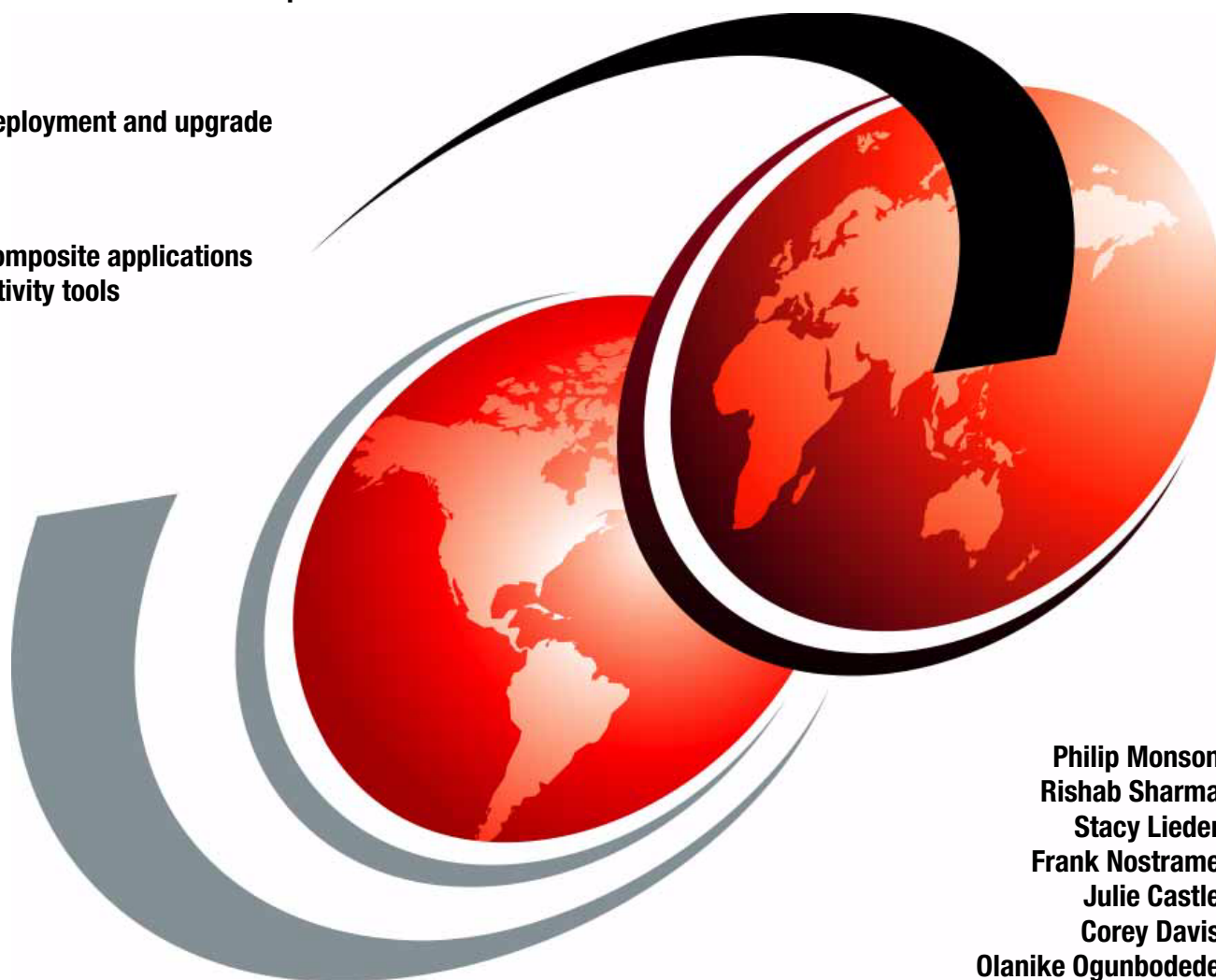


# IBM Lotus Notes and Domino 8 Deployment Guide

Implement new client and server capabilities

Plan new deployment and upgrade

Leverage composite applications and productivity tools



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**Redbooks**





International Technical Support Organization

**IBM Lotus Notes and Domino 8 Deployment Guide**

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**Note:** Before using this information and the product it supports, read the information in “Notices” on page xi.

**First Edition (November 2007)**

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# Preface

In today's competitive and diverse marketplace, effective collaboration is a critical component of organizational success. Lotus® Notes® and Domino®, the premier IBM® collaboration platform, helps organizations improve collaboration, increase productivity, and streamline business processes. The Lotus Notes 8 interface is intuitive and easy to use, and the Lotus Domino 8 server is secure, flexible, and reliable. Together, Lotus Notes and Domino 8 can help your organization to:

- ▶ Increase employee effectiveness and creativity through integrated messaging, collaboration, and office productivity applications.
- ▶ Reduce overall cost of ownership by deploying integrated offering with office productivity suite included at no additional charge.
- ▶ Protect IT infrastructure with a layered security model that reaches from server to individual field in a document.
- ▶ Increase mobile and offline productivity from secure, reliable replication.
- ▶ Increase individual responsiveness through customizable interface.
- ▶ Reduce application development and deployment costs through quick creation application component *mash ups*.
- ▶ Minimize downtime with high availability and simplified administration tools.

This IBM Redbooks® publication provides you with information about the new enhancements and features of Lotus Notes and Domino 8 and provides guidelines or directions on how to implement or utilize these. It also provides you with an approach to planning and deploying Lotus Notes and Domino 8 in new and existing environments.

This publication is a valuable reference to all kinds of users. It will help CIOs, CTOs, administrators, developers, and users with:

- ▶ Understanding the capabilities and benefits of Notes and Domino 8
- ▶ Planning for the deployment of Notes and Domino 8
- ▶ Planning to leverage new features of Notes and Domino 8

## The team that wrote this book

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*Figure 1 (Left to right) Frank Nostrame, Olanike Ogunbodede, Philip Monson, Stacy Lieder, Rishab Sharma, Julie Castle, Corey Davis*

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# Introduction

The premier IBM collaboration platform is Lotus Notes and Domino. Lotus Notes and Domino have repeatedly delivered forward-looking capabilities to empower business people to be more effective, responsive, and innovative in their daily work.

With Lotus Notes and Domino 8, world-class business e-mail and collaboration take an exciting step forward. They provide organizations around the world with new avenues to enhance efficiency and productivity. Lotus Notes and Domino 8 provide these capabilities while keeping existing investments in technology in mind.

Lotus Notes and Domino 8 are not just about features, enhancements, or new functionality. Lotus Notes and Domino 8 represent the next stage in the evolution of collaborative software that demonstrates the commitment by IBM to provide productivity, efficiency, reliability, and scalability to users across the business spectrum.

This chapter discusses the business benefits of deploying a Lotus Notes and Domino 8 environment that would impact both new and existing deployments. In addition, this chapter also discusses:

- ▶ The scope and focus of this IBM Redbooks publication
- ▶ The example environment of the fictitious ITSO Corp. This example environment is used throughout to explain the Lotus Notes and Domino 8 enhancements.

This book provides valuable information about Lotus Notes and Domino 8 for all kinds of organizations. The intended audience spans from a CIO to an administrator to a developer. It provides the audience with a structured and planned approach to deploying Lotus Notes and Domino 8. It also provides best practices with respect to co-existence and upgrade, and the steps required in order to enable and effectively utilize the new enhancements in Lotus Notes and Domino 8.

## 1.1 Lotus Notes and Domino 8

With a fresh new intuitive look and feel, the Lotus Notes 8 client is a veritable powerhouse. It brings together information and tools to accomplish your daily jobs/tasks in an efficient and productive manner. Lotus Notes 8 client has been designed for the business user. Deploying the Lotus Notes 8 client can have a phenomenal impact on your business and help users to extract maximum return on investment. The new features of Lotus Notes 8 client can help users to transition from basic e-mail to more productive collaborative functions.

Lotus Notes and Domino 8 have been enhanced to help improve performance and efficiency. Lotus Notes and Domino 8 have the potential for less administrative overhead through the new features that allow a more granular control of your environment.

The Domino Web Access (DWA) interface in Lotus Notes and Domino 8 has been completely redesigned with enhanced functionality to bring DWA closer to parity with Lotus Notes 8 client. These enhancements provide for a greatly improved and responsive user experience.

Application developers can use IBM Lotus Designer 8 to build reusable components that could be used by multiple applications. These reusable components can be combined with other functional components within a service-oriented architecture (SOA) to deliver what is now commonly referred as composite applications. Lotus Notes and Domino 8 applications now can consume Web services hosted on other systems. The open application infrastructure provided by Lotus Notes and Domino 8 supports business agility and extends your IT investments while improving user effectiveness and productivity.

## 1.2 Business benefits of upgrading or deploying Lotus Notes and Domino 8

IBM Lotus Notes and Domino 8 software delivers innovations in business collaboration. It continues to enhance its core capabilities while supporting your existing applications. Lotus software continues to be a leader in innovation, providing new capabilities that allow your employees to collaborate in the context of their day-to-day business.

### 1.2.1 Open application infrastructure

Using open standards-based Eclipse technology, Lotus Notes 8 client has been designed to:

- ▶ Let users work with people, information, and applications from a single page.
- ▶ Help users to reduce Inbox clutter.
- ▶ Allow users to bring together all related components of work into a common location.
- ▶ Provide an open platform for plugging in new capabilities driven by business needs.

The current release of Lotus Notes and Domino 8 provides enhanced support for service-oriented architecture through composite applications. Lotus Domino 8 also provides the ability to natively consume Web services. This allows users to weave contextual collaboration into your business applications. Lotus Notes and Domino 8 provides users the flexibility of leveraging your current investments by combining heterogeneous technologies.

Lotus Notes and Domino 8's open application infrastructure provides for server-managed provisioning. This capability allows users to centrally manage and control the deployment of Notes client features and composite applications.



## 1.2.2 Intuitive new interface for Lotus Notes and Domino Web Access client

*Intuitive yet familiar* seems to be the mantra for the Lotus Notes 8 client. The interface was designed in direct response to feedback from users. The Domino Web Access (DWA) Client has also been enhanced to provide close parity with the Lotus Notes 8 client.

### Lotus Notes 8 client

Lotus Notes 8 is flexible. It offers the option to personalize the interface to accommodate your own ways of working and includes the ability to use plug-ins, allowing the interface to be extended to meet your business requirements.

Figure 1-1 illustrates some of the new innovations in the new Lotus Notes 8 client.

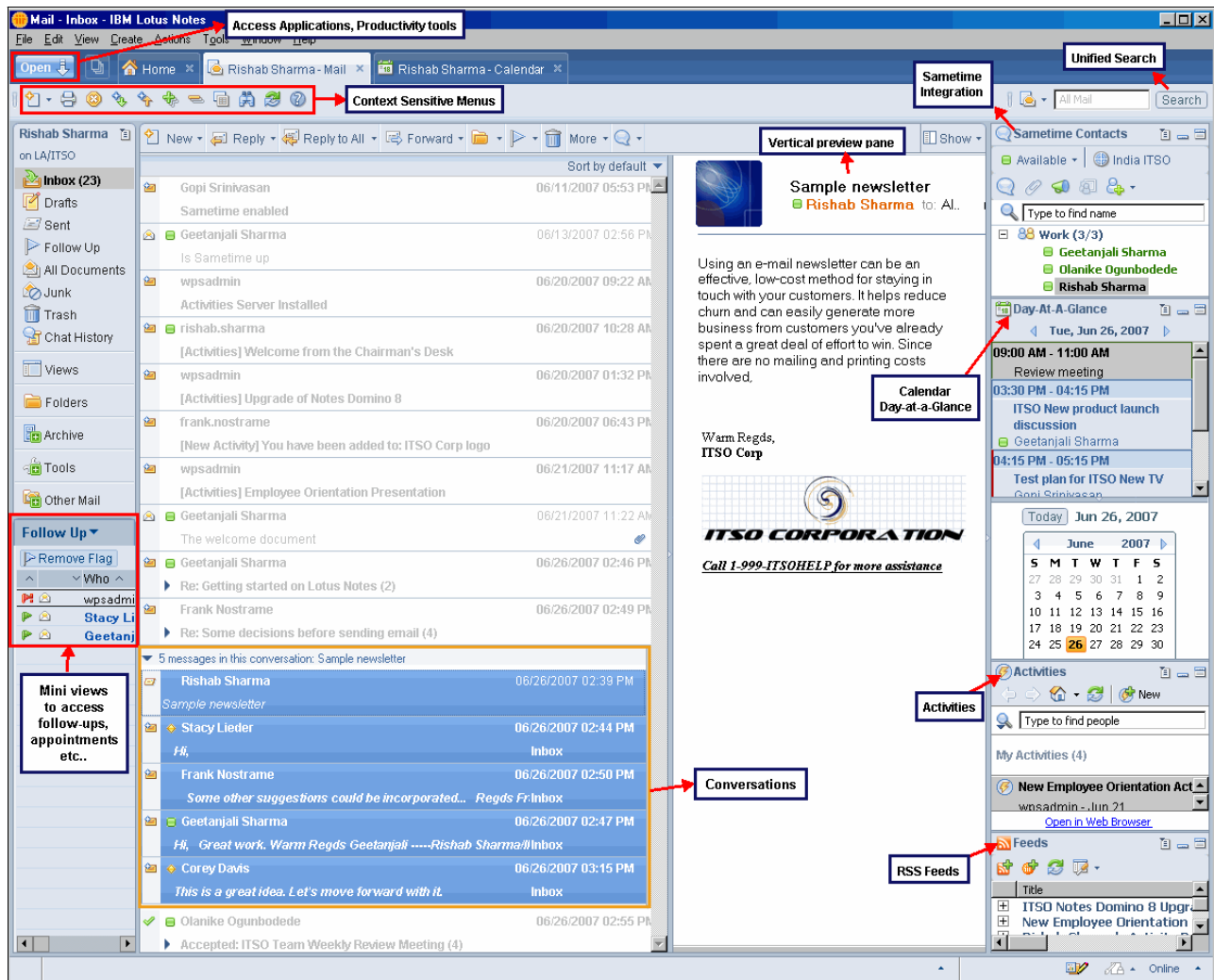


Figure 1-1 Lotus Notes 8 client layout with sidebar

Some user interface enhancements in Lotus Notes 8 client are:

- ▶ New vertical preview pane - In addition to the horizontal preview pane, Lotus Notes 8 has a new vertical preview pane option that offers users more flexibility when previewing mail, calendar, and contacts.
- ▶ Smaller and more appropriate inbox using conversations - Lotus Notes 8 provides the choice of viewing your inbox in the traditional way, as individual messages, or in an

innovative new way, as conversations. This reduces the time spent searching your inbox for responses, as all of the previous message threads are gathered together under the latest conversation.

- ▶ New customizable sidebar panel - The new sidebar panel on Lotus Notes 8 provides access to your Lotus Sametime contacts, calendar, activities, and an integrated RSS Feed reader. This sidebar panel can be customized to provide additional plug-ins that specifically meet your organization's business requirements.
- ▶ Greater flexibility in business contacts - Users can now manage information about your business contacts more flexibly by allowing contacts to contain photographs, which can be displayed along with a business card view.
- ▶ Integrated Sametime 7.5 interface - Lotus Notes 8 supports an integrated Sametime 7.5 interface that provides advanced functionality like presence awareness, emoticons, rich text, in-line spell check, instant messaging history, and much more. This allows users to quickly and easily collaborate with colleagues in real time side-by-side with your e-mail.

**Note:** For more information about Lotus Notes 8 client, refer to Chapter 4, "Deploying the Notes 8 client" on page 63, and Chapter 6, "Lotus Notes 8 client features" on page 113.

## Domino Web Access

DWA in Lotus Notes and Domino 8 has gone through a major redesign and now provides more enhancements and better performance. Figure 1-2 illustrates the new innovations in the new Domino Web Access 8 client.

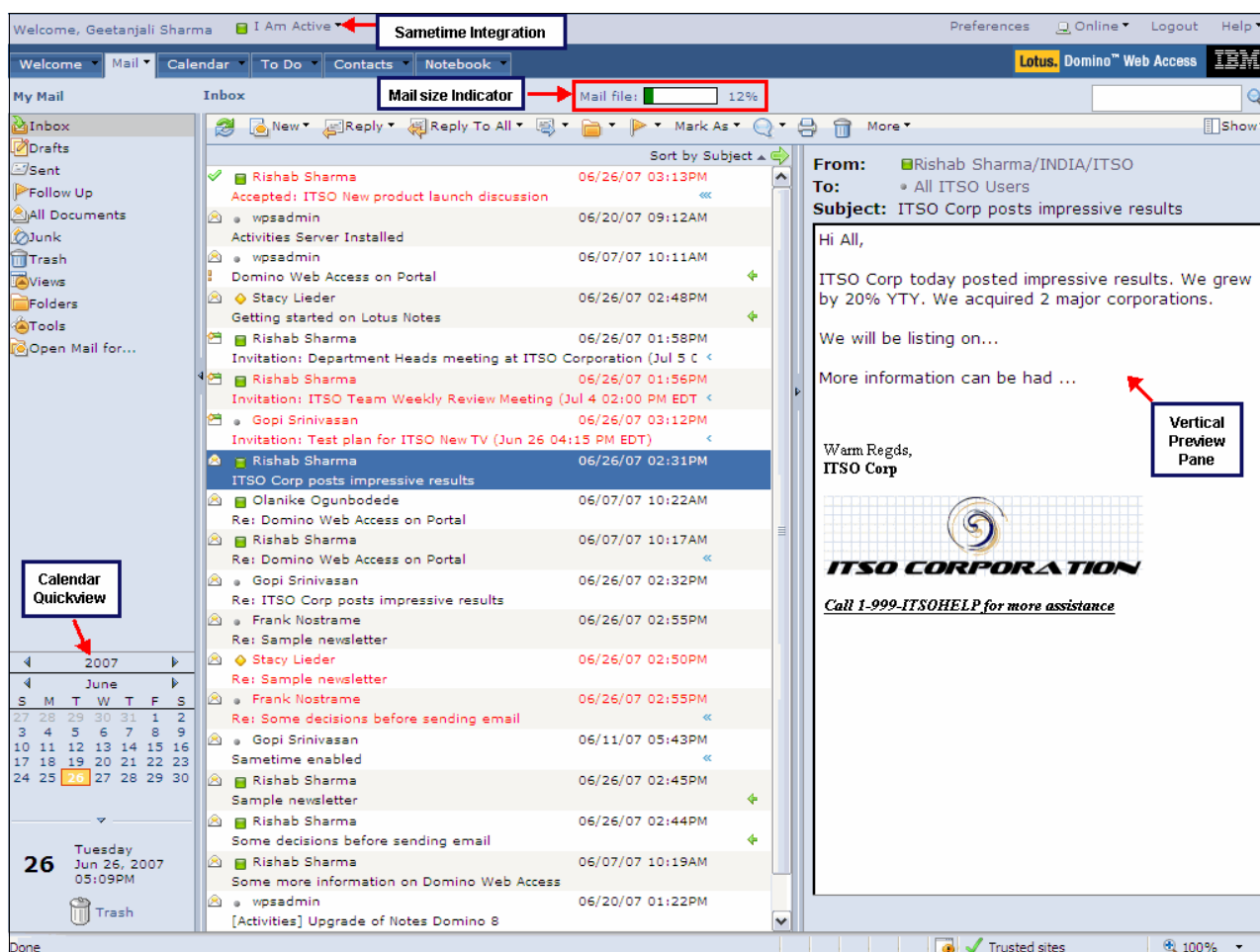


Figure 1-2 Domino Web Access 8 Client

Some of these enhancements have been listed below:

- ▶ Improved interface - The look and feel in Domino Web Access has undergone a significant change to provide a uniform interface across different client and server platforms.
- ▶ Preview pane - Allows users to quickly scan the information in their inboxes or business contacts in Domino Web Access.
- ▶ Support for RSS or Atom Feed for inbox - Allows users to gain the flexibility to view their mail from Internet and non-Lotus clients when they are away from their usual work environment.
- ▶ Additional spell check dictionaries - DWA provides integration and support for additional LanguageWare® libraries and dictionaries. DWA also supports a multi-threaded server spell check engine for greater efficiency.

**Note:** For more information about DWA, refer to Chapter 8, “Domino Web Access” on page 215.

### 1.2.3 Improved organizational productivity and responsiveness

The rich set of enhanced functionality provided by Lotus Notes and Domino 8 helps improve organizational productivity and responsiveness. Some productivity enhancements are:

- ▶ Recent contacts - Builds a list of contacts based on recent activity like e-mails or chats, which allows users quick and easy access to the information even while offline.
- ▶ Message recall - Provides users the option to retract an e-mail message that has been sent to a recipient using a Lotus Domino 8 server.
- ▶ Thumbnail view with search center - Enables the user to view and work across all the open panels at given time. It also enables the usage of the unified search center with search history, which can be used to search Notes databases, the Web, or your desktop with the Google Desktop Search integration.
- ▶ Out-of-office enhancements - Allows users to gain greater flexibility and speed in letting your colleagues know that they are away from their desks.
- ▶ Single unified interface for preferences - Enables users to configure all preferences associated with the Lotus Notes client, including preferences associated with locations, instant messaging, activities, and productivity tools.
- ▶ Multilevel undo functionality - Enables users to retrace their steps through more than 50 levels of edits while editing text in Lotus Notes and Domino 8. This enhances productivity by providing better editing support.
- ▶ Context sensitive help - Enables users to work in mail and look at Help simultaneously, fostering greater productivity.

### 1.2.4 Improved infrastructure flexibility

Lotus Notes and Domino software is well known for supporting a wide variety of operating system platforms. Lotus Notes and Domino 8 continue to provide hardware and software platform flexibility and choice. Lotus Notes and Domino 8 also offer more versatility for integration with complementary software.

The Lotus Notes 8 client offers a consistent installation process for both Microsoft® Windows® operating system users and Linux® desktop users. Enhancements in Lotus Notes 8 for Linux include integrated instant messaging and presence awareness, the Lotus Notes smarticons toolbar and support for color printing.

**Note:** The composite application editor feature of Lotus Notes 8 is supported on Microsoft Windows and Linux operating systems. However, Lotus Domino Designer is supported only for Microsoft Windows workstations. Refer to the latest release notes for the latest information:

<http://www.ibm.com/developerworks/lotus/documentation/releasenotes/>

In addition, Lotus Domino 8 brings greater similarity between Lotus Notes and Lotus Domino Web Access client options, for both the interface and the features.

Lotus Domino 8 also offers new capabilities to allow easier interoperability with other software. These include:

- ▶ Full support for the option to use IBM DB2® software as a data store for Lotus Domino 8 on select Microsoft Windows, IBM AIX®, and Linux platforms
- ▶ Full support for the DB2 access view and query view design elements of Lotus Domino Designer 8
- ▶ Incorporation of IBM Tivoli® Directory Integrator software capabilities into Lotus Domino 8
- ▶ Improved integration with IBM Tivoli Enterprise™ Console, IBM WebSphere Application Server, and WebSphere Portal software

**Note:** For more details on DB2 Integration, refer to Chapter 9, “New administration features” on page 241.

### 1.2.5 Simplified administration and layered security

Lotus Notes and Domino 8 administration has been enhanced to provide control of your everyday administrative tasks. Improved security in Lotus Notes and Domino 8 helps to protect users from unauthorized attacks while keeping costs down.

Some of these enhancements and features of Lotus Notes and Domino 8 Administration are listed below:

- ▶ Out-of-office service - Implementing out of office as a mail router service instead of a scheduled agent can minimize the elapsed time before users receive absence notifications after sending e-mail to a colleague who is out of the office.
- ▶ Message recall - Users can control the use of message recall in their environment as per the business needs of their organization.
- ▶ Transfer and delay delivery reports - Automatically notify users when e-mails that they have sent are delayed.
- ▶ Server-based provisioning - Allows users to manage the deployment of Lotus Notes 8 client features, Eclipse components, and composite applications from a Lotus Domino 8 server.
- ▶ New policy settings - Productivity tools, Domino Web Access Security, and so on, are new policy settings that provide further granular control of a user's desktop and mail files.
- ▶ Lotus Domino domain monitoring - Has new probes and probe subtypes in addition to other enhancements, thereby reducing the number of steps required to identify and resolve issues before they impact the business, potentially saving time and money.
- ▶ IBM support assistant - the integrated self-help application speeds the resolution of product challenges.

**Note:** For more information about Lotus Notes and Domino 8 Administration enhancements, refer to Chapter 9, “New administration features” on page 241.

## Security

Some of the enhancements and features of Lotus Notes and Domino 8 related to security are:

- ▶ Internet password fields - protects against attempts to decipher hashed passwords using access restrictions
- ▶ Internet password lockout - protects against brute force and dictionary attacks on user Internet accounts
- ▶ Longer encryption keys - protects against attempts to decipher encryption keys
- ▶ Database redirect functionality - maximizes database availability while simplifying administration

### 1.2.6 Integrated productivity tools reduce cost of ownership

Lotus Notes and Domino 8 include a suite of open standards-based office productivity tools that support OASIS Open Document Format (ODF). Word processing documents, presentations, and spreadsheets created using IBM productivity tools can be shared with other organizations using ODF compatible tools. This eliminates the requirement and significantly lowers the cost of having to license, deploy, manage, and integrate multiple proprietary productivity tools or solutions.

IBM productivity tools allow users to create, edit, and collaborate on a wide variety of document, presentation, and spreadsheet file types using the integrated Lotus Notes 8 client.

Organizations can save costs by using the productivity tools integrated within the Lotus Notes 8 client without having to license and deploy separate products that provide identical functionality.

IBM productivity tools provide interoperability and flexibility by offering support for multiple file formats. Users can read and save to Microsoft Office files and read from IBM Lotus SmartSuite® documents. Users can also save them to ODF format for sharing with ODF-compliant applications.

All documents, spreadsheets, and presentations created using IBM productivity tools can also be exported to PDF format.

**Note:** For more details on IBM productivity tools, refer to Chapter 7, “Productivity tools” on page 199.

### 1.2.7 Improved efficiency and performance

Several enhancements to Lotus Notes and Domino 8 software provide an opportunity for enhanced system performance. These include streaming replication for Lotus Domino clusters and a variety of database and I/O improvements.

Efficiency and performance improvements include:

- ▶ Inbox cleanup feature - Potentially can improve both Lotus Domino server and Lotus Notes client performance.
- ▶ Streaming cluster replication - Improves cluster replication performance and helps reduce the effect that this has on server I/O.
- ▶ User renames processing - Elapsed time required to complete user rename requests can be shortened by using the improved administration processing.
- ▶ Design Note compression - Can potentially reduce the I/O and space utilization associated with database design information.

## 1.2.8 Support for activity-centric computing

Activities is an innovative approach to collaborative work management that facilitates new levels of productivity by bringing together all aspects of your work into a common view and enabling users to combine ad hoc collaboration techniques flexibly within a formalized processes.

Activities help users to consolidate work items to meet and produce a particular deliverable. It provides a lightweight mechanism that helps build best practices around personal tasks and projects in a more managed context, enabling users to more quickly complete activities and maintain an up-to-date view of their daily work.

Activities is a part of IBM Lotus Connections social software that is designed to empower people to be more effective and innovative by building professional networks of coworkers, partners, and customers. With this software, users can find and collaborate with experts; easily locate people and information; build closer partner and customer relationships; and foster bottom-up, community-based innovation.

Using Lotus Notes 8 one can create, manage, and integrate activities with mail or chat via the activities plug-in, which is provided in the Lotus Notes 8 client. So any document, message, bookmark, file, to do or related activity can be dragged and dropped from the Lotus Notes 8 client into an activity or vice versa.

**Note:** The activities server, which is a component of the Lotus Connections product suite, would need to be installed and configured to leverage this functionality. More information about Lotus Connections and activities can be found at:

<http://www.ibm.com/lotus/connections>

**Note:** For more details on activities, refer to 6.9, “Activities” on page 176.

## 1.2.9 Improve responsiveness to manage emerging business requirements

IBM Lotus Notes and Domino 8 software is built on an open application infrastructure that can help users to respond quickly to emerging business needs requiring collaboration and integration using applications that are even easier to build.

The following enhancements and features make it possible to respond quickly and cost effectively to emerging business requirements:

- ▶ **Build reusable components** - Components built using Eclipse, Lotus Component Designer, Lotus Expeditor, or Rational® Application developer can be integrated or coupled with other components to create role-based composite applications that can be accessed using the Lotus Notes 8 client. This can help improve user effectiveness and have a positive impact on your business.
- ▶ **Consume Web services** - The ability to consume Web services allows your applications to interact with other systems using open standards, enabling users to leverage more of your existing IT investments.
- ▶ **Support for DB2 access views and query views** - Allows developers to rapidly build applications that blend collaborative services and relational data. Lotus Domino data can also be accessed using industry-standard Structured Query Language (SQL).

### **1.2.10 Increased offline productivity**

Lotus Notes and Domino have long provided offline functionality, which has been one of key differentiators between Lotus Notes and other vendor solutions.

Lotus Notes and Domino 8 include offline enhancements such as:

- ▶ Recent contacts.
- ▶ Make available offline, which is a single-click functionality for taking applications offline.
- ▶ Facility to take composite applications offline.
- ▶ The ability to create blogs or perform free-time search.

These enhancements help scale the offline innovations in Lotus Notes and Domino 8 to new heights.

## **1.3 Scope and focus of this IBM Redbooks publication**

Lotus Notes and Domino 8 software is more flexible and extensible than ever before. The client has been enhanced with a fresh, intuitive user interface and new capabilities like composite applications, activity-centric computing, and productivity tools for creating and sharing documents, presentations, and spreadsheets. The scope of this IBM Redbooks publication is to primarily focus on the core functionality in terms of enhancements and new features in Lotus Notes and Domino 8.

Our focus is to provide the following information:

- ▶ Insight into the new features and enhancements in Lotus Notes and Domino 8 from a usability and productivity stand point
- ▶ Best practices with respect to planning a new or upgrading an existing Domino environment
- ▶ Roadmap on what is required to implement the new features or enhancements in Lotus Notes and Domino 8



## 1.4 Structure of this IBM Redbooks Publication

This IBM Redbooks publication discusses the new features and enhancements in Lotus Notes and Domino 8. It helps you plan the deployment and provides a roadmap of how to effectively utilize the new functionality in the product.

Chapter 1, “Introduction” on page 1, introduces the business benefits of deploying Lotus Notes and Domino 8. It also explains the example scenario, which is used throughout this book.

Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15, discusses planning considerations for deploying Lotus Notes and Domino 8, both for existing and new deployments.

Chapter 3, “Deploying the Domino 8 server” on page 45, provides guidelines and recommendations required to install and configure Lotus Domino 8 Server into your new or existing environment.

Chapter 4, “Deploying the Notes 8 client” on page 63, discusses the considerations a Lotus administrator must make when deploying the Lotus Notes 8 client.

Chapter 5, “Coexistence: Domino/Domino and Domino/Microsoft Exchange” on page 93, discusses the principles of coexistence between Domino 8 and Domino 6.5/7, as well as touching on coexistence between Domino 8 and Microsoft Exchange 2000/2003.

Chapter 6, “Lotus Notes 8 client features” on page 113, focusses on the enhancements in the Lotus Notes client's core and extended capabilities, such as e-mail, calendaring and scheduling, contact management, instant messaging, presence awareness, and support for activity-centric computing.

Chapter 7, “Productivity tools” on page 199, discusses the new productivity tools that ship with Notes 8, which include:

- ▶ IBM Lotus Documents, for creating and editing word processing documents
- ▶ IBM Lotus Presentations, for creating and running presentations
- ▶ IBM Lotus Spreadsheets, for creating and editing spreadsheets
- ▶ IBM Lotus Productivity Tools Toolkit

Chapter 8, “Domino Web Access” on page 215, discusses the new and improved features in the IBM Lotus Domino Web Access 8 client, the Web client alternative to the Lotus Notes client.

Chapter 9, “New administration features” on page 241, introduces the major new administration features in Notes and Domino 8. This chapter also provides information about the installation and configuration of the new administration enhancements in Lotus Notes and Domino 8. This chapter also describes the Lotus Domino and DB2 deployment features.

Chapter 10, “New concepts in administration: Eclipse, composite applications, and provisioning” on page 313, provides a primer to Lotus Domino Administrators and Architects for deploying composite applications and provisioning updates.

Chapter 11, “IBM WebSphere Portal integration” on page 349, provides an insight into the new enhancements in Notes and Domino 8 with respect to IBM WebSphere Portal. The focus of this chapter is how WebSphere Portal features can be leveraged along with Lotus Notes and Domino 8.

Chapter 12, “New application development features” on page 399, provides information about the exciting new abilities for the application developer. New design elements, formula language commands, and LotusScript® commands, to the new worlds of composite applications and DB2 integration, are covered in depth in this chapter.

## 1.5 Example scenario - ITSO Corp

In order to facilitate and illustrate the discussions with respect to the enterprise deployment of Lotus Notes and Domino 8 within a reasonably large organization, we use the example of a fictitious organization called ITSO Corporation, which we reference throughout this IBM Redbooks publication.

ITSO Corporation is a large global management consulting, technology services, and multi-product organization. It is organized around four geographic regions: North America, Europe, Asia, and Australia. The geographical layout of the organization is shown in Figure 1-3.

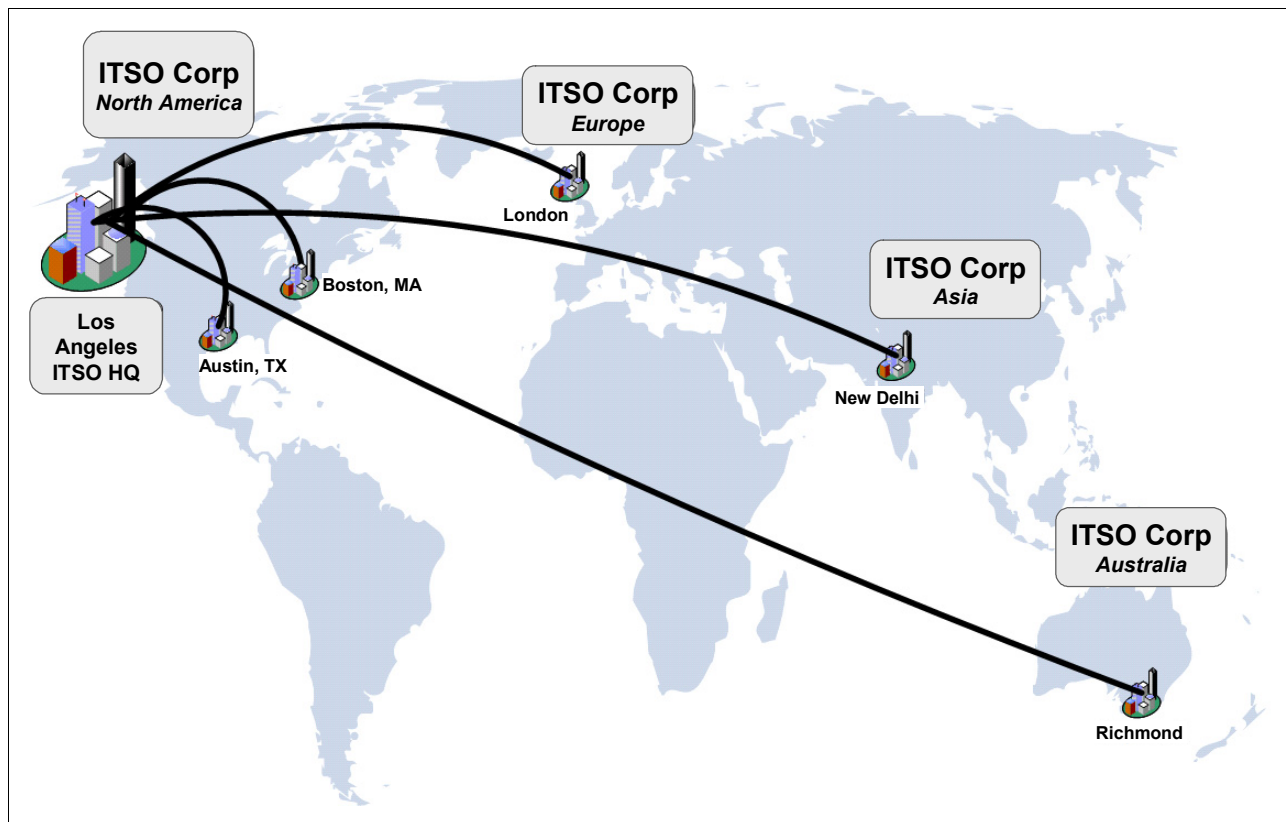


Figure 1-3 ITSO Corp geographic layout

ITSO Corp was initially only located in Los Angeles and Austin in the USA, with Richmond in Australia. The network layout diagram in Figure 1-4 illustrates this.

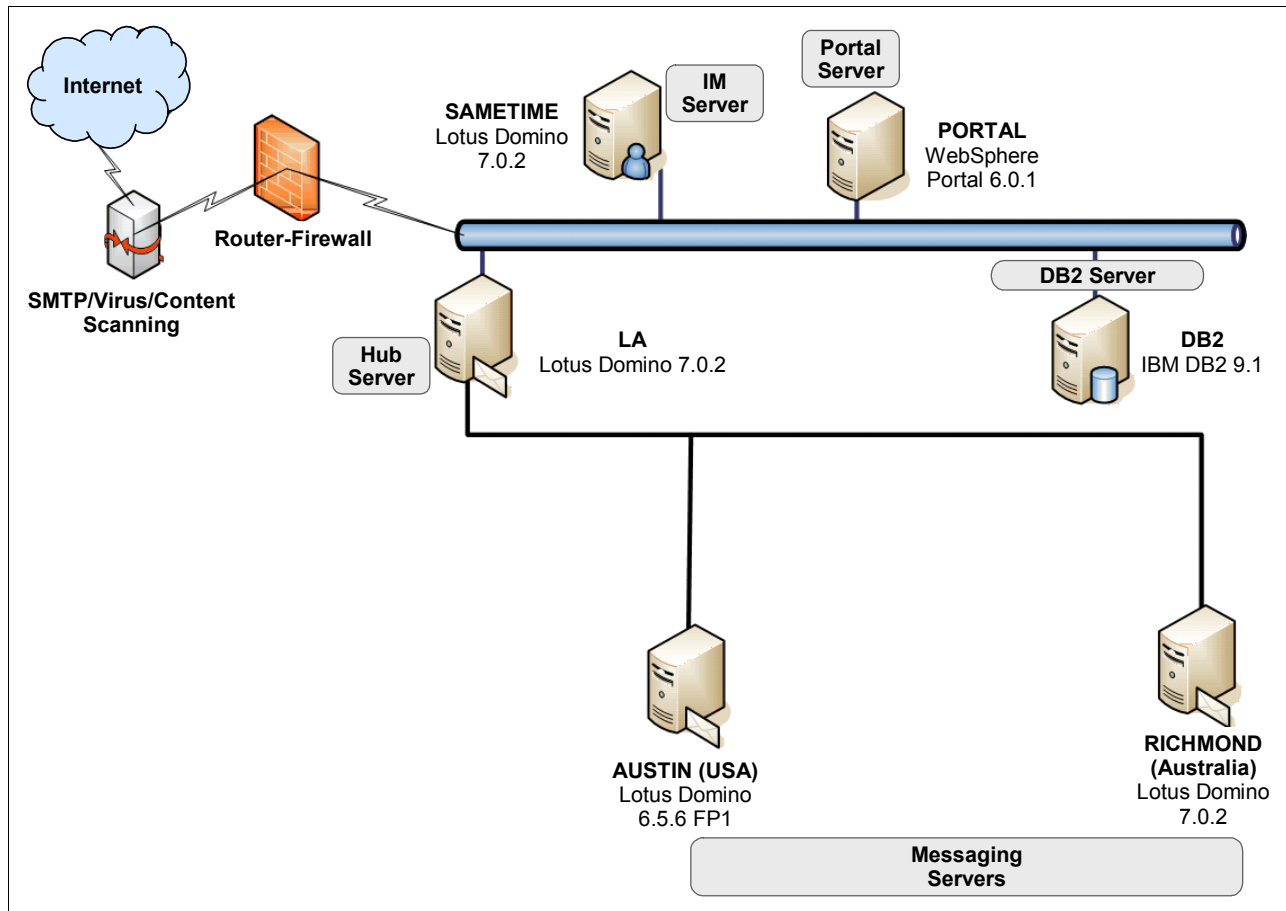


Figure 1-4 Initial network layout at ITSO Corp

ITSO Corp has already invested in a WebSphere Portal solution for its intranet and extranet, which enables a single unified personalized access to applications, information, people, and processes.

ITSO Corp also invested in Lotus Sametime to enable real-time collaboration for people to work seamlessly across geographies. This would also help ITSO Corp to bring travel and communication costs down.

ITSO Corp is growing. It has recently acquired organizations that have offices in Boston, New Delhi, and London. Boston and New Delhi are twin locations. A large number of employees travel between these locations. The organization that was acquired in London has a vast majority of developers who develop Lotus Domino and other applications.

Coinciding with these new acquisitions, IBM announced Lotus Notes and Domino 8. To leverage the advantage of new enhancements and features of Lotus Notes and Domino 8, ITSO Corp has decided to become an early adopter.

In the subsequent chapters, this book uses the ITSO Corp example to explain the following:

- ▶ What steps ITSO Corp took to upgrade the LA hub server to Lotus Notes and Domino 8
- ▶ What steps ITSO Corp took to set up Boston and Delhi on Lotus Notes and Domino 8
- ▶ What steps ITSO Corp took to set up London as a Lotus Domino Application Server and achieve DB2 integration
- ▶ What steps ITSO Corp took to integrate the activities plug-in with Notes 8
- ▶ What steps ITSO Corp took to integrate WebSphere Portal with Lotus Notes and Domino 8 to provide federation administration and other WebSphere Portal enhancements

Figure 1-5 illustrates the final network layout at ITSO Corp that was accomplished.

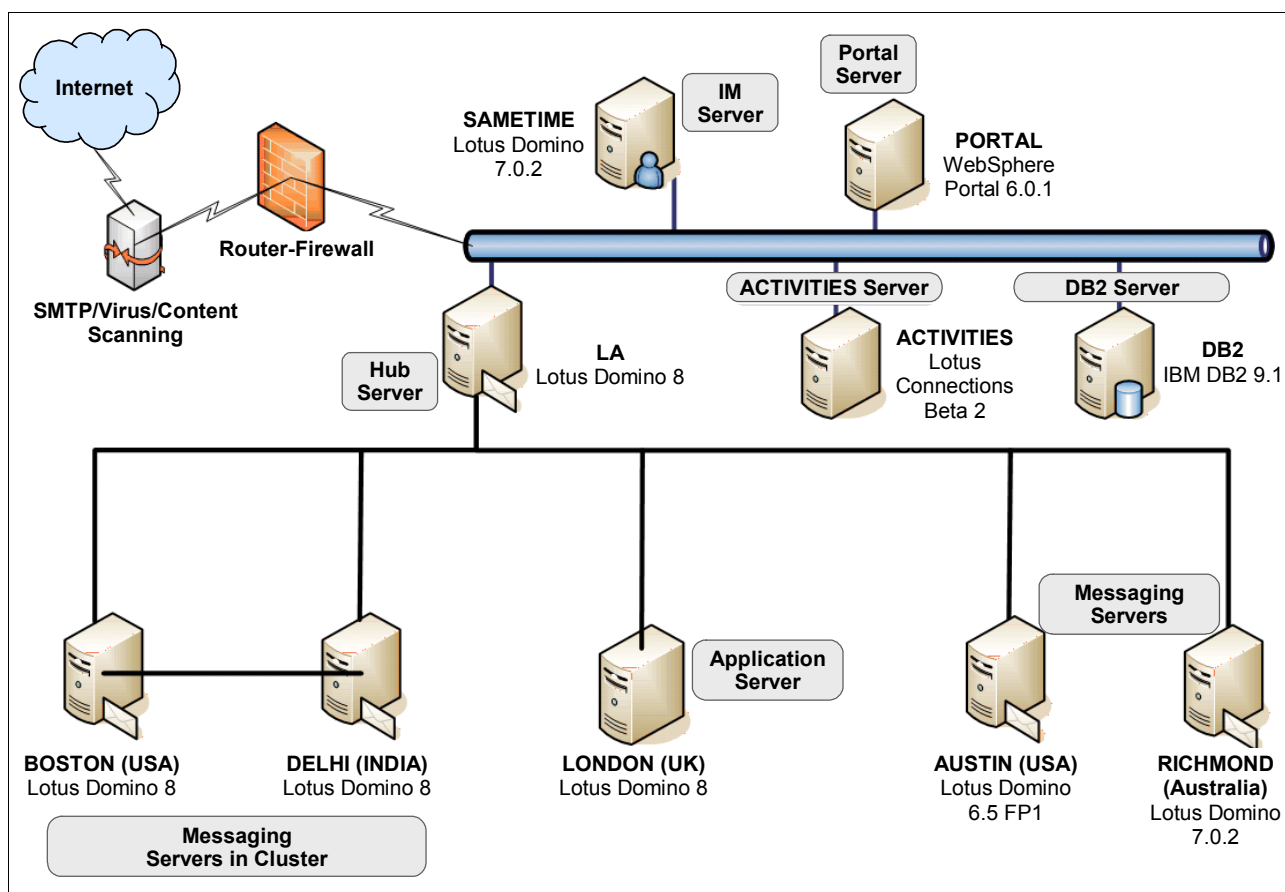


Figure 1-5 Final network layout at ITSO Corp



# Planning the Notes and Domino 8 Deployment

This chapter discusses planning considerations for deploying Lotus Notes and Domino 8 for both existing and new deployments.

Any sort of deployment project requires some degree of planning. This chapter gives you a framework to help identify and address planning considerations in your environment. This IBM Redbooks Publication does not advocate any specific project planning methodology, but provides guidelines and an approach that can be incorporated into your planning methodology of choice.

Whatever that methodology, it is crucial to view your deployment holistically, beginning with understanding the stakeholders in your environment.

**Note:** The audience for this chapter is the person or team designated to review Notes and Domino 8 and determine how and where they should be used to further your business goals.

## 2.1 Preparing to Deploy Notes and Domino 8

Whether you are deploying Domino for the first time in your infrastructure or upgrading an infrastructure that has been in place for 15 years, the same approach should be taken. This section discusses the process of preparing to deploy Domino from a holistic perspective, providing a general approach to deployment. The end of this section also discusses the different considerations for an upgrade or a new deployment.

While deployments of Notes and Domino have always been deeply intertwined with other enterprise-wide systems and software, such as hardware, networks, operating systems, storage, and the internet, the complexity and importance of that relationship has grown over time. Because of this, changes to any enterprise system cannot happen in a vacuum, and must be taken in context. This chapter will help you fully understand the context in which your deployment will occur. In essence, you need to ask yourself three questions, and then answer yourself honestly. Those three questions are:

- ▶ Where do you want to be?
- ▶ Where are you now?
- ▶ What is it going to take to get you there?

These questions are perhaps in a different order than you expected, and there is a reason for that. The key to imagining where you want to be is to free yourself from the constraints of where you are. Only after you understand where you want to go can you fully understand and address any obstacles that may lie in your path.

In this chapter, we walk through these steps together, as you begin to visualize where you want to take your Notes and Domino Deployment, then figure out what it will take to get from where you are to where you want to be.

### 2.1.1 Identifying team members

Whether you are upgrading an existing Domino environment or planning a new deployment of Notes and Domino 8, the very first step in your deployment planning is also one of the most crucial. Identifying all stakeholders and representing all interests on your team are very important for a successful deployment. Examples of stakeholders in a large enterprise include:

- ▶ The CIO or CTO, who provides guidance on business needs and direction
- ▶ Business analysts or line-of-business managers, to represent specific needs
- ▶ The architecture team, which is responsible for the overall architecture of the infrastructure
- ▶ The deployment team, which is responsible for implementing new deployments
- ▶ The operations team, which is responsible for steady-state operations of the deployment
- ▶ The client team, which handles distribution of client software
- ▶ The registration team, which adds, removes, and modifies users
- ▶ The support team, which responds to problems as they arise
- ▶ The development team, which creates and maintains Domino applications
- ▶ The users, who use the tools to perform their job duties to further business goals

In some organizations, two or more of these functions may be handled by the same team. Depending on the complexity and maturity of your deployment, other stakeholders may also include:

- ▶ The hardware team
- ▶ The operating system team
- ▶ The storage team
- ▶ The network team
- ▶ The security team including firewalls and so on
- ▶ The WebSphere Application Server team
- ▶ The WebSphere Portal team
- ▶ The IBM DB2 or relational database team
- ▶ The enterprise directory team

The important thing is to look at your organization and determine what teams or individuals would be required to understand your environment, your business needs, your user needs, your current capabilities, and any obstacles. The team members who you identify must be able to represent the needs and interests of all identified stakeholders.

## 2.1.2 Defining the goals and scope of your deployment project

When planning an upgrade of your existing Domino infrastructure, you should define clear goals and objectives. For example, if one of your goals is to take advantage of the new mail and calendar features in Lotus Notes and Domino 8, such as the out-of-office service and ghosted calendar entries, you may want to target your mail servers, mail files/templates, and Notes clients first, and consider application migration as a separate project. If your company has multiple mail domains, you may also consider a phased approach, focusing on one domain at a time, particularly if hardware upgrades or replacements are needed in a particular region.

### The importance of a project sponsor

You have a great team, you have a good understanding of your business, you are about to immerse yourself in Lotus Notes and Domino 8 — do you really need a project sponsor? In more and more cases, having a project sponsor can mean the difference between success and failure.

A project sponsor is usually someone from within the organization, such as a business manager or business executive. The project sponsor should have two specific attributes:

- ▶ The person understands the business benefits of the project and has a real business interest in ensuring that the project is a success and that the new software implementation fulfills a business need for the organization.
- ▶ The person is in a position to ensure that the project stays on track and is a success.

Your project sponsor is not just there to give you your charter and walk away. Your project sponsor will help get approvals, remove obstacles, and help you stay on track. Most importantly, your project sponsor will continue to provide you with business direction, to ensure that your work is not being done in a vacuum. Your project sponsor is the bridge between your team and the needs of the organization.

Your project sponsor works with you on the high-level goals, and helps define your vision. Additionally, having a project sponsor signals the importance of your project to the rest of the organization. It is your job to keep the sponsor informed and engaged, so that your sponsor can fulfill her duties as champion. Having an engaged and committed project sponsor will help you meet or exceed the goals of your deployment project.

### 2.1.3 Understanding Lotus Notes and Domino 8

The key concept here is getting a good understanding of where you want to be. Lotus Notes and Domino 8 offer many innovations for users, administrators, and designers. Your challenge is to answer the following questions:

- ▶ What business needs are you trying to meet?
- ▶ How do new features and functions benefit:
  - Your users?
  - Your administrators?
  - Your developers?
  - Your business?
- ▶ Which features and technologies you want to use?
- ▶ How you want to use them?

In order to develop your goals and objectives, you need to understand the features, functions, and benefits available to you in Lotus Notes and Domino 8.

For an overview of the benefits of Notes and Domino 8, see 1.2, “Business benefits of upgrading or deploying Lotus Notes and Domino 8” on page 2.

Later chapters have more detailed information about the exciting new capabilities in Lotus Notes and Domino 8.

- ▶ New features in Notes 8 - Chapter 6, “Lotus Notes 8 client features” on page 113
- ▶ Notes 8 Productivity Tools - Chapter 7, “Productivity tools” on page 199
- ▶ WebSphere Portal integration - Chapter 11, “IBM WebSphere Portal integration” on page 349
- ▶ New features in Domino Web Access 8 - Chapter 8, “Domino Web Access” on page 215
- ▶ New features for administrators - 9.1, “Introduction to new administration features” on page 242
- ▶ New features for developers, including composite applications - Chapter 12, “New application development features” on page 399

The information in these sections provides you with the information you need to begin to imagine what your deployment could be.

#### Think big

Now that you have an idea of what Lotus Notes and Domino 8 does, it is time to get creative. What does creativity have to do with deploying Notes and Domino 8? Everything. Any software deployment has the potential to change the way you do things, but often those of us in the IT community tend to do things in a step-wise fashion, taking advantage of incremental changes. Rarely do we take advantage of the opportunity to imagine what could be. While you may not be able to implement all of your big ideas immediately, you may be able to see your infrastructure in a different light if you begin by imagining what could be.

Regardless of the nature of your organization, the IT infrastructure exists to support the business. At its heart, IT is a business tool, helping your organization to do its work, whatever that work is. To use an analogy from the transportation business, no matter how well designed or built, a bridge to nowhere is still a bridge to nowhere. For this reason, it is critical to keep your business needs and direction clearly in mind when considering any changes to your IT infrastructure. Any changes should ultimately drive business needs and solve business problems.



Here are some questions that you may ask yourself and your team as you begin to consider how to make the best use of Lotus Notes and Domino 8 in your environment:

- ▶ What business problems do you have that need a solution?
- ▶ What one thing has your organization always wanted to do, but has not been able to?
- ▶ If you could change anything in your infrastructure, what would it be?
- ▶ How can Lotus Notes and Domino 8 solve those problems?
- ▶ What features and functions of Lotus Notes and Domino 8 caught your attention?
- ▶ How can you see these features in your environment?

## **Brainstorming as a planning tool**

You and your project team have the knowledge and perspective to advise your project sponsor and CIO/CTO how best to leverage Notes and Domino in your environment. With business needs as your guiding principle, and your knowledge of Notes and Domino as your framework, you and your project team can synthesize new ways of solving old problems in your organization.

At this stage of the game, you want to think big. You want to allow the members of your team to use their imaginations, unfettered at the moment by the realities of your existing infrastructure. You want to encourage your team to think outside of the constraints with which they normally function. This is the best way to visualize your ideal deployment.

The process best suited to fostering the latent creativity in your project team is brainstorming. Brainstorming is a process wherein groups of people with a diversity of perspectives come together to creatively address problems. Often, reframing the problem is one of the key goals of a brainstorming session. Brainstorming can be a very effective approach to problem definition.

The generally accepted rules of brainstorming include:

- ▶ Encourage wild and exaggerated ideas.  
Throw out all assumptions and preconceived notions. Encourage wild, non-linear thinking.
- ▶ Generate as many ideas as possible.  
In a brainstorming session, the idea is quantity, not quality. Introduce as many ideas as possible. The more ideas you generate, the more creative your team will be.
- ▶ Use the ideas of others as a springboard.  
Free-associate as much as possible. Add to the ideas of others. Combine ideas. Put things together in unexpected ways.
- ▶ Every person, and every idea, has equal worth.  
Encourage everyone to participate. During brainstorming sessions, it is okay to say things out loud as you think of them, as long as everyone's ideas are listened to and everyone gets the opportunity to talk.
- ▶ Write everything down.  
Use a whiteboard, but have all participants use paper as well. Have them write things down while calling them out, too. Capture everyone's notes. Photocopy all notes and give them to the entire team.

- There are no silly ideas.

This is the most important rule. Do not rate, evaluate, or criticize ideas during the brainstorming session. Prohibit the use of roadblock phrases. These are obstacles to creativity during a brainstorming session. Examples of roadblock phrases that should be prohibited during your brainstorming sessions are:

- That will never work.
- We cannot do that.
- That is not the way we do things.
- We will never get approval for that.
- We do not have the hardware for that.

These rules are critical to a successful brainstorming session. Everyone on the team and everyone in the brainstorming session must understand these rules, and everyone participating must agree to abide by the rules.

### ***Facilitating a brainstorming session***

You may also want to consider conducting brainstorming sessions with a subset of your stakeholder representatives. For example, if many of the team members are individual contributors, the creative process might be stifled by the presence of managers, particularly managers 2 or 3 levels above. In these cases, you might find your brainstorming session a little flat, because participants might not want to state a wild idea in the presence of management, either for fear of offending the manager, or worse, for fear of management latching on to the idea and pushing for immediate implementation.

The team members have to feel equal in their contributions and worth, or they may not fully engage in the process. You may also find that you need to have one or two sessions with the team to allow them to relax enough to unleash their creativity.

Additionally, you should try to build in diversity of viewpoints into the team. If everyone has the same viewpoint, you may experience the phenomenon of groupthink, where ideas are accepted on the basis of consensus. Groupthink can lead perfectly competent people to agree on mediocre ideas, without fully exploring all relevant issues. Diversity of viewpoint can help to ensure that issues are considered more thoroughly, which should lead to better ideas.

### **Defining the problem**

Start your brainstorming session with an open-ended question, or a short statement describing the facts of the situation you want your team to consider, but which may not explicitly state a problem. Imposing a predefined problem on the team may restrain the team's creativity. Instead, let the team formulate the problem based on their perception of the facts.

It is often the case that using a narrowly construed problem definition limits the solutions that may be proposed. Broader problem statements tend to lead to more innovative approaches to problem solving. Some approaches to creative problem solving advocate discussing the facts of a situation, and using brainstorming as part of the problem definition process, not just the solution development process.

### ***Example: reframing the problem provides a broader set of solutions***

Problem definition is the most important part of solving any problem. How you define the problem has a direct impact on what solutions you will consider.

**Situation:** Your organization is receiving many calls to the help desk regarding perceived sluggish performance of a particular application, which is hosted in Los Angeles. Most of the reports come from users in Delhi.

Consider how framing the problem influences the solution.

**Problem definition 1:** We do not have enough bandwidth on our WAN to support application X, so our users in Delhi are complaining.

**Solution:** The solution is to increase bandwidth.

**Analysis:** This problem statement is so narrowly construed that the solution is actually included in the problem statement. The problem is not actually a statement of the problem users are reporting, but it is a conclusion based on the facts.

Now, consider how reframing the problem changes the potential solutions.

**Problem definition 2:** Users are reporting that they are having to sit and wait a long time to get responses from application X.

**Solution:** Perhaps the WAN connection is the problem. If so, replicating the application to a server in Delhi would be a solution, and perhaps users could have local replicas of the database on their workstations, thereby eliminating the need for synchronous access to the database in Los Angeles, and taking the WAN connection out of the picture.

Perhaps the database design is the problem. If so, the database design could be modified to improve performance.

Perhaps the size of the database is the issue. If so, the database could be broken down into smaller databases, or dormant documents could be archived to an active archive database.

**Analysis:** In this case, the problem is defined from the perspective of facts, rather than conclusions. This leads to many more solutions, and increasing bandwidth is not necessarily one of them.

## Documenting your results

After completing your brainstorming exercise, where you wrote every idea down, it is time to document what you came up with. What is your ideal architecture? Express this in a way that is meaningful to you and your team. This may include diagrams, descriptions, high-level overviews, strategies, specifications, even presentations. Document your results in a way that makes sense and captures the essence of your aspirations for your environment.

You will be using your results at a later time to help you make decisions about what activities you will need to complete to deploy Notes and Domino. Do not worry if this is very ambitious at this stage. You will compare ideal to real soon enough. Remember that this is an aspiration, and that it is meant as a guide to help you plan for a successful Notes and Domino 8 deployment.

## 2.2 Evaluating your existing deployment

To have a successful upgrade, you must first understand your starting point and where you expect to be in the next six months to two years. Many deployments of Lotus Notes and Domino have grown organically over the years, with upgrades and additions occurring in an incremental fashion. Mergers and acquisitions often simply combine existing infrastructures together. New features are deployed by adding in additional servers. Bandwidth is added as needed. Generally, this incremental upgrade approach tends to be a tactical maneuver, and the speed of change does not often afford the opportunity to take a step back, understand what you have, and imagine what could be from a strategic perspective.

The project team, as described in 2.1.1, “Identifying team members” on page 16, should consider each of the areas on concern described in this section. The information gained in the exercise, while it does consider future needs, forms the starting point from where you will begin to plan your deployment.

Best practices suggest that a periodic review of needs should be undertaken, and the existing infrastructure assessed on the basis of how well it meets those needs. Ultimately, a *best of breed* deployment should be designed and used as an aspiration for improving the existing infrastructure. Planning for an enterprise-wide software upgrade is a good time to take that step back, and imagine how you might better meet the needs of your business by empowering your workforce with more efficient, better-targeted tools, allowing them to use the correct tool for each job. It is also a good time to consider taking advantage of technology improvements and understanding what it would take to implement those improvements. This section is intended to guide you through the process of evaluating where you are, the first step in planning a deployment.

### **A word about best practices**

In the IT community, the term *best practice* is used widely and broadly. In general, a best practice is an accepted method of performing a particular task. In general, best practices may encompass actions or approaches that improve efficiency, fault tolerance, capacity, or availability. However, for one reason or another, best practices may not always be implemented in an enterprise, even if they are recognized and acknowledged by the resources supporting that enterprise.

When reviewing your environment, you should strive for accuracy above all. If you assume that a stated and accepted best practice is in use in your enterprise, be sure to test that assumption before documenting your results. For example, suppose your CIO has a stated policy that your organization clusters all mail servers. When constructing your infrastructure diagrams, it is advisable to confirm the clustermate for each mail server by reviewing the Domino directory. You may find some exceptions to your own organizations best practices, and those should be documented without bias as you evaluate your environment.

## **2.2.1 Organizational concerns**

Every organization is different and has different needs and approaches. The first step in evaluating your existing deployment is understanding your organizational structure and how it affects your needs. The following checklist has questions you should answer about your organization, including plans for the immediate future.

- ▶ In how many countries do you do business?
- ▶ How many locations?
- ▶ How many employees?

## **2.2.2 User population**

The types of users in your organization, as well as the distribution of each type, should be considered when evaluating your existing deployment. Examples of types of users you may have in your organization include:

- ▶ Executives
- ▶ Desktop users
- ▶ Laptop users
- ▶ Kiosk users
  - Domino Web Access
  - Notes multi-user

- ▶ Other mobile users
  - Telecommuters
  - Mobile device users

The types of users you have in your organization will impact your decisions about which clients you deploy and how you distribute your software.

### 2.2.3 Network/infrastructure

When evaluating the readiness of your infrastructure for a Notes and Domino upgrade, you should consider the following areas. Again, planning should consider expected changes/increases/decreases over the next two years or so. Areas of concern when evaluating your network/infrastructure include:

- ▶ Geographic distribution of users and servers
- ▶ Network topology
- ▶ Current network bandwidth usage
  - Within each geographic location
  - Between locations
- ▶ Network bandwidth availability and cost for each geographic location
- ▶ Storage subsystems

Depending on the history of your organization and deployment, there may be other areas of concern as well.

When reviewing your network infrastructure readiness, it is also important to understand how well your infrastructure meets your current needs. For example, if you are currently at capacity on your networks or on your WAN connections, you may already be at the point where you need to add capacity just to keep up with current needs.

**Tip:** The information you collect during your infrastructure review should be used to update existing diagrams of your environment or to create diagrams if they do not yet exist.

Documentation should also include:

- ▶ OS and software versions
- ▶ Mail routing topology
- ▶ Replication topology
- ▶ Customizations
- ▶ Standard deployments (client and server)
- ▶ Network links (LAN/WAN, plus capacity)
- ▶ Backup and storage topology
- ▶ Other data stores, such as WebSphere Portal Servers, DB2 servers, and WAS servers
- ▶ VPNs, DMZs, firewalls
- ▶ Anything else you deem relevant

**Note:** The last two to three years have seen explosive growth in Telecom infrastructure in many regions around the world, providing increased bandwidth, reliability, and competition. Organizations with offices in high-growth areas may want to review their existing telecom infrastructures in light of this growth.

## 2.2.4 Anticipating future needs

While no one can see the future, planned changes should be considered, and certain things can be expected to increase. For instance, some companies regularly acquire new companies, or are expanding operations in certain regions. These changes should be considered when evaluating the current environment. Additionally, experience has shown us that as users become familiar with newer technology, their usage increases. When planning a new deployment, again, it is important to consider what your needs will be, not just what they are today.

Things to be considered:

- ▶ Planned mergers, acquisitions, divestitures
- ▶ Planned or expected hiring
- ▶ Increased usage of products due to new features
- ▶ Increased traffic on network/servers
- ▶ Increased mailfile or application size
- ▶ Planned changes in corporate strategy

Anticipating future needs is a very important part of understanding where you are now. They become part of the foundation for where you want to be. In other words, you cannot build for where you are now, because you will fail to meet the needs of the foreseeable future. You have to build for where you expect to be down the road if you want your deployment to be successful.

Again, in order to ensure that you have the correct insight, it is critical to ensure that all stakeholders are represented on the project team. Leaving out representation from the part of your organization that does resource planning may lead to a deployment that is unable to fully meet the needs of your organization.

## 2.2.5 Other concerns

There may be other things at play external to your environment, such as business pressures or government regulations, which may impact your deployment choices. These are unique for every organization, but some examples of these types of items include:

- ▶ Changes to Daylight Saving Time observance in 2006 and 2007
- ▶ Italian privacy regulations in 2005
- ▶ U.S. Federal Information Processing Standards (FIPS) compliance
- ▶ Canadian laws requiring software to be in French as well as English

There may be other externally imposed types of considerations as well. When evaluating your enterprise, you should include resources that are cognizant of these external forces, such as the office of your chief information officer (CIO), chief technology officer (CTO), or equivalent.

## 2.2.6 Considerations for upgrading an existing Domino infrastructure

In addition to the general areas of concern listed in this section, when you are evaluating an existing Domino infrastructure, there are some additional areas to be reviewed and evaluated. You should evaluate your current Domino environment thoroughly when planning your upgrade. Some things you should consider include:

- ▶ Domain and directory configuration
  - The number of domains you have
  - The types of domains you have
  - The types of directories in use

- ▶ Mail routing topology
- ▶ Replication topology
- ▶ Application topology
- ▶ User and server registration process used in your organization
  - Naming standards for users and servers
  - Domino certificates for organization and organizational units
- ▶ Domino software upgrade procedures currently used in your organization
- ▶ Hardware age and capacity
- ▶ Usage patterns on each server
- ▶ Template customization
- ▶ Third-party software
  - Virus scanning
  - Spam scanning
  - Backup
  - Monitoring
  - Mobile device support

The goal of the review of your existing Domino environment is to understand whether it is meeting your needs and how close to capacity your environment is. Typically, older enterprise deployments have grown *organically* and incrementally, as the needs of the organization have changed. Growth in the size and maturity of an organization, mergers, acquisitions, and divestitures all have an effect on deployments, with changes typically being tactical and incremental, rather than strategic.

When reviewing your Domino environment, you may find a need for some new hardware or added capacity. You may also see an opportunity for server consolidation. For information about consolidating your Domino environment, see *Domino 7 Server Consolidation: Best Practices to Get the Most Out of Your Domino Infrastructure*, REDP-4181-00, which can be found at the following URL:

<http://redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/redp4181.html>

For more information about deploying Domino 8 on new hardware, see 2.3.3, “Planning a new deployment of Notes and Domino 8” on page 38.

For a checklist to use when sizing a new Domino server, see Techpaper 7008851, “Notes/Domino Best Practices: Sizing,” available at this URL:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg27008851>

## Considerations for mail servers

For many organizations, e-mail is considered a mission-critical application. For this reason, special attention should be given to the evaluation of your mail infrastructure. When assessing your Domino mail servers, you should consider each of the following areas:

- ▶ General server performance
  - Responsiveness
  - Average and peak CPU utilization
  - Average and peak memory utilization
  - Average and peak transactions per minute
  - Average and peak disk utilization
- ▶ Total disk usage for mail files
- ▶ Average mail file size
- ▶ Largest mail files
- ▶ Current quota practices
- ▶ Current archiving practices
- ▶ Average number of messages processed each day

- ▶ Average number of concurrent users
- ▶ Peak usage times
- ▶ Usage of local replica model
- ▶ Inbox size
- ▶ Attachment compression
- ▶ Standard settings and configurations
- ▶ Use of Web-based mail
  - HTTP
  - IMAP
  - SSL
  - RSS

You are probably already monitoring many of these things, and you may have historical data to show you how disk space usage and CPU utilization has increased over time. You may also track your top 10 largest mail files, and track the overall disk footprint of mail files on your servers. You may even have implemented an archiving and quota strategy to keep your mail files at or below a specified size, as well as a local replica model to improve user experience and decrease user impact in the event of network or server issues.

Wherever you are today, understanding the work that your mail servers do is a very important part of assessing your overall Domino environment.

## **Considerations for application servers**

From a similar perspective, you should consider your application servers carefully. In some ways, your application servers are more difficult to assess than your mail servers because of different usage patterns and differences in application design. However, many of the same things should be assessed in your review.

Information to collect while assessing your application environment includes:

- ▶ List of all application servers in your environment
- ▶ List of any mixed-use servers (mail and application)
- ▶ Locations of critical and enterprise-wide applications
- ▶ List of servers dedicated to a specific application
- ▶ Inventory of all non-mail applications
- ▶ Usage patterns
  - Critical and enterprise-wide applications
  - Application servers
- ▶ Use of Web applications
  - HTTP
  - SSL
  - RSS
- ▶ Replication topology
- ▶ Attachment handling
- ▶ Any specialized functions or features used by applications
- ▶ Backup methodology
- ▶ Dependencies between databases in complex applications (such as lookups)
- ▶ Use of applications to send mail

Using the database catalog on your application servers, or on any server on which you allow users to create databases, is a good way to develop your application inventory. The catalog also provides information such as ACL listings and information about reads and writes on the database. Additionally, you can redirect the output of a directory list command on the operating system to develop a list of all databases and applications on your servers.



Because of the varied nature of applications, there may well be other concerns as well. It is important to work closely with your development teams to gain a full understanding of your application environment.

### Third-party applications

Like many organizations, you may have third-party applications in place in your environment, such as anti-spam, anti-virus, backup, and monitoring. When reviewing your Domino environment, it is important to fully understand the third-party applications you have in your environment.

Things to consider while assessing the use of third-party applications in your environment include:

- ▶ Which third-party applications you have in place
- ▶ Versions of each third-party application
- ▶ Dependencies for each third-party application
- ▶ Interaction between Domino and third-party applications

There may well be other concerns, depending on the nature of the third-party applications you have in place. Because of the variety of applications and vendors, it is important to work closely with the teams supporting these applications to fully understand their usage in your environment.

### Template customization

When evaluating your environment, you should also consider any customizations that you have made to templates. It is possible that customizations have been made to mail templates, directory templates, and application templates that ship with Notes and Domino, such as teamroom and discussion. You need to consider any customizations that have been made, and determine whether any customizations need to be carried forward into the templates that ship with Notes and Domino 8.

If you do have template customizations, best practices suggest that you create a new custom template based on the template that ships with the version of code you deploy. This may involve re-coding certain changes to ensure full compatibility.

For more information about considerations for template management, see 3.3.4, “Review your template strategy” on page 47.

### Evaluation questionnaire: existing Domino environment

Table 2-1 provides a checklist of things to consider based on the areas listed in this section.

*Table 2-1 Existing Domino environment evaluation questionnaire*

Area of concern	Things to consider
Stakeholders	CTO/CIO Users Client/desktop software team Deployment team Domino admin/operations team Help desk/support team Network admin Storage admin Other admins (Portal, WAS, DB2, Web servers)

Area of concern	Things to consider
Organizational concerns	Countries in which you do business Number of locations/facilities Number of users
Domino environment - general	Domain and directory configurations The number of domains you have The types of domains you have The types of directories in use Replication topology Naming standards Domino certificates in use (O, OUs) User registration process used in your organization Domino software upgrade procedures currently used in your organization Hardware age and capacity Template customization
Domino environment - mail	Locations of key mail files (executives) Average mail file size per server Largest mail files per server Archive strategy Quota strategy Mail routing topology Usage patterns on each server Average number of messages processed each day Average concurrency rate Peak usage times Usage of local replica model Inbox size Attachment compression Standard settings and configurations Use of IMAP/HTTP/SSL/RSS for mail
Domino environment - applications	Location of critical applications Location of enterprise-wide applications Usage patterns on each server Any servers dedicated to a specific application Use of HTTP/SSL/RSS for applications Replication topology Attachment handling Specialized functions or features used by applications Backup methodology Dependencies between databases in complex applications (such as lookups) Use of applications to send mail
User types	Executives Desktop Laptop Kiosk: DWA Kiosk: Notes multi-user Roaming users Telecommuters Mobile device users

Area of concern	Things to consider
Network/Infrastructure	Geographic distribution of users and servers Network topology Current network bandwidth usage in each geographic location and between locations Network bandwidth availability and cost for each geographic location Storage subsystems
Documentation	Infrastructure diagrams Standard configurations (client and server) Lists of customizations Procedure documents Organizational best practices
Other concern	Governmental regulations Business pressures Other data stores you may want to utilize
Future needs	Planned mergers, acquisitions, divestitures Planned or expected hiring Increased usage of products due to new features Increased traffic on network/servers Increases in mail file or application size Planned changes in corporate strategy
Third-party applications (such as backup, anti-virus, anti-spam, monitoring, mobile)	Third-party applications you have in place Versions of each third-party application Dependencies for each third-party application Interaction between Domino and third-party applications

## 2.2.7 Considerations for a new Domino deployment

When evaluating your existing environment in order to plan a new deployment of Domino, the process is essentially the same as for an existing Domino infrastructure upgrade. The additional concerns include:

- ▶ Designing your Domino architecture
  - Planning your hierarchy
  - Determining your organizational structure
- ▶ Setting your naming standards
- ▶ Defining your topologies
  - Mail routing
  - Replication
- ▶ Planning your administration strategy
  - Centralized or regional
  - User management
  - Server management
  - Application management

## Environment evaluation questionnaire: new Domino deployment

Table 2-2 is an environment evaluation questionnaire for new Domino deployment.

*Table 2-2 Existing Domino environment evaluation questionnaire*

Area of concern	Things to consider
Stakeholders	CTO/CIO Users Client/desktop software team Deployment team Domino admin/operations team Help desk/support team Network admin Storage admin Other admins (Portal, WAS, DB2, Web servers)
Organizational concerns	Countries in which you do business Number of locations/facilities Number of users
User types	Executives Desktop users Laptop users Kiosk: DWA Kiosk: Notes multi-user Roaming users Telecommuters Mobile device users
Network/infrastructure	Geographic distribution of users and servers Network topology Current network bandwidth usage in each geographic location and between locations Network bandwidth availability and cost for each geographic location Storage subsystems
Documentation	Infrastructure diagrams OS and software versions Standard configurations (client and server) Lists of customizations Procedure documents Organizational best practices
Other concerns	Governmental regulations Business pressures Other data stores you may want to utilize
Future needs	Planned mergers, acquisitions, divestitures Planned or expected hiring Increased usage of products due to new features Increased traffic on network/servers Increases in mail file or application size Planned changes in corporate strategy
Third-party applications	Backup Spam Virus scanning Monitoring

## 2.3 Plotting your course

By working through the checklists earlier in this chapter, you have now answered the first two questions:

- Where do you want to be?
- Where are you now?

Now, you are ready to answer the final question: What is it going to take to get you there?

In essence, this part of the process is the easiest. You have all of your background information, you know what you need to accomplish, and essentially you just need to apply this to getting to where you want to be. This section will be your map.

### 2.3.1 Planning to upgrade your existing Domino servers

When planning to upgrade your existing Domino infrastructure, it is important to understand what is needed to get your environment ready to accept Domino 8.

#### Understanding prerequisites

Preparing for an upgrade includes understanding and meeting all prerequisites for the upgrade, all the things that need to be in place before you begin the upgrade.

Things to consider at this stage include:

- Does your operating system meet the minimum requirements?
- Does your hardware meet the minimum requirements?
- Do you need to upgrade existing server hardware?
- Do you need to add or replace server hardware?
- Do you need to add more network bandwidth?
- Do you need to add more storage capacity?
- Does it make sense to consolidate?

The information that you have gathered in the infrastructure assessment should be used to help determine what actions will be required to meet the prerequisites to deploy Notes and Domino 8.

#### *Evaluating server readiness*

The tables below compare system requirements from Domino 7 to Domino 8 for all supported platforms, to allow you to determine if your hardware needs to be upgraded or replaced. The Domino 7 requirements are based on system requirements for Domino 7.0.2, as listed in the release notes for Notes and Domino 7.0.2.

Note that with Domino 7.0.2, additional platform support was added to enable you to prepare your systems for Domino 8 prior to its release. This allows you to bridge any gaps you find in your preparedness now, in advance of deploying 8, and removes the need to perform hardware, operating system, and Domino upgrades all at once, allowing you to segment your upgrade activities in the most appropriate manner for your environment.

Tables 2-3, 2-4, 2-5, 2-6, 2-7, 2-8, and 2-9 compare the system requirements of Domino 7.0.2 and 8 on all supported platforms.

**Important:** Note that with Domino 8, support has been discontinued for older versions of some operating systems that are out of vendor support. In most cases, these are replaced by supported versions, as shown in the following tables.

Table 2-3 Comparison of system requirements from Domino 7 to Domino 8 on Windows

	Domino 7.0.2	Domino 8
Operating system	Windows 2000 Windows 2003	Windows 2003
Memory	256 MB minimum 512 MB or more recommended per CPU	512 MB minimum 512 MB or more recommended per CPU
Disk space	1.5 GB minimum per partition, more recommended	1.5 GB minimum per partition, more recommended
Processor	Pentium® or better	Pentium or better

**Note:** Windows 2000 is not supported for Domino 8.

Table 2-4 Comparison of system requirements from Domino 7 to Domino 8 on AIX

	Domino 7.0.2	Domino 8
Operating system	AIX 5.2 AIX 5.3	AIX 5.3
Memory	512 MB minimum 512 MB or more recommended per CPU	512 MB minimum 512 MB or more recommended per CPU
Disk space	1.5 GB minimum per partition, more recommended	1.5 GB minimum per partition, more recommended
Processor	PowerPC®	PowerPC

**Note:** AIX 5.2 is not supported for Domino 8.

Table 2-5 Comparison of system requirements from Domino 7 to Domino 8 on Solaris™

	Domino 7.0.2	Domino 8
Operating system	Solaris 9 Solaris 10	Solaris 10
Memory	512 MB minimum 512 MB or more recommended per CPU	512 MB minimum 512 MB or more recommended per CPU
Disk space	1.5 GB minimum per partition, more recommended	1.5 GB minimum per partition, more recommended
Processor	UltraSPARC	UltraSPARC III or better

**Note:** Solaris 9 is not supported for Domino 8.

Table 2-6 Comparison of System Requirements from Domino 7 to Domino 8 on Linux

	Domino 7.0.2	Domino 8
Operating System	Novell SLES 8 Novell SLES 9 Novell SLES 10 (32-bit) Novell SLES 10 (64-bit) Red Hat RHEL 4 (32-bit) Red Hat RHEL 4 (64-bit)	Novell SLES 10 (32-bit) Novell SLES 10 (64-bit) Red Hat RHEL 5 (32-bit) Red Hat RHEL 5 (64-bit)
Memory	512 MB minimum 512 MB or more recommended per CPU	512 MB minimum 512 MB or more recommended per CPU
Disk Space	1.5 GB minimum per partition, more recommended	1.5 GB minimum per partition, more recommended
Processor	Pentium or better	Pentium or better

**Note:** SUSE Linux Enterprise Server 8 and 9, and Red Hat RHEL 4 are not supported for Domino 8.

Table 2-7 Comparison of system requirements from Domino 7 to Domino 8 on System i™

	Domino 7.0.2	Domino 8
Operating system	i5/OS® V5R3 i5/OS V5R4	i5/OS V5R4
Memory	288 MB minimum 512 MB or more recommended per Domino server	512 MB minimum 512 MB or more recommended per Domino server
Disk space	1.6 GB minimum 2 GB or more recommended	2 GB minimum 4 or more drives recommended
Processor	eServer™ i5 model 520 and later	iSeries® 270 and 8XX eServer i5 model 520-901 and later  iSeries 270, 800-2464, 810-2465, and eServer i5 520-0901 recommended for Notes-based mail or light applications only  eServer i5 520-902 or later recommended for CPU-intensive workloads

**Note:** iSeries 800-2463 and eServer i5 520-0900 are not supported for Domino 8. i5/OS V5R3 is no longer supported for Domino 8.

Table 2-8 Comparison of system requirements from Domino 7 to Domino 8 on System z™

	Domino 7.0.2	Domino 8
Operating system	z/OS® Version 1, Release 5 or later z/OSe Version 1, Release 5 or later	z/OS Version 1, Release 7 or later; z/OSe Version 1, Release 7 or later

	Domino 7.0.2	Domino 8
Memory	1 GB Minimum 2 GB or more recommended	1 GB Minimum 2 GB or more recommended
Disk space	Three 3390-3 volumes minimum	Three 3390-3 volumes minimum
Processor	Any processor that supports your release of z/OS	Any processor that supports your release of z/OS

**Note:** z/OS Version 1, Release 5 is no longer supported for Domino 8.

Table 2-9 Comparison of system requirements from Domino 7 to Domino 8 on Linux for System z

	Domino 7	Domino 8
Operating system	Novell SLES 8 on System z (31-bit) Novell SLES 9 on System z (64-bit) Novell SLES 10 on System z (64-bit) Red Hat RHEL 4 on System z (64-bit)	Novell SLES 10 on System z (64-bit) Red Hat RHEL 5 on System z (64-bit)
Memory	1 GB minimum 2 GB or more recommended	1 GB minimum 2 GB or more recommended
Disk space	2.5 GB minimum, more recommended	2.5 GB minimum, more recommended
Processor	Any processor that supports your release of Linux of System z	Any processor that supports your release of Linux of System z

**Note:** Novell SLES 8 on System z (31-bit), Novell SLES 9 on System z (64-bit), and Red Hat RHEL 4 on System z (64-bit) are no longer supported for Domino 8.

## Consolidation

When reviewing your Domino environment, you may have found your environment in need of some level of consolidation, such as domain consolidation or server consolidation. If you are considering consolidation, it would be wise to conduct the consolidation as part of your prerequisite activities. While consolidation is not a prerequisite, best practices suggest that, should you want to consolidate, you should do so before upgrading, to avoid making multiple changes at once. Then upgrade those servers to Domino 8 only after the consolidation has been successful.

For more information about consolidation, see *Domino 7 Server Consolidation: Best Practices to Get the Most Out of Your Domino Infrastructure*, REDP-4181, available at the following URL:

<http://www.redbooks.com/Redbooks.nsf/RedbookAbstracts/redp4181.html>



## Mail file management

When reviewing your mail servers, you may have found some things you would like to change. Are there things that you would like to implement that you have not yet implemented? Some things you may want to consider include:

- ▶ Managing user mail file size
  - Implementing quotas
  - Implementing archiving
  - Managing template size
  - Managing the size of user inboxes
- ▶ Implementing a local replica model

For more information about management of large mail files, see the developerWorks® article “Best Practices for large Lotus Notes mail files,” which discusses the impact of mail file size on performance, as well as the impact of inbox size on server performance. The article can be found at this URL:

<http://www.ibm.com/developerworks/lotus/library/notes-mail-files/>

This article suggests that smaller inboxes may improve server performance, and it also suggests the use of archiving and quotas to assist in addressing mail file growth. While archiving and quotas have been around for a while, Domino 8 has introduced functionality to assist in maintaining smaller inboxes. For more information see 9.4, “Inbox maintenance” on page 249.

Another consideration for mail servers is the impact of the mail template on mail file size and total disk utilization. Table 2-10 shows the size of the out-of-the-box mail template in 7 and 8. The third column shows the impact of using the design note compression that ODS 48 makes available.

*Table 2-10 Out-of-the-Box Mail Template size comparison*

	Mail 7 template	Mail 8 template (ODS 43)	Mail 8 template (ODS 48 with design note compression)
Template only	17 MB	25 MB	11 MB
Template in 1,000 mail files	17 GB	25 GB	11 GB
Net change per 1,000 mail files	---	+8 GB	-6 GB

As the table clearly illustrates, on a server with 1,000 mail files, upgrading the Domino 8 could increase total disk usage by 8 GB. However, enabling design note compression could actually save you 6 GB over what you would be using today, significantly decreasing your disk overhead on a per-mailfile basis. For more details on design note compression, see “Design compression” on page 279.

For a comparison of local and server-based mail, see the developerWorks article “Lotus Notes Mail: comparing Server-based mail and local replica mail” at the this URL:

<http://www.ibm.com/developerworks/lotus/library/serverlocalmail/>

This article discusses the advantages and disadvantages of using local mail replicas, and suggests that in many situations, a local replica model is a better choice.

## Application considerations

From an application perspective, there are a few things to consider when planning to upgrade your application servers. While it is not necessary to rewrite your pre-existing applications, we strongly recommend testing your applications on Domino 8 before upgrading your production application servers.

In previous steps, you collected the information about your applications. Using this information, you can target your testing appropriately. Additionally, once your application has been tested and the application server upgraded, you can consider modifying the application to take advantage of new application development functionality in Domino 8.

**Important:** We advise following the recommended upgrade path, which suggests upgrading your application servers last, after you have upgraded your mail servers and Notes clients.

For more information about the recommended upgrade path, see 3.4, “Defining the deployment sequence” on page 49.

### *Leveraging new application development functionality*

While it is not necessary to upgrade your applications to run them in a Lotus Notes and Domino 8 environment, you may want to leverage the new application development functionality available with Domino 8.

At this stage, you may want to identify the new application development features you would like to leverage in your Domino applications. For more information about this, see Chapter 12, “New application development features” on page 399.

### Third-party applications

Your third-party applications also have prerequisites, and server readiness includes making sure that your environment meets the prerequisites for supported versions of your third-party applications. In some cases, you may need to upgrade to a later version of a third-party application to support Domino 8. Understanding the version and patch requirements for your third-party applications is critical to your successful deployment.

## 2.3.2 Planning to deploy Lotus Notes 8

The first thing to consider when planning to deploy Lotus Notes 8 is whether your client base meets the minimum requirements. While Lotus Notes and Domino 7 was a server-centric release, Lotus Notes and Domino 8 are client-centric releases. Many new capabilities have been added, and the system requirements for Lotus Notes 8 are significantly greater than what was required to run Lotus Notes 7.

**Note:** Note that many base model notebook and desktop computers available from leading PC makers today meet the minimum requirements for Lotus Notes 8.

### Understanding prerequisites

When planning to upgrade existing clients, whether they are Notes clients or Domino Web Access clients, you need to understand the system requirements for deploying the new versions. The tables that follow provide guidance in understanding your hardware and software prerequisites.

### ***Evaluating workstation readiness: Lotus Notes 8***

Table 2-11 compares system requirements for Lotus Notes 7 and Lotus Notes 8.

*Table 2-11 Comparison of system requirements on Notes 7 and Notes 8*

	Notes 7	Notes 8
Memory	128 MB minimum 256 MB or more recommended (Windows 2000 and Windows XP)	Windows XP: 512 MB minimum, 1 GB or more recommended  Windows Vista®: 1 GB minimum, 1.5 GB or more recommended  Linux: 512 MB minimum, 1 GB or more recommended
Disk Space	275 MB required	Windows: 900 MB required, more recommended  Linux: 1.5 GB minimum, more recommended
Processor	Pentium or better	Pentium or better

**Attention:** A basic configuration of Notes 8 is available for low-memory client machines. Workstations running the basic configuration of Notes 8 are unable to take advantage of components built on the Eclipse framework, such as composite applications, productivity tools, the sidebar, vertical preview pane, and mail improvements related to recent contacts, such as drop-down addressing.

For more information about what Notes 8 features are available with this configuration, see "Features not available in "basic" configuration of Notes 8" in the Notes and Domino 8 release notes.

### ***Evaluating workstation readiness: Domino Web Access 8***

The following tables provide comparisons of system requirements for Domino Web Access 7 and 8 on Windows, Linux, and Macintosh.

Table 2-12 compares system requirements for Domino Web Access 7 and 8 on Windows.

*Table 2-12 Comparison of system requirements for Domino Web Access 7 and 8 on Windows*

	DWA 7	DWA 8
Client operating system	Windows 2000 Windows XP Professional	Windows XP Windows Vista
Browser	Internet Explorer® 6.0  Mozilla Firefox 1.0.x and 1.5.0.2 or later Note: Does not support Lotus Sametime awareness	Internet Explorer 6 Internet Explorer 7 Mozilla Firefox 2.0 or later
Memory	128 MB minimum 512 MB or more recommended	128 MB minimum 512 MB or more recommended
Processor	Pentium III 400 MHz minimum, Pentium IV 1.0 GHz or better recommended	Pentium III 400 MHz minimum, Pentium IV 1.0 GHz or better recommended

Table 2-13 compares system requirements for Domino Web Access 7 and 8 on Linux.

*Table 2-13 Comparison of system requirements for Domino Web Access 7 and 8 on Linux*

	<b>DWA 7</b>	<b>DWA 8</b>
Client operating system	Novell SuSE Linux Desktop (SLD) 8 Novell Linux Desktop (NLD) 9 Novell Red Hat Enterprise Linux Desktop (RHELD) 4	Novell Linux Desktop (NLD) 10 Linux RedHat RHEL 5.0
Browser	Mozilla Firefox 1.0.x and 1.5.0.2 or later Mozilla 1.7.x, but without Domino Off-Line Services (DOLS) and local archiving	Mozilla Firefox 2.0 or later
Memory	192 MB minimum 512 MB or more recommended	192 MB minimum 512 MB or more recommended
Processor	Pentium III 500 MHz minimum, Pentium IV 1.0 GHz or better recommended	Pentium III 500 MHz minimum, Pentium IV 1.0 GHz or better recommended

Table 2-14 compares system requirements for Domino Web Access 7 and 8 on Macintosh.

*Table 2-14 Comparison of system requirements for Domino Web Access 7 and 8 on Macintosh*

	<b>DWA 7</b>	<b>DWA 8</b>
Memory	256 MB minimum 512 MB or more recommended	256 MB minimum 512 MB or more recommended
Client operating system	OS 10.4.x	OS 10.4.x
Browser	Mozilla 1.7x Mozilla Firefox 1.0.x and 1.5.0.2 or later Note: Does not support Domino Off-Line Services (DOLS), local archiving, or Lotus Sametime awareness	Mozilla Firefox 2.0 or later Note: Does not support Domino Off-Line Services (DOLS), local archiving, or Lotus Sametime awareness
Processor	G4 1.0 GHz minimum, 1.25 GHz or better recommended	G4 1.0 GHz minimum, 1.25 GHz or better recommended

### 2.3.3 Planning a new deployment of Notes and Domino 8

For a new deployment, you need to consider many of the same things as when planning to upgrade an existing infrastructure:

- ▶ Organizational structure
- ▶ Network/infrastructure
- ▶ User types

But you also need to plan your Domino environment, considering:

- ▶ Architecture
- ▶ Naming Standards for users and servers
- ▶ Domain structure
- ▶ Domino server platform
- ▶ Third-party products you may need:

- Backup
- Anti-virus
- Anti-spam
- Monitoring
- Mobile device support

### 2.3.4 A word about pilot deployment

When working with new software, whether a new version or a completely new product, many companies include a *pilot* phase in their project plans. In a pilot, a smaller, representative group of servers and users are upgraded. Often, pilot projects are used to improve deployment procedures and practices before deploying to the enterprise, and they allow the project team the opportunity to test assumptions and fine-tune procedures.

The knowledge and experience gained during a pilot deployment can dramatically improve results of a production deployment, because it can uncover unanticipated problems in the environment, and allow them to be resolved during the pilot phase, rather than after the product has gone into wide production. Additionally, pilot projects typically have a specified duration, and at the end of the specified time period, the success of the pilot is evaluated, and lessons-learned are captured and documented.

Some organizations choose to conduct their pilot deployment using the *dot zero* release of new software, but standardize their wide-scale deployment on later point releases of the software. This approach may work for you, as it has the benefit of allowing your organization to take advantage of any fixes for problems that may be discovered after the initial release of the product.

### 2.3.5 Creating a communication and training plan

When making any changes to your environment that could impact users, it is advisable to communicate the nature of the changes to the community, particularly if user action is required either before or after the changes occur.

If you are planning to implement a new product or take advantage of new features, some level of training may be needed for some or all of the stakeholder community.

The following sections discuss some of the groups that may be impacted by your Domino 8 deployment.

#### Users

Users will be affected because they will be using a new interface, with new features available to them. User needs should be considered when determining your training and communication needs, particularly if any action will be required on the users' part. Additionally, users with a more complete understanding of the product may open fewer help desk tickets, decreasing the burden on your help desk personnel, and potentially lowering your help desk costs.

For more information about Lotus Notes 8, see Chapter 6, "Lotus Notes 8 client features" on page 113.

#### Client/desktop software team

The team tasked with deploying Notes 8 should definitely be considered for your communication and training plan. This team will be responsible for implementing the software

based on the needs you identify, such as type of user (as discussed in 2.2.2, “User population” on page 22), and which client features you plan to implement.

For more information about deploying Lotus Notes 8, see Chapter 4, “Deploying the Notes 8 client” on page 63.

### **Domino Administrators/operations staff**

Your administrators and operations staff will also be affected. They will be responsible for actually installing the Domino server software onto your servers, and they will be managing steady-state operations and problem response. They need to understand what is new in Domino 8, and whether any changes will affect their job duties.

For form information about new features for administrators, see Chapter 9, “New administration features” on page 241.

For information about the tasks required to upgrade your Domino servers, see Chapter 3, “Deploying the Domino 8 server” on page 45.

### **Help desk**

The people who respond to problems reported in your environment need to be considered when developing your communications and training plan. From the people in the call center who answer the phone to the people who have to perform problem determination and interface with Lotus technical support, all will be affected, and will have to understand how to perform their job duties when addressing issues with the deployment.

### **Developers**

Developers should also be considered, as you may have plans to take advantage of some of the new application development capabilities in Domino 8, such as composite applications. In order to leverage these new capabilities, your developers must understand these functions.

For more information about the new features for developers, see Chapter 12, “New application development features” on page 399.

### **Network/operating system administrators**

Communicating with *ancillary* team members is particularly important, because Domino is completely dependent on the network infrastructure. Network administrators need to be aware of any prerequisites that must be met before you begin deploying Domino 8. In this context, prerequisites may include anything from operating system patch levels to additional bandwidth, based on your assessed needs.

### **Storage team**

In the enterprise, most organizations have some sort of external or remote storage, such as a Storage Area Network (SAN) or Network Attached Storage (NAS). If your Domino 8 deployment will take advantage of external storage, your storage team will need to be included in the communications plan.

## **2.4 System requirements**

This section includes the supported platforms for Lotus Notes and Domino 8, as well as the minimum system requirements.

## 2.4.1 Lotus Notes 8 supported platforms

This section contains the supported platforms for Lotus Notes 8.

### Microsoft Windows

The following are supported platforms for Lotus Notes 8:

- ▶ Microsoft Windows XP Professional, Service Pack 2
- ▶ Microsoft Windows XP Tablet Edition
- ▶ Microsoft Windows Vista Ultimate with Aero™
- ▶ Microsoft Windows Vista Ultimate Tablet Edition

On Windows XP, 512 MB RAM is required at minimum, with 1 GB RAM or higher recommended.

On Windows Vista, 1 GB RAM is required at minimum, with 1.5 GB RAM or higher recommended.

### Linux

The supported Linux platforms for Lotus Notes 8 are:

- ▶ Novell SUSE Linux Enterprise Desktop (SLED) 10 XGL™.
- ▶ RedHat Enterprise Linux (RHEL) 5 Desktop. XGL and SELinux must be disabled

For Linux, 512 MB RAM is required at minimum, with 1 GB RAM or higher recommended.

**Tip:** For comparisons of system requirements in Lotus Notes 7 and 8, refer to “Evaluating workstation readiness: Lotus Notes 8” on page 37.

## 2.4.2 Domino Designer 8, Domino Administrator 8 supported platforms

The supported platforms for Domino 8 Designer and Domino 8 administrator are:

- ▶ Microsoft Windows XP Professional, Service Pack 2
- ▶ Microsoft Windows Vista Ultimate with Aero

On Windows XP, 512 MB RAM is required at minimum, with 1 GB RAM or higher recommended.

On Windows Vista, 1 GB RAM is required at minimum, with 1.5 GB RAM or higher recommended.

## 2.4.3 Domino Web Administrator 8 supported platforms

The supported platforms for Domino Web Administrator 8 are:

- ▶ Microsoft Windows
  - Internet Explorer 6 and 7
  - Mozilla Firefox 1.4.x, 1.5.x, 2.0.x, or later
- ▶ Linux
  - Mozilla Firefox 1.4.x, 1.5.x, 2.0.x, or later

## 2.4.4 Domino Web Access 8 supported platforms

The requirements for Domino Web Access 8 are listed below.

**Important:** Domino Web Access does not work if JavaScript™ or session cookies are disabled.

### Client hardware requirements

Recommended for better performance:

- ▶ Windows - Pentium IV 1 GHz with 512 MB of memory
- ▶ Linux - Pentium IV 1 GHz with 512 MB of memory
- ▶ Macintosh - G4 1.25 GHz with 512 MB of memory

Minimum requirements:

- ▶ Windows - Pentium III 400 MHz with 128 MB of memory
- ▶ Linux - Pentium III 500 MHz with 192 MB of memory
- ▶ Macintosh - G4 1 GHz 256 MB of memory

### Client operating systems and supported browsers

This section lists the operating system and browser requirements for Domino Web Access.

**Attention:** Attempting to access Domino Web Access through unsupported browsers results in the display of an unsupported browser notice. Netscape 4.x users may see hangs or crashes when encountering the Domino Web Access unsupported browser page. If you are a Netscape 4.x user and you encounter these problems, you should open your mail file using the WebMail UI directly through the &ui=webmail switch. This is documented in the topic Switching to WebMail in the Domino Web Access help.

Windows XP and Vista using the following browsers:

- ▶ Internet Explorer 6 and 7
- ▶ Mozilla Firefox 2.0 or later
- ▶ Novell Linux Desktop (NLD) 10 using Mozilla Firefox 2.0 or later
- ▶ Linux RedHat RHEL 5.0 using Mozilla Firefox 2.0 or later
- ▶ Macintosh OS 10.4.x, using Mozilla Firefox 2.0 or later

**Note:** This configuration does not support Domino Off-Line Services (DOLS), local archiving, or Lotus Sametime awareness.

**Restriction:** For all operating systems, Mozilla Firefox is supported by the DWA7 and DWA8 mail templates only. It is not supported by iNotes6 templates.

**Tip:** For a comparison of system requirements for Domino Web Access 7 and 8, refer to “Evaluating workstation readiness: Domino Web Access 8” on page 37.

## 2.4.5 Lotus Domino 8 supported platforms

The platforms that are supported by Lotus Domino 8 are listed in the sections that follow. See the release notes for patch and service pack requirements.



Note that Domino 8 support has been dropped for older versions of some operating systems that are now obsolete.

## **Microsoft Windows**

The supported Microsoft Windows platforms are:

- ▶ Windows 2003 Server Standard Edition, Service Pack 1
- ▶ Windows 2003 Server Enterprise Edition, Service Pack 1
- ▶ Windows 2003 Server x64 Edition

## **UNIX**

The supported UNIX® platforms are:

- ▶ IBM AIX 5.3
- ▶ Sun™ Solaris 10

Note that for both operating systems, the 64-bit kernel is required.

## **iSeries**

The supported iSeries platform is IBM i5/OS V5R4.

## **Linux**

The supported Linux platforms are:

- ▶ Novell SUSE Linux Enterprise Server (SLES) 10 with 32-bit kernel
- ▶ Novell SUSE Linux Enterprise Server 10 with 64-bit kernel
- ▶ Novell SUSE Linux Enterprise Server 10 for zSeries® with 64-bit kernel
- ▶ Red Hat Enterprise Linux (RHEL) 5 with 32-bit kernel
- ▶ Red Hat Enterprise Linux 5 with 64-bit kernel

## **zSeries**

The supported platforms for zSeries are:

- ▶ IBM z/OS Version 1, Release 7 and later
- ▶ IBM z/OSe Version 1, Release 7 and later

**Tip:** For a comparison of system requirements for Domino 7 and 8, refer to “Evaluating server readiness” on page 31.





## Deploying the Domino 8 server

This chapter provides recommendations and best practices for planning, installing, and testing Domino 8 into your new or existing Domino server infrastructure. While your upgrade plan must be tailored to your own environment, this chapter provides a high-level outline of a typical enterprise deployment that can be used as a base reference.

Additionally, this chapter covers the optional steps of upgrading to the Domino 8 On-Disk Structure (ODS) of your Notes databases the extended capabilities available with Notes and Domino 8 that require additional server deployment, including activities, composite applications, and the Domino and DB2 feature.

In this chapter the following topics are discussed:

- ▶ Planning for the Lotus Domino 8 deployment
- ▶ Defining the Lotus Domino 8 deployment sequence
- ▶ Deploying the Lotus Domino 8 servers
- ▶ Upgrading to the Lotus Domino 8 ODS
- ▶ Extending the Lotus Domino 8 capabilities

## 3.1 Introduction to deploying Domino 8

Now that we covered the high-level planning for Notes and Domino 8 in Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15, we are ready to tackle the deployment of the Domino 8 servers into our infrastructure.

The good news is that since Notes and Domino 8 is a client-centric release, the Domino deployment considerations, sequence, and installation have, for the most part, remained unchanged from prior Lotus Domino releases. This allows us to focus our efforts on planning for and enabling the new Domino 8 administration features, which are described in detail in Chapter 9, “New administration features” on page 241.

In 3.3, “Planning lays the foundation for deployment” on page 46, we cover some additional planning steps that are Domino 8-specific. Section 3.4, “Defining the deployment sequence” on page 49, lays out the upgrade path, and we then progress to the actual Domino code installation in 3.5.4, “Installing the Domino 8 code across your Domino domain” on page 55. Finally, we discuss the optional ODS upgrade and extended capabilities of Notes and Domino 8.

## 3.2 Domino upgrade versus new installation

As mentioned in 2.2.7, “Considerations for a new Domino deployment” on page 29, the process of deploying new Domino servers is similar to upgrading existing Domino servers. Given this fact, this chapter assumes a Domino upgrade, but will call out anything that is required or unique to a new Domino deployment.

## 3.3 Planning lays the foundation for deployment

As detailed in Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15, planning is essential to a successful deployment of Notes and Domino 8. This section covers the Domino server specific planning steps that are required when deploying Domino 8.

### 3.3.1 Pilot deployment of Notes and Domino 8

As discussed in 2.3.4, “A word about pilot deployment” on page 39, leverage your pilot or pre-production environment not only to test your procedures that directly relate to the Domino code installation itself, but also for testing your implementation of your template strategy, control of Domino directory design, new Domino 8 features, and other mechanisms that maintain administrative control over your Domino environment. The goal is to create a miniature production environment, mirroring the hardware, software, network, and other elements as much as possible.

### 3.3.2 Isolate the Domino 8 deployment from other system changes

For existing Domino deployments, best practices recommend performing any non-Domino server code upgrades or consolidation work prior to beginning the deployment of Domino 8. While it may save time and money in the short term, *piggy-backing* system changes like a consolidation or operating system upgrade on a Domino upgrade is risky. Introducing changes to high availability applications like IBM Lotus Domino should be performed in a

systematic step-by-step approach in order to isolate the root cause and resolve potential problems.

### 3.3.3 Planning for Domino coexistence

The issue of Domino version and product coexistence has not been very problematic given the backwards compatibility that IBM Lotus builds into the Notes and Domino products. With that said, there are certain elements of risk that should be examined and approached with caution. A full examination of the considerations and recommendations of Domino version and Domino and Microsoft Exchange coexistence is available in Chapter 5, “Coexistence: Domino/Domino and Domino/Microsoft Exchange” on page 93.

### 3.3.4 Review your template strategy

An essential planning step for deploying Domino 8, as was the case for prior versions of IBM Lotus Notes and Domino, is to review your template deployment and maintenance strategy. Managing your templates is important because a lot of the new functionality in a new major release of Domino is due to new design elements that are *pushed* from template to system databases.

Here are some of the more common methods of Domino template management:

- ▶ Centrally managing templates from one Domino server or a subset of servers
- ▶ Modifying the ACL to grant limited rights to the servers and potential users
- ▶ Modifying the template name inheritance, replica ID, and template file name
- ▶ Disabling the replication of all the templates
- ▶ Removing all templates from the Domino server and removing the nightly run of the design task

You should use one or more of the above methods to manage your templates. For more information about template strategy, including details on how to create your own template package, reference the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices* Redpaper at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4120.html?Open>

The method used to manage your templates depends on what you and your Domino administration team have found to work in the past in your environment and how tightly you want to manage and protect your templates in the future.

**Note:** If you have customized any of the pre-Domino 8 templates, such as the mail template, make sure to thoroughly test your modifications on the new Domino 8 templates before deploying the updated templates to your Notes mail files or database applications. In order to take advantage of the new design features in Domino 8, we recommend making customizations to the new Domino 8 templates, rather than using back-leveled templates.

### 3.3.5 Controlling and managing your Domino directory design

The Domino directory is the heart of your Domino infrastructure, and access to the database, including the design, should be tightly controlled. Any erroneous or ill-timed changes to the design or contents of the directory could result in Domino server unresponsiveness or other

unexpected behavior. Therefore, an essential planning step is to devise or design a method of *locking down* your Domino directory design or reviewing your existing method.

You should set your ACLs to only allow administrator access to the Domino directory configuration documents. The replication flow of both data and design of the Domino directory from a high-level hub, most likely your administration hub, to your other hub and spoke servers should be managed through ACL settings.

In addition to ACL settings, there are other means of controlling the design of the Domino directory, including modifying the Domino directory template inheritance and selecting the **Replace Design on Admin Server Only database** property. These methods, as well as the ACL settings, are documented in the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices* Redpaper at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4120.html?Open>

If your organization has customized the Domino directory, you should compare your custom design elements to the default Domino 8 directory design elements to see if the customizations are still needed. If they are still needed, add the customizations to the new Domino directory design. Remember, customized templates are not supported by IBM Lotus, so if your customizations provide similar functionality to the Domino 8 template, we recommend using the out-of-the-box template.

**Note:** One of the major new Domino 8 Domino directory design enhancements is the inclusion of a By Client Version view, which is a Person view sorted by the Notes client build users have listed in the Notes client build field in the Administration tab. Note that users will be listed multiple times if they have more than one Notes client version listed in the Notes client build field.

The ultimate goal is to protect the new Domino directory design during the Domino 8 deployment and beyond, whether it contains customizations or not.

### 3.3.6 Additional Domino 8 planning considerations

Prior to upgrading to Domino 8 you need to decide which of the new features to implement and when to implement them. In some cases, new Domino features are enabled by default, while in other cases they are disabled, with the latter usually being the case. This section focuses on the features that are enabled by default, for example, the new message recall feature.

**Attention:** Chapter 9, “New administration features” on page 241, provides a thorough description of the major new Lotus Domino 8 administration features, including features enabled and disabled by default, and functionality that is not configurable, like streaming cluster replication.

As a best practice, upgrade the server and verify stability at the new code level in your production environment. Only then should you enable new features. Achieving a steady state after upgrading will help you isolate any potential issues that may arise during the enablement of new Domino 8 features.

## Message recall

The message recall feature is enabled by default with Domino 8. Therefore, you need to decide whether you want message recall enabled or disabled prior to rolling out the Domino directory in your production environment.

**Important:** If you decide to disable the feature, do not forget that you need to take action to disable the feature from a configuration document in the Domino directory. More information regarding message recall is provided in 9.3, “Message recall” on page 245.

## Direct deposit of administration requests onto the target server

In Domino 8, certain administration requests are now deposited directly into the target server’s administration request database replica, which can potentially result in faster administration request processing. By default, this new feature is enabled, but can be disabled with the `ADMINP_DONT_ATTEMPT_DIRECT_DEPOSIT=1` notes.ini parameter.

## Activity trends in Domino 8

The billing feature is only included in Domino 8 for older system support. This means that no bug fixes or feature enhancements are planned for the billing feature, and we recommend that you migrate to activity logging for the equivalent functionality.

## Third-party support for Domino 8

As discussed in Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15, it is essential that you plan and test for Domino 8 interoperability with any third-party products.

## Domino 7 features, if upgrading from Domino 6.5.x

If you are upgrading from Domino 6.5.x, you also need to plan for the enablement of the Domino 7 features. Review Appendix A, “Considerations for upgrading from Notes and Domino 6.5.x to 8” on page 447, for the Domino 6.5.x to Domino 8 upgrade considerations.

# 3.4 Defining the deployment sequence

As mentioned in 3.1, “Introduction to deploying Domino 8” on page 46, the high-level Domino 8 deployment sequence has not changed from prior releases, except for the addition of two optional steps. We recommend that you leverage your existing Domino upgrade processes and procedures to avoid repeating what has already been done when deploying Notes and Domino 8.

The two optional steps that have been added to the end of the recommended upgrade sequence from pre-Domino 8 releases are:

- Upgrade ODS to take advantage of the new database properties and optimizations.
- Install the extended capabilities like activities, composite applications, and the Domino and DB2 feature.

## Recommended deployment sequence

We recommend the following upgrade sequence, which is depicted in Figure 3-1 on page 50:

1. Upgrade your Domino Administrator clients to Notes 8.
2. Upgrade the design of your Domino directory across your domain.
3. Upgrade your administration server.

4. Upgrade your hubs and directory servers.
5. Upgrade your mail and application servers.
6. Upgrade your Notes clients.
7. Upgrade the design of your mail databases and new applications to enable new Notes and Domino 8 features.
8. (Optional) Upgrade the ODS of your mail and applications.
9. Install additional server components to extend Domino capabilities.

**Note:** While the extended capability is not new to Domino 8, IBM Lotus Sametime is also represented in step 9 in Figure 3-1. The IBM Lotus Notes client provided integrated capabilities with IBM Lotus Sametime since Notes 6.5.

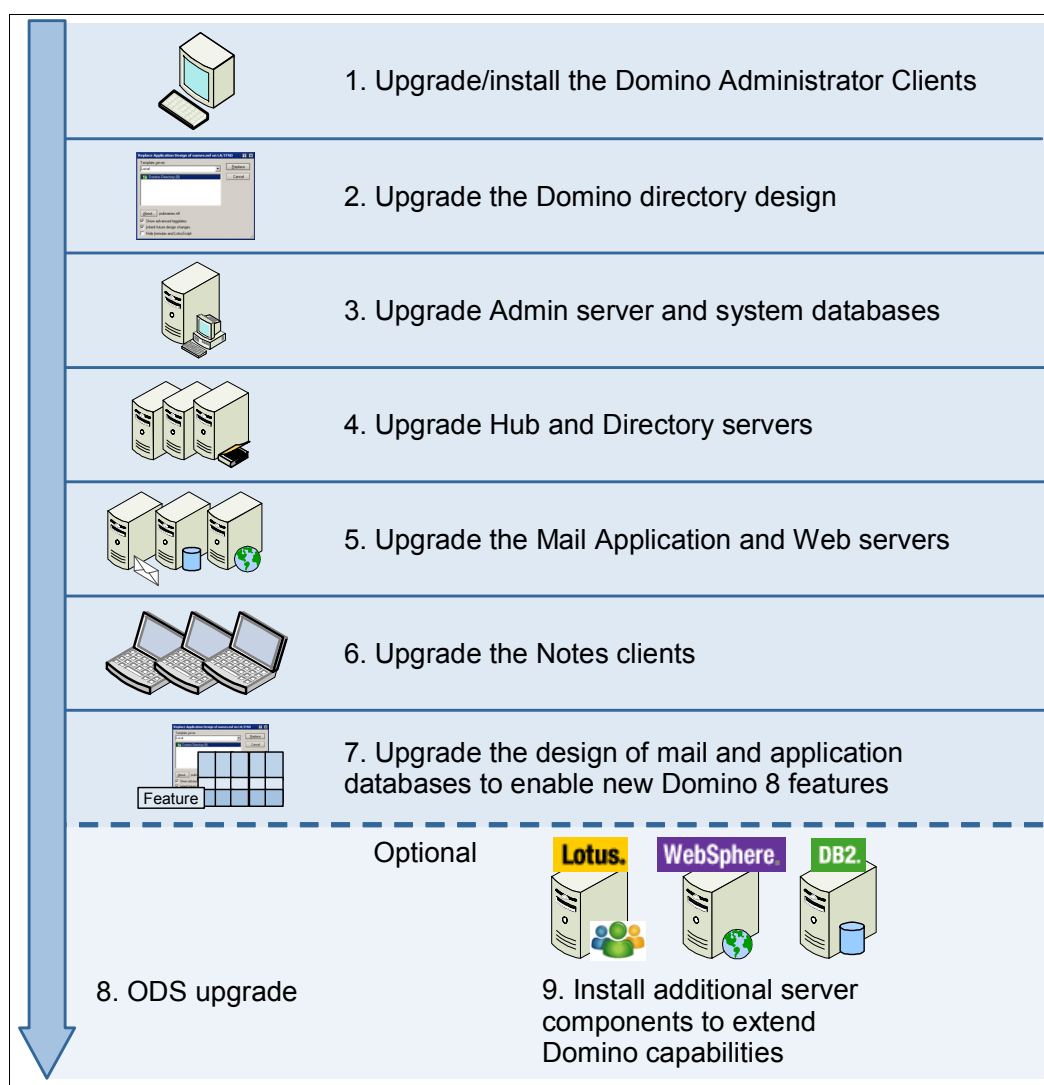


Figure 3-1 Recommended upgrade sequence

This is not the only sequence that can be used to deploy Domino. There could be reasons that are specific to your Domino infrastructure that prevent you from following these exact steps. The key is to ensure that the sequence makes sense for your environment, has been



tested in your pilot environment, and minimizes Domino service disruption as much as possible.

## 3.5 Performing the Domino 8 deployment

With all of the prerequisites from “Understanding prerequisites” on page 31 in place and planning and pilot testing complete, you are ready to deploy Lotus Domino 8.

### 3.5.1 Install the Notes 8 Domino Administrator client

In order to become familiar with the new Notes 8 client, the Domino administration team should install the Notes 8 All Client version, making sure to install both the Domino Administrator and Domino Designer client options. Install additional client features as required.

**Tip:** As shown in Figure 3-2, install the remote server setup feature in order to remotely connect to and configure your first Domino server for new Domino deployments or subsequent servers for existing Domino deployments.

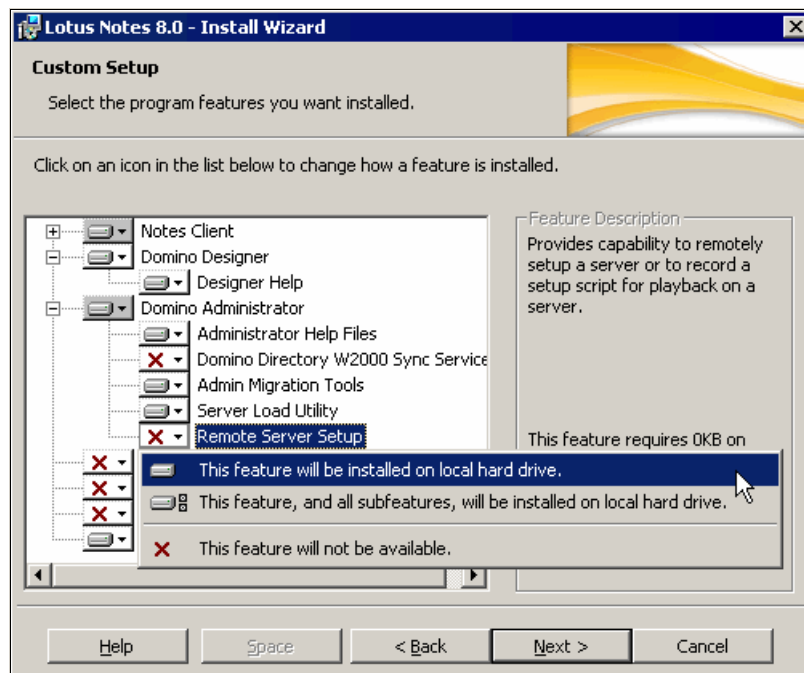


Figure 3-2 Remote server setup option in Notes 8 All Client installation

The Domino Administrator and Domino Designer clients are also available with the basic client configuration. Therefore, if the system you are installing the Notes 8 All Client version onto does not meet the minimum system requirements, as documented in 2.3.2, “Planning to deploy Lotus Notes 8” on page 36, install the basic configuration during this step. More information about the basic client configuration can be found in 4.8, “Notes 8 - basic configuration” on page 91.

### 3.5.2 Upgrade the Directory design across your domain

Given that the Domino directory is backwards compatible, you should upgrade your Domino 8 Domino directory design prior to upgrading your servers to Domino 8. Deploying the directory design first allows you to get this major system database work out of the way, and pave the way for the Domino 8 code upgrade.

While we recommend that you use the latest design for the Domino directory (and also the administration requests database), this is not the case with all databases. In particular, for the mail template or more widely used application templates, we recommend that you do not use a later release than the version used by both the Notes client and the Domino server.

**Attention:** For more information regarding template version and design interoperability, see 5.1, “Domino/Domino coexistence” on page 94.

Prior to upgrading the design, make sure to review 3.3.5, “Controlling and managing your Domino directory design” on page 47 to ensure that you are effectively managing your Domino directory. As mentioned in that section, there are various ways in which you can control the design of the Domino directory, and you should use the method that is appropriate for your environment.

**Important:** The message recall feature is enabled by default with Domino 8. Therefore, you need to decide whether you want message recall enabled or disabled prior to rolling out the Domino directory in your production environment. If you decide to disable the feature, do not forget that you need to take action to disable the feature from a configuration document in the Domino directory. More information regarding message recall is provided in 9.3, “Message recall” on page 245.

The following list provides some of the options for upgrading the design in your Domino environment:

- ▶ Manually upgrade the Domino directory design on the administration server prior to upgrading any servers to Domino 8, and let the design replicate out to the Domino domain servers via standard replication.
- ▶ Upgrade your administration server to Domino 8 and upgrade the design of your Domino directory at the same time. Let the design replicate out to the Domino domain servers via standard replication.
- ▶ Prevent the Domino directory design from replicating out from the administration hub (via ACL settings), and manually upgrade the Domino directory design on the administration server prior to upgrading any servers. Make an operating system level copy of the Domino directory, which will still have the same replica ID, of the new Domino directory from the administration server and copy it to your Domino systems, scheduling down time to swap in the new replica.

The last option has traditionally been employed by Domino enterprises that have large Domino directories. Large Domino directories can result in replication delays or long view indexing if a new directory design is pushed onto the high-level hub and replicated out to the spoke Domino servers. This activity could interfere with Notes client access during peak usage hours.

**Note:** If you employ this last method, ensure that the master Domino directory replica has completed all view rebuilds prior to making the copy to use across other servers, as is mentioned in “Pre-upgrade checklist” on page 55.

Furthermore, as of this writing, the IBM Lotus Notes/Domino 8 Beta 3 Release Notes state that if you upgrade to Domino 8 and your Domino directory contains 10,000 users or more, plan ahead for view updating. This information is provided in reference to the Unicode standard collation, and two views are called out specifically, the \$Users and \$ServerAccess views. In a large enterprise deployment of ND, these two views are usually the largest, and great care should be taken to ensure that they do not become corrupt or need to be rebuilt after upgrading your servers to Domino 8.

Detailed instructions on how to upgrade the design of the Domino directory, from either the Domino Administrator client or the Domino server console, are provided in the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices* Redpaper at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4120.html?Open>

### 3.5.3 Pre-installation steps

Prior to performing the Domino code installation, the following steps should be performed:

- ▶ Clean up system files.
- ▶ Review Notes.ini settings.
- ▶ Back up system files.
- ▶ Complete the pre-upgrade checklist.

**Note:** The steps in this section apply to all server types: administration, hub, directory, mail, application, and Web servers. If there are specific steps or recommendations that are specific to one particular server type, they will be mentioned separately.

#### Clean up system files

Upgrading your Domino server provides a good opportunity to clean up all unused program documents, server connection documents, and even databases that are no longer used. If upgrading from Domino 7, utilize the Scheduled Checks Database DDM probe to find inactive mail files or applications on your servers.

**Tip:** If upgrading from Domino 6, utilize a database event generator to find inactive mail files or applications on your servers.

Also, you should consider removing and archiving old files present in your Domino data directory, such as old NSD files and temporary files.

#### Review notes.ini settings

Consider removing notes.ini settings that are no longer supported in Domino 8. In addition to obsolete parameters, you should also review the debug notes.ini settings you have in place to ensure that they are still required. Most debug settings should only be utilized on a temporary basis for debugging and troubleshooting purposes. Look in both the notes.ini files and server configuration documents when cleaning up obsolete or debug notes.ini parameters.

**Note:** Review the IBM Lotus Notes/Domino 8 Release Notes for any obsolete notes.ini parameters in Domino 8.

In addition to removing notes.ini parameters for cleanup purposes, the following parameters should be considered for addition:

- ▶ **Server\_Upgrade\_No\_Directory\_ReDesign=1**

Add this setting if you have already upgraded the design of your Domino directory and do not want to be prompted to upgrade your design when the Domino server starts up on Domino 8.

- ▶ **CREATE\_R8\_DATABASES=1**

While we do not suggest upgrading the ODS during the upgrade process itself, you can add this notes.ini parameter prior to upgrading to Domino 8. As described in 9.10.2, “How to enable the new On Disk Structure on Domino servers” on page 280, pre-Domino 8 servers ignore this setting, so it is safe to set this parameter even in a mixed version environment.

- ▶ If you utilize the native Domino console logging and do not explicitly enable console logging with the console\_log\_enabled=1 notes.ini setting or specify a default console logging limit size with the console\_log\_max\_kbytes=<desired size> notes.ini setting, upgrading the Domino server to Domino 8 sets the console logging limit to 1 K. The new default setting of 1 K was introduced to improve product serviceability and is enabled without user intervention or notification.

Therefore, we strongly recommend that, if you utilize console logging for crash reporting to Lotus support, troubleshooting, document retention, or whatever other purpose, you enable one of the following notes.ini parameters:

- console\_log\_enabled=1
- console\_log\_max\_kbytes=<desired size>

Stopping and restarting console logging with the **stop consolelog** and **start consolelog** commands is required for these setting to take effect.

**Tip:** The following IBM Lotus Web site provides a great reference for common Notes.ini parameters:

<http://www.ibm.com/developerworks/lotus/documentation/notes-ini/index.html>

## Backup system files

Performing a backup prior to upgrading is strongly recommended in the rare case you will need to backout an upgrade or you experience any database corruption or data loss.

We recommend performing a full backup of your Domino server before starting the server upgrade process. If you are unable to perform a full backup of all your Domino servers, we suggest backing up at least the following elements:

- ▶ Server ID and all other IDs present on your system
- ▶ Notes.ini files
- ▶ Domino directory
- ▶ Log.nsf, to provide a record of your previous server activities
- ▶ All other directory databases such as the directory assistance, extended directory catalog, condensed directory catalog, and schema database
- ▶ Any customized templates
- ▶ Any third-party add-ins binaries or executables and extension managers

## Pre-upgrade checklist

Complete the following pre-upgrade checklist just prior to upgrading your Domino servers. The exact steps for your environment vary based on your Domino server configuration and other factors.

1. Verify the Domino directory design on your server (**Application** → **Properties** → **Design information**). It should inherit from the Domino directory 8 design, which was pushed out prior to the first upgrade in 3.5.2, “Upgrade the Directory design across your domain” on page 52, unless you are going to upgrade the Domino design during the Domino code install.

If you are swapping in an operating system level copy of names.nsf, run the **upda11 -R** command to rebuild the views.

2. Back up any files that have been updated or were not backed up during the full or partial backup completed in “Clean up system files” on page 53.
3. (Optional) Disable Domino directory replication.
4. (Optional) Disable other connection documents (replication and routing information).
5. Restrict server usage using the `server_restricted=1` dynamic Notes.ini parameter and drop all users from server sessions.  
  
This notes.ini parameter does not stay in effect after Domino is restarted. To maintain the setting after a Domino server restart use **server\_restricted=2**.
6. Force routing of all mail still waiting for delivery, and then stop the router and SMTP tasks. To force mail that is pending to a destination server, issue the **route <destination server address>** Domino console command.
7. (Optional) Purge all administrative requests.
8. If running Domino as a service on Windows, change the startup type to manual.
9. Disable any cron jobs on UNIX platforms that automatically restart Dominos and clean up shared memory segments.
10. Stop the Domino server.

### 3.5.4 Installing the Domino 8 code across your Domino domain

This section details the steps required to perform the actual Domino 8 code installation.

**Note:** The steps in this section apply to all server types: administration, hub, directory, mail, application, and Web servers. If there are specific steps or recommendations that are specific to one particular server type, they will be mentioned separately.

#### Install the Domino 8 code

IBM Lotus provides several different installation types, including full, silent, and express installations.

For the purposes of this IBM Redbooks publication, we focus on the full setup installation, which we performed on the Windows 2003 operating system in our ITSO lab environment. For details on the silent and express installations or other operating systems installations, see the Lotus Domino Administrator 8 help documentation.

For a Domino full setup installation, perform the following steps:

1. After invoking the setup.exe file to launch the Domino 8 installation program, the Java™-based InstallShield Wizard dialog box opens, as shown in Figure 3-3.

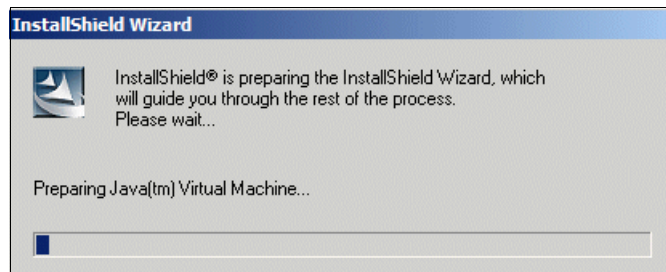


Figure 3-3 Domino Java-based installer

2. After accepting the license agreement, you will be prompted to select a folder for the Domino executable and data files, as shown in Figure 3-4.

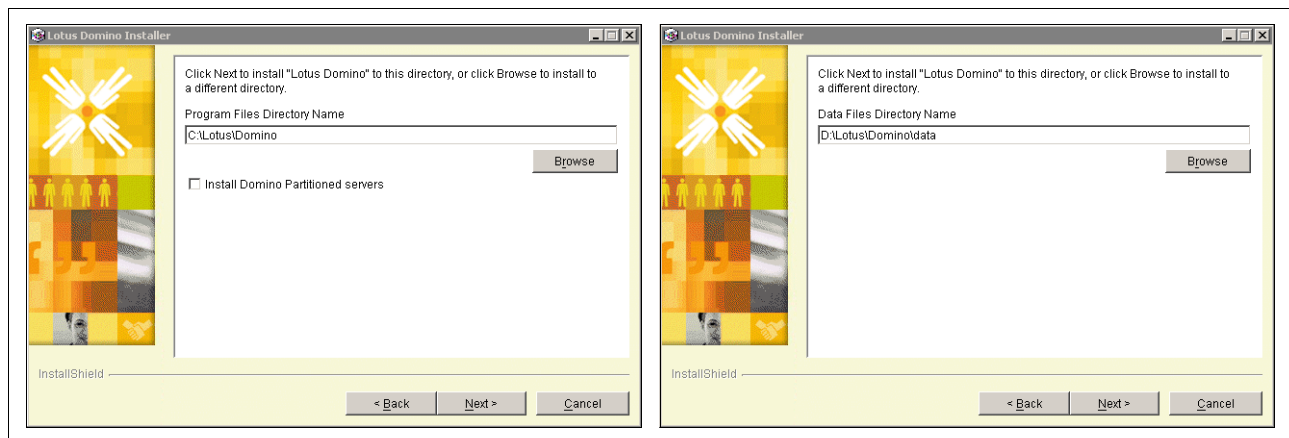


Figure 3-4 Select a folder for the Domino data and executable files

By default, the installation program installs the new files to the same location where your current Domino server is installed.

You will also be asked whether you want to install a partitioned server, which means that the same binaries folder and directory are used by several Domino servers on the same physical machine or on the same logical OS partition, known as an LPAR on UNIX-based machines. We do not install partitioned servers, so we leave this setting unchecked.

**Attention:** On UNIX-based systems, Domino 8 still supports the installation of running multiple versions of Domino code across two or more Domino servers, which was introduced with Domino 6.

3. After specifying a location for the Domino 7 installation, the dialog box shown in Figure 3-5 opens, offering selections for the server types and features to install.

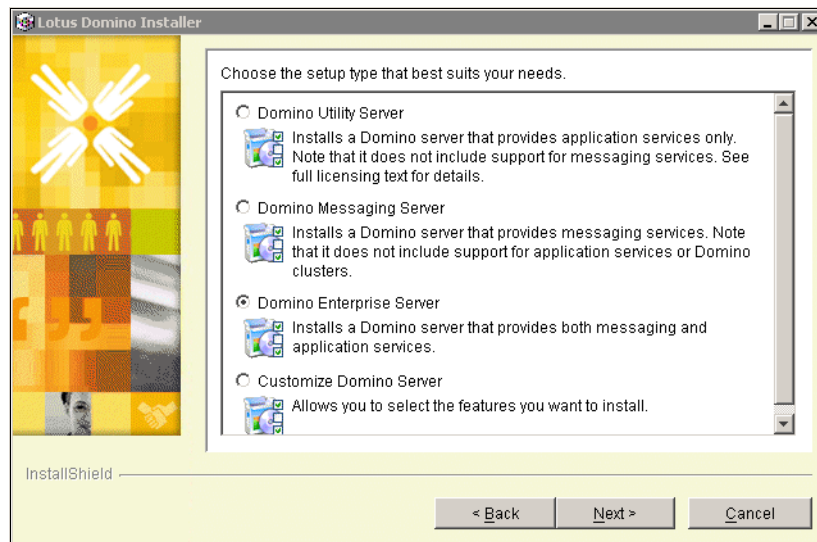


Figure 3-5 Available choices during the Domino upgrade

4. After verifying the installation settings, shown in Figure 3-6, click **Next** to launch the Domino 8 server installation.

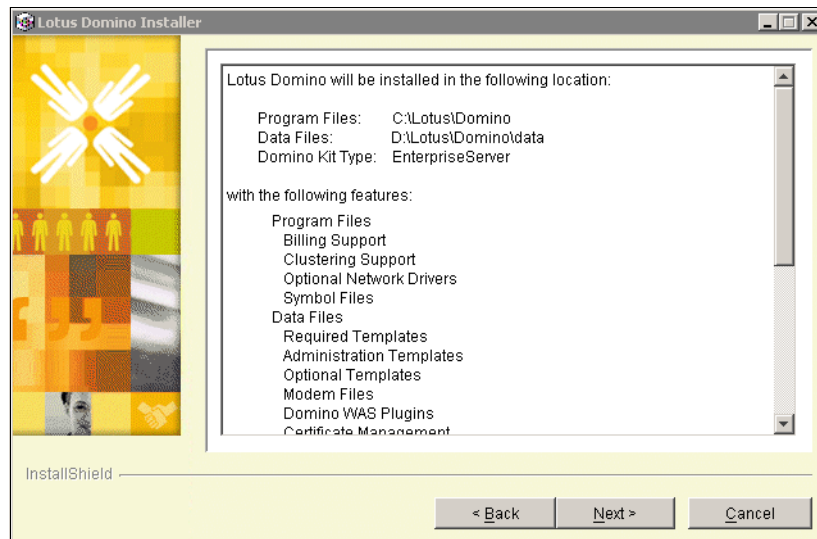


Figure 3-6 Verify the installation settings

5. After the installation completes, click **Finish**, as shown in Figure 3-7.

**Important:** Before starting the Domino 8 server, refer to “Pre-upgrade checklist” on page 55 for additional steps and considerations.

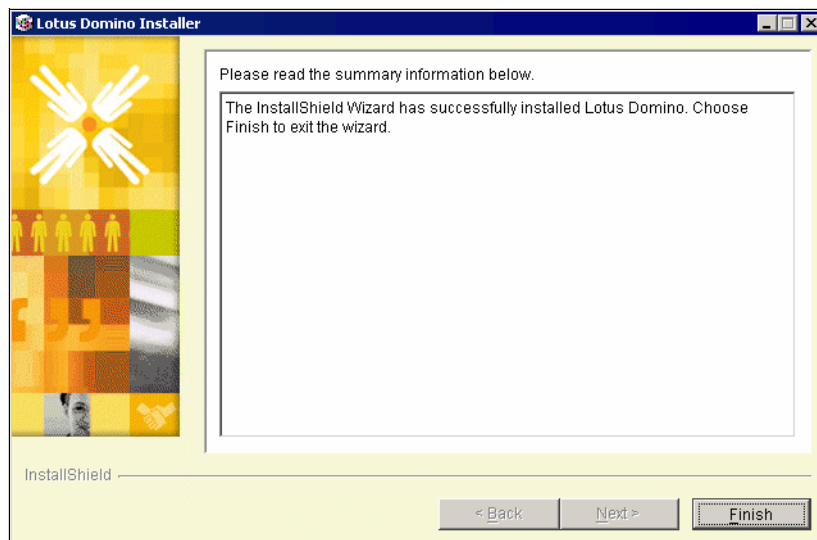


Figure 3-7 Final Windows installation panel

While this install was performed on a Windows 2003 server, the installation on the UNIX platform has not changed drastically from pre-Domino 8 releases.

**Tip:** You can now customize the IBM Lotus Domino server installation on UNIX platforms. Installing all templates is now optional, whereas with previous releases you only had the option to install all or none of the template files. If you choose the Customize Domino server option, you can now choose which template options to install under Data Files. Note that all templates are installed by default with utility, messaging, and enterprise server types.

### ***Post-upgrade checklist***

Perform the following steps prior to starting the Domino 8 servers for the first time:

1. Verify your template management, as discussed in 3.3.4, “Review your template strategy” on page 47. Replace the out-of-the-box templates and remove unused templates, as necessary.
2. Edit the server Notes.ini file, per the recommendations in “Review notes.ini settings” on page 53.
3. (Optional) Perform maintenance operations, like compact, on the names.nsf and admin4.nsf files.

Note that if the Create\_R8\_Databases=1 notes.ini parameter was put into place and a copy style compact is run on names.nsf or admin4.nsf, the ODS is upgraded to ODS 48.

4. Rebuild view of names.nsf offline, using the **upda11 -R** command.

If working with a large names.nsf, it is ideal to replace the names.nsf database with a replica that already has the new Domino 8 design with updated views. See 3.5.2, “Upgrade the Directory design across your domain” on page 52, for more information. If



you are swapping in an operating system level copy of names.nsf, move out the old file to a names.nsf.<date>.<time> name and move in the new copy.

5. Delete busytime.nsf and move out the log.nsf file and mailXX.box files.
6. Restart your server.

As mentioned in “Review notes.ini settings” on page 53, if you do not have the `Server_Upgrade_No_Directory_ReDesign=1` Notes.ini setting in place prior to starting your server after the Domino 8 upgrade, you will be prompted to upgrade the design of your Domino directory.

As with prior releases of the Domino server, after starting the server for the first time on Domino 8, the design of many of the system databases is automatically upgraded as well, including events4.nsf and ddm.nsf.

7. For Windows servers, reset your Domino server as a Windows service.
8. For UNIX servers, reenale any cron jobs that automatically restart Domino.
9. If disabled in “Pre-upgrade checklist” on page 55, turn on replication and connection documents.
10. If `server_restricted=2` was enabled in “Pre-upgrade checklist” on page 55, reenale Notes client access by issuing the Domino console command **set config server\_restricted=0**.
11. Test your Domino server:
  - a. Access the Domino server from a remote Notes client.
  - b. Access a database on the Domino server from a Web browser if http is enabled.
  - c. Ensure that the major Domino server functions like replication, mail routing, and any third-party applications are running successfully.
12. After upgrading the administration server, make sure that you upgrade the design of your administration requests database (admin4.nsf) based on the new admin4.ntf template.
13. Prepare the next Domino sever for upgrade.

Repeat the upgrade steps in this section for each of your Domino servers: administration, hub, directory, mail, application, and Web servers. Once all Domino servers are upgraded, your Domino server deployment is complete.

You are now ready to perform the optional ODS upgrade and deploy the extended Domino capabilities.

### 3.5.5 Upgrade the Notes clients

With your Lotus Domino 8 deployment complete, you are now ready to deploy the new Notes 8 client to your user population.

Section 2.3.2, “Planning to deploy Lotus Notes 8” on page 36, provides prerequisites, recommendations, and best practices that should be used when planning for the Notes 8 client deployment.

The considerations that should be made when actually deploying the Notes client, as well as upgrade options and information about the Linux and basic configuration, can be found in Chapter 4, “Deploying the Notes 8 client” on page 63.

### 3.5.6 Upgrade the Notes mail file and application design

After both Lotus Domino 8 and Lotus Notes 8 are deployed, upgrade the design of your user mail files and applications. Detailed information regarding upgrading the design of mail or applications using the convert Domino task can be found in the Lotus Domino Administrator 8 help documentation. If using Upgrade-by-Mail to upgrade your Notes clients, you also have the option to upgrade the mail template after the Notes client install or upgrade. More information about Upgrade-by-Mail can be found in 4.5, “Upgrade by mail” on page 76.

**Important:** As discussed in “Design compression” on page 279, design note compression is enabled in the standard Notes 8 mail template (Mail8.ntf). Therefore, once you enable the new Domino 8 ODS with the Create\_R8\_Databases=1 Notes.ini variable, any new mail files created with the Notes 8 mail template or any mail files converted to the Notes 8 mail template will have design note compression enabled.

If you do not want to automatically enable design note compression for mail files, deselect the option in the Notes 8 mail template (mail8.ntf) before using it for new and existing mail files.

Note that mail8.ntf is the only standard system template that has design note compression selected by default. All other templates have the option deselected.

### 3.5.7 Upgrading the ODS (optional)

The full details of how and why to upgrade to ODS 48, the new Domino 8 ODS, are provided in Chapter 9, “New administration features” on page 241. To summarize, the new ODS provides potential improvements for I/O and folder optimization. It is also a requirement for the implementation of the following new features:

- ▶ Database names list for user renames
- ▶ Design compression

The ODS 48 upgrade steps are provided in 9.10.2, “How to enable the new On Disk Structure on Domino servers” on page 280. To summarize, the following two steps are required to enable the new ODS:

- ▶ Add the Create\_R8\_Databases=1 parameter to the server notes.ini files.
- ▶ Run a compact -c, or other copy-style compact, against your databases.

**Important:** If you add the Create\_R8\_Databases=1 notes.ini parameter and do not run a copy-style compact, any new databases that are created on the server will be created with ODS 48, but the existing databases will remain at ODS43.

We highly recommend that, if and when you decide to upgrade the ODS of your databases, you ensure that the Domino server is stable at the new Domino 8 code level. This includes the testing of all the basic Domino server functionality, as outlined in “Post-upgrade checklist” on page 58. Once you are confident that the Domino 8 upgrade was a success, you can proceed to upgrading the ODS.

With that said, if you decide that you would like to upgrade to ODS48 immediately or shortly after you upgrade to Domino 8, you can add the Create\_R8\_Databases=1 notes.ini parameter to a Lotus Domino 7 server in preparation for the Domino 8 upgrade, as mentioned in 9.10.2, “How to enable the new On Disk Structure on Domino servers” on page 280.

### 3.5.8 Extending the capabilities of Domino 8 (optional)

This section provides links to sections within this IBM Redbooks publication and other documentation where you can find more information about how to extend the capabilities of IBM Lotus Notes and Domino 8. The capabilities include:

- ▶ Activities through the Notes 8 side-bar with an activities server
- ▶ Composite application support with WebSphere Portal
- ▶ Domino and DB2 integration
- ▶ IBM Lotus Sametime for awareness and chat

#### **Activities through the Notes 8 side-bar with an activities server**

Notes 8 has an activities plug-in in the Side Bar panel, which allows users to work with activities that have been hosted on an IBM Lotus Connections server. Activities help users to consolidate work items to meet and produce a particular deliverable.

Activities provides a lightweight mechanism that helps build best practices around personal tasks and projects in a more managed context, enabling users to more quickly complete activities and maintain an up-to-date view of their daily work.

More detailed information about activities can be found in 6.9, “Activities” on page 176.

#### **Composite application support with WebSphere Portal**

Notes 8 provides support for composite applications, a key element of IBM service-oriented architecture and contextual collaboration strategy. Composite applications combine components from multiple applications into a single, role-based work environment.

Composite applications are a loose coupling of Eclipse components, Lotus Component Designer components, and Notes applications (known within composite applications as NSF components) encompassed within a single panel to create a unified view of disparate data.

For more information about the following Domino and WebSphere Portal integration topics, visit Chapter 11, “IBM WebSphere Portal integration” on page 349:

- ▶ Domino Portal Integration (DPI®) Wizard
- ▶ Domino Portal Federated Administration
- ▶ Web Administrator Server Bookmarks
- ▶ WebSphere Portal Home Portal Account
- ▶ Lotus server client installer (SCI)

#### **Domino and DB2 integration**

Notes and Domino 8 now fully support utilizing a DB2 backend for data storage and retrieval. In addition to DB2-enabling a Notes application, the feature allows for data federation from a Notes view, which means that you can query non-Notes SQL data from within a Notes view.

Utilizing the Domino and DB2 feature means that you can take advantage of the strengths of both data storage systems, including the security and user interface of Domino and the scalability and flexibility of DB2. This new features breaks down traditional barriers that prevented Notes applications from directly running SQL queries against Notes data or non-Notes SQL data.

Domino and DB2 installation and configuration information can be found in 9.11, “Domino and DB2 deployment” on page 286.

## **IBM Lotus Sametime for Awareness and Chat**

Presence awareness and instant messaging were first introduced into the IBM Lotus Notes 6.5 Client. The IBM Lotus Notes 8 client provides an instant message experience based on the IBM Lotus Sametime Connect 7.5.1 client, which, just like the IBM Lotus Notes 8 client itself, is also based on Eclipse client technology.

Some of the Sametime client features provided with the IBM Lotus Notes 8 client include tabbed chats, video chats, enhanced contact list, chat history, and Web conferencing. More information about the IBM Lotus Notes 8 Sametime features can be found in 6.8, “Sametime contacts” on page 167.

For best practices on deploying a Sametime 7.5.1 infrastructure, visit the *Sametime 7.5.1 - Best Practices for Enterprise Scale Deployment* IBM Redbooks publication at:

<http://www.redbooks.ibm.com/redpieces/abstracts/sg247410.html?Open>



## Deploying the Notes 8 client

This chapter discusses the considerations a Lotus administrator must make when deploying Notes 8. The goal is to assist you when considering different upgrade options for the client in conjunction with how it will impact you from an administrative perspective and the client from a user perspective.

In this chapter we discuss:

- ▶ Manual installation of Notes 8
- ▶ Upgrade options, including:
  - Smart Upgrade
  - Upgrade by mail
  - Seamless mail upgrade
- ▶ Installing the client on Linux
- ▶ Notes 8 - basic configuration

## 4.1 Introduction

IBM Lotus Notes and Domino have three major clients:

- ▶ The Lotus Notes client allows you to send and receive mail, schedule appointments, work in custom-built applications, browse the Web, use instant messaging, and much more.
- ▶ The Lotus Domino Designer Client allows you to develop collaborative Lotus Notes, Web, and mobile device applications that are required for your business needs.
- ▶ The Lotus Domino Administrator client allows you to manage your Domino servers and perform most Notes and Domino specific administrative tasks.

You need to decide which Lotus Notes and Domino Client to deploy based on user type. You may want to install all three clients — the Notes client, Domino Administrator client, and Domino Designer for your Domino Administrator or Designer — or you may choose to install only two of the clients, based on your users' job functions. If you decide to install only the Notes client for your users, you also need to decide whether this is a multi-user or single-user installation.

Depending on the size of your enterprise, you may also need to provide an installation method for only a few users or for thousands of users. In addition, you may need to customize the installation process so that users install only the features that they need.

Section 4.2, “Client installation choices” on page 64, discusses some installation choices that you can make available to the users in your enterprise.

### Note:

Single-user client installation: This installation is usually done from the CD or from files placed in the network.

Multi-user installation: This option is available only for Notes client installation. Multi-user installation is not available for installing the Domino Administrator client or Domino Designer.

## 4.2 Client installation choices

**Important:** Before deploying Notes 8, review 2.3.3, “Planning a new deployment of Notes and Domino 8” on page 38, and 2.4, “System requirements” on page 40.

Notes 8 provides the following choices for deploying the client:

- ▶ Manual installation: This is usually done from the CD or from files placed in the network.
- ▶ Smart Upgrade: This is a feature that uses policy and settings documents to help push out upgrade to users who would then get a notification to upgrade their Lotus Notes client.
- ▶ Upgrade by mail: This is a feature that sends an e-mail notification to specified users to upgrade their Notes clients and, optionally, their mail file templates.
- ▶ Administrative installation: This is a feature of the Microsoft Windows Installer that copies the installation kit to a file server that users access through a network connection. Users launch the installation program from the file server to install Lotus Notes client locally on their client machines.

**Note:** You can use administrative installation to copy the installation files to a network file server, then use upgrade-by-mail or Lotus Notes Smart Upgrade to notify users

Table 4-1 compares these choices.

*Table 4-1 Notes client deployment choices*

Deployment options	Advantages	Disadvantages
Manual installation/upgrade	<ul style="list-style-type: none"> <li>▶ Easily back up files before upgrading</li> </ul>	<ul style="list-style-type: none"> <li>▶ Time consuming</li> <li>▶ Administrator might have to visit each workstation</li> </ul>
Smart Upgrade	<ul style="list-style-type: none"> <li>▶ Can establish a deadline in which users must upgrade their Notes client</li> <li>▶ Can be customized with transforms to create a silent, automated installation, a shared installation, and so on</li> </ul>	<ul style="list-style-type: none"> <li>▶ Not capable of upgrading pre-Release 6 clients</li> </ul>
Upgrade by mail	<ul style="list-style-type: none"> <li>▶ Capable of upgrading pre-Release 6 clients.</li> <li>▶ Can be customized with transforms to create a silent, automated installation, a shared installation, and so on</li> <li>▶ Mail template can also be upgraded at the time of client upgrade</li> </ul>	<ul style="list-style-type: none"> <li>▶ Administrator cannot determine when upgrade occurs</li> </ul>
Administrative Installation/Upgrade	<ul style="list-style-type: none"> <li>▶ Uses the command line option /A to create an administrative image of the Lotus Notes 8 installation on a network file server</li> <li>▶ Can be customized with transforms to create a silent, automated installation, a shared installation, and so on</li> </ul>	<ul style="list-style-type: none"> <li>▶ Requires the Windows Installer service, which is part of the Windows XP and 2000 operating systems and is available for, but not part of, Windows 95, 98, and NT 4.0</li> </ul>

## 4.3 Manual installation/upgrade

The manual installation process has not changed from Release 7. This section briefly describes what to expect from a manual installation of Notes 8, with emphasis on the new available features. The steps below walk you through the all client installation.

**Note:** The all client installation allows you to install the Domino Administrator and Domino Designer clients. It is, however, not supported with a multi-user installation.

1. You are prompted with the welcome panel shown in Figure 4-1. Click **Next**.

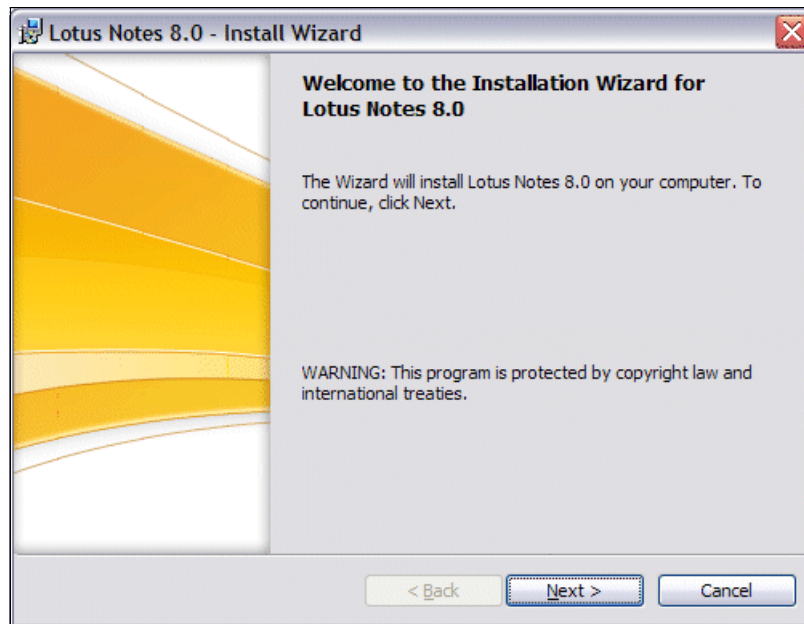


Figure 4-1 Welcome panel



2. Read and accept the license agreement, as shown in Figure 4-2.

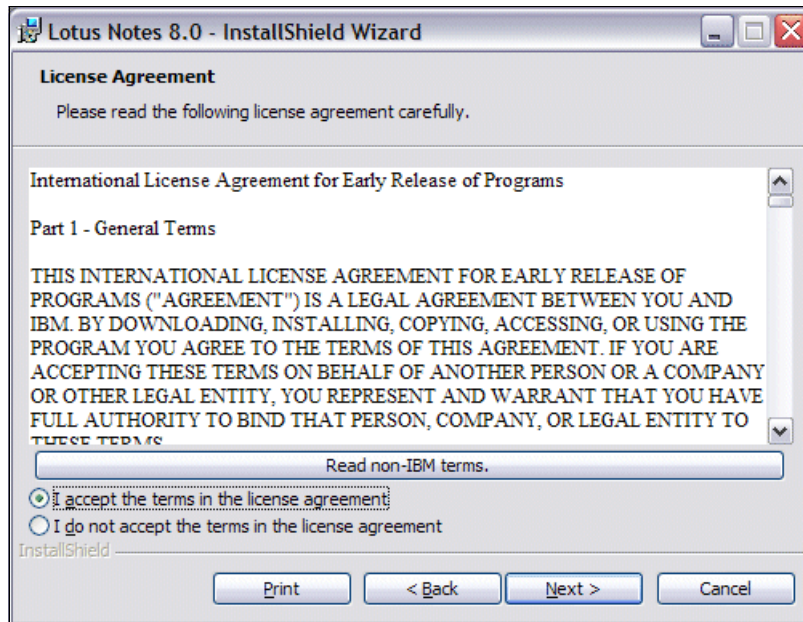


Figure 4-2 License agreement

3. You are prompted for customer information, as shown in Figure 4-3. If this is an upgrade, Notes retrieves the information from the client currently installed. You can modify it as needed. Click **Next**.

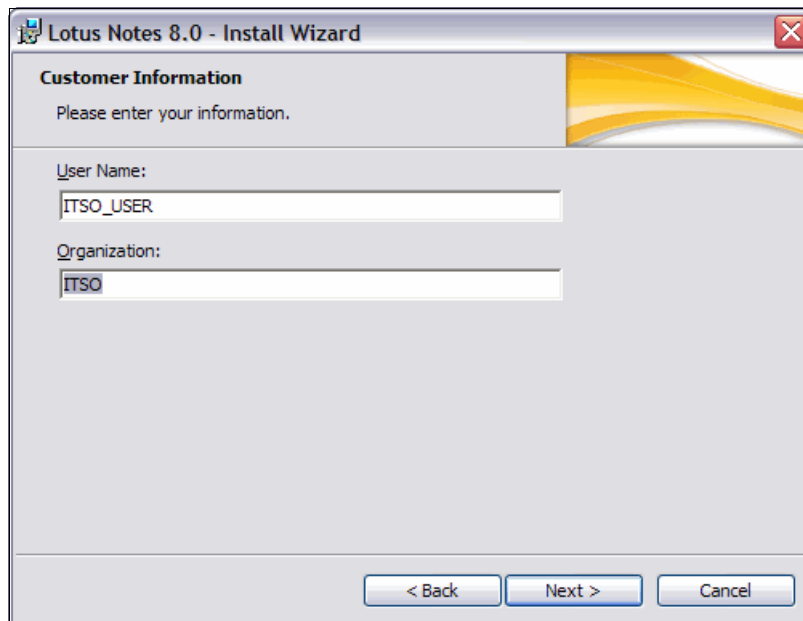


Figure 4-3 Customer Information

4. Select the installation path, as shown in Figure 4-4.
  - If this is an upgrade, go to step 4a.
  - For a new install, go to step 4b.
  - a. If this is an upgrade, the installation path would default to where the Notes client is currently installed, and the change button might be unavailable.

**Important:** During an upgrade, the current install path is pulled from the registry key\HKEY\_LOCAL\_MACHINE\SOFTWARE\Lotus\Notes. If you want to install the Notes client to a different path, we recommend that you uninstall the previous client before installing the new version.

- b. If this is a new installation, select the installation path or leave the default and click **Next**.

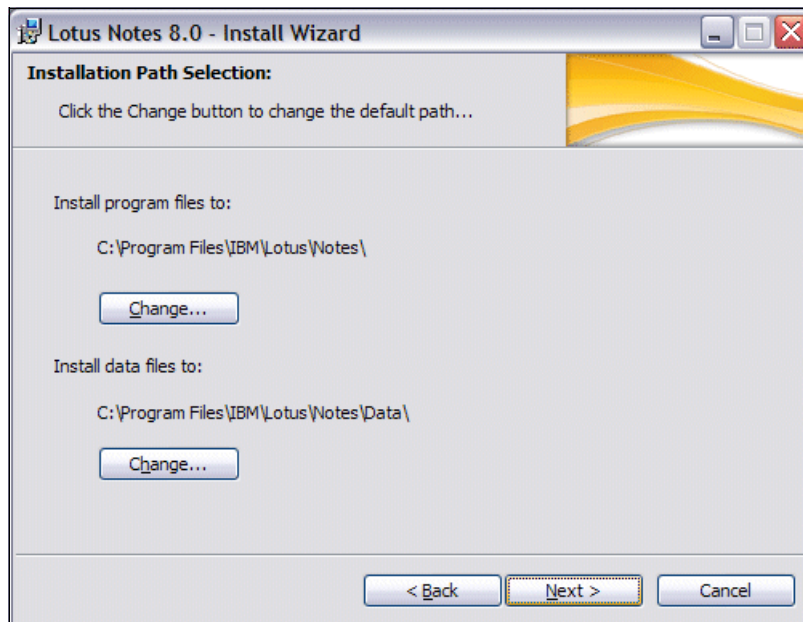


Figure 4-4 Installation Path Selection

5. Select which features to install, as shown in Figure 4-5 and Figure 4-6 on page 70. By default, the installation selects the minimum recommended files for the Notes client installation. Activities, composite application editor, IBM productivity tools, and Sametime (integrated) features are newly introduced in Notes 8.

- Activities - Select this to install the activities feature. An activities server is required to use this feature. For complete details see 6.9, “Activities” on page 176.
- Sametime (integrated) - Select to install basic Sametime capabilities such as chat and presence awareness. A Sametime server is required to use this feature. For complete details see 6.8, “Sametime contacts” on page 167.
- IBM Lotus Productivity Tools - Select this to install IBM Lotus Documents, IBM Lotus Presentations, and IBM Lotus Spreadsheets. For more information about productivity tools, see Chapter 7, “Productivity tools” on page 199.
- Composite Applications Editor - Select this to install the composite applications editor for use with composite applications. For complete details see Chapter 12, “New application development features” on page 399.

You can highlight some features for a description. You can also select each client to check how much hard drive space it requires. Click **Next**.

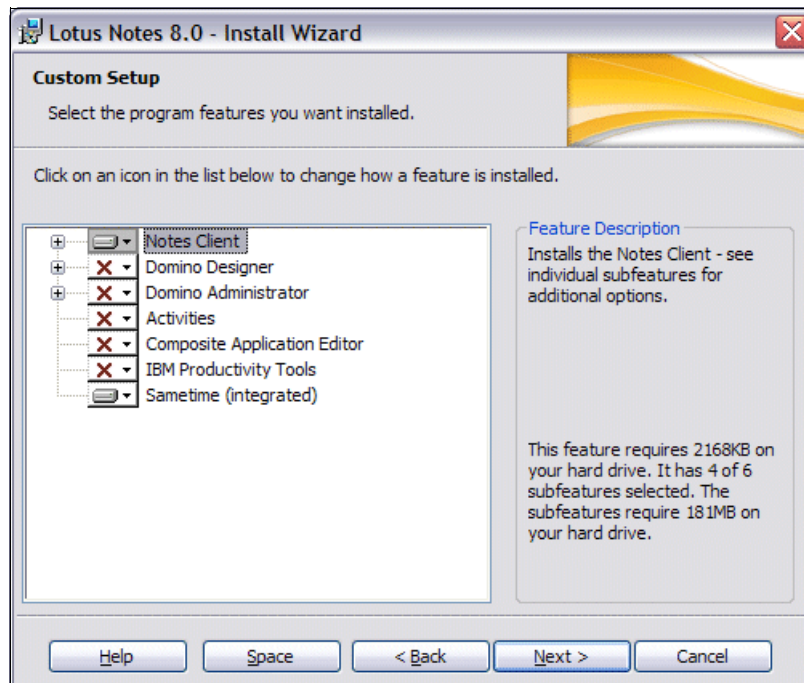


Figure 4-5 New features added in Notes 8

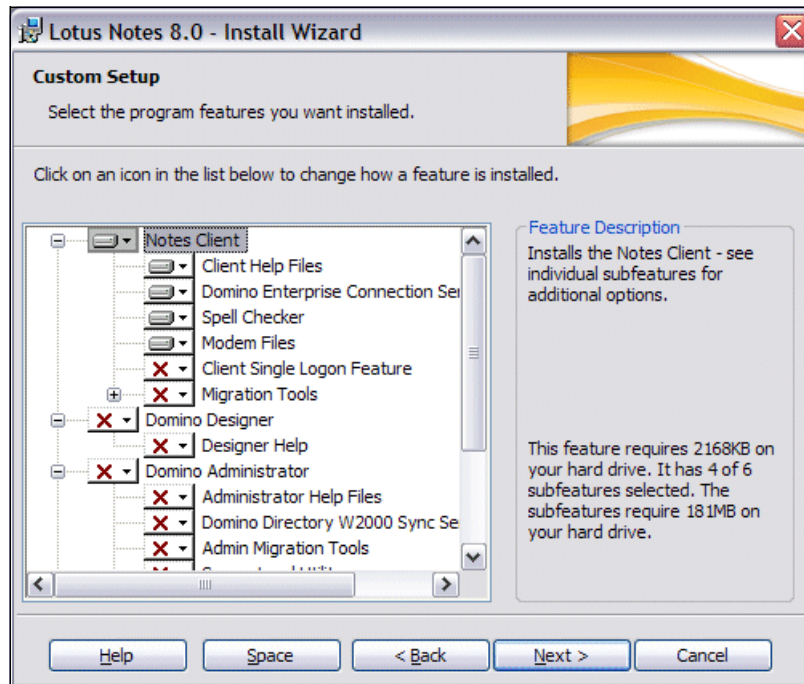


Figure 4-6 Custom Setup

6. You are now ready to install the program. Click the **Install** button as shown in Figure 4-7 or use the **Back** button to change to any of the previous options without canceling the installation.

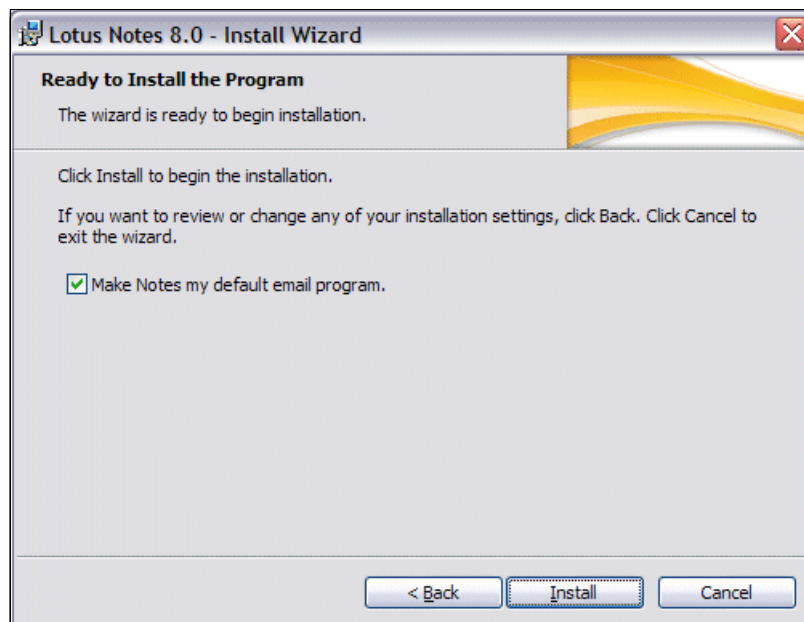


Figure 4-7 Ready to Install the Program

7. While the Notes client is being installed, a panel with a progress bar is displayed. See Figure 4-8.

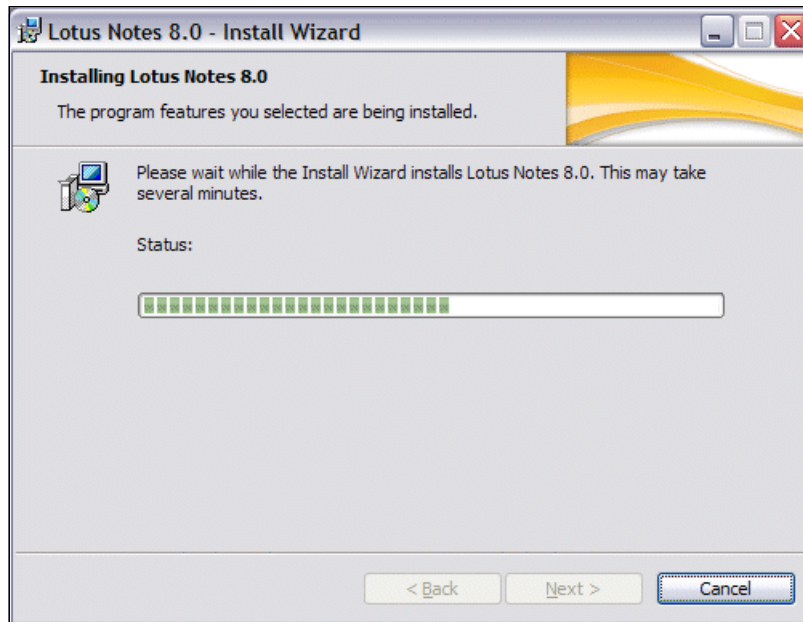


Figure 4-8 Installing Lotus Notes - progress bar

8. Once installation completes, you should see the dialog box shown in Figure 4-9. Click **Finish**. You can now launch the Notes client with the desktop icon.

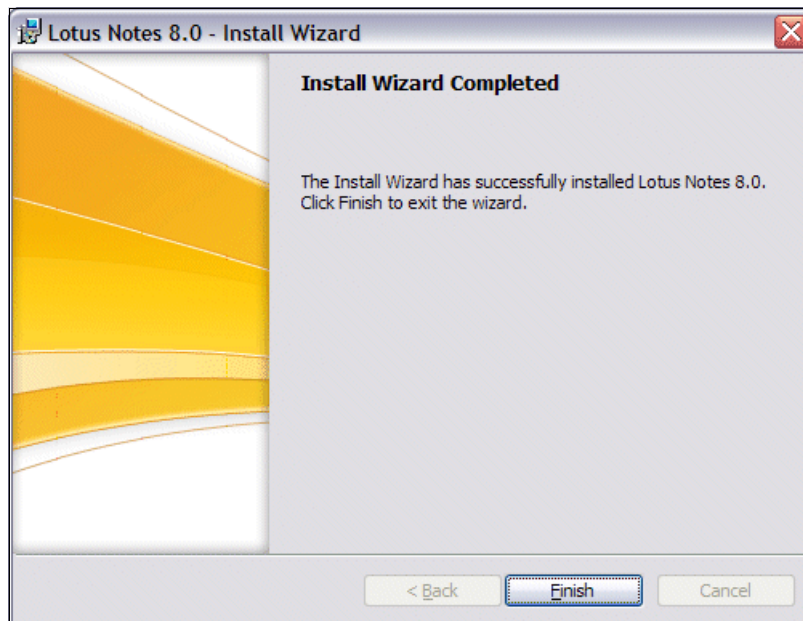


Figure 4-9 Install completed

### 4.3.1 Multi-user installation

Multi-user install enables multiple users to sequentially log in to the same machine and use the same shared IBM Lotus Notes install directory, but with their own Notes data directory.

Use the multi-user installation if your enterprise has multiple users who share a single workstation.

In a multi-user installation, the installer installs the Notes program files to a central location on the local system. When users log onto the system and run the Lotus Notes client setup, their own personal data files (that is, BOOKMARK.NSF, NAMES.NSF, and other files) are created. It allows each user to store her personal desktop, address books, local databases, preferences, and so forth. In essence, each user has her own data directory located in the system's application data directory for the current user. The actual location varies according to operating system.

**Note:** Individual location documents are no longer needed for each user who uses the Notes client on the same workstation, as was required in previous releases.

The multi-user installation differs from a shared installation in that program files are located on the local system in a multi-user install, which can be an advantage. This allows for access to the Notes client regardless of which network drives are available. In a shared installation, users are dependent on the availability of shared network drives.

When installing for multi-user, you must be logged in as an administrative user. Once installed, users can open and use Lotus Notes 8.

**Note:** When installing Lotus Notes 8 for single user, you must be logged in as an administrative user or as a non-administrative user with elevated privileges.

Windows supports both single-user and multi-user installs of Lotus Notes 8. However, the AllClient kit, which includes the Domino Administrator and Domino Designer clients, does not support the multi-user installation.

**Note:** You can install Lotus Notes on Windows as single or multi-user installation. However, Lotus Notes installation on Linux supports multi-user only. Be aware that you can still install Lotus Notes as multi-user for just one user.

Section 4.3, "Manual installation/upgrade" on page 66, walked you through the installation of the AllClient. At no point was the installation specified as a multi-user installation.

Installing the Notes-only client gives you the option to install as a single user or multi-user, and Figure 4-10 would replace Figure 4-3 on page 67 in the manual installation process.

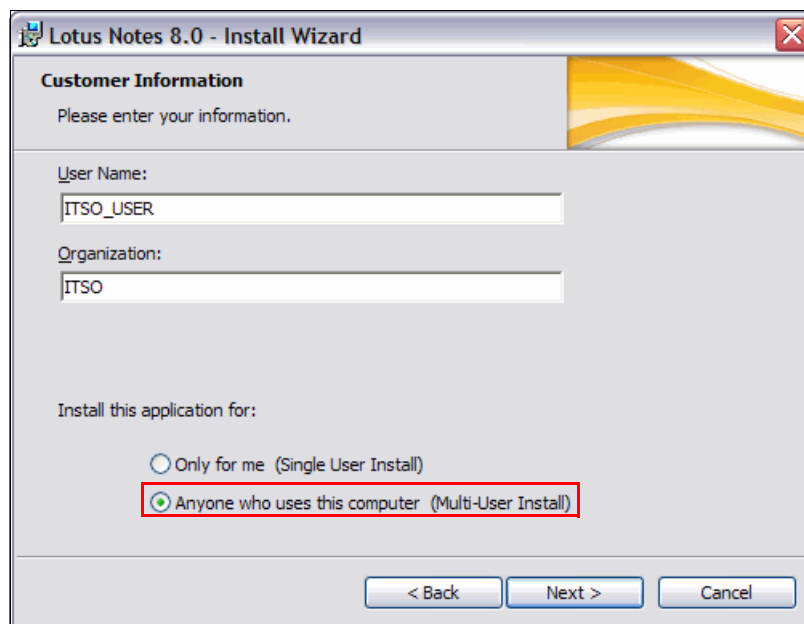


Figure 4-10 Option to install as multi-user

### 4.3.2 Automating your deployment

Depending on the size of your enterprise, you may need to provide an deployment method for hundreds or even thousands of users. In this instance being able to automate the deployment saves you both time and resources. Below are a few resources to help with automating your deployment:

- ▶ IBM Redpaper, *Distributing Notes Clients Automatically*, REDP-3693  
<http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/redp3693.html?Open>
- ▶ Lotus Domino Administrator 8 Help topic, *Automating client installation using a silent install*
- ▶ Lotus Domino Administrator 8 Help topic, *Setting up client installation and installation methods*
- ▶ Lotus Domino Administrator 8 Help topic, *Providing a batch file for installing the clients*

**Important:** You may choose to use a third-party tool in automating your deployment. However, be aware that IBM Lotus would assist you as much as possible to make your deployment successful, but does not support the third-party tool.

## 4.4 Smart Upgrade

Lotus Smart Upgrade enables administrators to push out a Notes client upgrade with ease to an entire company or selected users using policy and settings documents. Users would get a Smart Upgrade notification to update their Notes clients to later releases, with the option to delay the upgrade if the time is inconvenient.



Lotus Smart Upgrade was introduced in Release 6.x to assist Lotus Domino Administrators in upgrading the Notes client. Smart Upgrade can be used to upgrade the Notes clients from Release 6.x or later to Release 8. Using Smart Upgrade has three important benefits:

- ▶ Prevents administrators and support staff from having to visit each desktop
- ▶ Reduces the dependency on third-party tools
- ▶ Reduces the total cost of upgrading

This section discusses what you should know before you proceed with setting up Smart Upgrade, and what has changed in Notes 8 with respect to setting up the Smart Upgrade kit.

## **What you need to know before setting up Smart Upgrade**

You must know:

- ▶ If you are running a version of Lotus Notes that was released prior to Notes 6.5, you need to upgrade to at least Lotus Notes 6.5 before upgrading to the Lotus Notes 8 release. You can choose to have multiple upgrade kits: one to upgrade the client to 6.5.x and the other to upgrade from Lotus Notes release 6.5.x or 7.x to Lotus Notes 8 release.
- ▶ Smart Upgrade is not supported in Lotus Notes 8 Beta, and neither is any form of upgrading from a beta version to a gold version. If you have installed a previous beta version of Lotus Notes 8, you must uninstall it before installing Lotus Notes 8.



## Changes in the Smart Upgrade kit document

In Notes and Domino 8, the Smart Upgrade kit document now has a new Configuration field (Figure 4-11), where you can choose to install the standard installation or basic configuration (see 4.8, “Notes 8 - basic configuration” on page 91) of the Notes client.

Save & Close Cancel

### Smart Upgrade Kit : Lotus Notes 8 -Client only Kit

Basics Administration

**Basics:**

Kit description: Lotus Notes 8 -Client only Kit

Enable this kit for use: ☒ Enabled

**This Smart Upgrade kit can be used to update the following versions of Lotus Notes:**

Configuration: ☒ Notes Standard ☐ Notes Basic

Source versions: Release 6.5.6

Operating system: Windows/32

Localization: English

Install Type: ☐ Notes client only ☐ All client (Notes client, Admin client, Designer)

**After applying this kit, the client will be running this version of Lotus Notes:**

Destination version: Release 8.0

Restart Notes after update: ☒ Restart

**Location of update kit:**

Location: ☒ On a shared network drive ☐ Attached to this note ☐ Shared network drive & attached kit

Full path to update kit: \\itso.ibm.com\Software\Lotus ND8\Notes\setup.exe

Optional arguments for shared network drive kit:

**Optional message to end users (appears in update prompt):**

Message text:

Figure 4-11 Sample Smart Upgrade kit document

## Smart Upgrade “run as admin” utility (SURunAs)

The *runs as admin* utility was introduced in the Lotus Notes 7.0.2 release, enabling users to install the Notes client using different permissions from what the user’s current logon provides.

The feature is especially designed for Notes client users who do not have administrator privileges but who still need to update their Notes client software periodically. SURunAs can be used in Smart Upgrade or through any existing deployment method. It can be used to create a single executable file that can be attached to the Smart Upgrade kit document or it can be used to create a setup.exe file that can be placed on a network drive and referenced in the Smart Upgrade kit document.

For details on how Smart Upgrade and SURunAs works, its features, and steps to deploying the Notes client using Smart Upgrade, refer to the IBM Redpaper, *Understanding Lotus Notes Smart Upgrade*, REDP-4180:

<http://www.redbooks.ibm.com/abstracts/redp4180.html?Open>

## 4.5 Upgrade by mail

Upgrade by mail is a feature that sends an e-mail to users and gives them the option to upgrade their Notes client and the design of their mail template. You might want to use upgrade by mail for users who are already familiar and comfortable with this form of upgrade from a previous release. Upgrade by mail also has no time limit, allowing users to upgrade their Notes client at a convenient time. This works well for users out of the office (during the upgrade) for an extended period of time.

**Restriction:** Be aware that upgrade from a release prior to Notes 6.5 is not supported. If you are running a version of Lotus Notes that was released prior to Notes 6.5, upgrade to at least Lotus Notes 6.5 before installing and upgrading to this Lotus Notes 8.

Below are steps for a basic upgrade by mail process:

1. Launch the Domino Administrator client.
2. Confirm that you are administering the server on which the user's mail file resides. If not, from the **File** menu, choose **Open server** and select the proper server.
3. Click the **Messaging** tab, then click the **Mail Users** view on the left navigator pane. See Figure 4-12.
4. Select one or more users who you want to send the notification to upgrade just the Notes client or the Notes client and mail file design. Click the **Send Upgrade Notification** action button, as shown in Figure 4-12.

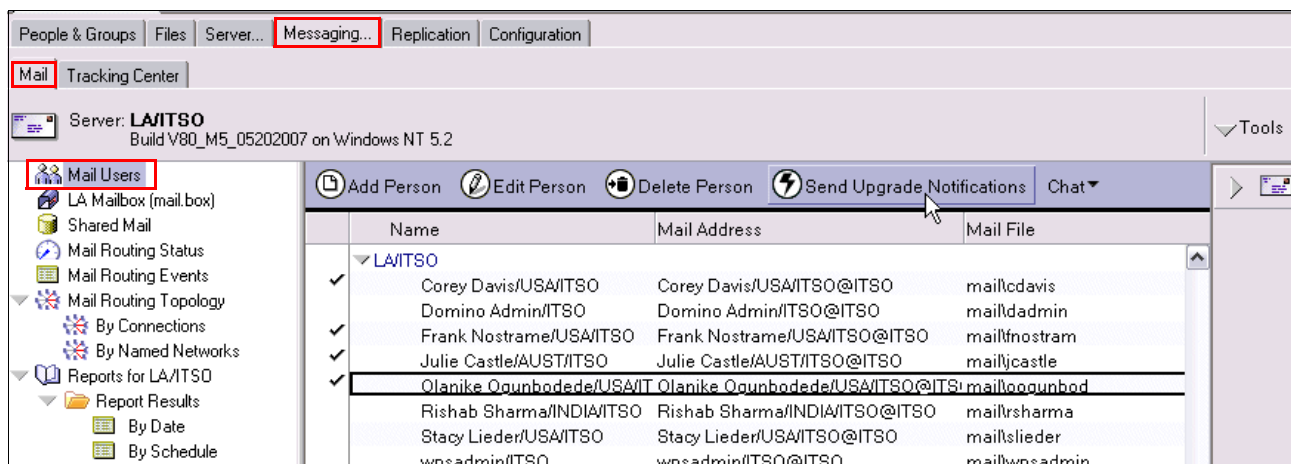


Figure 4-12 Select users

5. The upgrade notification document will now display, as shown in Figure 4-13.

Address... Send

## Upgrade Notification

From: Domino Admin/ITSO

To: Frank Nostrame/USA/ITSO  
Corey Davis/USA/ITSO  
Olanike Ogunbodede/USA/ITSO  
Julie Castle/AUST/ITSO

Subject: Upgrading to the latest version of Notes.

Basics Client Versions Software Distribution

Select the type of upgrade notification to send out:

- ☒ Upgrade Notes Client & Mail Template to Notes 6 or higher
- ☐ Upgrade Notes Client & Mail Template to pre Notes 6 versions
- ☐ Convert local cc:Mail/MS Mail/MS Exchange data to Notes

Notify me when users complete mail conversion:

- ☐ Yes
- ☒ No

Figure 4-13 Upgrade Notification - Basics tab

6. On the Basics tab, select **Upgrade Notes Client & Mail Template to Notes 6 or higher** for the type of upgrade notification to send. If you want to be notified once the user upgrades his or her mail template, select **Yes** for the option, "Notify me when users complete mail conversion."

- Switch to the **Client Versions** tab of the upgrade notification document. The "Do not upgrade Notes if workstation uses build xxx or later" option reflects the build number corresponding to the client used to send the upgrade notification. The build number for Lotus Notes Version 8.0 is 306. See Figure 4-14.

**Note:** If you do not know or are not sure of the build number, set the option "Do not upgrade Notes if workstation uses build xxx or later" to 999. This ensures that the recipient of the upgrade notification is able to upgrade his client.

The screenshot shows the Domino Admin/ITSO upgrade notification document. The 'Client Versions' tab is selected. The 'Do not upgrade Notes if the workstation uses build 306 or later' option is checked. The 'Client Version / Build number matching table' is displayed below.

Do not upgrade Notes if the workstation uses build 306 or later.	Build Number	Lotus Notes Version
<input checked="" type="checkbox"/>	171	6.0x
<input type="checkbox"/>	166	5.0x
<input type="checkbox"/>	147	4.6x
<input type="checkbox"/>	145	4.5x
<input type="checkbox"/>	138	4.1x

Figure 4-14 Upgrade Notification - client versions

8. Switch to the **Software Distribution** tab and enter the "Root path for install kits" to point to the server and shared folder name, making sure to end the line with a backslash (\). See Figure 4-15.
9. In the Path for Windows 95, 98, NT, 2000 field enter the path to setup.exe. Be sure to put a backslash in front of the path to setup.exe if it is relative to the root path specified in step 8. See Figure 4-15.

The screenshot shows the Domino Admin/ITSO interface with the 'Software Distribution' tab selected. The 'Notes Install Kit Paths' section contains fields for 'Root path for Install kits', 'Path for Windows 95, 98, NT, 2000', 'Arguments Option for W32', and 'Path for Macintosh PPC'. The 'Mail Template Information' section contains fields for 'Old design template name for your mail files', 'New mail template file name', 'Ignore 200 category limit', 'Mail file to be used by IMAP mail clients', 'Upgrade the design of custom folders', and 'Prompt user before upgrading custom folders'.

Notes Install Kit Paths		Mail Template Information	
Root path for Install kits (must end with "\"):	<input type="text" value="\\ITSO.com\Software\"/>	Old design template name for your mail files:	<input type="text" value="*"/>
Path for Windows 95, 98, NT, 2000:	<input type="text" value="\\w32\client\setup.exe"/>	New mail template file name:	<input type="text" value="mail8.ntf"/>
Arguments Option for W32:	<input type="text" value=""/>	Ignore 200 category limit:	<input checked="" type="checkbox"/> Yes
Path for Macintosh PPC:	<input type="text" value=""/>	Mail file to be used by IMAP mail clients:	<input type="checkbox"/> Yes
		Upgrade the design of custom folders:	<input checked="" type="checkbox"/> Yes
		Prompt user before upgrading custom folders:	<input type="checkbox"/> Yes

Figure 4-15 Upgrade Notification - Software Distribution tab

10. In the Old design template name for your mail files field (see Figure 4-15) enter the current template name for the mail file or use an asterisk (\*) for any template.
11. In the New mail template file name field enter the new template name for upgrading the design of the mail files.
12. Click **Send**. The recipient will receive an e-mail with the subject Upgrading to the latest version of Notes.

**Note:** The Subject field is not editable on the upgrade notification document.

13. In the "Upgrading to the latest version of Notes" e-mail are two buttons, as shown in Figure 4-16, Install New Notes Software and Upgrade My Mail File, to upgrade the user's mail file. When the user clicks the first button, the Notes client currently running will shut down and the upgrade will begin.

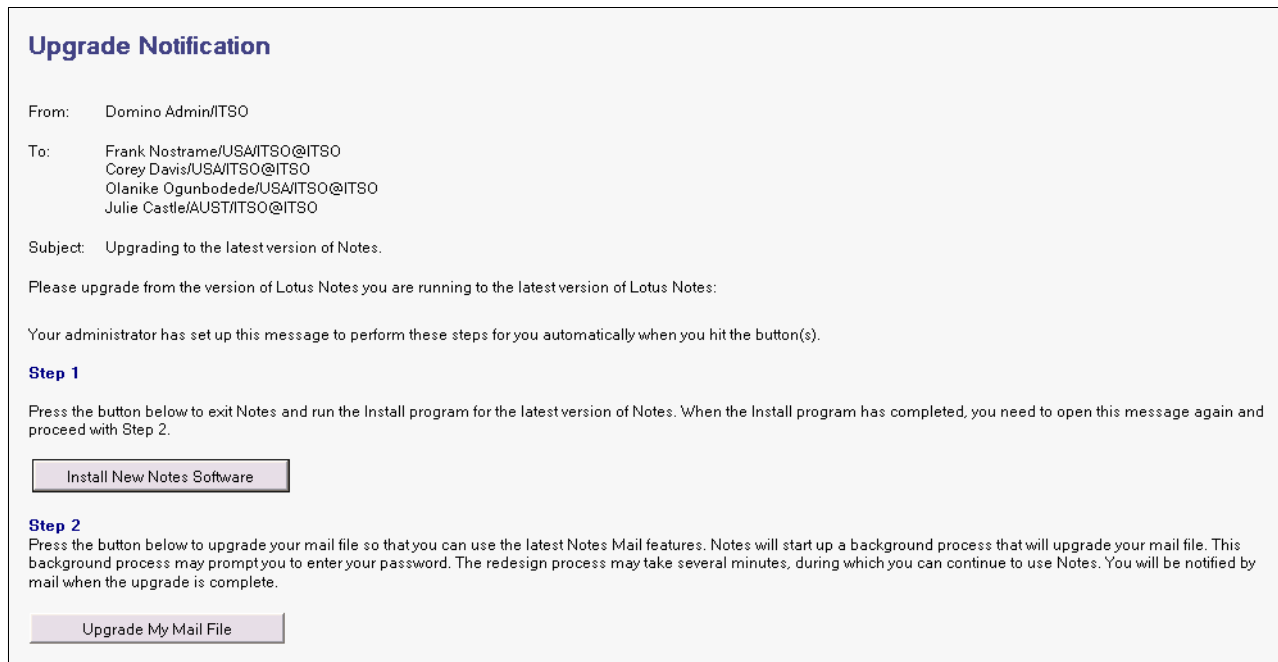


Figure 4-16 Upgrade Notification - e-mail message

14. Once the install is complete, the user can open the message again and click the second button to upgrade the design of the mail file.

**Important:** The new mail template must be in each user's data directory for the user to properly upgrade his mail file using the Upgrade My Mail File button sent in the upgrade notification message. Therefore, it is important that your users click the Upgrade My Mail File button after they click the Install New Notes Software button.

The user must have Designer access in the ACL to upgrade his own mail file using the upgrade by mail feature.

**Tip:** If you would rather not have the users upgrade their mail files using the upgrade by mail process, leave the New mail template file name option in step 12 empty.

## Using optional arguments

Upgrade by mail allows you to control user interaction with the upgrade process. This can be configured in the Arguments Option for W32 field, shown in Figure 4-15 on page 79.

Optional arguments are commonly used to run a silent installation requiring no user input during the upgrade, or to launch an upgrade that is *almost silent*, requiring almost no input from users.

Samples of the optional command-line arguments and their descriptions are shown in Table 4-2.

Table 4-2 Optional command line arguments

Arguments	Description and use
/a	Administrative installation.
/s  Note: Always place a blank space immediately after the /s.	Instructs setup.exe to run in silent mode (does not display the install shield initialization box).
/v	Passes arguments to MSiexec. All arguments entered to the right of the argument /v apply to MSiexec (for example, /v"qb+" would pass the qb+ command to the MSI installer). The commands are surrounded by quotation marks. There is no space between the /v and the quotation marks.
/qn+	No user interface displayed during the installation of the client except for a modal dialog box displayed at the end to notify that the installation is completed.
/qb+	User sees progress bar showing status of the installation of the client with a modal dialog box displayed at the end to notify that the installation was completed. The modal box is not displayed if the user cancels the installation. Use qb+! or qb!+ to hide the Cancel button.

**Tip:** For instructions on how you can perform a silent upgrade by mail for Windows, see the Lotus Software Knowledge Base Document, "How to perform a silent upgrade by mail" at:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21164125>

**Note:** The transform file created by a third-party tool, such as InstallShield Tuner OEM Edition, can be used to customize the installation process by adding resources, changing defaults, or hiding features present in the Lotus Notes installation kit.

The transform file can be used with upgrade by mail. Use the "TRANSFORMS=" parameter and specify the transform file path in the Arguments Option for W32 field (for example, /s /v"TRANSFORMS=file.mst").

There is an excellent IBM Redpaper, *Distributing Notes Clients Automatically*, REDP-3693, with detailed instructions on using the InstallShield Tuner to create a transform file:

<http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/redp3693.html?Open>

Domino Administrator help also includes help topics, such as customizing client installations using the tuner.

## 4.6 Seamless mail upgrade

Seamless mail upgrade is a method of upgrading client templates when upgrading the Lotus Notes client. It is configured in a desktop settings document and is assigned to a master policy document. It only works at the time of the client upgrade.

From the user's perspective, after the Notes setup is complete, the user can be asked (or forced) to upgrade his mail file to the new template design.

**Tip:** To avoid potential incompatibility issues, use seamless mail upgrade in conjunction with Smart Upgrade. This upgrades the template immediately following the upgrade of the client to avoid potential incompatibility.

### Configuring seamless mail upgrade

Perform the following steps:

1. From the Domino Administrator, select the **People & Groups** tab, and select the **Settings** view.
2. If there is already a desktop policy setting document, you can edit the current one or create a new desktop settings document by clicking **Add Settings** → **Desktop**.
3. If the desktop settings document is new, fill in a name on the Basics tab.

Mail Template Information		Inherit from parent policy:	Enforce in child policies:
<b>Note: The information in this section is only used during client upgrades.</b>			
Prompt user before upgrading mail file: (If users have multiple machines or custom folders that they don't want the design replaced on)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Old design template name for your mail files:	<input type="text" value=""/>	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
If Running This Version Of Notes:	Use This Mail Template:	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Release 8.0	mail8.ntf	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Ignore 200 category limit:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Mail file to be used by IMAP mail clients:	<input type="checkbox"/> Yes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Upgrade the design of custom folders:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Prompt before upgrading folder design:	<input type="checkbox"/> Yes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Notify these administrators of mail upgrade status:	<input type="text" value="Domino Admin/ITSO"/>	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce

Figure 4-17 Desktop settings document - section to configure seamless mail upgrade



4. Scroll down to the mail template information section and complete the fields shown in Table 4-3. Figure 4-17 on page 82 shows the mail template information section.

Table 4-3 Seamless mail upgrade fields

Field	Action
Prompt user before upgrading mail file	Do one: <ul style="list-style-type: none"> <li>► Select Yes to inform users before upgrading their mail files. This enables users to defer the upgrade.</li> <li>► Clear the Yes option (default) to upgrade without notification.</li> </ul>
Old design template name for your mail files	The default asterisk (*) uses any mail template. (Optional) Enter the name of the current template you are using.
If Running This Version of Notes	Enter the build version of the Notes client in the format Release Vnn Month dd, yyyy (for example, Release 7.0.1 January 21, 2006). To upgrade all versions, use an asterisk (*). Tip: To find the build version, select <b>Help</b> → <b>About Domino Administrator</b> .
Use This Mail Template	Enter the new mail template file name, Mail8.ntf.
Ignore 200 category limit	By default, the number of folders created during conversion is limited to 200 folders. Do one of the following actions: <ul style="list-style-type: none"> <li>► Select Yes to override that limit and create as many folders as necessary (default).</li> <li>► Clear the Yes option to enforce the limit.</li> </ul>
Mail file to be used by IMAP mail clients	Do one: <ul style="list-style-type: none"> <li>► Select Yes if mail file will be used by an IMAP mail client.</li> <li>► Clear the Yes option if IMAP will not be used (default).</li> </ul>
Upgrade the design of custom folders	The conversion does not upgrade private folders automatically. Do one: <ul style="list-style-type: none"> <li>► Select Yes to include custom folders in the design upgrade (default).</li> <li>► Clear the Yes option to exclude custom folders in the design upgrade.</li> </ul>
Prompt before upgrading folder design	Do one: <ul style="list-style-type: none"> <li>► Select Yes to inform users before upgrading their mail folder design. This enables users to defer the upgrade.</li> <li>► Clear the Yes option (default) to upgrade folder design without notifying users.</li> </ul>
Notify these administrators of mail upgrade status	If you chose to notify users before updating mail template or folders, enter the names of administrators who should receive status information.

5. Click **Save & Close**.
6. Include the desktop settings document in the master policy.

7. Assign to users if it is an explicit policy.

**Note:** See your Domino Administrator help for more information about policies.

## 4.7 Installing Lotus Notes 8 client on Linux

This section provides you with helpful information for installing Notes 8 on a Linux client.

**Important:** Before deploying Notes 8 on Linux, review 2.3.2, “Planning to deploy Lotus Notes 8” on page 36, and 2.4.1, “Lotus Notes 8 supported platforms” on page 41.

**Note:** See the requirements section of the release notes for the latest information about supported hardware and software.

### 4.7.1 Considerations before installing the client

In this section we discuss the considerations before installing the client.

Requirements:

- ▶ Lotus Notes 8 installation on Linux supports SLED 10 (XGL enabled or disabled) and RHEL 5 (AIGLX and SELinux disabled).
- ▶ Before installing Lotus Notes 8 on a Linux client, you must have Mozilla Firefox, Version 1.5+ GTK2 build, Mozilla Seamonkey, or the Mozilla Runtime Environment, Version 1.8+ GTK2 build, installed on your system. The client does not support the earlier beta requirement of Mozilla 1.7.12. See the "Linux system requirements" release note for details.
- ▶ If you have installed a previous beta version of Lotus Notes 8, you must uninstall it before installing Lotus Notes 8. Upgrade from a beta version of this release is not supported.
- ▶ You must install Lotus Notes 8 on Linux in a multi-user environment. Single user install is not supported.
- ▶ You must be logged in as a root user or switch the user to root before installing Lotus Notes. Once installed, non-root users can open and use Lotus Notes.

Recommendations:

- ▶ While a minimum of 512 MB of memory is required, 1GB or more of memory is recommended. See the "Software requirements" section of the release notes for details.
- ▶ A summary panel displays the disk space footprint for what is being installed. Install also needs additional temporary disk space. The temporary disk space required is almost as large as the footprint. If you do not have enough space for the footprint and temporary space, the installer will stop you from continuing.

Unsupported/supported configurations:

- ▶ Roaming user is not supported in Lotus Notes 8. Roaming user in Lotus Notes 8 basic configuration remains available.
- ▶ The installation path cannot contain special characters such as # or \$.
- ▶ Only one instance of Lotus Notes 8 should be installed on a client workstation at any given time.

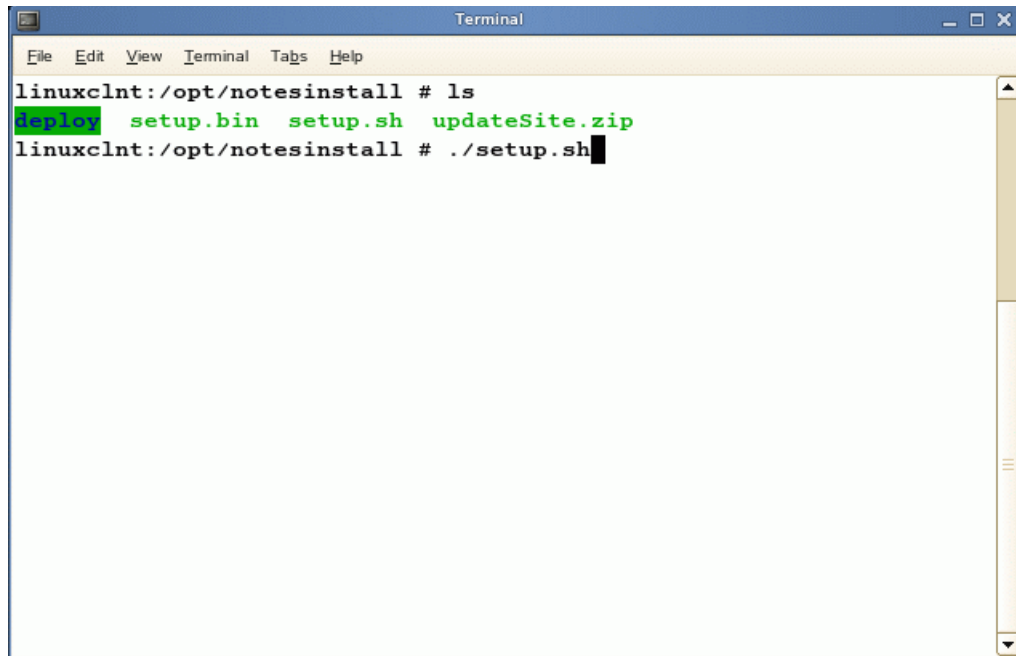
## 4.7.2 Installing the client

Read 4.7.1, “Considerations before installing the client” on page 84, before starting Notes 8 installation.

1. Exit out of any existing versions of Lotus Notes and Lotus Sametime Connect Client.
2. If you have installed a previous beta version of this Lotus Notes release, uninstall it before continuing. For information about uninstall, see the "Uninstalling Notes on Linux" release note.
3. As the root user, open a new terminal panel or file browser. If you are obtaining the installation kit from a Web downloads page, open your Mozilla GTK2 browser and navigate to the Web page from which to obtain the download.
4. Locate the Lotus Notes installation media kit CD or download it from your Passport Advantage® site and save it to a local folder, for example, to your /root folder.
5. Navigate to the folder in which you saved the installation kit and unpack the tar file.
6. Change to the directory that contains the unpacked setup.sh installation executable.

**Note:** Verify that the directory also contains the deploy directory, setup.sh, and updateSite.zip. These contain the needed install manifest, feature, and plug-in JAR files.

7. Run the setup.sh installation executable by double-clicking **setup.sh** or by running `./setup.sh` in a shell. see Figure 4-18.

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The command prompt shows the user is in the directory /opt/notesinstall. The user runs 'ls' and the output shows 'deploy', 'setup.bin', 'setup.sh', and 'updateSite.zip'. Then the user runs './setup.sh' and the prompt returns.

```
linuxclnt:/opt/notesinstall # ls
deploy  setup.bin  setup.sh  updateSite.zip
linuxclnt:/opt/notesinstall # ./setup.sh
```

Figure 4-18 Run installation executable from shell

**Note:** You must be logged in as root user to install.

8. Read the Welcome window, shown in Figure 4-19, and click **Next**.

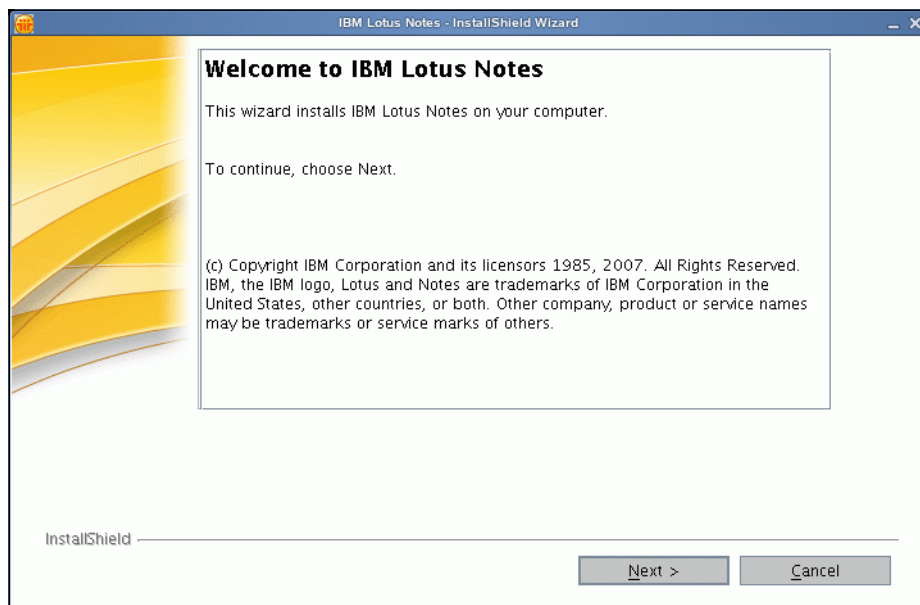


Figure 4-19 Welcome panel - Linux Installation

9. Read and accept the license agreement terms, shown in Figure 4-20, and click **Next**.

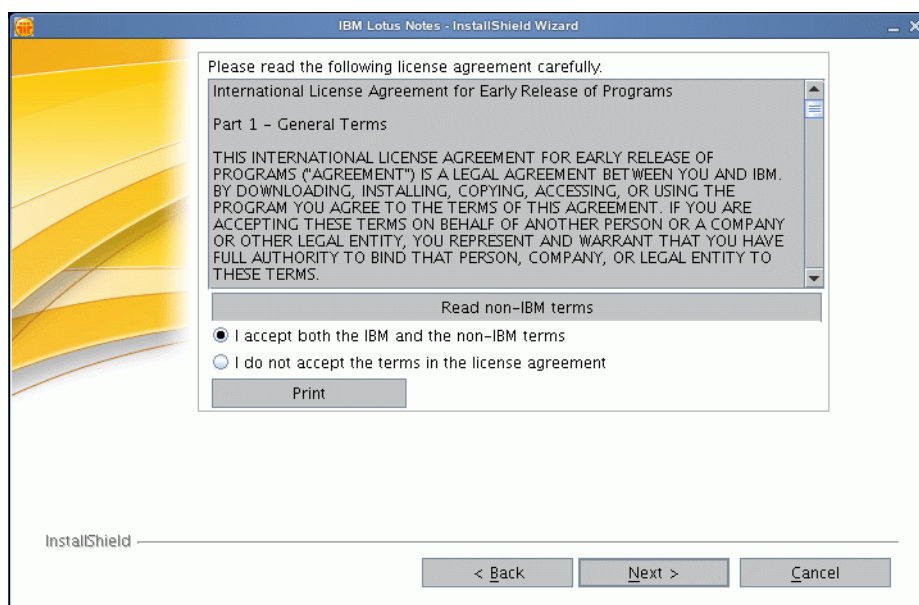


Figure 4-20 License agreement - Linux installation

10. Accept the default install directory (/opt/ibm/lotus/notes, shown in Figure 4-21) or choose a different install directory. You must install to a directory that is readable, but not writeable, by all users. Click **Next**.

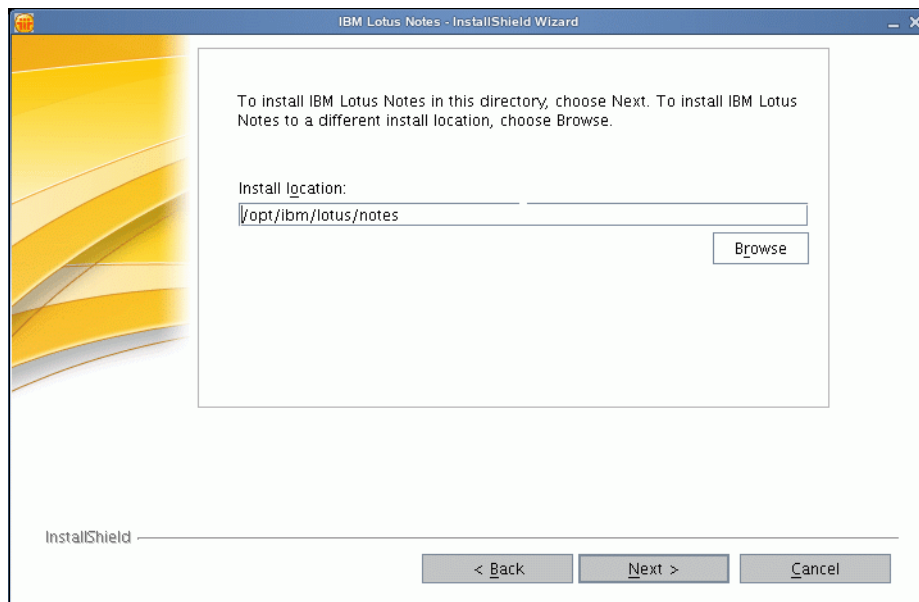


Figure 4-21 Specify the install location

**Note:** Upgrade from a Notes 7.x installation is not supported. Install to a different directory or uninstall Notes before installing.

11. Select the features to install, as shown in Figure 4-22, and click **Next**. These options include the following:

- Activities - Select this to install the activities feature. An activities server is required to use this feature. For complete details, see 6.9, “Activities” on page 176.
- Sametime (integrated) - Select to install basic Sametime capabilities such as chat and presence awareness. A Sametime server is required to use this feature. For complete details, see 6.8, “Sametime contacts” on page 167.
- IBM Lotus Productivity Tools - Select this to install IBM Lotus Documents, IBM Lotus Presentations, and IBM Lotus Spreadsheets. For more information about Productivity tools, see Chapter 7, “Productivity tools” on page 199.
- Composite Applications Editor - Select this to install the Composite Applications editor for use with composite applications. For complete details see Chapter 12, “New application development features” on page 399.

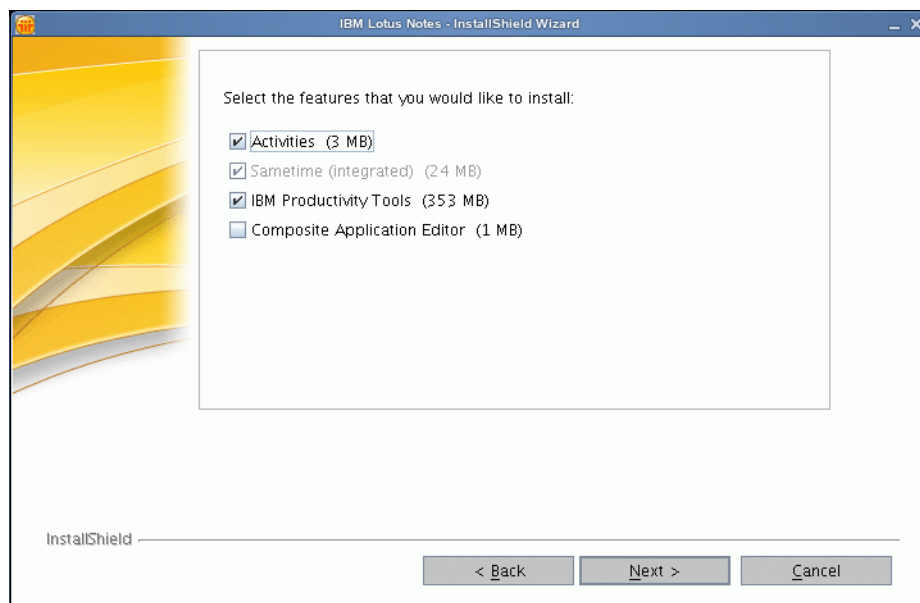


Figure 4-22 Select features to install

12. Review the preview window for installation directory, features, and size, and click **Cancel** to cancel installation, **Back** to go back and make changes to the configuration, or **Install** to install the client. See Figure 4-23.

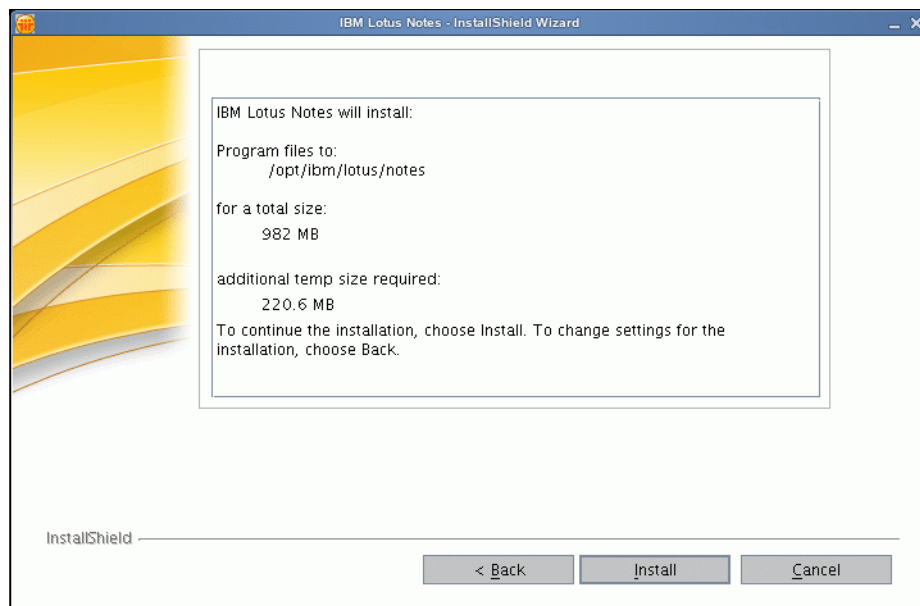


Figure 4-23 Installation summary

**Note:** This process may take several minutes. You may be prompted by an acceptance window from any firewalls you have installed, asking for confirmation, even if the installation is being done locally.

A progress bar displays while the installer copies files to the install directory and provisions the installed features.

13. Read the installation summary window and click **Finish** to exit the installation wizard.

**Note:** If installation is unsuccessful, you can open the install log file at `<install_dir>/framework/rcp/installer_logs/framework_install.log`.

### 4.7.3 After install

The following information describes what you just installed.

- ▶ After install, application icons should be visible for all users by clicking **Computer** → **More Applications** → **Office** and residing in /usr/share/applications. See Figure 4-24.

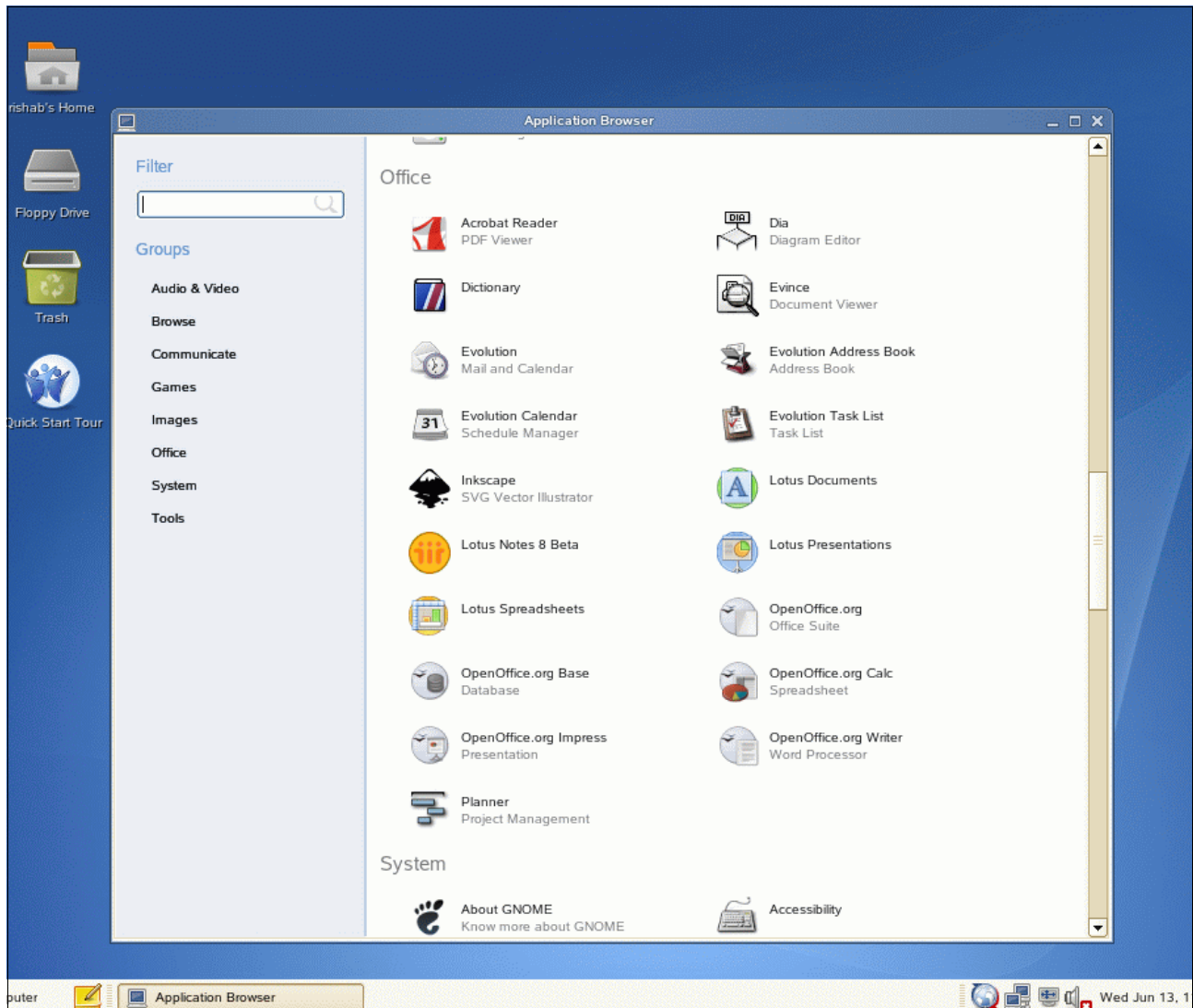


Figure 4-24 Lotus Notes icons

- ▶ The Notes installer does not create desktop shortcut icons.
- ▶ The directories created are:
  - /opt/ibm/lotus/notes - Lotus Notes 8 product and binary files installation directory
  - /root/lotus/notes/data - Lotus Notes 8 data files installation directory
  - /root/lotus/notes/data/workspace - Lotus Notes 8 workspace directory
  - /opt/ibm/lotus/notes/framework - Lotus Notes 8 Java code installation directory
  - /etc/lotus/notes/data - Shared data directory
  - /\${HOME}/lotus/notes/data - Lotus Notes 8 data files directory for each user



- /{\$HOME}/lotus/notes/data/workspace - Lotus Notes 8 workspace directory for each user

### ***Running the client as a user after root user install***

Once the administrator has installed the Notes client, users can log in and run Notes.

1. Log in as a non-root user.
2. Start Lotus Notes by clicking **Computer** → **More Applications** → **New Applications** → **Lotus Notes 8**.
3. Respond to Notes setup prompts as they appear.

## **4.8 Notes 8 - basic configuration**

The system memory requirements for running the Lotus Notes 8 client with the Eclipse interface are higher than those required for running previous versions of the Lotus Notes client. You may find that some percentage of your workstations do not yet meet the requirements to run Lotus Notes 8.

However, this does not mean that you cannot deploy Notes 8. A basic configuration of Lotus Notes 8 is available that requires no more resources than Lotus Notes 6.5/7.x client. Although some features will not be available, the basic configuration may be a good option for your deployment.

**Note:** You can install the Lotus Notes 8 client with the Eclipse interface but still run the basic portion of the Lotus Notes 8 client by adding the **-sa** command-line parameter until the workstation has been upgraded to the required specification.

Certain functions and features will not be available with the Basic Lotus Notes 8. See Appendix B, “Lotus Notes and Domino client feature comparison” on page 457, for details.





## Coexistence: Domino/Domino and Domino/Microsoft Exchange

This chapter discusses the principles of coexistence between Domino 8 and Domino 6.5/7, as well as touching on coexistence between Domino 8 and Microsoft Exchange 2000/2003. We layout the phases of coexistence followed by a highlight of key issues.

Coexistence is a time of change in your Domino environment that should be handled with care and attention to detail. In this chapter we discuss the following implications of coexistence:

- ▶ Domino/Domino coexistence
  - Templates and design elements
  - System databases
  - Clusters
  - Out of office
  - Message recall
  - Smart Upgrade
  - Client
  - On-Disk Structure
  - ID files
- ▶ Coexisting with Domino 6.5
- ▶ Domino/Exchange coexistence

## 5.1 Domino/Domino coexistence

Coexistence between two versions of Notes and Domino has generally not been very problematic. Design of Notes and Domino has always been approached with careful consideration to backward compatibility. But, as with any deployment project, there are elements of unavoidable risk that must be examined and approached with caution.

### 5.1.1 The phases of coexistence

The process of upgrading an existing Lotus Notes and Domino environment to Notes and Domino 8 will require a period of coexistence between Notes and Domino 8 and pre-Notes and Domino 8 servers, clients, and applications. Coexistence is not purely the realm of large enterprise infrastructures. Even a single-server environment will experience some level of coexistence with clients, templates, and design elements. The time period in which your environment is in coexistence can be broken up into phases. Regardless to how long these phases of coexistence last, keep in mind that during coexistence your environment is in a continuous cycle of change with server installs and upgrades, client installs and upgrades, and application design upgrades. All the while, this shiny new code is communicating with older servers, clients, and applications. This period of change must be handled with thought and devotion to quality. Planning and testing are wonderful tools, so give them due consideration.

The following list of coexistence phases is intended to provide a higher level of understanding into the change that your Domino application and messaging environment will be experiencing. The phases of coexistence go hand-in-hand with the migration steps outlined in 3.4, “Defining the deployment sequence” on page 49.

#### Initial phase

The first step in any Domino upgrade is to deploy the new Notes client to the Domino administration team. As soon as the first upgraded client connects to your existing Domino servers, you have entered the initial phase of coexistence. Because the time-lapse between installing the administrator’s client and installing the first server can be separated by days, weeks, or even months, the initial phase of coexistence can last for quite some time.

The next step in the upgrade is to replace the Domino directory design with the Domino 8 design template. Upgrading the Domino directory design can take place several days or weeks prior to upgrading the Domino code on the administration server, or it can be done just prior to the administration server upgrade. For more information see 3.5.2, “Upgrade the Directory design across your domain” on page 52.

**Tip:** A Domino directory based on the Domino 8 design can run on Domino 6.5 and Domino 7 servers.

The initial phase of coexistence ends when you upgrade or install your first Domino 8 server.

Things to be aware of during this initial phase of coexistence include:

- ▶ Some of the features in the Domino Administrator 8 client may not be functional on pre-Domino 8 servers.
- ▶ Developers need to keep in mind that newly added Formula, LotusScript, and Java functionality will not work with pre-Notes and Domino 8 clients and servers.

- Domino 8 specific features added to the Domino directory design, especially in the server and configuration documents, will not function on pre-Domino 8 servers even if they are configured.

## Mixed-environment phase

Whether or not you stay in the initial phase of coexistence for a short or long time span, the next step is to upgrade your first server to Domino 8. This is usually the administration server, as discussed in 3.4, “Defining the deployment sequence” on page 49.

Once your first server is upgraded, you have entered the second phase of coexistence and can begin upgrading other servers in your environment. This is also referred to as a mixed-environment due to the fact that you have Domino 8 servers running in the same environment alongside pre-Domino 8 servers and clients. This phase introduces several potential challenges to the administrator as the struggle between implementing new features while coexisting with old server code is being managed.

Typically, upgrading the On-Disk Structure (ODS) version of databases on Domino servers is the next step in the process. This step is optional with Domino 8. However, there are some features that do not work unless the databases are upgraded to ODS48.

- For more information about how to upgrade your databases to ODS48, refer to 3.5.7, “Upgrading the ODS (optional)” on page 60.
- To understand the advantages of upgrading the ODS, refer to 9.10, “The new optional On Disk Structure (ODS48)” on page 278.
- Step-by-step instructions for the server upgrade process can be found in 3.5, “Performing the Domino 8 deployment” on page 51.

**Tip:** Thoroughly test your deployment strategy by creating a proof-of-concept environment where you can test various server, client, and application deployment strategies. Although Domino is designed to be backward compatible, this does not lessen the need for testing. Test your back-out strategy. Test it multiple times.

The next step in the mixed-environment phase is client deployment. Even though the Notes 8 client is backward compatible with pre-Domino 8 servers, users may see features that are not available when on a pre-Domino 8 server. Therefore, we recommend upgrading the clients soon after the servers have been upgraded to avoid user confusion.

Refer to Chapter 4, “Deploying the Notes 8 client” on page 63, for more information about the client upgrade procedure.

## Design upgrade phase

Finally, the last phase of coexistence is started. This phase entails upgrading your mail database and application design.

To simplify your mail database design deployment strategy, familiarize yourself with all facets of the design and convert tasks, and use the task that is appropriate for your given situation. These tasks allow you to upgrade the design of all databases, specific databases, even non-mail databases. In-depth information about design and convert can be found in the Lotus Domino Administrator 8 Help.

Applications should be tested prior to this phase in your proof-of-concept or similar environment to ensure full compatibility with Domino 8. If any changes need to be made to existing applications, they should be rolled-out as soon as possible with consideration of their functionality with pre-Notes 8 clients.

From a support standpoint, you want coexistence to last for as short a period as possible. Though great strides have been made by IBM to ensure backward compatibility between servers, clients, and templates, there are simply too many factors involved with coexistence that can lead to undesirable results. There are unavoidable situations in which environments must stay in coexistence. However, every component that can be upgraded in these ongoing mixed-environments should be upgraded in order to ensure the highest level of compatibility and satisfaction with Notes and Domino.

**Note:** Did you know that the attention to backward compatibility in Notes allows applications built in Notes Release 1, prior to the advent of LotusScript, to still work in Notes 8? Notes Release 1 shipped in 1989.

## 5.1.2 Templates and design elements

One of the very first items you need to consider when managing your coexistence with pre-Domino 8 servers involves templates and design elements. Specifically, you need to decide whether to allow Notes and Domino 8 design elements to replicate to pre-Domino 8 servers, and whether to replicate the new Notes and Domino 8 templates to the older pre-Domino 8 servers.

### Templates and design element replication

Generally speaking, replicating Notes and Domino 8 templates and design elements to pre-Domino 8 servers does not cause issues. In most cases, the new design element feature simply does not work. However, there may be situations in which you do not want a pre-Domino 8 server to have the Notes and Domino 8 design elements. If this situation were to arise, not only would you want to prevent the new design elements from replicating to the pre-Domino 8 server, you would also need to prevent the old design elements from replicating back to the Domino 8 server. The same holds true for templates in situations where separation of Domino 8 and pre-Domino 8 templates is required.

Before we go further, let us quickly define the difference between template and design element, as the two terms are frequently used interchangeably.

- ▶ **Templates:** When we refer to templates in this chapter, we specifically refer to the physical .NTF file. This file does not contain data, only database design elements.
- ▶ **Design elements:** When we refer to design elements in this chapter, we specifically refer to only the design elements of a .NSF file, not the data. Design elements are forms, views, framesets, pages, agents, script libraries, and so on. Keep in mind that, in Notes and Domino, data is separated from design. Therefore, forms are not the same as documents. Forms make up a document's user interface and programming, while documents simply contain data.

**Note:** Documents with stored forms are slightly different, but you can simply think of the stored form as data because it has, in essence, ceased to be a detached design element and has become merged with the data.

### *Template replication*

During the coexistence phases of an upgrade you should keep in mind that template replication is no different than replication of any other Notes and Domino application. In fact, in order to ensure that this replication takes place, many of the system templates have reserved replica IDs that do not change from release to release. Therefore, if your environment is architected in a manner that allows templates to replicate between servers (that is, you allow replication of all databases via connection documents between servers),

you will need to keep in mind that once you upgrade your first Domino 8 server, many of the Notes and Domino 8 templates may replicate to other servers.

**Note:** Replication works by comparing the documents within a database on one server to the documents in a matching replica of the same database on a different server. There are many facets to understanding replication, but at the high level it is simply a comparison that checks for changes and ensures that all replicas are synchronized and contain the same data.

To really understand replication and how it actually compares documents by using sequence numbers, revision history, and so on, read the developerWorks article *Notes from Support: Domino Replication* found at:

[http://www.ibm.com/developerworks/lotus/library/1s-Domino\\_Replication](http://www.ibm.com/developerworks/lotus/library/1s-Domino_Replication)

If you prefer to keep templates server-version specific (that is, keep Domino 8 templates on Domino 8 servers, and Domino 7 templates on Domino 7 servers), then you may need to change your procedures to prevent template replication.

Below are some examples of how you might prevent templates from replicating:

- ▶ Limit pre-Domino 8 server ACL rights to prevent access.
- ▶ Create new copies of the templates so that they have different replica IDs.

### ***Design element replication***

Once you begin upgrading the design of your Notes and Domino 8 databases, you may also need to consider whether to allow upgraded database design elements to replicate to pre-Domino 8 servers. This is not the same as allowing templates to replicate. Here we are referring to the ability to filter the replication of a database's design elements from replication to other replicas. In essence, this is the same as saying that the database replication will only replicate data, not design.

### ***Example: Domino directory person form***

We use the Domino directory as an example. In Domino 8, the person document has a new field named Photo URL on the Miscellaneous tab. Perhaps you do not want users on pre-Domino 8 servers to see this field. To achieve this, you decide to keep the Domino directory from replicating new design elements to old servers.

There are a number of ways to handle this scenario:

- ▶ Restrict ACL access.
- ▶ Disable design element replication.

### ***Restrict ACL access***

Designer access or above is required to replicate design elements. You could accomplish this simply by creating two new groups in your Domino directory, one for Domino 8 servers and one for pre-Domino 8 servers. The group of Domino 8 servers is allowed Designer or above access, while the pre-Domino 8 group is assigned less than Designer access. As each server is upgraded you move it out of the pre-Domino 8 group and into the Domino 8 group.

If possible, administrator and developer access should also be restricted to the database in order to prevent accidental replication to the server from a local replica.

**Tip:** The configuration documents, found in the Servers/Configurations view of the Domino directory, can be assigned to either a single server or a group. If you decide to utilize a new configuration document for your Domino 8 servers, you can use these same groups to assign one configuration document to pre-Domino 8 servers, and another configuration document to the Domino 8 servers.

**Note:** If you have agents in your domain signed by the server ID that require Designer or above access to the directory, this option may cause issues for those agents. If this is the case, consider allowing those agents to run with full access administration or try disabling design element replication as outlined below. For more information about allowing agents to run with full access administration, see the Lotus Domino Designer 8 Help.

### ***Disable design element replication***

Another option is to disable design element replication for non-clustered servers only. To achieve this, follow these steps:

1. Open the template or application.
2. Select **File** → **Replication** → **Options for this application**.
3. Select the **Advanced** tab.
4. Uncheck the **Design Elements** box, as shown in Figure 5-1.

**Important:** To fully prevent design elements from replicating using this method, we recommend that design element replication be disabled on all servers on which the template exists.

**Note:** Communicate this temporary change to all administrators and developers. One out-of-the-loop individual can easily change this back and ruin your entire plan.

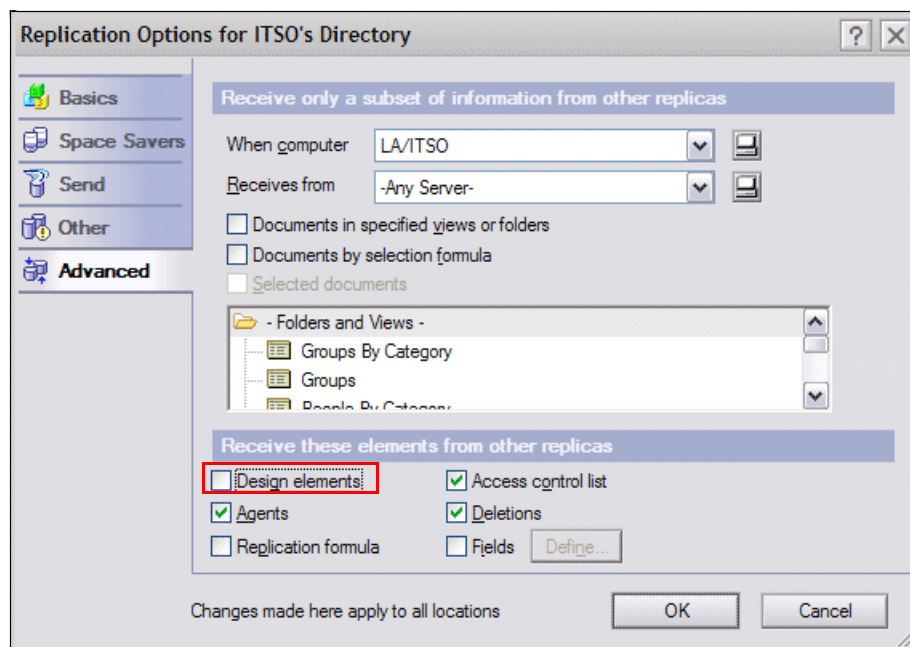


Figure 5-1 Disabling design element replication



**Note:** Remember to re-enable design element replication as you upgrade each server so that you can take full advantage of the benefits of the new design elements.

**Important:** If you are in a clustered environment, keep in mind that the cluster replicator will not abide by this setting and will replicate design elements to other servers in the cluster. If you want to keep design elements at the same version as the server, do not put Domino 7 and Domino 8 servers in the same cluster.

Unless you have a particular need to keep the templates and design elements server version specific, you may prefer to keep your upgrade, and your environment, simple by allowing replication to take place naturally.

### ***Customized templates***

Customizing mail and directory templates is very common and must be taken into consideration when upgrading. Unless you have specifically implemented some scheme to ensure that your customized templates remain independent of the out-of-the-box system templates, you may encounter usability issues or lose your customizations when replicating newer and older design elements.

**Tip:** To understand how replication conflicts are created during replication, read “A review of the Notes ID” on page 150 in the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120, at:

<http://www.redbooks.ibm.com/abstracts/redp4120.html>

### ***Considerations for databases with Notes and Domino 8 design elements***

No matter the scheme or mechanism by which you plan to replicate Notes and Domino 8 design elements, keep in mind that any application based on a Notes and Domino 8 design running on a pre-Domino 8 server may exhibit undesirable effects if you attempt to access the Notes and Domino 8 features. In most situations, these newer features simply do not function on older servers, but this cannot be assumed to be true in all cases. It is therefore important to test any business-critical applications.

## **5.1.3 System databases**

Domino system databases such as the Domino directory, resource reservations, and administrations request require special consideration when upgrading your Domino environment.

### **Domino directory**

Best practices suggest that you upgrade your Domino directory before upgrading any servers. Keep in mind, however, that many server features are implemented via design elements in the Domino directory. For example, many features can be turned on/off or configured via the server and configuration documents. With that in mind, remember that just because a feature is configurable via these documents does not mean that the feature is actually available. If the server is a pre-Domino 8 server, any Domino 8 specific features, though visible in these documents, will not actually run until the server is upgraded to Domino 8 as well.

**Tip:** Another upgrade best practice is to freeze all modifications to the environment until all servers have been upgraded. Not only will this help avoid confusion over which features are available on which servers, but it can drastically improve time-to-resolution on server-related issues by not obscuring a problem with both an upgrade and configuration change. Many organizations freeze changes during predetermined times of the year, such as during quarterly or annual reporting periods.

## Administration requests and monitoring configuration

The administration requests database, based on the ADMIN4.NTF template, and the monitoring configuration database, based on EVENTS4.NTF, automatically upgrade after your server has been upgraded to Domino 8. Allowing these databases to replicate the Domino 8 design to pre-Domino 8 servers should not cause any issues in your environment. If you do not want the Domino 8 design to replicate to pre-Domino 8 servers, follow the steps for disabling design element replication in “Templates and design element replication” on page 96. However, as mentioned in that section, you should re-enable replication as each server is upgraded to Domino 8.

## Domino Domain Monitoring

Domino Domain Monitoring (DDM) was introduced in Domino 7. Though most DDM probes are only available on Domino 7 and later servers, there are probes that can be used on pre-Domino 7 servers. For instance, a Domino 8 server can probe Domino 6.5 configurations from the Domino directory if that directory exists on a Domino 7 or 8 server. The best practice probes for security and the Web can also be used.

**Tip:** Pre-Domino 7 event generators can report to the DDM database. Note that by default, only the failure and fatal event types and severities are logged. If you need a specific event generator to report to DDM, be sure to adjust the filter or event severity accordingly.

For additional information about the Domino Domain Monitor database (DDM.NSF), refer to the Lotus Domino 8 Administrator Help, or the Redpaper *Lotus Domino Domain Monitoring*, REDP-4089, located at:

<http://www.redbooks.ibm.com/abstracts/redp-4089.html>

Also refer to 9.9, “New Domino domain monitoring features” on page 265, for information about changes to DDM in Domino 8.

## Resource reservations

Resource reservations have seen significant changes since Domino 6.5. Prior to Domino 7, the resource reservation functionality was distributed amongst the resource template, the router task, and the schedule manager task. Beginning with Domino 7, this functionality was combined into a single server task: rooms and resource manager, or RnRMgr.

If you will be upgrading directly from Domino 6.5 or earlier, read “Resource Reservations database” in the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120, for a full overview of managing resource reservation coexistence, as these points apply to Domino 8 just as they did for Domino 7.

## Preventing system databases from reverting back to pre-Domino 8 design

The design task is responsible for refreshing the design of all databases on the server with their associated master template. Unless configured otherwise, the design task runs every

morning at 1 a.m. From each database, it gets the name of the template from the Inherit Design From field and then finds the master template with the same name. Assuming that one is found, design then refreshes the database design based on the master template design. In most cases, this is a powerful and time-saving feature that not only ensures that any design elements inadvertently lost during the day are restored, but also keeps the database design up-to-date in case the design template has been modified or upgraded.

During the mixed release phase of coexistence, this feature can be a burden on all servers by constantly overwriting the Domino 8 design with the pre-Domino 8 templates if the Domino 8 templates are not replicated to all servers. This may seem contradictory to our statement above regarding system database templates replicating from newly upgraded Domino 8 servers, but keep in mind that this statement encompassed those specific system database templates that have reserved replica IDs that remain the same from release to release. Also, these templates only replicate if your connection documents allow it. For instance, if the ITSO Corp domain had a single connection document between LA/ITSO and Delhi/ITSO for the replication of names.nsf and no other connection documents, then only the names.nsf database would replicate between those two servers during scheduled replication, and therefore templates, along with all other databases, would not replicate.

**Note:** There are many more aspects to consider when discussing replication. ACL, manual replication (**pull**, **push**, or **rep1** commands issued from the Domino console), database replication settings, and so on all affect replication.

### **Example: design reversion loop**

For this example, we use two servers from the ITSO Corp environment: Boston/ITSO and Richmond/ITSO. Both servers replicate the Domino directory every 60 minutes via scheduled replication. Boston is a Domino 8 server with all Domino 8 templates installed. Richmond is a Domino 7 server with the Domino 7 templates installed. The templates do not replicate between the two servers. Both servers run the design task every morning at 1 a.m. To simplify this example, we also assume that both servers are in the same time zone. Table 5-1 explains what happens.

*Table 5-1 Database design reversion loop*

Time	Boston (Domino 8)	Richmond (Domino 7)
Day one: 1 a.m.	Design task launches. As it processes the Domino directory it compares it to the master template PUBNAMES.NTF. There are no differences between the designs, so design moves on to the next database.	Design task launches. As it processes the Domino directory it compares it to the master template PUBNAMES.NTF. Because PUBNAMES.NTF is the Domino 7 template and the Domino directory is based on the Domino 8 design, the design task sees them as being different and overwrites all Domino 8 design elements with the Domino 7 elements.

Time	Boston (Domino 8)	Richmond (Domino 7)
Day one: 2 a.m.	The replicator kicks off and as it compares the Domino directory with the replica on Richmond it sees hundreds of design elements that are newer in Richmond because the design has just been refreshed from the Domino 7 template. Replicator replaces all Domino directory design elements on Boston with the Domino 7 design elements from Richmond, effectively overwriting the Domino 8 design. This is equivalent to deleting several hundred documents on Boston. Therefore, several hundred deletion stubs are pushed from Boston to Richmond.	
Day two: 1 a.m.	The design task launches. As it processes the Domino directory it compares it to the master template PUBNAMES.NTF. Because PUBNAMES.NTF is the Domino 8 template and the Domino directory is based on the Domino 7 design after the day one reversion, the design task sees the elements as being different and overwrites all Domino 7 design elements with the Domino 8 elements.	The design task launches. As it processes the Domino directory it compares it to the master template PUBNAMES.NTF. There are no differences between the designs, so design moves on the to next database.
Day two: 2 a.m.	The replicator kicks off, and as it compares the Domino directory with the replica on Richmond it sees hundreds of design elements that are newer in Boston because the design has just been refreshed from the Domino 8 template. The replicator replaces all design elements on Richmond with the Domino 8 design elements, effectively overwriting the Domino 7 design. Again, this is equivalent to deleting several hundred documents on Richmond. Therefore, several hundred deletion stubs are pushed from Richmond to Boston.	

The scenario outlined in Table 5-1 on page 101 does not address additional effects, such as:

- ▶ Re-indexing of all views that would take place when the update task runs at 2 a.m.
- ▶ What would happen if the replicator was replicating the Domino directory at 1 a.m. while the design task was replacing the design on Richmond
- ▶ The impact on directory performance with so many deletion stubs being created and replicated daily
- ▶ Time zone differences in a globally diverse environment

It is clear that this design reversion loop may cause an unnecessary drain on server resources. Worse yet, this design reversion loop would happen every day.

If you have the design task running on any of your servers, you may find it beneficial to ensure that the new Domino 8 system database templates replicate with the older pre-Domino 8 servers in order to prevent the old design from being reapplied, or see “Design element replication” on page 97 for more information about preventing replication of design elements.

**Tip:** Allowing the design of system databases to replicate throughout your domain alleviates these types of concerns.

## 5.1.4 Clusters

Clustering Domino servers is one of the single most powerful features in Domino for maintaining high availability for your mail and applications. Both Domino 7 and Domino 8 introduced clustering enhancements that improve manageability and speed.

Domino 7 saw manageability improvements in the form of the cluster administrator (CLADMIN) task. As of Domino 7, the cluster administrator is now a server thread. It still performs the same tasks as it did before, such as starting the cluster database manager (CLDBDIR) and cluster replicator (CLREPL) tasks at server startup. Previously, the CLDBDIR and CLREPL tasks were required to be in the ServerTasks= line, but this is no longer necessary. If these tasks still exist in the NOTES.INI, the process of upgrading to Domino 8 removes any CLDBDIR and CLREPL lines from ServerTasks= and adds CLADMIN.

Domino 8 further improves on clustering with the advent of streaming replication. You can read more about what streaming replication is and how it works in 9.12, “Other administrative enhancements” on page 309. The important thing to know about streaming replication is that during coexistence, Domino 8 does not preform streaming replication with pre-Domino 8 servers in the same cluster. Instead, Domino attempts to initiate streaming replication, and upon failure to do so reverts back to standard cluster replication. Therefore, while this new feature is not used with older Domino releases, clustering continues to function as it did pre-Domino 8. As soon as there are two or more Domino 8 servers within a cluster, the Domino 8 servers automatically begin utilizing streaming replication amongst themselves and fall back to standard cluster replication with the remaining pre-Domino 8 servers in the cluster.

Finally, while modifications have been made to the cluster database directory template (CLDBDIR.NTF), these changes are all backward compatible with pre-Domino 8 servers.

**Note:** Even though changes to the cluster database directory database are backward compatible and the new streaming replication will gracefully revert back to standard cluster replication when attempted with a pre-Domino 8 server, we recommend that all servers in a cluster be upgraded to the same Domino release in relatively quick succession.

## 5.1.5 Out of office

New to Domino 8 is the option for the out of office process to run as a service rather than an agent. During the upgrade of your environment, when a Domino 8 server is in a cluster with one or more pre-Domino 8 servers, out of office must run as an agent.

For more information about running out of office as a service refer to 9.12, “Other administrative enhancements” on page 309.

## 5.1.6 Message recall

A new feature to Domino 8, message recall, provides the ability for users to recall a message that has been sent. This feature utilizes the router task of the Domino server to perform the recall, while in a mixed environment, users on a Domino 8 server are not able to recall messages from users on pre-Domino 8 servers.

**Tip:** Message recall is enabled by default on Domino 8 servers, so it is a good idea to decide whether your organization will allow message recall prior to beginning the upgrade procedure. Refer to 9.3, “Message recall” on page 245, for more information.

## 5.1.7 Smart Upgrade

Smart Upgrade was introduced in Notes 6 to alleviate much of the burden involved with upgrading Notes clients across the enterprise. Table 5-2 presents the features of Smart Upgrade and notes which features are dependent on specific client versions, server versions, or template versions. Take this table into consideration when planning your client upgrades.

**Tip:** For more information about SmartUpgrade, refer to the IBM Redpaper *Understanding Lotus Notes Smart Upgrade*, REDP-4180, at:

<http://www.redbooks.ibm.com/abstracts/redp-4180.html>

Table 5-2 Smart Upgrade feature and server, client, or a specific template version dependency

Smart Upgrade feature	Notes client dependency	Domino server dependency	Template dependency
Multiple source versions.	6.0.3/6.5 or later	6.0.5/6.5 or later	6.5.1 Smart Upgrade kits (SMUPGRADE.NTF)
Pattern matching for source version.	6.5.1 or later	6.5.1 or later	N/A
Upgrade deadline (and “remind me every hour”).	6.0 or later	6.5.1 or later	6.5.1 Domino directory (PUBNAMES.NTF)
Automatic prompting occurs when authenticating to user’s home server is down, but a server in the cluster contains a Smart Upgrade database.	6.0 or later	6.5.1 or later	N/A
Notes client fails over when attempting to find Smart Upgrade database and the user’s home server is down, but a server in the cluster is up containing a replica of the Smart Upgrade database.	6.5.1 or later	6.0 or later	N/A
Administrator can specify both a shared path and an attached kit.	6.5.1 or later	6.5.1 or later	6.5.1 Smart Upgrade kits (SMUPGRADE.NTF)
Background thread initiates Smart Upgrade.	6.5.3 or later	6.0 or later	N/A
Attached kits detach in the background.	6.5.3 or later	6.0 or later	N/A

Smart Upgrade feature	Notes client dependency	Domino server dependency	Template dependency
Smart Upgrade tracking.	6.5.3 or later	6.0 or later	6.5.3 Domino directory (PUBNAMES.NTF) 6.5.3 Smart Upgrade Kits (SMUPGRADE.NTF)
Smart Upgrade console commands: SUCACHE SHOW and SUCACHE REFRESH.	6.0 or later	6.0.5/6.5.4 or later	N/A
Smart Upgrade governors.	6.0.5/6.5.4 or later	6.0.5/6.5.4 or later	6.0.5/6.5.4 Domino directory (PUBNAMES.NTF)
All clients versus Notes client only differentiation.	6.5.5 or later	6.0 or later	6.5.5 Smart Upgrade kits (SMUPGRADE.NTF)
Prompt when detaching kits in background complete.	7.0 or later	6.0 or later	N/A

For more information about Smart Upgrade changes in Notes 8, refer to 4.4, “Smart Upgrade” on page 73.

### 5.1.8 Client

Just as Domino 8 can communicate with older Domino server releases, the Notes 8 client can also communicate with older server releases. It is considered a best practice to upgrade clients after the server has been upgraded, but there are cases, such as with administrators and developers, where certain users may need the newer client prior to their server being upgraded. If this happens you should communicate to these users that there may be features available in the client that require a Domino 8 back-end in order to operate, and that those features may not be available until Domino is upgraded. As long as you keep this in mind, upgrading the client on select users prior to upgrading the server should pose no significant issues.

For more information about communication, refer to 2.3.5, “Creating a communication and training plan” on page 39.

#### Client/template interoperability

After upgrading both the server and client, you can begin the process of upgrading user mail files to the Notes 8 template. Using the latest template enables the user to take advantage of all the latest features in Notes and Domino 8. Table 5-3 lists best practices for client/template coexistence.

*Table 5-3 Supported client/template coexistence*

	Lotus Notes 8.x	Lotus Notes 7.x	Lotus Notes 6.5.x
Notes 8 template	Supported	Supported <sup>a</sup>	Unsupported
Notes 7 template	Supported	Supported	Supported <sup>a</sup>
Notes 6 template	Supported	Supported	Supported

a. Although this configuration is supported, it is not considered a best practice because there is limited functionality available to the user.

Refer to Chapter 6, “Lotus Notes 8 client features” on page 113, for a more in-depth review of Notes client features.

**Tip:** For the most up-to-date information about supported templates, refer to Technote 1264690 at:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21264690>

### ***Calendar and scheduling***

Many of the new calendar and scheduling features rely on a Domino 8 back-end, Notes 8 interface, and Notes 8 mail template design. Therefore much of the new functionality is missing until the server, client, and finally mail template are upgraded.

Table 5-4 lists the new calendar features available in Notes 8.

*Table 5-4 New calendar features in Notes 8*

Feature	Description	Benefit
More consistent and intuitive navigation	<ul style="list-style-type: none"> <li>► Ability to access views from the left navigator</li> <li>► Action bar enhanced for consistency with mail</li> </ul>	Get your work done more quickly and easily.
Unprocessed calendar entries	Option to display unprocessed invitations side-by-side with accepted calendar entries	See overlaps in your schedule at a glance before deciding which meetings to accept.
Improved display of events	Modified display of all day events to visually span the entire day	See at a glance that every time slot in the day is already scheduled.
Ability to check your calendar while you are scheduling a meeting	Option to show your schedule for the target meeting date while you are creating a meeting notice	More easily reduce the likelihood of inadvertent scheduling conflicts.
Options to manage meeting cancellations	Option to have canceled meetings identified with visual cues on your calendar	<p>Choose the way you prefer to work.</p> <p>Can use in conjunction with unprocessed calendar entries to help you make scheduling decisions about which meetings to accept.</p>
More flexible free time search	Ability to locate a mutually free time for a dynamic subset of the invitee list	Check free time for different groupings of invitees when there is no mutually convenient time for everyone.

### ***Calendar delegation***

Users who manage other users’ calendars, also known as calendar delegates, are a special case requiring some forethought before upgrading their client or template. Undesirable side effects can occur if the calendar owner and calendar delegate are running different versions of the Notes client. For example, if the calendar owner were to be upgraded to both the Notes 8 client and template prior to the delegate, the delegate could encounter difficulty managing the calendar based on the Notes 8 template while they are still using a pre-Notes 8 client. Furthermore, the calendar owner will have features available that the calendar delegate does not.

To alleviate this situation, we recommend coordinating the upgrade process so that both calendar owner and calendar delegate are upgraded to the Notes 8 client at the same time.



We also recommend upgrading their mail templates at the same time, mostly to avoid user confusion rather than for any technical reason.

**Tip:** Keeping confusion to a minimum for your users during a migration will see a drastic improvement in both user satisfaction and user-perceived migration success.

### ***Autoprocess meeting invitations***

Notes/Domino 7 introduced the ability to autoprocess incoming meeting invitations based on preference settings. If you are upgrading from a pre-Domino 7 environment, see the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120-00, at <http://www.redbooks.ibm.com/abstracts/redp4120.html> for coexistence issues, as they apply to Domino 8 as well.

## **5.1.9 Domino Web Access**

Domino Web Access 8 (DWA) has several new features that require a Domino 8 server and the FORMS8.NSF file, which resides on the server. If you upgrade a mail file to the Notes 8 design on a Domino 7 server, or if you replicate a Notes 8 mail file to a Domino 7 server, you will not have access to these new features or the new look of DWA. However, because Domino 8 servers do contain FORMS6.NSF and FORMS7.NSF, these prior releases of DWA will work on a Domino 8 server.

**Note:** As of Domino 8 there are no longer two separate templates for mail and Domino Web Access. The MAIL8.NTF includes DWA. There is no separate DWA template.

**Attention:** If you currently have DWA5 deployed, note that FORMS5.NSF is not distributed with Domino 8. However, if upgrading a server that contains FORMS5.NSF to Domino 8, the install process does not remove this file and DWA5 continues to work. In order to get DWA5 to work on a new Domino 8 install you must replicate FORMS5.NSF to this server.

In order to run Sametime connect through DWA7 with new mail files on a Domino 8 server, refer to Domino Administrator 8 Help for information about how to use the Sametime 7.0 connect client for browsers. The help entry “Setting up Domino Web Access with Sametime” provides step-by-step instructions. This can be skipped if all new mail files on your Domino 8 server will be created with the DWA8 design.

If you will be housing DWA6.5 users on your Domino 8 server, you should also note that the instant messaging settings and local archive settings in the configuration document of the Domino directory are intended only for users using the DWA8 template. In order to configure these option for DWA6.5 users you will need to utilize the appropriate INI parameters, as defined in Table 5-5.

*Table 5-5 Sametime and local archiving NOTES.INI parameters for DWA6.5 users*

<b>Notes.ini parameter</b>	<b>Configuration Settings document field</b>
iNotes_WA_Chat	Instant Messaging features
iNotes_WA_LiveNames	Online awareness
iNotes_WA_SametimeJavaConnect	Prefer Sametime Java Connect for browsers

Notes.ini parameter	Configuration Settings document field
iNotes_WA_SametimeServer	Set instant messaging server host name for all Domino Web Access users
iNotes_WA_SametimeToken	Allows secrets and tokens authentication
iNotes_WA_STLinksLocal	Loads \stlinks from Domino application server
iNotes_WA_NoLocalArchive	Local Archiving

For more information about Domino Web Access 8, see Chapter 8, “Domino Web Access” on page 215.

## 5.1.10 On-Disk Structure

The On-Disk Structure, more commonly referred to as ODS, has been upgraded in Domino 8 to ODS 48. Domino 8 is fully backward compatible with all prior ODS versions including ODS 16 used in Notes Release 1. However, you are not able to open an ODS 48 database locally in Notes 7 or prior. If you require an ODS 48 database on a Domino 7 or prior server, you must either create a new replica or a new copy. Do not make an operating system-level copy, as the ODS is part of the database structure and is copied if done from the OS. Replicas and Notes copies automatically convert the ODS to the appropriate version depending on the Notes or Domino version being replicated/copied to.

For more information about ODS see 9.10, “The new optional On Disk Structure (ODS48)” on page 278.

## 5.1.11 ID files

Many changes were made to encryption key length between Notes and Domino 6.5 and Notes and Domino 7. Therefore, if you are upgrading to Notes and Domino 8 directly from Notes and Domino 6.5, refer to the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120-00, available at:

<http://www.redbooks.ibm.com/abstracts/redp4120.html>

## 5.1.12 Coexisting with Domino 6.5

While many new features have been added to Domino 8, it is Notes 8 that received most of the attention in this release. Though we tried to keep Domino 6.5 in mind throughout this chapter, we recommend that if you are considering upgrading to Domino 8 directly from Domino 6.5 you also consult the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120-00, as much of the information in it applies to Domino 8 as well. The Redpaper can be found at:

<http://www.redbooks.ibm.com/abstracts/redp4120.html>

## 5.2 Domino/Exchange coexistence

Coexistence between the Exchange and Domino environments plays one of the most critical roles in ensuring a seamless migration process for both administrators and users. Unless you can accomplish instantaneous migration of users from Exchange to Domino, users will likely

be migrating gradually over a period of time. During that time, users in both environments must be able to continue communicating with one another as well as with users who are external to both environments. Failure to provide this ability to users can have an adverse effect on any migration project.

### 5.2.1 Levels of coexistence

Several levels of coexistence between Exchange and Domino are possible. The functionality that is provided by the selected coexistence approach normally depends on the functionality presently utilized by Exchange users and existing Domino users. The following list describes coexistence options from the simplest to the most complex. Refer to the technical sections later in this book for comparison of the different coexistence and migration tools.

The levels of coexistence are:

- ▶ No coexistence
- ▶ Messaging only
- ▶ Messaging with directory synchronization
- ▶ Messaging with directory synchronization and cross-platform calendar and scheduling support
- ▶ Messaging with directory synchronization, cross-platform calendar and scheduling support, and uninterrupted application access

#### **No coexistence**

Users are migrated instantaneously, for example, during the weekend. At no point are there Domino and Exchange servers existing side-by-side.

#### **Messaging only**

This coexistence method uses SMTP to exchange mail messages between Exchange, Domino, and the Internet, and requires manual entry of addressing information for some or all recipients.

This method is fairly easy to establish, however, it imposes a burden on users to know the exact addresses of all recipients, some of whom they had previously been able to select from the directory. Addressing questions subsequently increase the load on the user support personnel, dramatically increasing the overall cost and decreasing satisfaction with the coexistence solution. This method is only recommended for brief coexistence periods.

#### **Messaging with directory synchronization**

This coexistence method uses SMTP or other protocols for sending mail messages between Exchange, Domino, and the Internet, and allows selection of all Exchange and Domino recipients from the appropriate mail directory. Depending on the mail exchange approach selected, directory synchronization can be performed manually or automatically.

Manual directory synchronization requires periodic updates to Domino and Exchange directories initiated by an authorized individual. The process can consist of executing custom programs, performing manual data entry, or a combination of the two.

Automated directory synchronization is a process that automatically performs directory updates either instantly or based on a predefined schedule. Automated directory synchronization can be achieved by using IBM Tivoli Directory Integrator, Microsoft's Domino Connector for Exchange, Microsoft's Identity Integration Server, TenFour's TFS Gateway, or by creating automatically invoked custom programs.

While automated directory synchronization requires a fair amount of effort to establish, it enables users to continue e-mail communication in a familiar way regardless of the sender's or recipient's migration status. Because of this, this method is recommended for extended coexistence periods.

### **Messaging with directory synchronization and cross-platform calendar and scheduling support**

This coexistence option uses SMTP or other protocols for exchanging mail messages between Exchange, Domino, and the Internet, and allows selection of all Exchange and Domino recipients from the appropriate mail directory. Depending on the mail exchange approach selected, directory synchronization can be performed manually or automatically. Also, depending on the mail exchange approach selected, cross-platform calendar and scheduling support can be provided in a transparent or manual fashion.

In the manual approach to cross-platform calendar and scheduling, Domino and Exchange users include users of the opposite platform in the scheduling notices, which are translated into simple mail messages when delivered to such recipients. Recipients have to manually add scheduling notices to their calendars and manually respond to invitations. Cross-platform schedule check is not possible with this approach.

In the transparent approach to cross-platform calendar and scheduling, Domino and Exchange users are able to perform all calendar and scheduling functions, such as sending scheduling notices, accepting invitations, checking schedules, and so forth, regardless of the recipient's platform. Transparent cross-platform calendar and scheduling support can only be achieved by using the calendar connector portion of Microsoft's Domino Connector for Exchange.

This method requires a great deal of effort to establish. However, it enables users to continue all of their e-mail and calendar and scheduling communication in a familiar way regardless of the sender's or recipient's migration status. This method is recommended for extended coexistence periods.

### **Messaging with directory synchronization, cross-platform calendar and scheduling support, and uninterrupted application access**

This coexistence method uses SMTP or other protocols for exchanging mail messages between Exchange, Domino, and the Internet, and allows selection of all Exchange and Domino recipients from the appropriate mail directory. Depending on the mail exchange approach selected, directory synchronization can be performed manually or automatically. Also, depending on the mail exchange approach selected, cross-platform calendar and scheduling support can be provided in a transparent or manual fashion. Finally, depending on the nature of applications, application access can be achieved through universal application access, or manual or automatic application synchronization.

Universal application access is achieved for applications that are Outlook® client-independent, for example, Web-enabled applications accessed through a Web browser. Users continue to access such applications regardless of their migration status. For Outlook client-dependent applications, continuous application access can be achieved by retaining the Outlook mail client on users' workstations, possibly along with the Notes client, and continuing to access applications that so require it using Outlook client.

Manual application synchronization requires that periodic updates to applications be performed by an authorized individual. The process can consist of executing custom programs, performing manual data entry, or a combination of the two.

Automated application synchronization is a process that automatically performs application updates, either instantly or based on a predefined schedule. Depending on the nature of an

application, automated application synchronization can be achieved by using a third-party product or by creating automatically invoked custom programs.

Depending on the nature of applications, this method can require a great deal of effort to establish. However, it enables users to continue accessing applications regardless of their migration status. This method is recommended for extended coexistence periods where seamless application access is important.

**Note:** For an in-depth overview of migrating from Exchange 2000/2003 to Domino, see *Migrating from Microsoft Exchange 2000/2003 to Lotus Notes and Domino 7*, SG24-7777.





## Lotus Notes 8 client features

World-class collaboration gets even better with new features and capabilities in Lotus Notes 8 client. This chapter focuses on the enhancements in the Lotus Notes client's core capabilities, such as e-mail, calendaring and scheduling, and contact management.

This chapter also provides insights into the enhanced instant messaging and presence awareness support and support for activity-centric collaboration, which can increase user productivity and efficiency.

This chapter would be of great value for all kind of users who would like to understand in detail the new features in the Lotus Notes 8 client and how does it impacts productivity and efficiency. This chapter also provides tips on how to utilize these new features in order to derive maximum benefit.

This chapter contains the following sections:

- ▶ Enhanced user interface
- ▶ Mail enhancements
- ▶ Calendar enhancements
- ▶ Contacts
- ▶ Document editing
- ▶ Sidebar plug-ins
- ▶ Sametime contacts
- ▶ Activities
- ▶ Reading feed content in Lotus Notes 8 client

## 6.1 Enhanced user interface

The Lotus Notes 8 client has a fresh but familiar look and feel and is designed to be intuitive to use. The interface was designed in direct response to feedback from users. Notes 8 software offers a number of new features to assist in improving employee efficiency and effectiveness.

Notes 8 software is flexible. Not only does it offer the option to personalize the interface to accommodate your own ways of working, it also includes the ability to use plug-ins, allowing the interface to be extended to meet your business requirements.

### 6.1.1 Welcome page

While the home setup page (previously known as welcome setup page) has a new look, as shown in Figure 6-1, there are still the familiar options, where you can choose to create your own home page, use the default, or learn more on what is new in this release.

**Note:** If you are upgrading from a previous version of Lotus Notes client, then, by default, you will retain your existing welcome page.

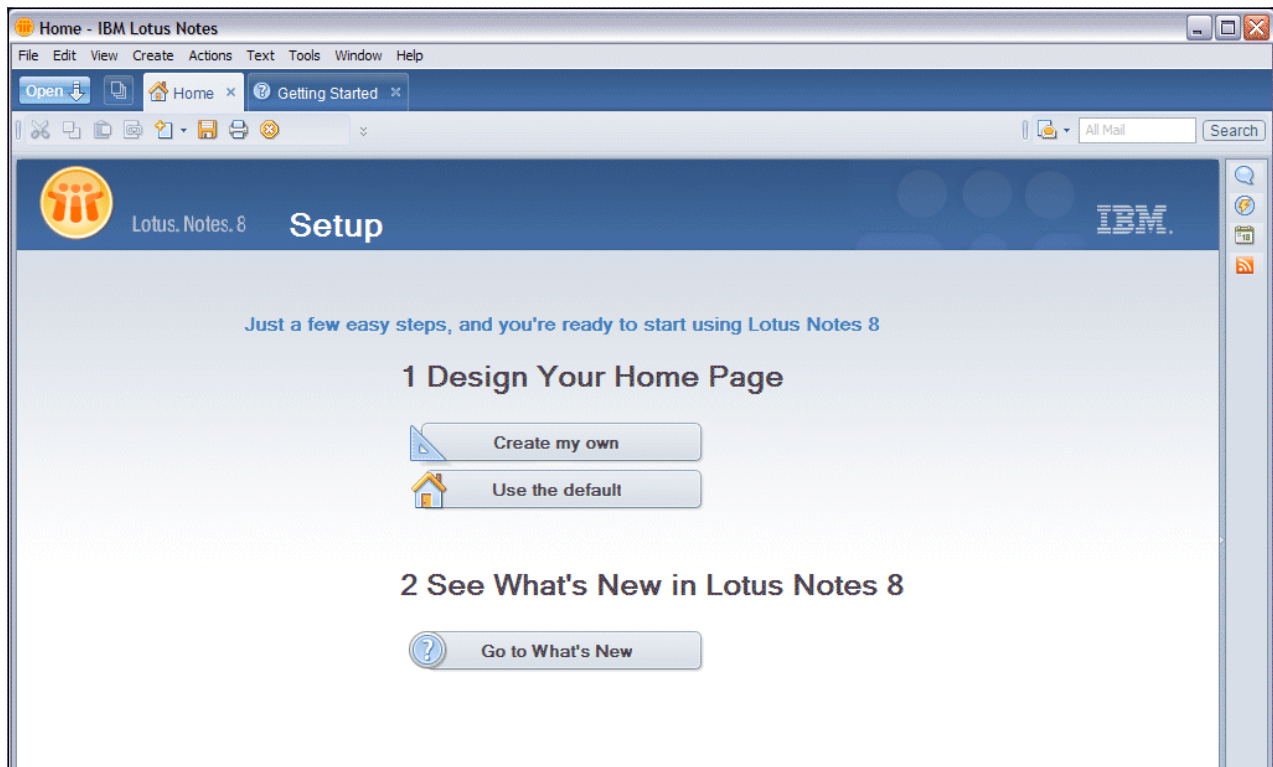


Figure 6-1 Home Setup page



Choosing to use the default page takes you to the Getting Started page. See Figure 6-2.

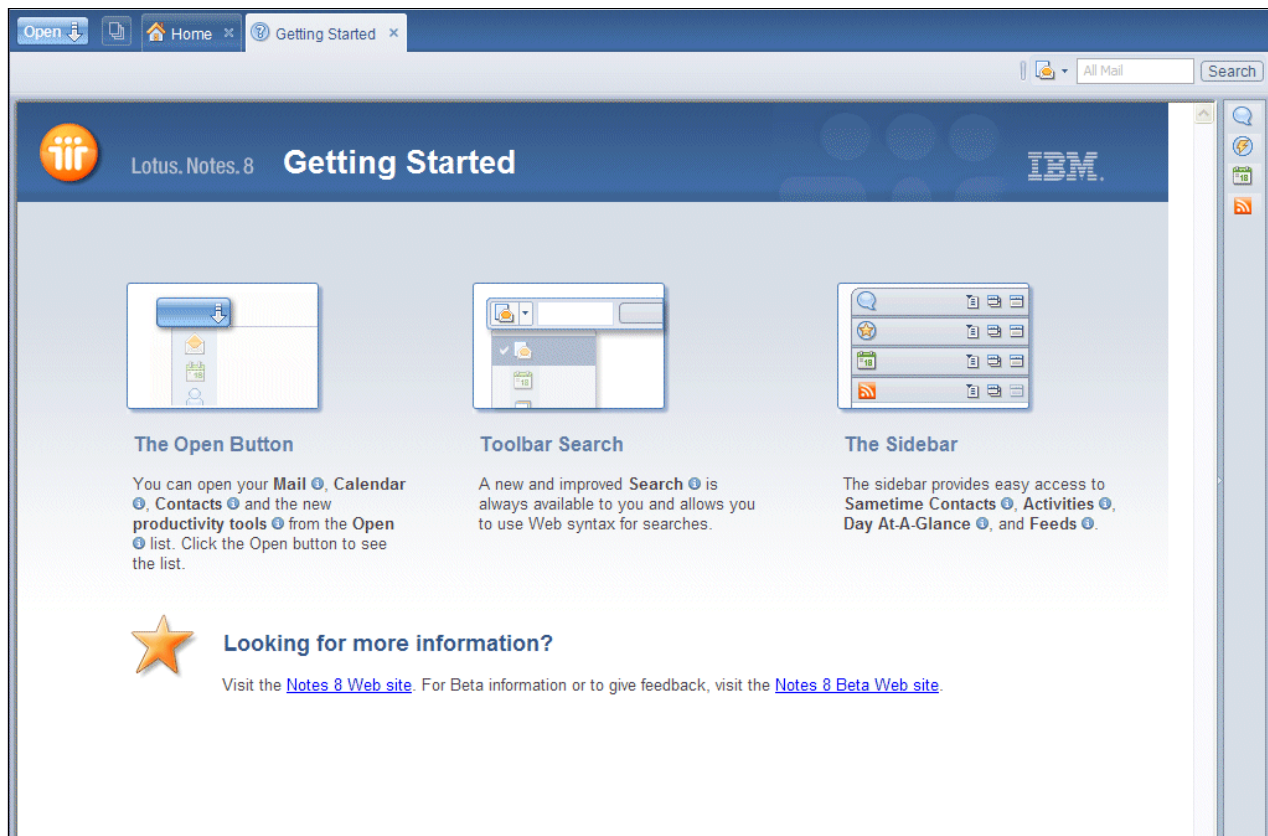


Figure 6-2 Getting Started page

Once the Getting Started page is close, the Notes client opens to the home page or an application that you have specified.

The Notes 8 client has a new default welcome page, now called Home page, as shown in Figure 6-3.

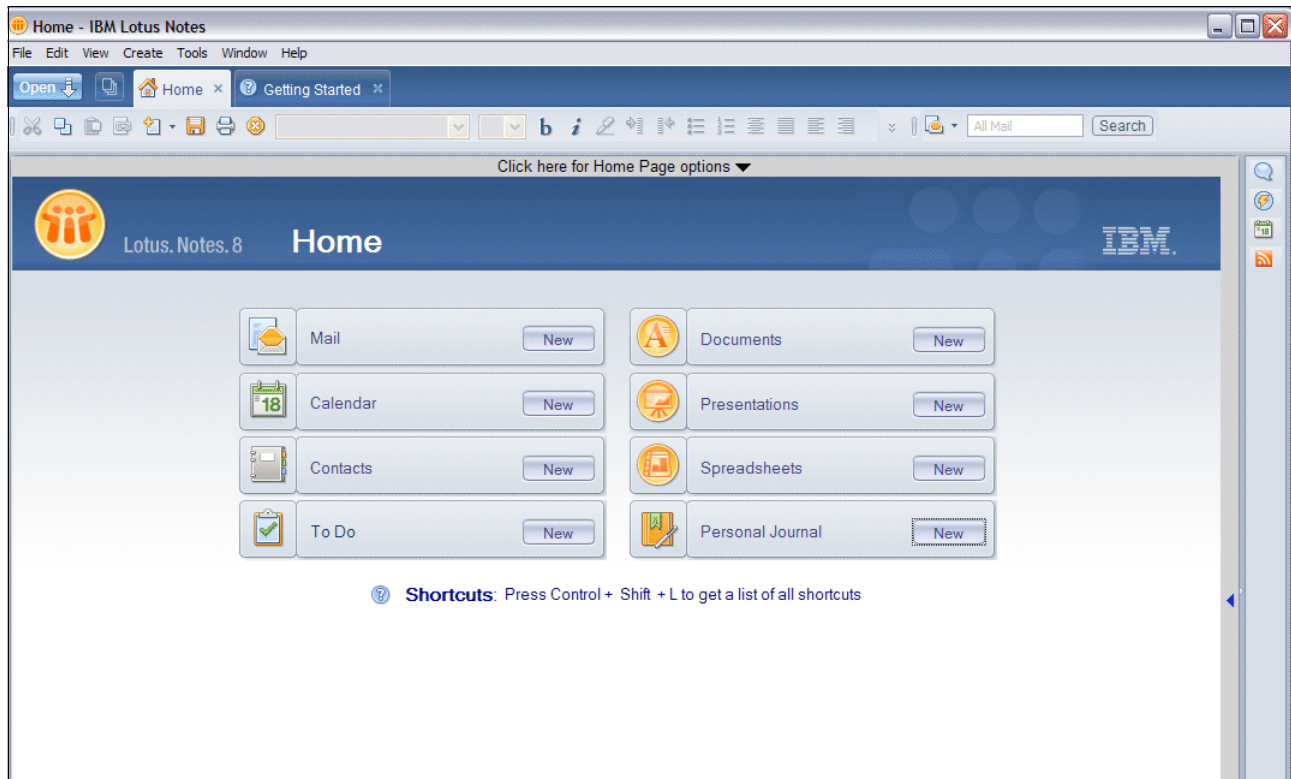


Figure 6-3 Default Home page

As with previous versions of the Lotus Notes client, there are links on the Home page to mail, calendar, contacts (previously called personal address book), to do, and personal journal. Additionally, with the Notes 8 client, you now have links to a set of productivity tools, which you might have installed with the Notes client. For more details, see Chapter 7, “Productivity tools” on page 199.

## 6.1.2 Open list

Your Lotus Notes applications and documents are now accessible from a new Open list menu, which is displayed by clicking the **Open** button in the top-left corner of the panel (Figure 6-4).

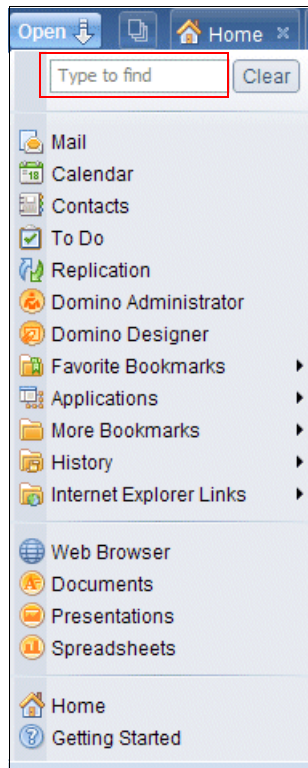


Figure 6-4 Open list

If you are upgrading from a previous release of the Lotus Notes client, you would realize that the Open menu has replaced what you knew as the bookmark bar, and your bookmarks are migrated into the Open list. In addition to what was on the bookmark bar, the Open list also has links to the IBM productivity tools (see Chapter 7, “Productivity tools” on page 199 for more information), as well as the Web browser. One of the advantages of the Open list is that it displays icons as well as a brief description for each item without having to hover over the icons.

## *Dock the Open list*

You can choose to dock the Open list to display only icons in a thin list along the edge of your panel (or for the look and feel of a bookmark bar). See Figure 6-5. To do this, right-click **Open** and then click **Dock the Open List**. To view it as a full list once again, right-click an open area of the thin list and uncheck the docking option. This option is available on the View tab.



*Figure 6-5 Docked Open list*

**Type to find**

Another advantage of the Open list menu is that you have the ability to search your Open list. Use the type-ahead feature by entering the first letter or two of the application that you want to open at the Type to find prompt (Figure 6-4 on page 117). As you type, only applications that contain text matching the typed text will remain in the list.

Note that there is still a File menu from where you can open Lotus Notes databases that you have not bookmarked. If you have used a previous version of Lotus Notes, you will notice that the term *database* has been replaced with *application* (Figure 6-6).

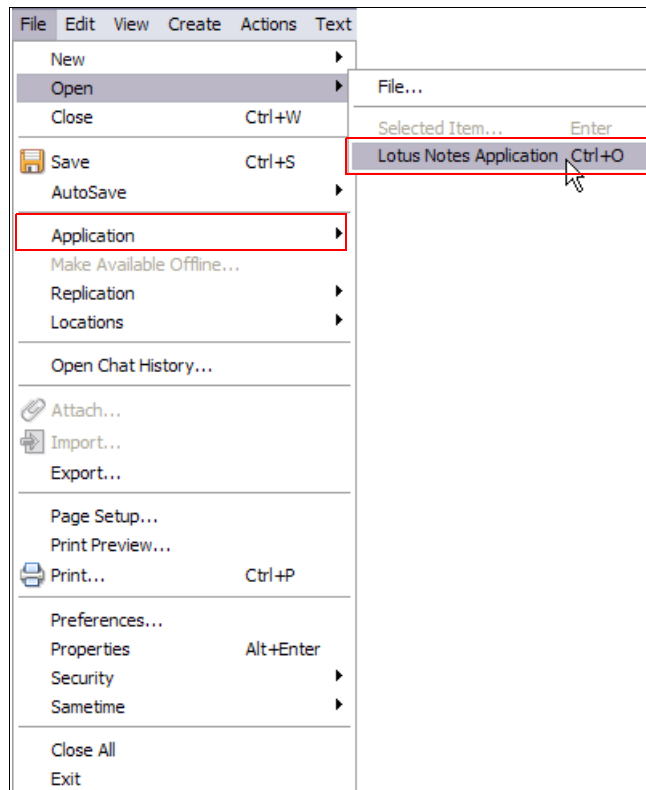


Figure 6-6 File menu

This change in terminology reflects the fact that the Lotus Notes 8 client is embracing additional types of applications and is no longer limited to just databases. See Chapter 12, “New application development features” on page 399.

### 6.1.3 Toolbars

Contextual toolbars now appear within each individual Lotus Notes tab rather than directly below the menu, bringing the toolbars closer to the activity to which they relate and allowing a smoother transition when switching between tabs that require different toolbars. Figure 6-7 shows an example.

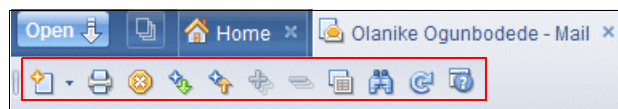


Figure 6-7 Toolbar appears within the mail tab

**Tip:** To quickly display a menu that allows you to hide toolbars, display additional toolbars, or access toolbar preferences, right-click the toolbar.

## 6.1.4 Window management and navigation

Notes 8 offers several features to help you manage your open windows, making it possible for you to navigate easily to the required view, document, or page, even when there are several Lotus Notes panels open. To set a preference on how documents or applications are opened, click **File** → **Preferences** → **Windows and Themes** and make you changes.

### ***Open each document in its own tab***

As with Lotus Notes 7, this default option has each document and application open a new window tab in your active Lotus Notes panel.

### ***Group document tabs***

With Notes 8, you now have the option to group window tabs. This means that when you have several documents open from the same database view, they are grouped together under a single tab. Clicking the arrow on the right side of the tab displays a list of all of the open windows from this view. Simply click an entry in the list to navigate to the required window. See Figure 6-8 for an example.

This feature can improve your ability to manage multiple windows. Fewer tabs across the top of the page make it easier to read the tab names. And, because the tab contents are listed in the drop-down list, it is possible to see the complete panel titles.

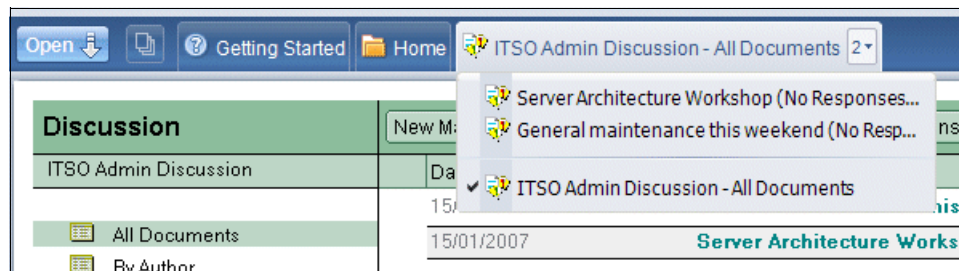


Figure 6-8 Group document tabs



### Open each document in its own panel

Another option for panel management is to have all documents in their own panel. This is useful if you want to display more than one document on the page at one time, as shown in Figure 6-9.

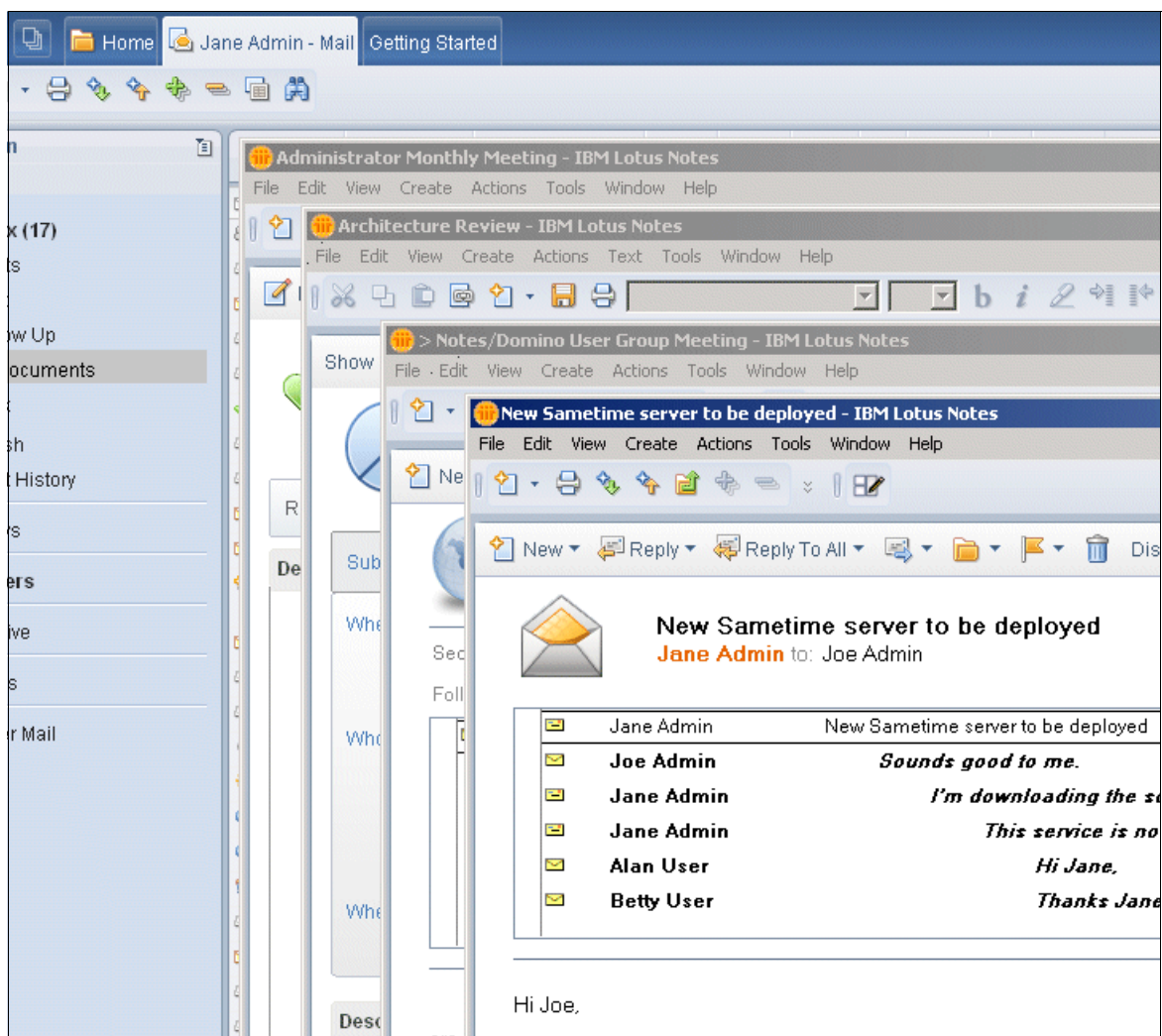


Figure 6-9 Open each document in a separate panel

## 6.1.5 Thumbnails

Window tabs make it convenient for you to switch from one open document or application to another. However, the number of tabs in the panel can grow very quickly. In addition to the options listed in 6.1.4, “Window management and navigation” on page 120, you are also able to view thumbnails of all open panel tabs. Click the Show Thumbnails icon on the right side of the Open button, as shown in Figure 6-10, to view the tabs as thumbnails.

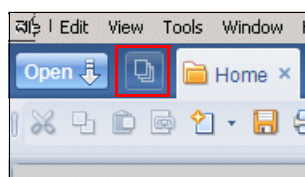


Figure 6-10 Show Thumbnails icon

Figure 6-11 is an example of a view with all open window tabs showing as thumbnails. You can click one of the thumbnails to quickly navigate to the associated Lotus Notes window tab.

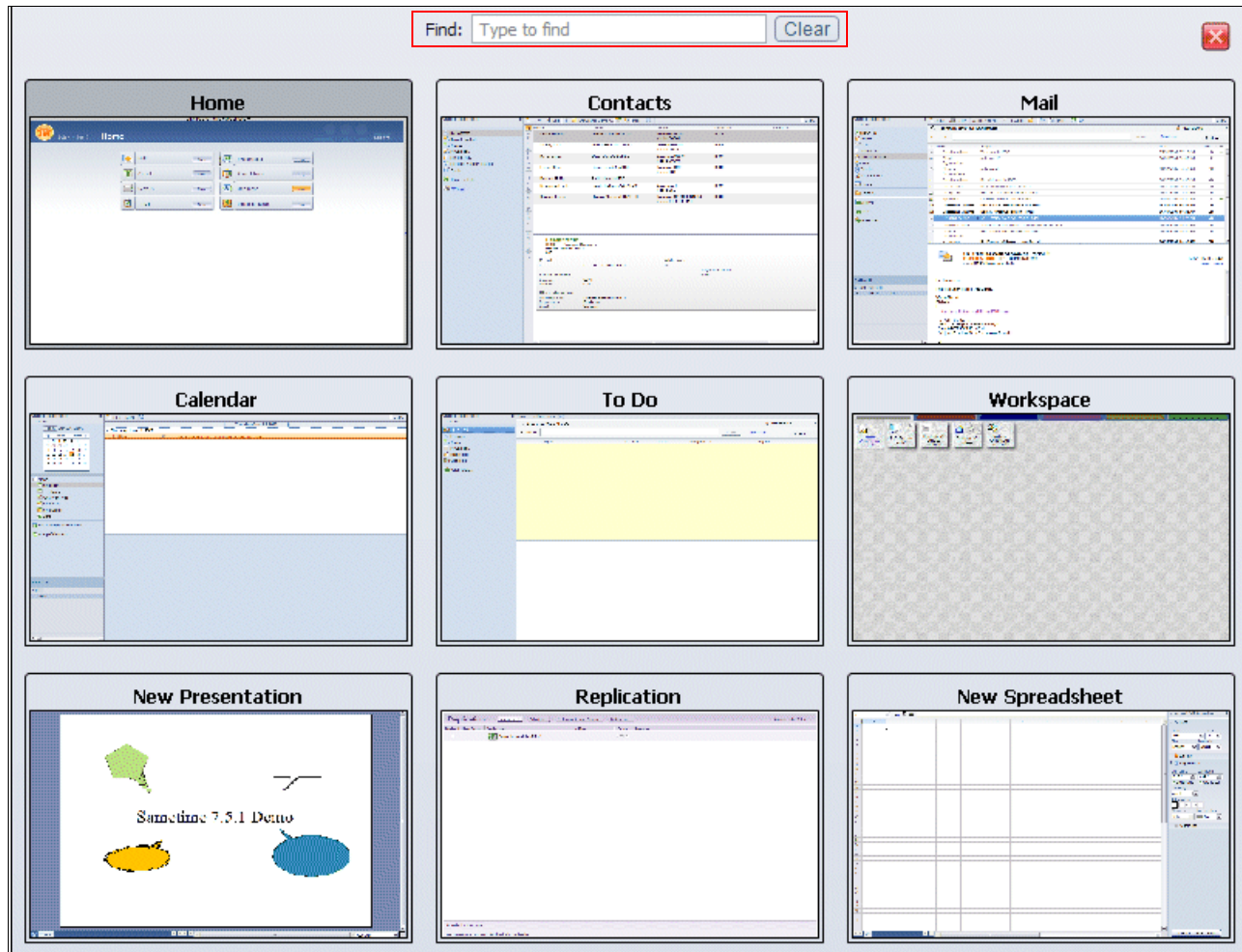


Figure 6-11 Thumbnails

You can also use the type-ahead feature by entering the first letter or two of the document or application that you want to open in the Find field (see Figure 6-11). This acts as a filter, displaying only the tabs with the titles that contain the typed text, and therefore reduces the number of tabs displayed and makes it easier to locate the tab that you need.



## 6.1.6 Unified preferences

With Notes 8, the File → Preferences menu is a single location from which you can configure all preferences associated with the Lotus Notes client, including preferences associated with locations, instant messaging, activities, and the productivity tools. See Figure 6-12.

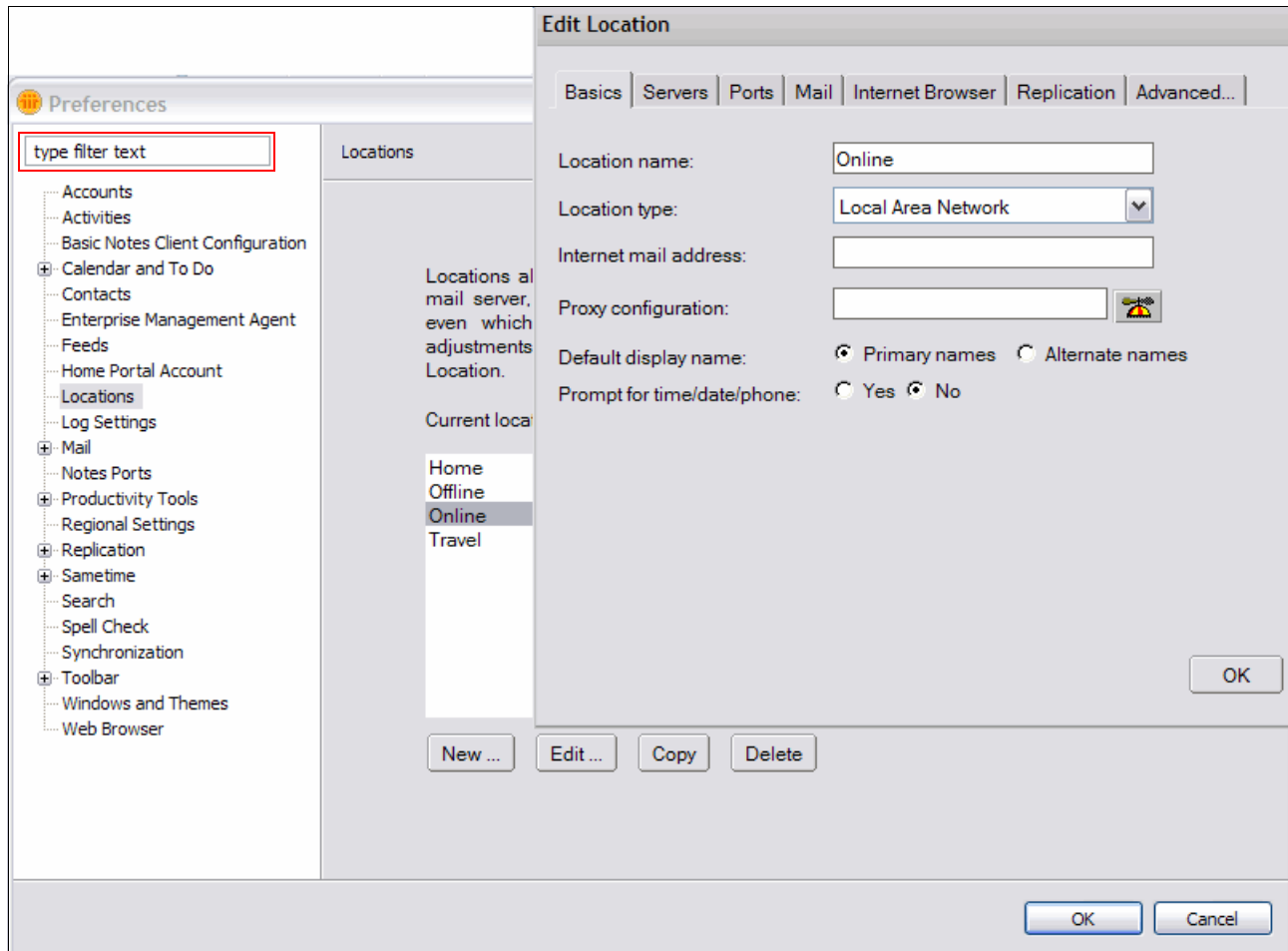


Figure 6-12 Preferences

To offer users the flexibility to customize the client interface to meet their specific needs and ways of working, there are many preferences that can be configured. However, a filter function at the top of the list of preferences enables you to quickly locate the required preference by showing only those preferences that match the text that is entered. See the example in Figure 6-13.

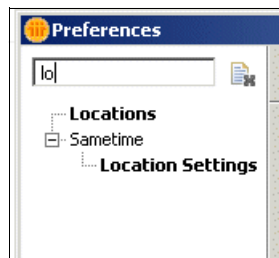


Figure 6-13 Filtering the preferences

Note that the original methods for accessing the mail/calendar preferences and locations are still available in addition to the unified preferences menu, allowing backward compatibility for users familiar with the original methods.

## 6.1.7 Advanced menu option

In order to simplify the menus for users, the Notes 8 client has an option to suppress the advanced menus, as shown in Figure 6-14. Options on advanced menu are targeted more for system administrators or designers, and include menus for tasks such as archiving or deleting Lotus Notes applications, creating an embedded element, or viewing agents. The Advanced Menu option is deselected by default, and users requiring these advanced menu entries need to select this option using **View → Advanced Menu**.

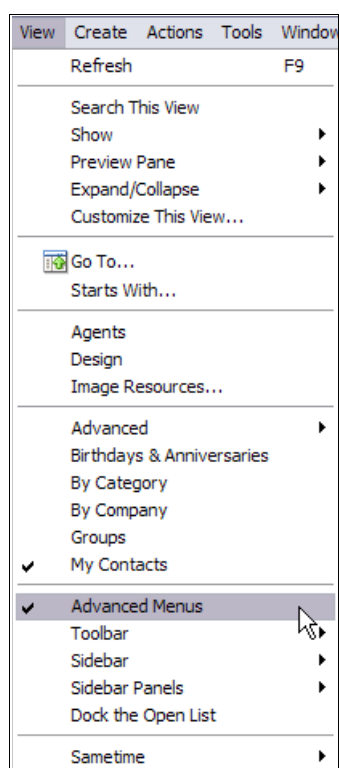


Figure 6-14 Configuring advanced menus

Figure 6-15 is an example showing the difference between the tools menu with the advanced menus option selected and the tools menu without the advanced menus option.

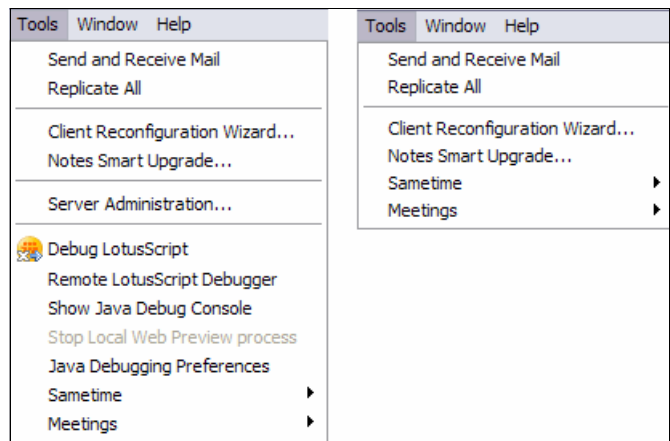


Figure 6-15 Difference in the tools menu options with and without the advanced menus option

The options listed in Table 6-1 display only when advanced menus are enabled.

Table 6-1 Additional options with advanced menus enabled

Menu	Option
File → Application	Archive Delete Design synopsis New Copy Publish Refresh Design Replace Design
File → Replication	Find Replica History New Replica
View	Agents Design Image Resources Switch Form
View → Show	Hidden from Notes Java Applets Running Page Source Pass-Thru HTML
Create	Computed Text Design Embedded Element Java Applet View
Actions	Edit HTML Attributes

## 6.1.8 Making applications available offline

To simplify the process of creating a local replica of an application that is hosted on a Lotus Domino server, the Notes 8 client has a Make Available Offline option. Through a single

window, users can supply all the information necessary to enable them to access applications when they are disconnected from their network. See Figure 6-16 for an example.

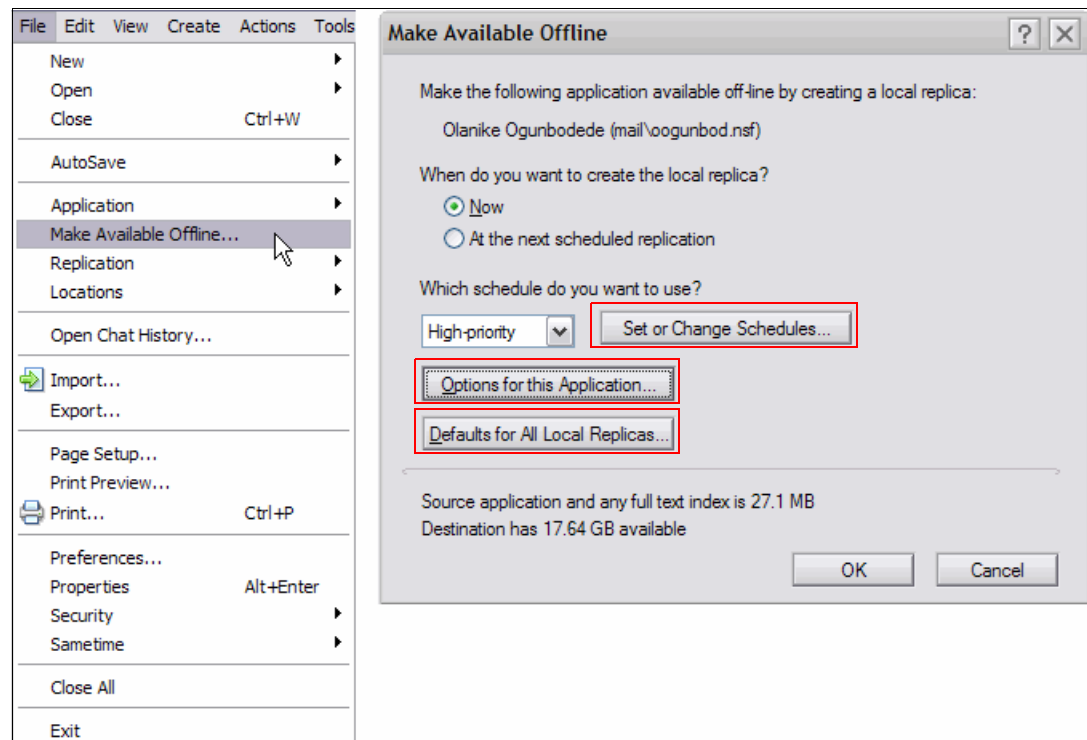


Figure 6-16 Make the application available offline

The Make Available Offline option is also available by right-clicking the application icon on the workspace or in the Open list.

### 6.1.9 Search enhancements

The Notes 8 client has a new search center interface and also a new search syntax that allows the user to find information more seamlessly.

## Search center

The search center in the Notes 8 client enables you to go to a single location to search your mail, calendar, directories, catalogs, and even the Web. Figure 6-17 illustrates some of the enhancements. For example, there are options for Yahoo! and Google Web searches. If you select one of these options, your Web search is carried out by the associated search engine. If you have Google Desktop Search installed on your workstation, this option also appears in the search scope drop-down menu.

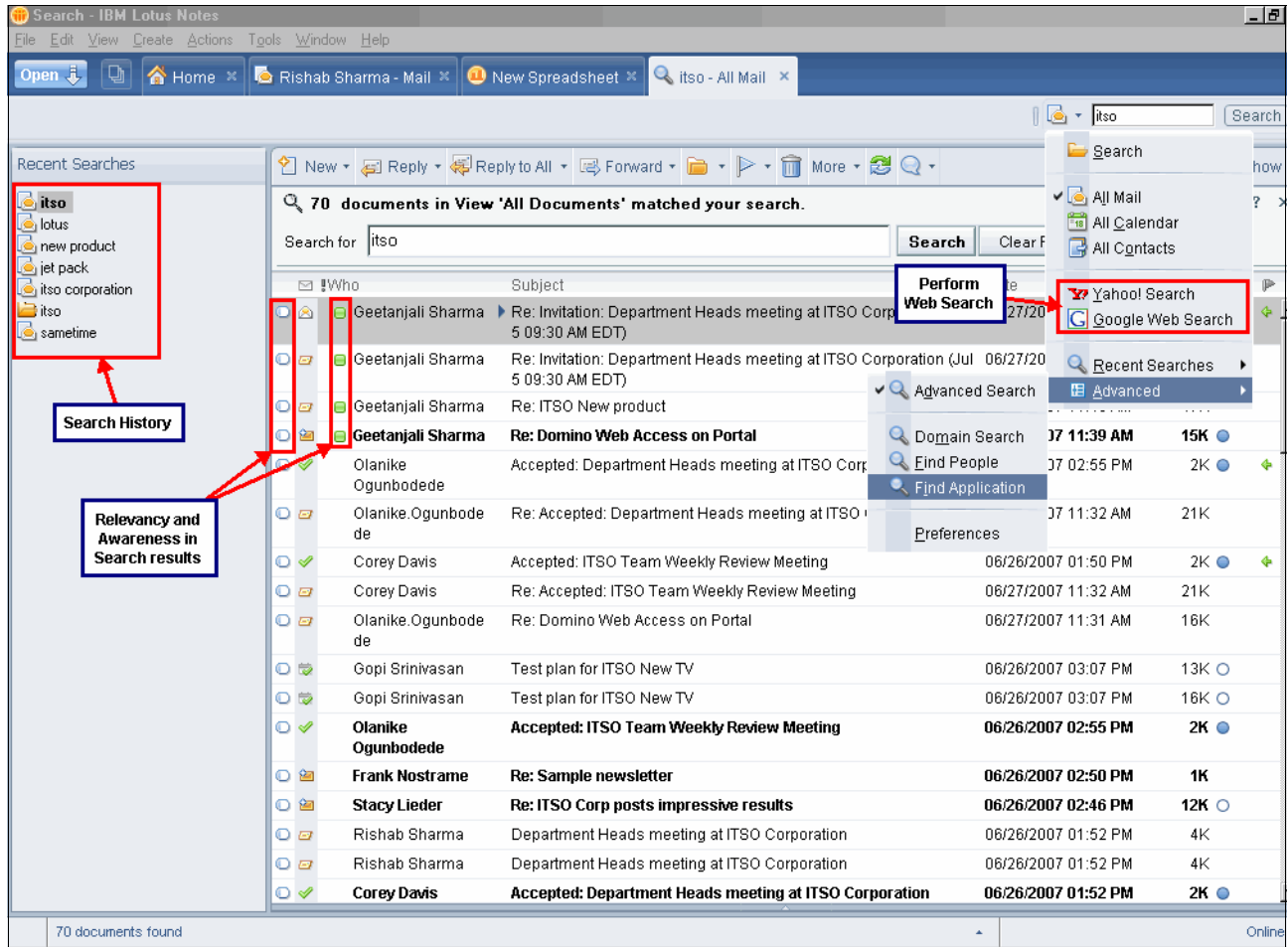


Figure 6-17 Search center enhancements

Now you do not have to leave your Lotus Notes client to perform common search tasks even if the targets of the search are not in the Lotus Notes environment itself.

## New search syntax

The Lotus Notes 8 client now supports a new *Web-style* syntax when performing search. If your search query now has several words, the documents returned will contain those words, but not necessarily in the order that you specified.

For example, “ibm redbooks publications” or “publications redbooks ibm” might give the same search results.

This is a change from the current Notes syntax. To search exact terms and to force the order, quotation marks are now needed.

**Attention:** To use the old Notes-style (pre-Lotus Notes 8) search for a particular query, you can prepend a forward slash (/) to the beginning of the query to switch off Web-style syntax for that search.

**Note:** Refer to the Lotus Domino 8 Administrator's Guide for more information. All Lotus Notes and Domino documentation can be found at:

<http://www.ibm.com/ldd/doc>

## 6.1.10 Web browser

In order to view a Web page from the Lotus Notes client, earlier releases of the client provided you with the option of using either Notes browser, Microsoft Internet Explorer, Netscape Navigator, or manually selecting a different browser path.

With the Notes 8 client, you can either choose to use the embedded browser, which lets you navigate Web pages directly from within Lotus Notes or your operating system default browser, allowing you to use the browser familiar to you, without having to know its installed path.

You can specify which browser to use from your Web browser preferences, as shown in Figure 6-18.

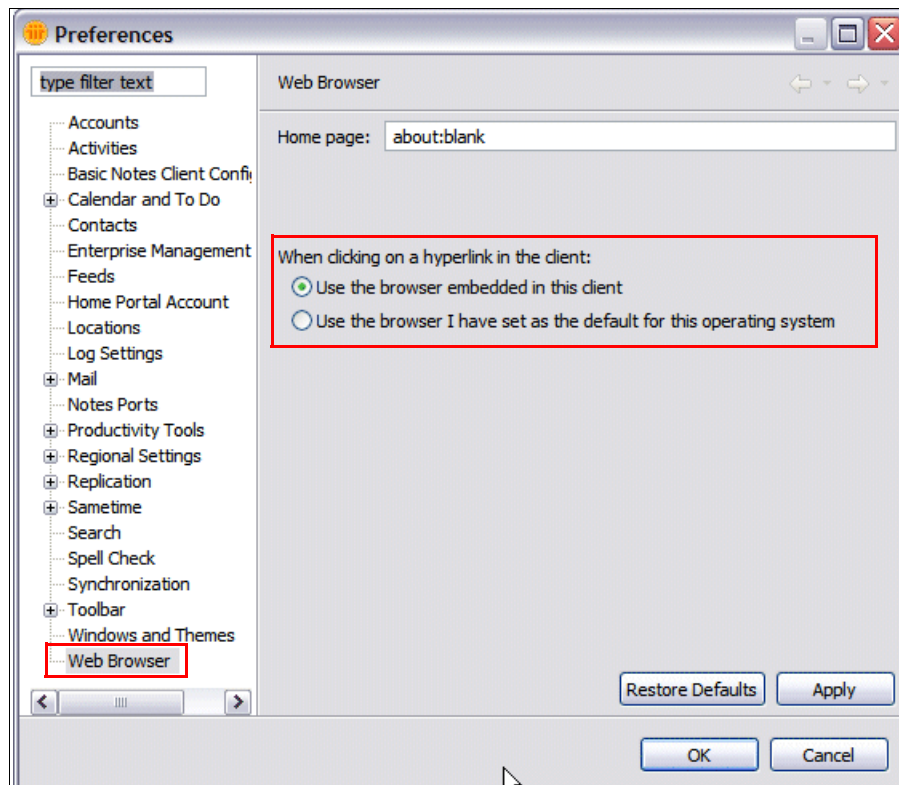


Figure 6-18 Web browser preferences

### 6.1.11 Dynamic help

In the Notes 8 client, help has a new user interface that lets you display context-sensitive help, specific to the task you are performing, in a side panel while you work (Figure 6-19).

**Tip:** Context-sensitive help is available when you press F1.

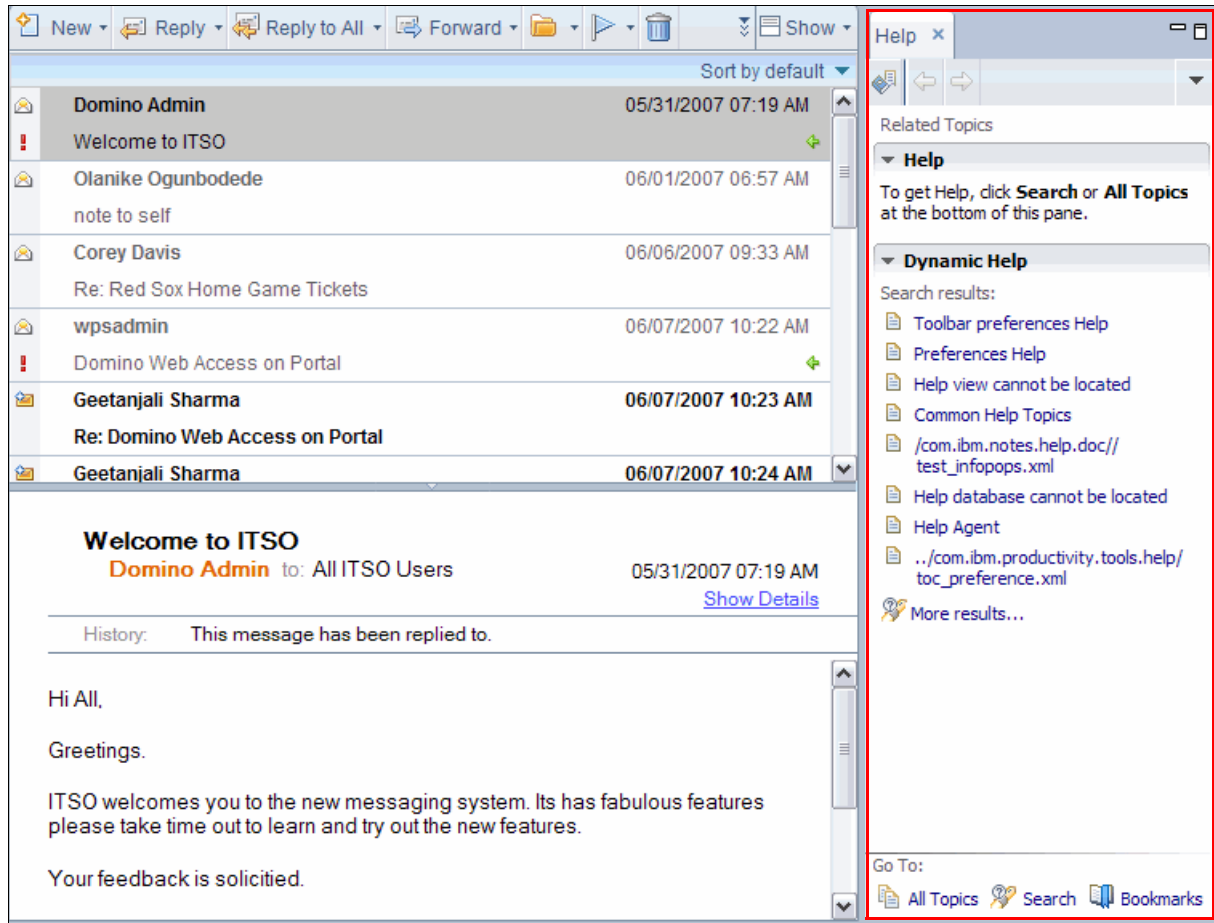


Figure 6-19 Context-sensitive help

In addition to help for the Lotus Notes client, this help system includes sections about Sametime contacts, activities, the composite application editor, and the IBM productivity tools, each of which you can choose to install during the Notes 8 client installation.

### 6.1.12 IBM Support Assistant

IBM has integrated the IBM Support Assistant with the Lotus Notes client. You can access the IBM Support Assistant from the Notes 8 client help menu by selecting **Help** → **Support** → **IBM Support Assistant**.

IBM Support Assistant is a software application offered at no additional charge. It is intended to help clients be more productive with IBM products by resolving product challenges faster. Clients are encouraged to consult IBM Support Assistant when experiencing a product challenge. IBM Support Assistant offers resources for self-help that can enable customers to identify, assess, and overcome product difficulties without needing to contact IBM. When it is

necessary to contact IBM, IBM Support Assistant offers resources for rapid submission of problem reports and immediate, automated collection of diagnostic data that can accelerate problem resolution. See Figure 6-20.

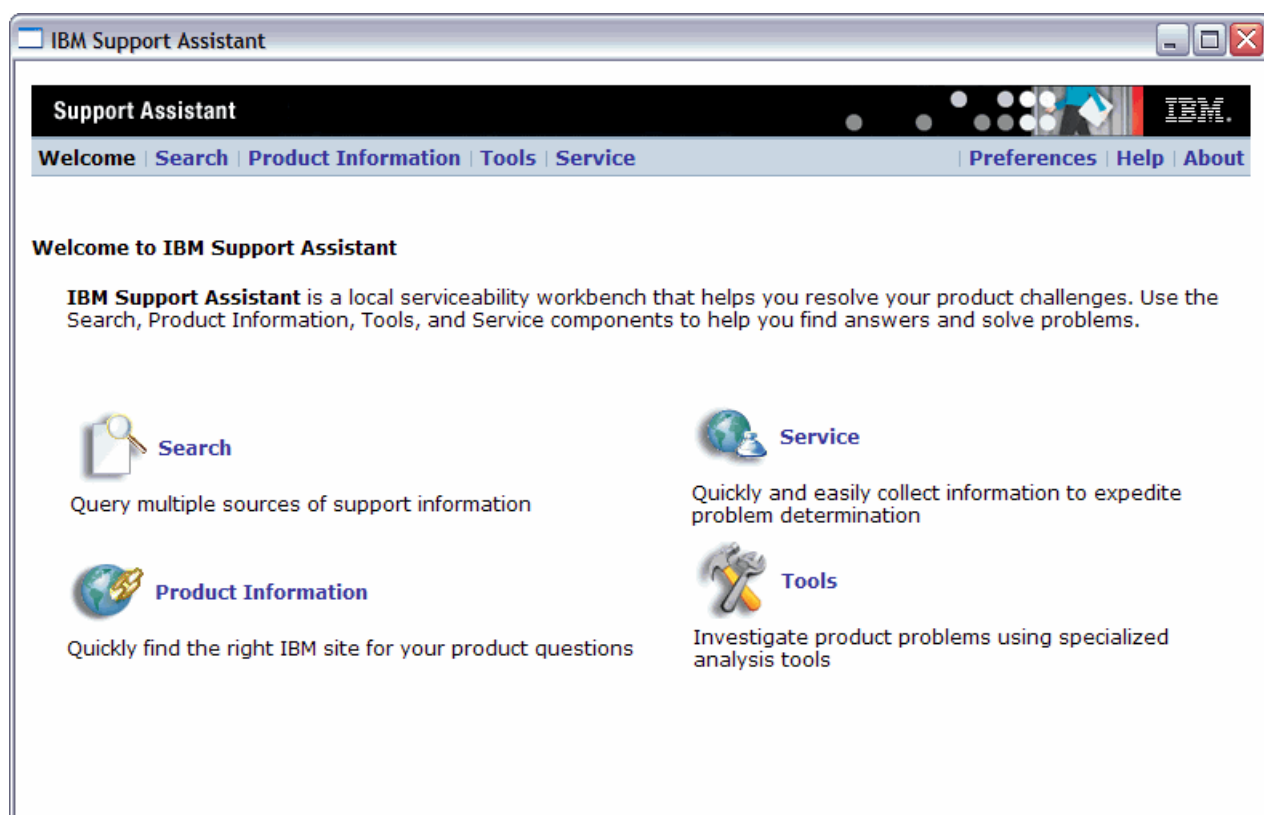


Figure 6-20 IBM Support Assistant Welcome page

For more information about IBM Support Assistant, see the Lotus Notes 8 client online help or the following Web site:

<http://www.ibm.com/software/support/isa/>

## 6.2 Mail enhancements

The fresh new interface in the Lotus Notes 8 mail file is a direct result of considerable feedback from the Lotus Notes community. It is intuitive to use, as well as having new and improved features, which include a new preview option, in-line spell checking, message recall, intelligent e-mail addressing, enhanced out of office, and improved threaded e-mail capabilities. We look at these new mail features in detail.



## 6.2.1 Action bar

Each window tab optionally includes an action bar, specific to the application or document open in the window tab. The mail file inbox action bar uses both icons and text. There are icons with no text for common and easily distinguishable actions. However, you can hover over the icon to remind you of its action. Figure 6-21 displays the mail action bar with the folder icon selected.

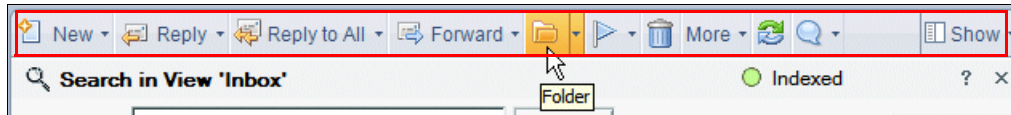


Figure 6-21 Inbox Action bar

**Note:** Items on the action bar are also available from the action menu.

In most cases, common actions can be carried out with a single click, leaving easily accessible, two-click actions for less frequent tasks. For example, if you are in your mail file, it is likely that the type of document you create most often is a new e-mail. Therefore, if you click the New icon in the action bar, a new message form opens. However, if you click the arrow beside the New icon, you get a drop-down list allowing you to select a new calendar entry, to do entry, or contacts entry instead.

Also, reply and reply to all are single-click actions, and these now default to including the mail history and attachments.

## 6.2.2 Mail preferences

Notes 8 has all preferences pertaining to your mail file in one location as part of the unified preferences. Mail preference (Figure 6-22) has been simplified so that it is easier for users to manage their mail file.

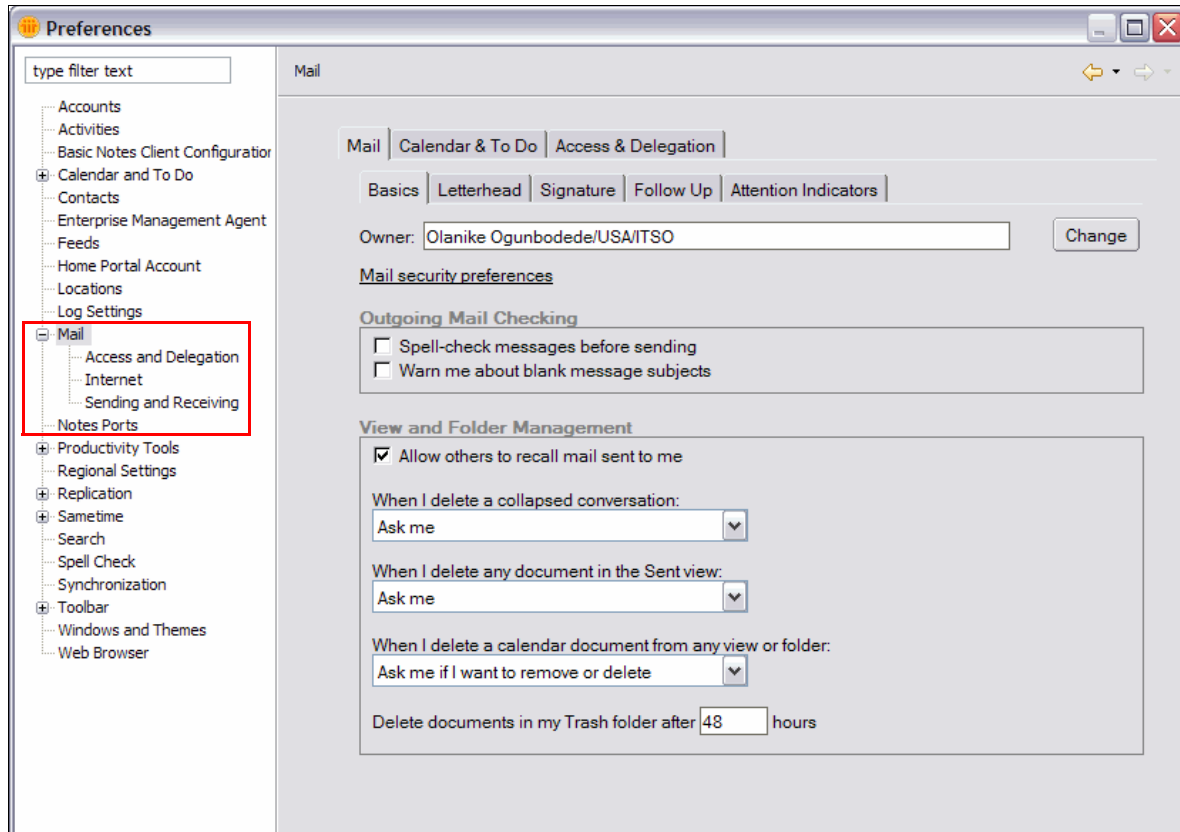


Figure 6-22 Mail preferences

New in Notes 8 is the Image Security option with the ability for you to prevent the display of unwanted images, especially from unsolicited mail. See Figure 6-23.

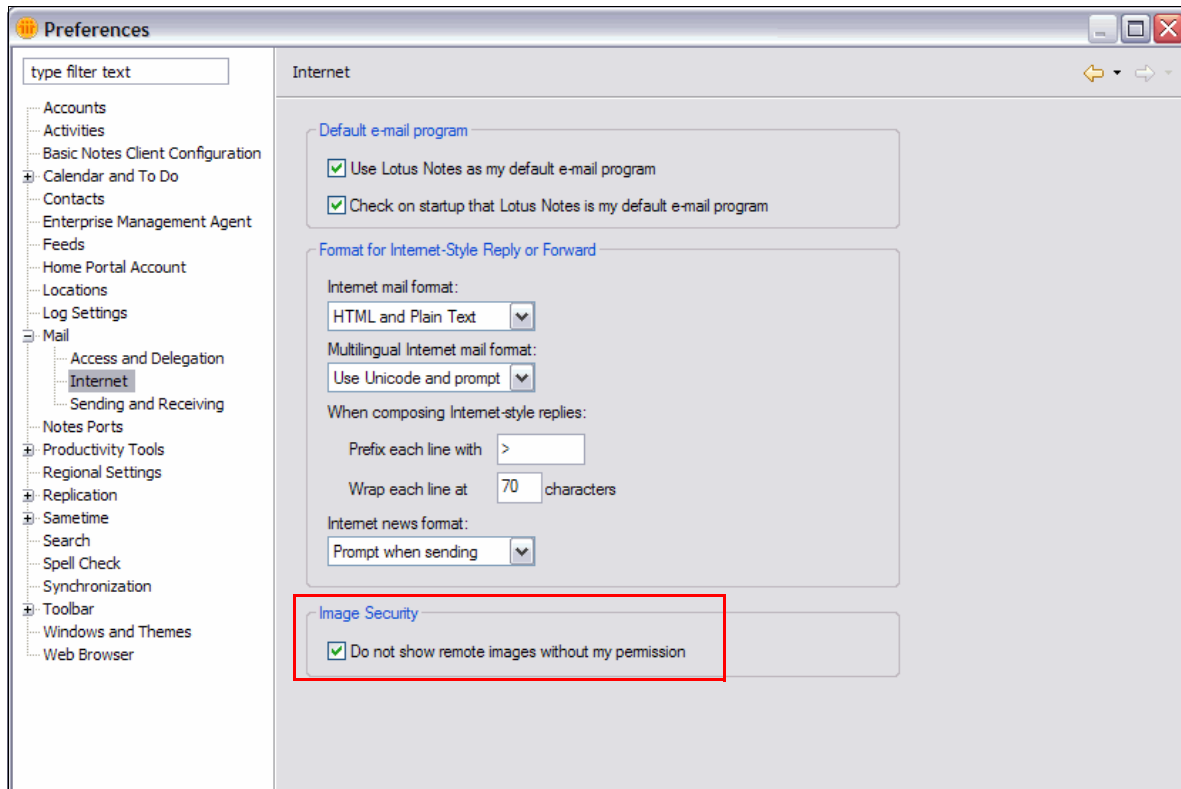


Figure 6-23 Mail preferences - image security

### 6.2.3 Message preview

In this section we discuss the message preview.

## Vertical preview

The preview pane displays a preview of a selected document in an application, such as a mail message or calendar entry. In Notes 8, you now have the option of displaying the preview pane vertically, beside the view pane, as well as horizontally, underneath the view pane. The vertical preview pane is shown in Figure 6-24.

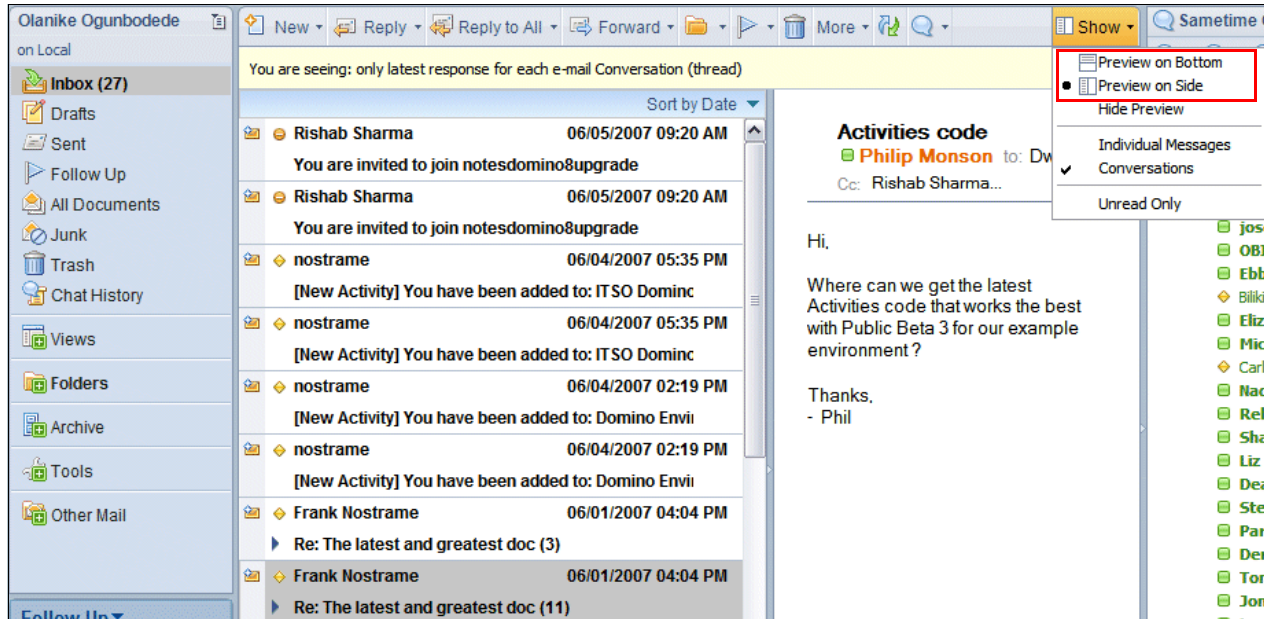


Figure 6-24 Vertical preview pane

Note that, with the vertical preview pane on the right, your mail view is automatically reformatted to show the mail subject on a second line, underneath the sender and the date. This allows you to see the pertinent information for each mail message even though the width of the view has been made smaller. The option to switch between the preview panes or to hide the preview pane altogether is selected from the Show menu at the top-right corner of the page.

## 6.3 Mail threads and conversations

Lotus Notes 7 introduced the ability to see the mail thread to which an e-mail belonged from within the header of an e-mail. In addition, with Notes 8, there are two methods of viewing mail threads directly from the inbox (or any folder whose design is based on the inbox).

## Individual message view

By default, the inbox view will show you whether there is a thread associated with an e-mail when you highlight the e-mail. Note the twisty in front of the mail subject. This tells you that this e-mail is part of a mail conversation (Figure 6-25).

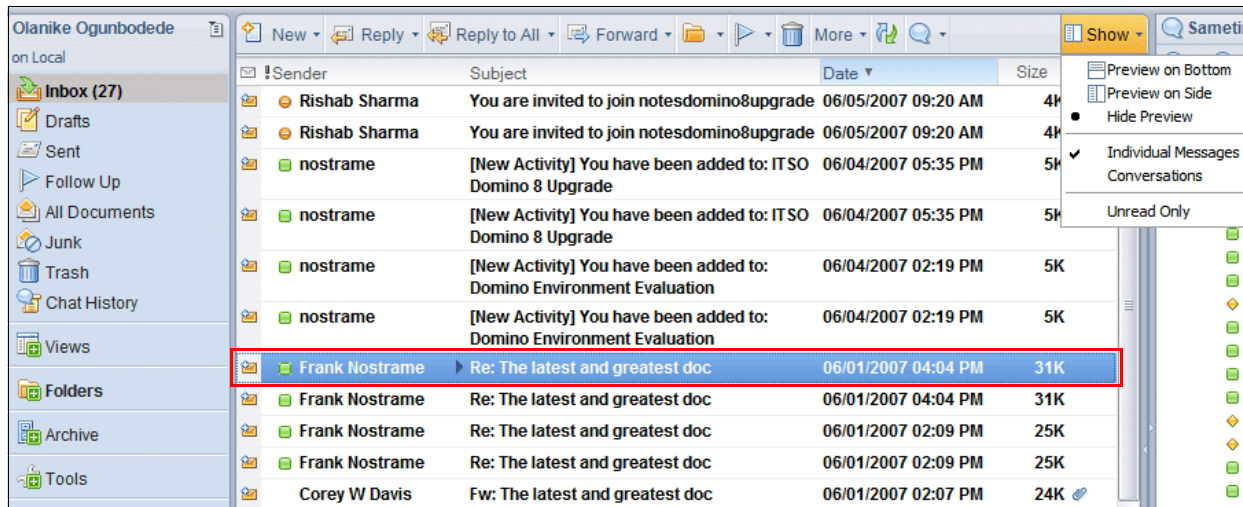


Figure 6-25 Individual mail

Clicking the twisty at the front of the subject opens up the conversation and allows you to see the contents of the conversation, as shown in Figure 6-26.

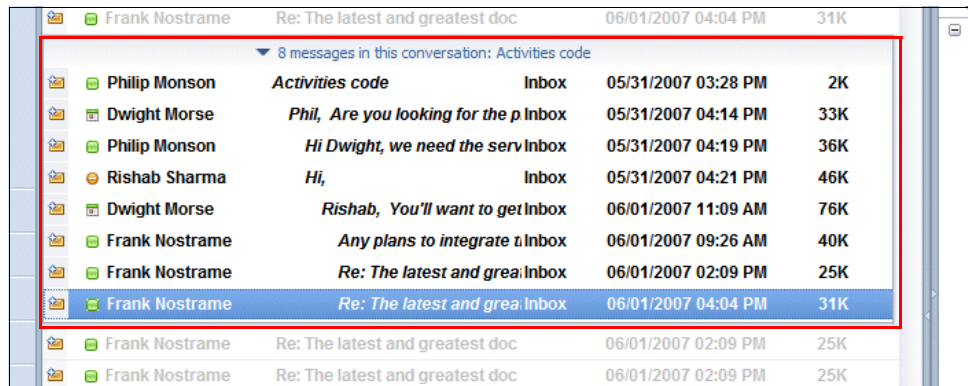


Figure 6-26 Click twisty to see conversation

Replies to an e-mail often have the same title as the original e-mail, simply prefixed with Re: . In order to allow more useful information to be shown in the conversation, the first line of the e-mail, rather than the title, is used in the conversation. This might make it easier for you to identify the e-mail that you need. It might even allow you to find all the information you require without actually having to open any of the e-mails in the conversation.

Note that the conversation shows all associated e-mails regardless of where they are in your mail file and also shows you the folders in which they are located.

The mail conversations are resilient. This means that if an intermediate response is deleted from the mail file, any replies to the deleted response still appear in the conversation. Also, conversations can now include mails that originated from e-mail systems other than Lotus Notes, meaning that responses to and from people outside of your company also appear in your conversations.

## Conversation view

With Lotus Notes 8, you can also organize mail messages in your inbox view so that they are grouped in conversations with only one view entry per conversation. This can make searching the inbox much easier. This is because there are fewer conversations than there are e-mails. You can now have all the e-mails in a topic grouped together in your inbox under the latest entry in the mail thread.

You can switch between the individual messages mode (where messages and replies are displayed and sorted individually) and the conversations mode (where messages and replies are grouped together) from the Show menu at the top-right corner of the page.

When you are in conversations mode, you only see the latest response in each mail thread displayed in the view. The number in parentheses at the end of the subject indicates how many e-mails are in the conversation, as shown in Figure 6-27. As with the default inbox view, if you click the twisty beside the view entry, you can open the thread to see all the mails in the conversation.

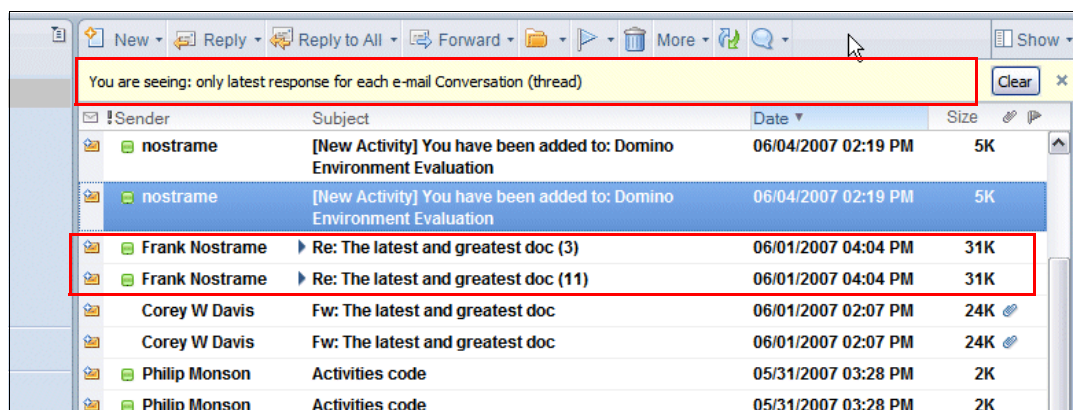


Figure 6-27 Conversation view

When in conversation mode, you are also able to perform actions, such as filing in a folder or deletion, on an entire mail thread. To help prevent accidental deletion, a dialog box shown in Figure 6-28 warns you of the action. You can suppress this dialog box if wanted.

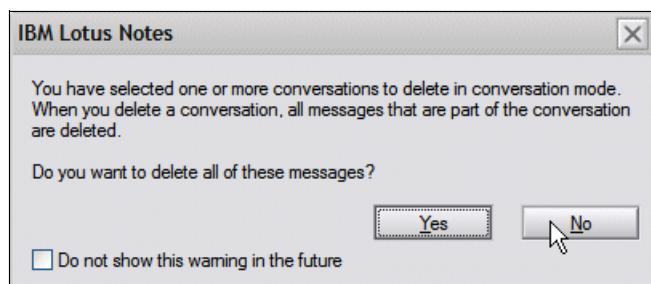


Figure 6-28 Warning that you are about to delete a conversation and not a message

### 6.3.1 Collaboration history

When you are searching for information, you might remember the people with whom you were collaborating rather than the tool in which the collaboration was taking place. With Lotus Notes 8, a right-click menu option (Figure 6-29) for names fields allows you to see a list of other collaborations that you had with that person. These collaborations can be e-mails from your inbox, meetings from your calendar, instant messages stored in your history, or activities displayed in your sidebar.

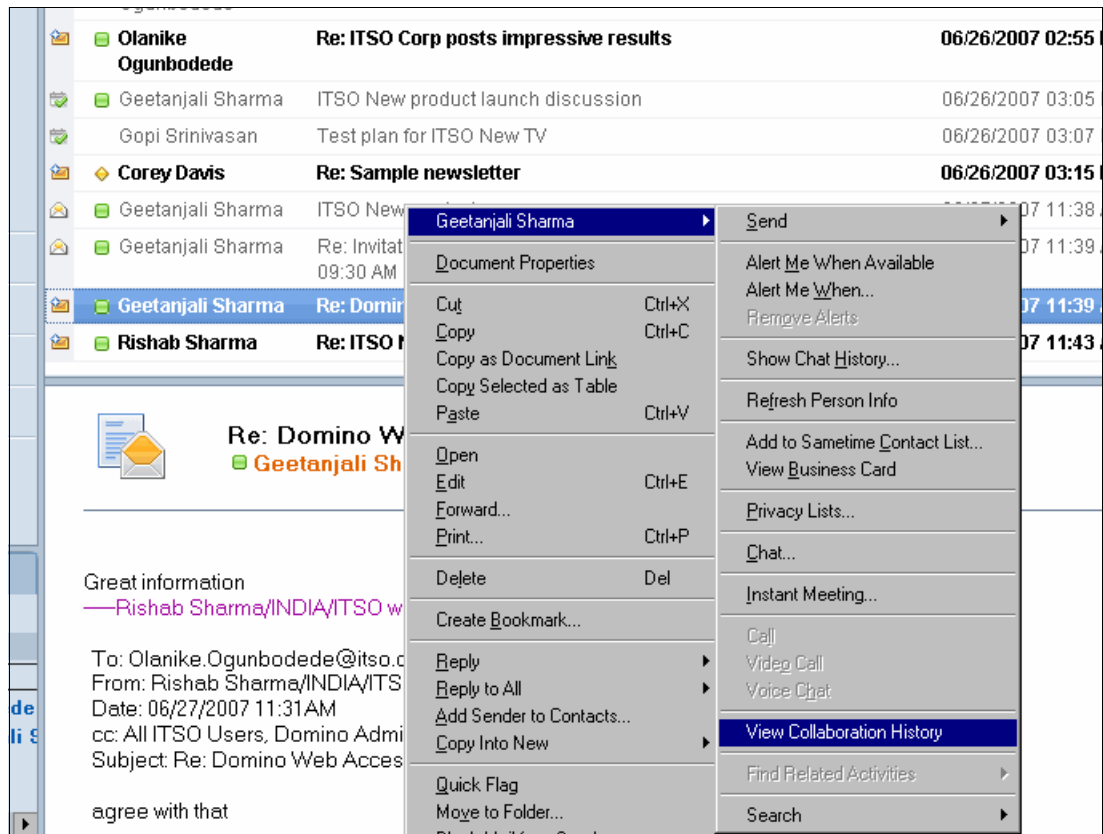


Figure 6-29 Right-click menu option to view collaboration history



All of these are displayed together in the collaboration history, as shown in Figure 6-30. You can select an entry from the list to open it directly from your mail file, calendar, instant message history, or activities list.

Name	Type	Date
New Message	Mail	06/27
Re: Domino Web Access on Portal	Mail	06/27
Geetanjali Sharma [Started: 11:41 AM]	Mail	06/27
New Message	Mail	06/27
Re: ITSO New product	Mail	06/27
New Message	Mail	06/27
Re: Invitation: Department Heads meeting at ITSO Corporation (Jul 5 09:30 AM EDT)	Mail	06/27

Figure 6-30 Collaboration history

**Tip:** The right-click View Collaboration History option extends to name fields in other databases such as contacts, team room, and discussion databases, as well as in the mail, calendar, and instant contacts list.

## 6.3.2 Mail header

With Notes 8, you can customize your mail header to display only information and options that are useful to you.

### ***New message***

As shown in Figure 6-31, a new Display drop-down lets you customize the header of your new message by checking or unchecking the options from the drop-down menu.

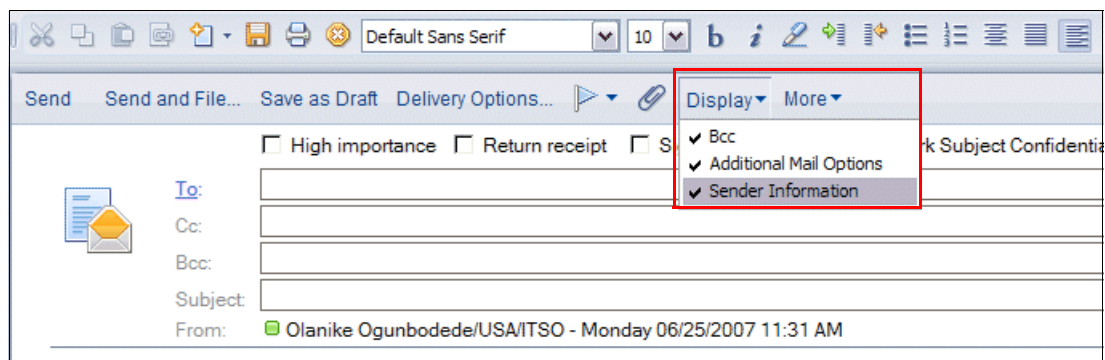


Figure 6-31 Customize display of mail header



Also new in Notes 8 is an additional mail option, Mark Subject Confidential. Check the **Mark Subject Confidential** box to add a \*Confidential: prefix to the subject (Figure 6-32). This makes it simple for you to mark confidential e-mail in a consistent and easily recognized format.

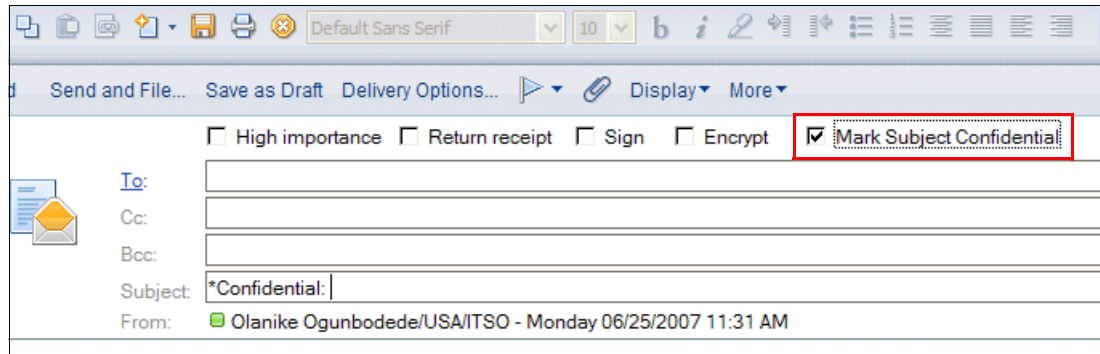


Figure 6-32 Additional mail option - mark subject confidential

### Received message

Received messages in Notes 8, by default, display a simple mail header, which is cleaner and also hides information you may not be interested in. However, you have the option to display a more detailed header by clicking **Show Details** link. See Figure 6-33 for an example of a simple and detailed mail header.

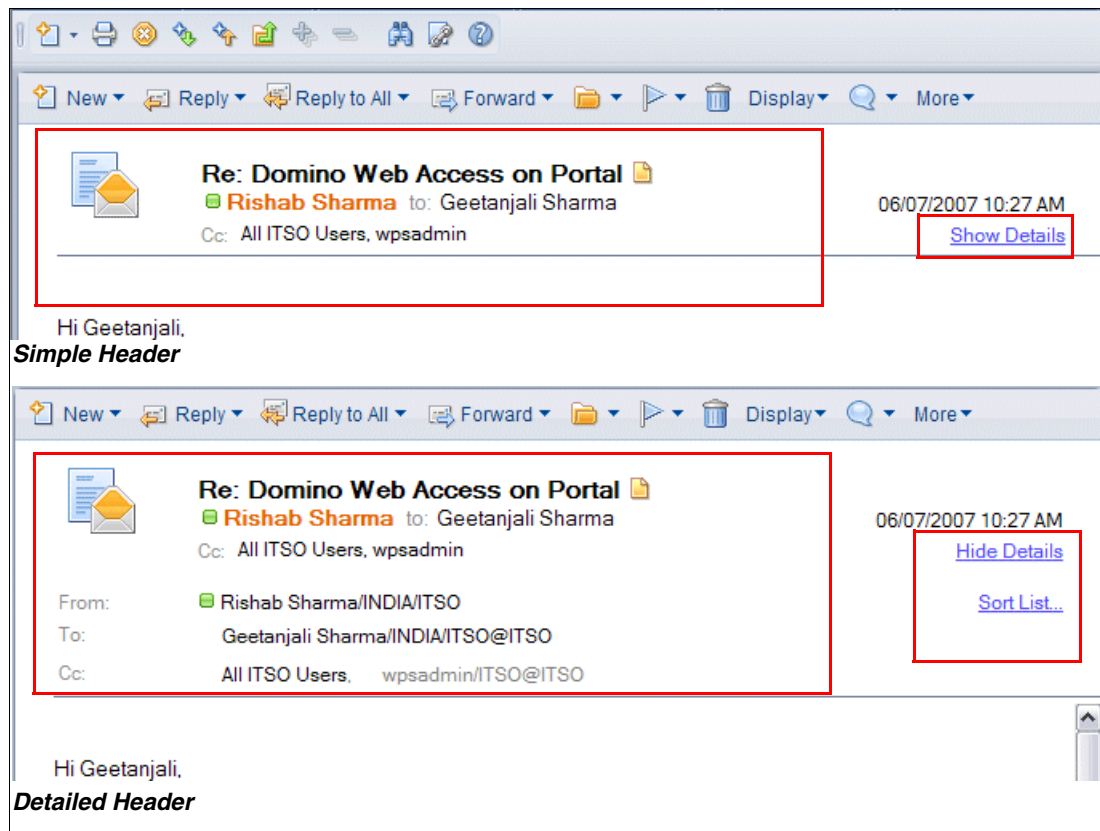


Figure 6-33 Mail header - received message

With the detailed header, you are able view a sorted name list of the recipients of the message. Click the **Sort List** link and a dialog similar to the one shown in Figure 6-34 is displayed.

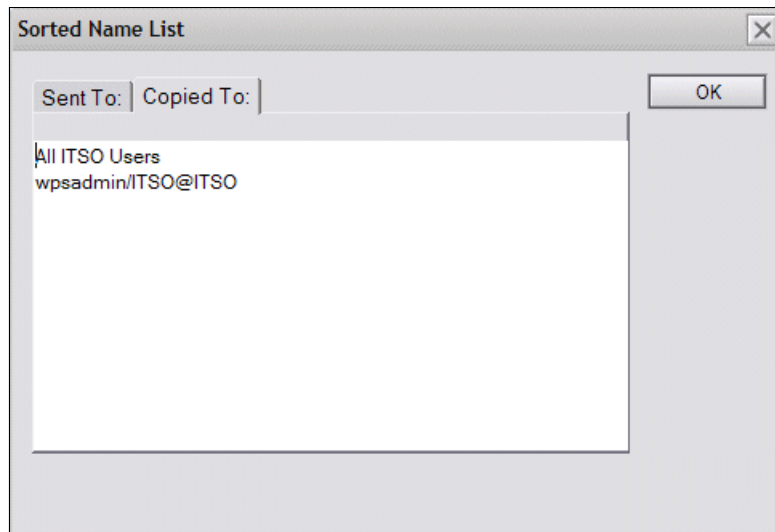


Figure 6-34 Sorted Name List

**Note:** The sorted name list is only available for the SendTo and CopyTo fields.

### 6.3.3 Mail addressing

You can address a message either by selecting recipient names from an address book or by entering names or addresses directly into an address field of the message. If you enter names directly, you can set Notes to use a type-ahead feature that completes names based on the first few letters you type.

The address type-ahead feature available in prior versions of Lotus Notes has been enhanced and converted to a type-down feature in Notes 8, to make it quicker for you to find the people you collaborate with most often. As you type into an address field, names that match your typed text appear in a drop-down list below. The list of names is not sorted alphabetically but according to frequency of use. Therefore, your most common contacts appear at the top of the address list, as shown in Figure 6-35.

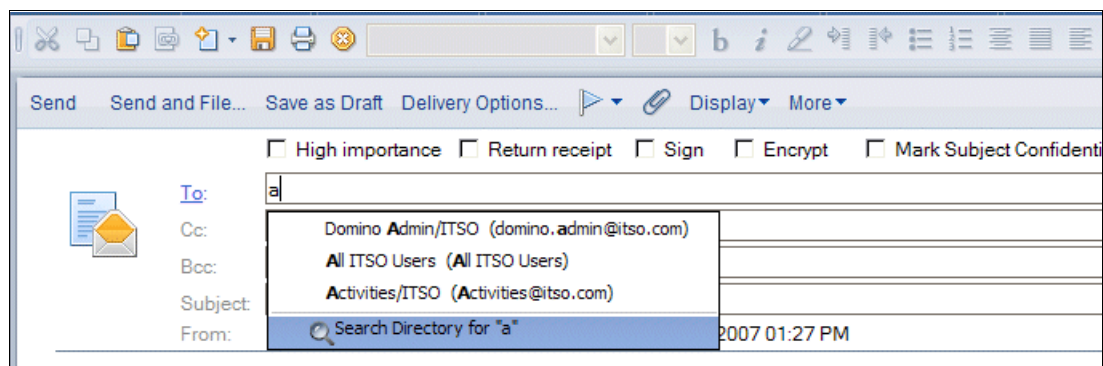


Figure 6-35 Type-ahead

When you see the name you want, you can click it in the list to populate the address field with the full name.

**Note:** The type-ahead drop-down list would also include the address in the recent contacts view of your personal contacts. See 6.5, “Contacts” on page 152, for more information about recent contacts.

### 6.3.4 Message recall

The new Notes 8 message recall feature provides Lotus Notes client users with the ability to recall mail messages from other Lotus Notes users. This feature is useful when a Lotus Notes client user has accidentally clicked Send and then needs to retract the message, because it was sent to the wrong recipient or in order to complete or modify the message content.

**Note:** You will only be able to use this feature if it has been enabled on the Lotus Domino server and configured for use in the Server Configuration settings document (for all users) or in mail policy (which can be for specific users). See 9.3, “Message recall” on page 245, for more details.

This facility is available only from the Sent view of the mail folder, as shown in Figure 6-36. Note that the sender’s copy of the mail message is required in order to collect the information required to locate the recipients copies. If the mail message was not saved before it was sent, you would not be able to recall it.

In order to recall an e-mail, highlight the e-mail in the Sent view and click the **Recall Message** action button, shown in Figure 6-36.

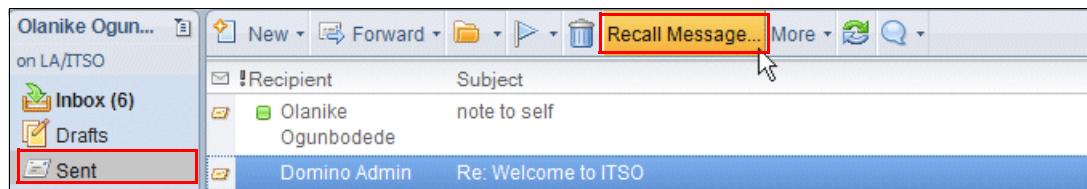


Figure 6-36 Recall Message action button

A Recall Message dialog then displays, allowing you to select recipients from whom you want to recall the message, as shown in Figure 6-37. You also have the option to recall messages that have already been read and receive a status report on each recall.

**Important:** You can only recall read messages if the message recall configuration on the Domino server allows the recall of read messages. If message recall configuration on the Domino server does not allow recall of read messages, you would receive a status report of Not Recalled (Figure 6-38). For other factors that could cause a not-recalled status, see 9.3.2, “How message recall works” on page 248.

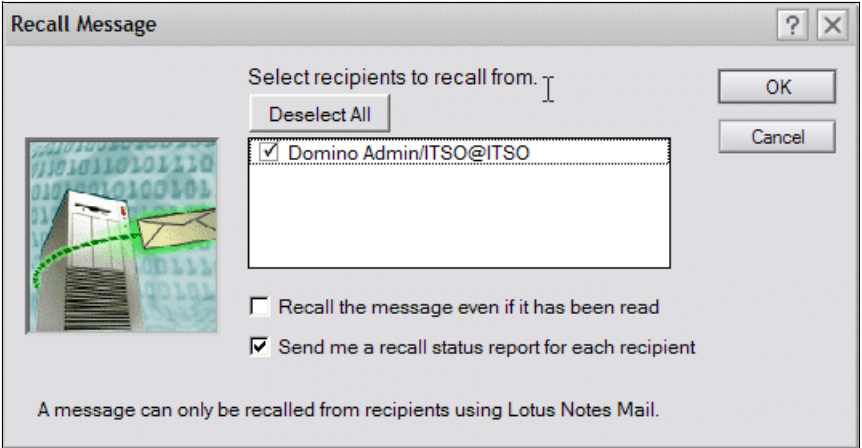


Figure 6-37 Recall Message dialog

If you select the option to receive a recall status report, for each recipient from whom you have recalled the e-mail, you will receive a report similar to the one shown in Figure 6-38.

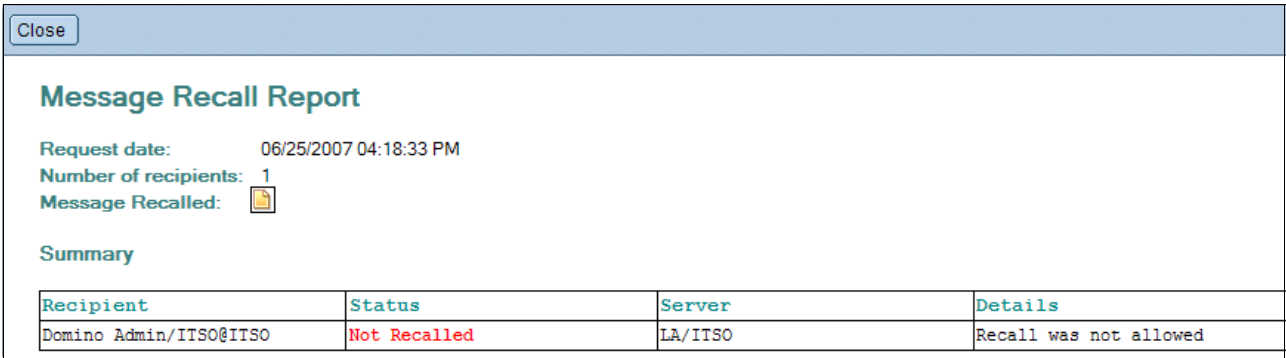


Figure 6-38 Message Recall Report

You as a recipient can prevent senders from recalling mail messages that were sent to you. To do this, open your mail preferences, and in the Basic and from the View and Folder Management section, uncheck the option **Allow others to recall mail sent to me** (Figure 6-39).

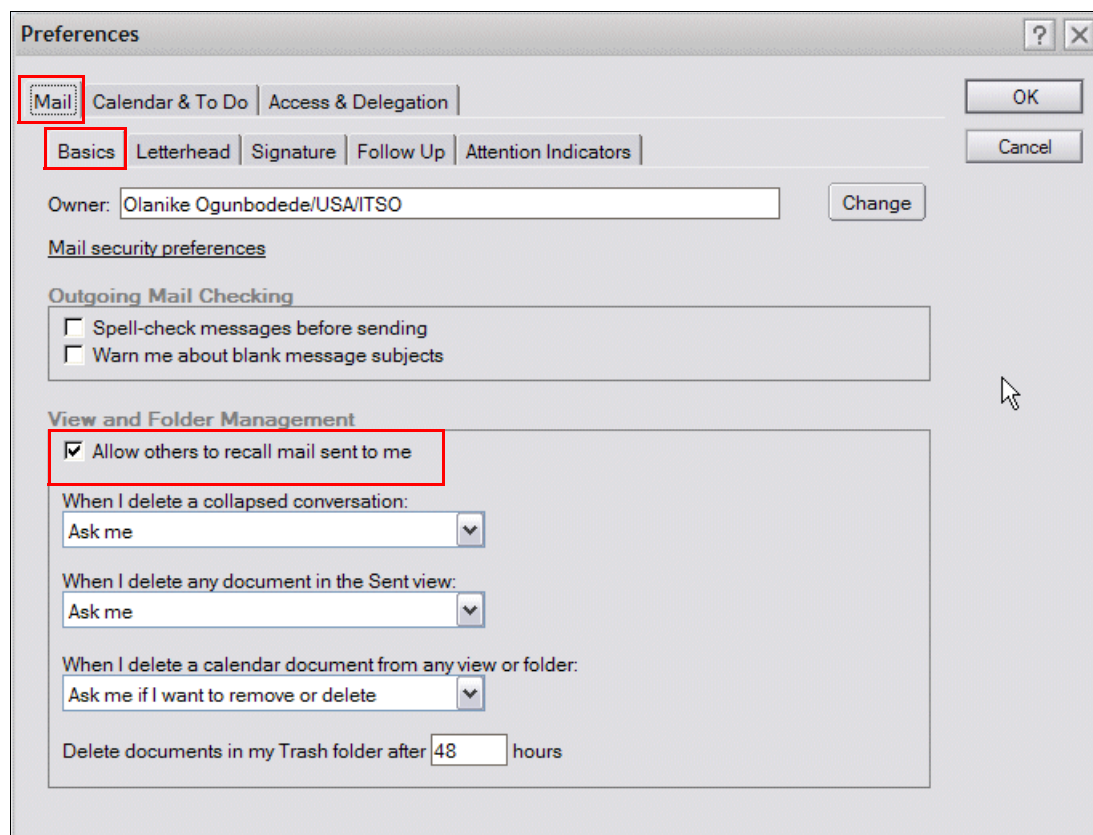


Figure 6-39 “Allow others to recall mail sent to me” option

For more information about how message recall works and how to configure it on the Domino server, refer to 6.3.4, “Message recall” on page 141.

### 6.3.5 Improved out of office

In previous Notes and Domino versions, the out of office functionality was implemented using an agent stored in each user’s mail file. The out of office functionality has been enhanced in Lotus Notes and Domino 8 both in terms of performance and flexibility of configuration. In Domino 8, administrators now have the option of implementing router-based out-of-office processing. For more details see 9.2, “Out of Office router service” on page 242.

From the client configuration perspective, the out-of-office interface has been refreshed and enhanced (Figure 6-40). You now have options to set the hour at which you will be leaving and returning to the office, and also to configure whether out-of-office notifications are sent in response to every message that a person sends or only to the first message.

**Important:** The Specify hours option is only available if the out-of-office service has been specified in the Domino server configuration document. For more details see 9.2, “Out of Office router service” on page 242.

The Specify hours option is not available from the local replica of your mail file when you are offline.

Figure 6-40 Out-of-office notification

Also, when the out-of-office time period expires, you no longer have to disable your out-of-office notification. This is done for you automatically, reducing the number of administrative tasks you need to complete on your return to the office after a period of absence.

Also, if you delegate administration of your calendar to an assistant, he is now able to enable or disable out of office on your behalf.

## 6.4 Calendar enhancements

The Lotus Notes calendar is a view in your mail database that you can use to manage your time. It enables you to check other users' schedules, send out meeting invitations, track

invitee responses, and reserve meeting resources. The calendar view in Notes 8 has been enhanced with a fresh interface, as well as having new and improved features.

### 6.4.1 View navigation

In Notes 8, you can change the format of the calendar view to the days, week, or month format from the left navigator, as shown in Figure 6-41, making this consistent with the navigation facilities in mail and other standard Lotus Notes databases.

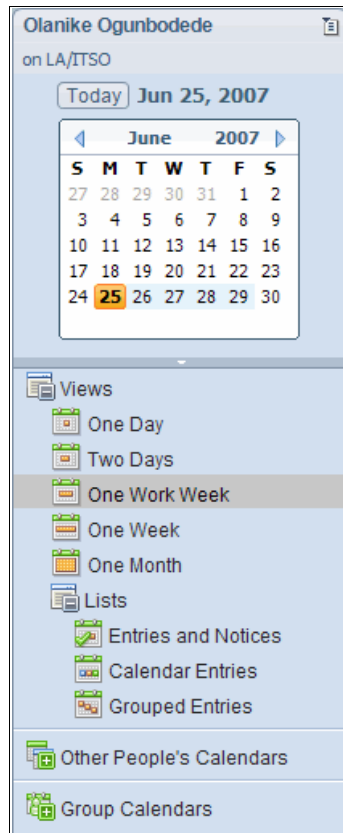


Figure 6-41 Calendar views navigation

### 6.4.2 Action bar

To provide consistency across mail and calendar, the same techniques are used in the calendar interface to make the calendar simple and intuitive to use.



As with the mail action bar, the calendar action bar also uses both icons and text, with the ability to hover over an icon to be reminded of its action. Also, most common actions can be carried out with a single click, leaving easily accessible, two-click actions for less frequently used tasks. For example, from within an unprocessed calendar invitation, you have single-click actions to accept or decline the invitation. However, if you need to give a different response, the additional options are easily accessible with two-click actions available from the Respond action. See Figure 6-42.

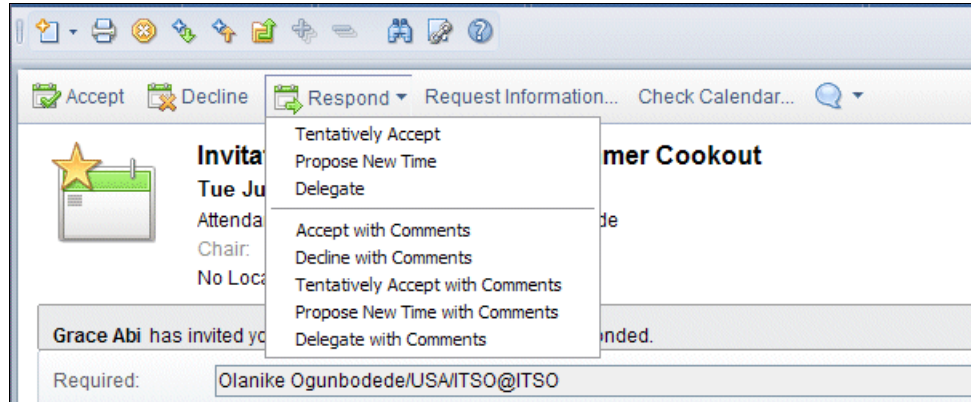


Figure 6-42 Calendar action bar - single-click and two-click actions



### 6.4.3 New display of all-day events

All-day events now display over the whole day rather than just in the top area (Figure 6-43), making it obvious at a glance that this time is already scheduled. The title of an all-day event remains at the top of the page regardless of the displayed time slot in the calendar view. This way you can be aware of the subject of the all-day event without having to scroll back to the beginning of the day.

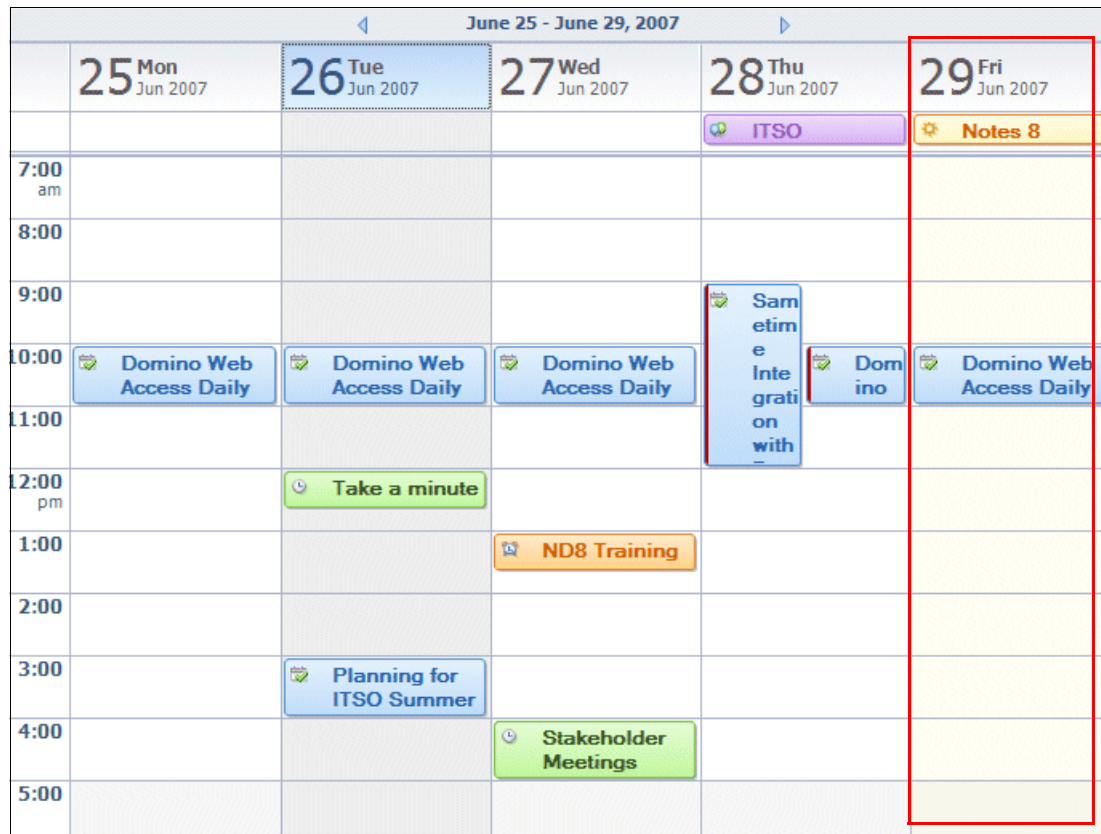


Figure 6-43 One work week view format - all-day event

**Note:** Calendar entries with shorter durations display in time slot views with a duration of 15 minutes.

### 6.4.4 Manage new notices from your calendar view - meeting ghosts

In Notes 8 it is now possible to have unprocessed meeting notices. Those that have been received but not accepted appear in the calendar view as *ghosted* entries alongside other meetings and appointments. This might be very useful for users who receive a large number of meeting invitations and need to be able to see where there are overlaps in their schedule and better prioritize before selecting which meetings to accept. This is also true for rescheduled notices.

This feature is not turned on by default and must be configured in the calendar preferences. To turn on this feature, open the calendar preferences, navigate to **Calendar & To Do** and select **Display** → **Views**, and check the **Display new (unprocessed) notices** box, as shown in Figure 6-44.

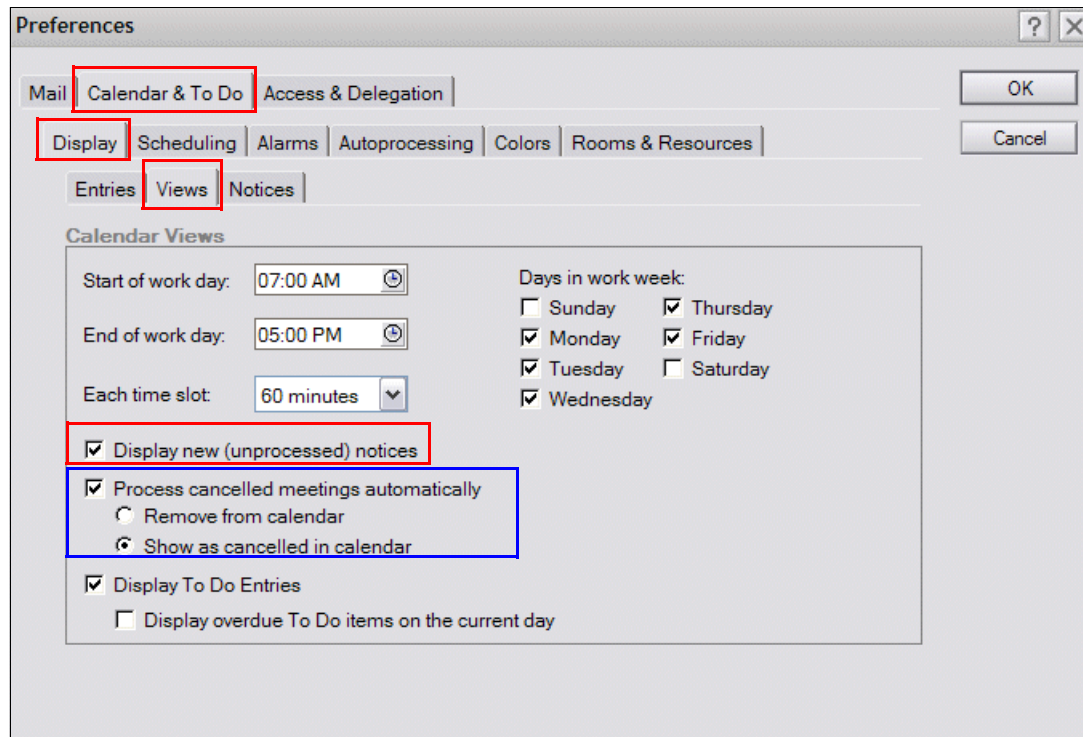


Figure 6-44 Calendar Preferences - Views tab

With the **Display new (unprocessed) notices** option enabled, gray placeholders appears on the calendar for meeting notices that have not been responded to yet. Figure 6-45 shows an example of the gray placeholder for an unprocessed meeting invitation.

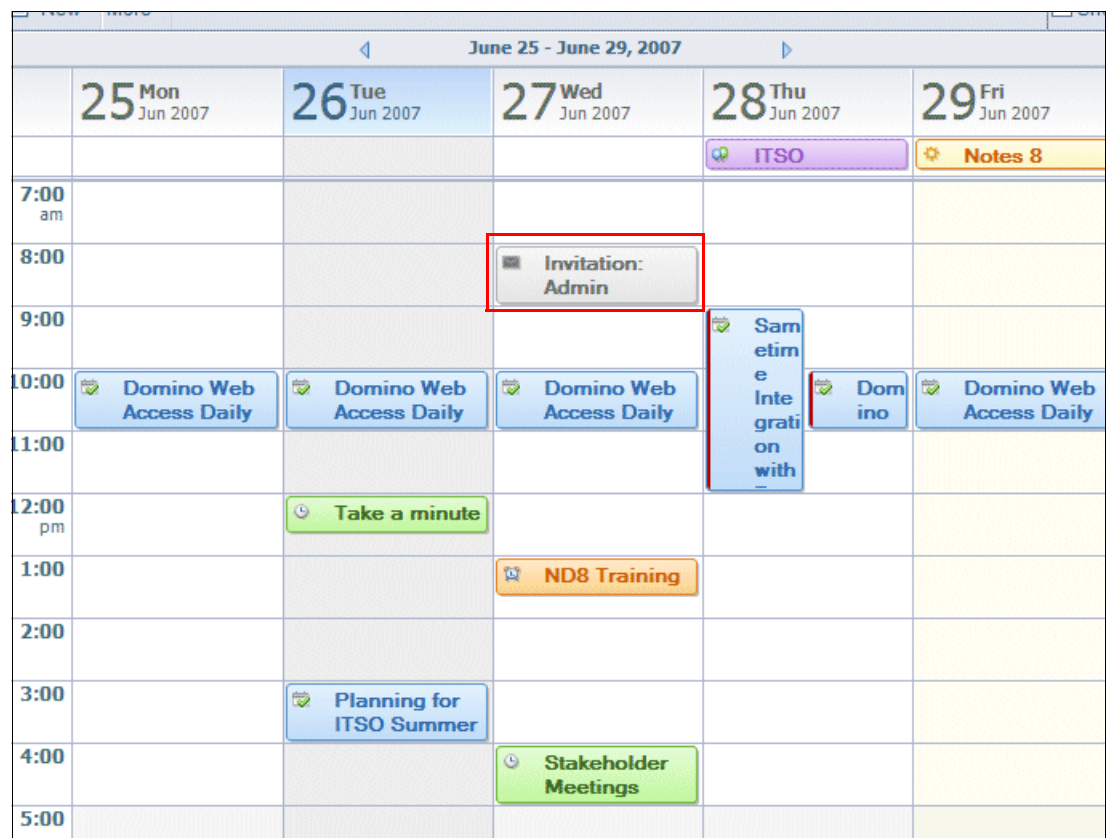


Figure 6-45 One work week view format - unprocessed invitation in calendar view

## 6.4.5 Choose how to display cancelled invitations

With previous versions of Lotus Notes, you can select to have cancellations for meeting invitations processed automatically when they are received in your inbox. With Notes 8, this feature has been enhanced to allow you to specify whether you want to keep the cancelled invitation showing in your calendar view or have it removed immediately. This enables you to keep a record of the cancellation in your calendar, where you are more likely to look for information regarding your schedule, rather than in your inbox. This is configured through the calendar preferences by checking the **Process cancelled meetings automatically** box and selecting the **Show as cancelled in calendar** option, as shown in Figure 6-44 on page 148 (called out in blue).

**Note:** If you open a cancelled meeting, it is removed from your calendar view.

Meeting ghosts are automatically removed when the invitation is cancelled.

## 6.4.6 Check calendar

With Notes 8, you can check your schedule while creating a new meeting invitation or before you decide how to respond to a meeting invitation. Click the new **Check Calendar** action button to open a Check Calendar dialog box with a navigable view of the calendar for the date in question. See Figure 6-46.

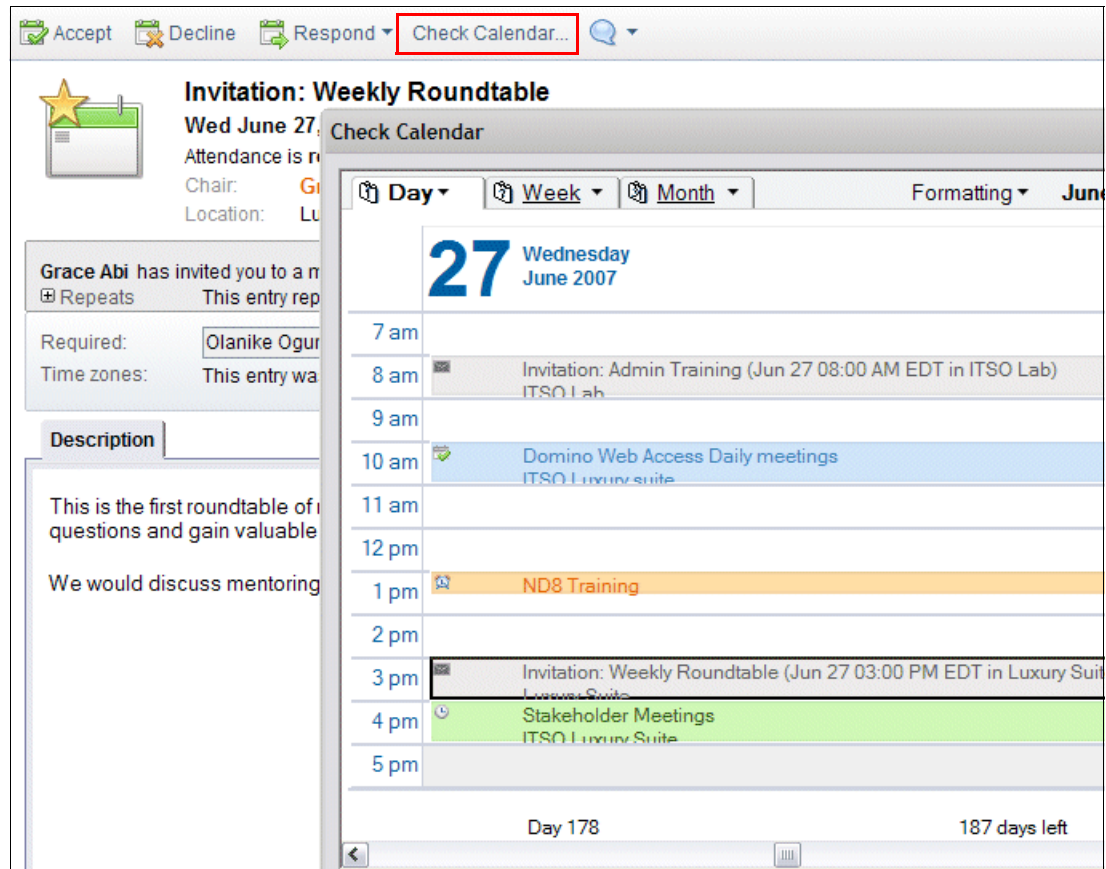


Figure 6-46 Check calendar before responding to meeting invitation

This provides quick access to your calendar in case you need to see how the meeting you are scheduling or the new meeting invitation fits in with other events and tasks that you already planned.

**Note:** To switch calendar views, click the down arrow on the Day, Week, or Month tabs, and then click a view. This is useful in instances where you might want to propose a different date.

To close the dialog box when you finish checking your calendar, click **Done**.

## 6.4.7 Locate free time for subset of invitees list

If you are setting up a meeting for a large number of invitees, it is not always easy to find a time slot in which all the invitees are free.

Notes 8 allows you to check for a time slot that works for a subset of the invitee list. You can keep the required invitee list and also select the key users who you really need to attend the meeting and easily identify a time slot that will be convenient for all of them.

For example, a meeting has to be scheduled for this Wednesday at either 10 a.m. or 2 p.m., but the Chair is unable to find a time slot that works for everyone on the invitees list. See Figure 6-47.

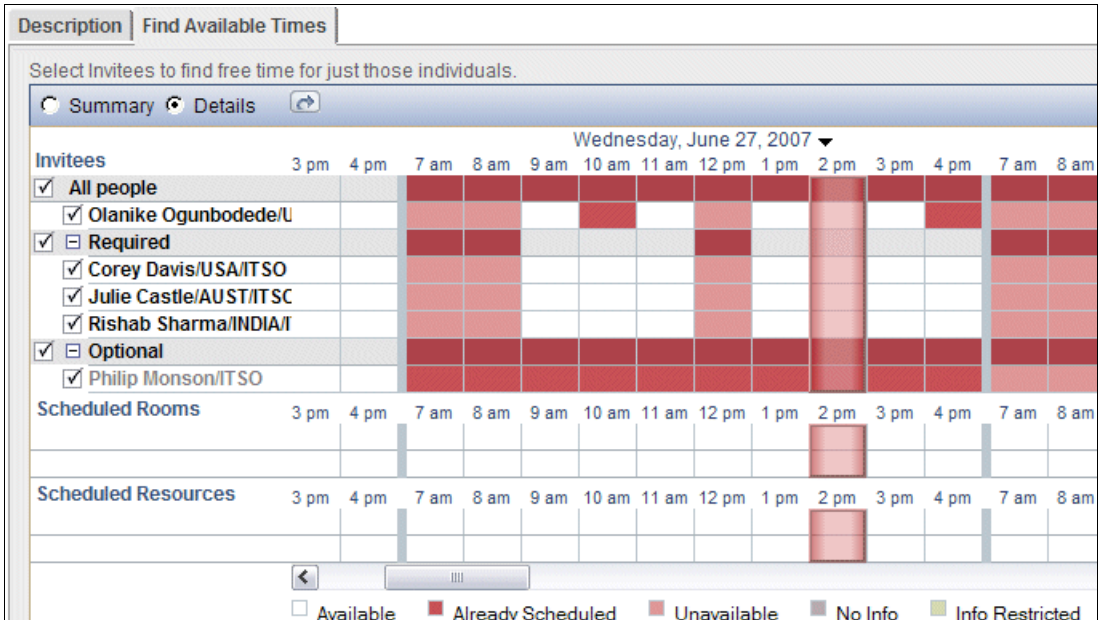


Figure 6-47 Searching for free time with everyone selected

The Chair decides that there is a user for whom attendance at the meeting is not vital, and deselects the user from the invitees list, making it possible to find a time that is free, indicated by the green bar, for the rest of the users. The Chair is able to schedule the meeting for 2 p.m. See Figure 6-48.

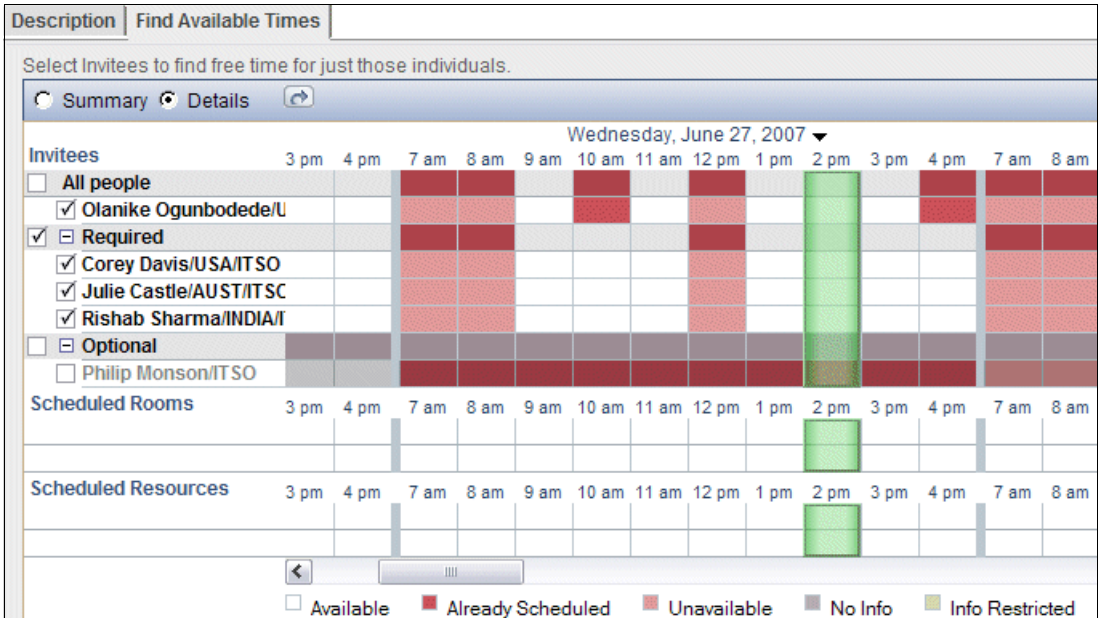


Figure 6-48 Searching for free time with only key people selected

## 6.5 Contacts

The personal address book, NAMES.NSF, on your client machine has been renamed *Contacts* to better reflect the contents and purpose of the database, and includes new and improved features. The new contact-related enhancements are summarized below:

- ▶ Business card-like views for displaying individual contact information.
- ▶ Contact records can include a photograph of the person.
- ▶ Instant messaging chats can be initiated from the Contact view.
- ▶ Drop-down addressing and the Recent Contacts view in contacts presents a list of people who you have recently collaborated with to speed the addressing of outbound messages.
- ▶ Contact records can be synchronized with Domino Web Access.
- ▶ Contact delegation allows other users access to your list of personal contacts.
- ▶ Enhanced support for printing contacts.

Figure 6-49 shows the new contacts interface with some of the new enhancements.

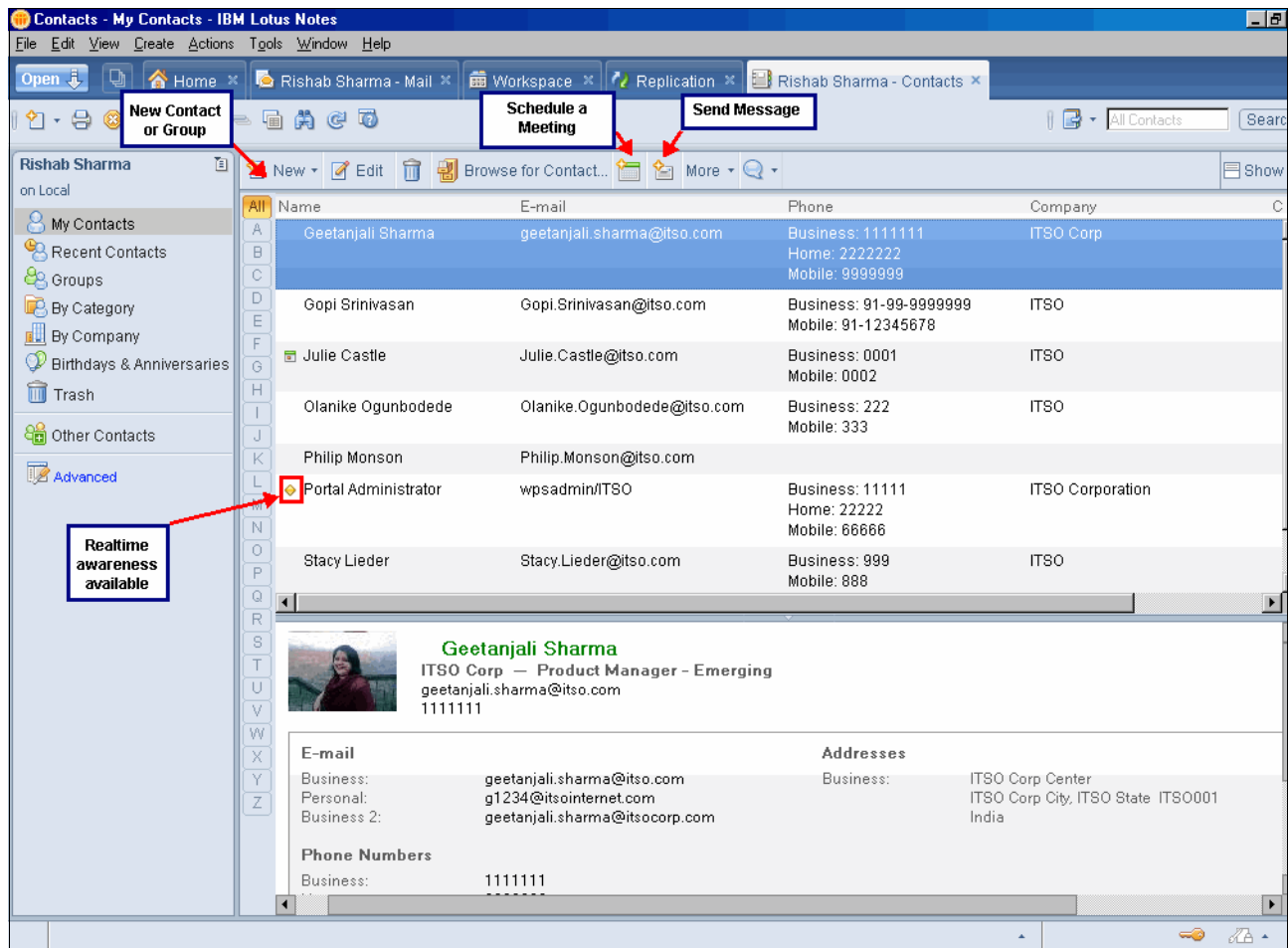


Figure 6-49 Contacts - Lotus Notes 8



### 6.5.1 Contact form

An updated contact form in the new contacts database gives you more flexibility with your contacts by providing more fields to store the information when adding or editing a contact record, as shown in Figure 6-50.

Only fields that contain data are shown, as seen in Figure 6-51, when viewed presenting a more compact view.

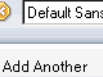
**New Contact - IBM Lotus Notes**

File Edit View Create Actions Picture Tools Window Help

Open Home Rishab Sharma... Rishab Sharma... Sharma's Conta... New Contact Workspace ITSO's Director...

Default Sans Serif 9 b i l e n t w o r k s p a c e All Mail

Save and Close Save and Add Another Select Address Format..



Contact Name:   
Company Name:  Job Title:

**E-mail:**

Business:	<input type="text" value="geetanjali.sharma@itso.com"/>
Personal:	<input type="text" value="g1234@itsointernet.com"/>
Assistant:	<input type="text"/>
Business 2:	<input type="text" value="geetanjali.sharma@itsocorp.com"/>
Personal 2:	<input type="text"/>

**Phone Numbers:**

Business:	<input type="text" value="1111111"/>
Home:	<input type="text" value="2222222"/>
Mobile:	<input type="text" value="9999999"/>
Fax:	<input type="text"/>
Pager:	<input type="text"/>

**Other Information:**

Messaging ID:	<input type="text"/>
Department:	<input type="text"/>
Location:	<input type="text" value="New Delhi"/>
Manager:	<input type="text"/>

**Addresses:**

Business:	<input type="text"/>
Street:	<input type="text" value="ITSO Corp Center"/>
City:	<input type="text" value="ITSO Corp City"/>
State/Province:	<input type="text" value="ITSO State"/>
ZIP/Postal code:	<input type="text" value="ITSO001"/>
Country/Region:	<input type="text" value="India"/>
Personal:	<input type="text"/>
Street:	<input type="text"/>
City:	<input type="text"/>
State/Province:	<input type="text"/>
ZIP/Postal code:	<input type="text"/>
Country/Region:	<input type="text"/>

Click to insert photo

*Figure 6-50 Contact form when editing*


	<b>Julie Castle</b> ITSO — Manager Julie.Castle@itso.com 0001	
	<hr/>	
	<b>E-mail</b> Business: Julie.Castle@itso.com	<b>Addresses</b> Business: Melbourne Australia
	<b>Phone Numbers</b> Business: 0001 Mobile: 0002	
<b>Other Information</b> Messaging ID: Julie.Castle/AUST/ITSO Department: IT Location: Melbourne		

Figure 6-51 Contact form when reading

Different countries have varying conventions for how an address is formatted. With Lotus Notes 8, you have the option to select the address format that is appropriate for each contact. See Figure 6-52.

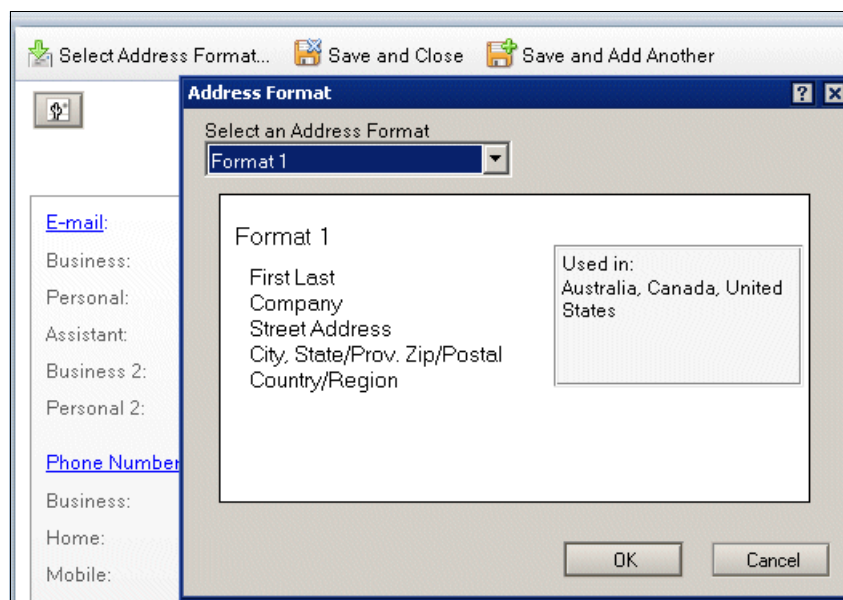


Figure 6-52 Select address format

You also can change the titles associated with any of the information that is held in the contact form to more closely reflect the information that you want to have about a contact, as shown in Figure 6-53.

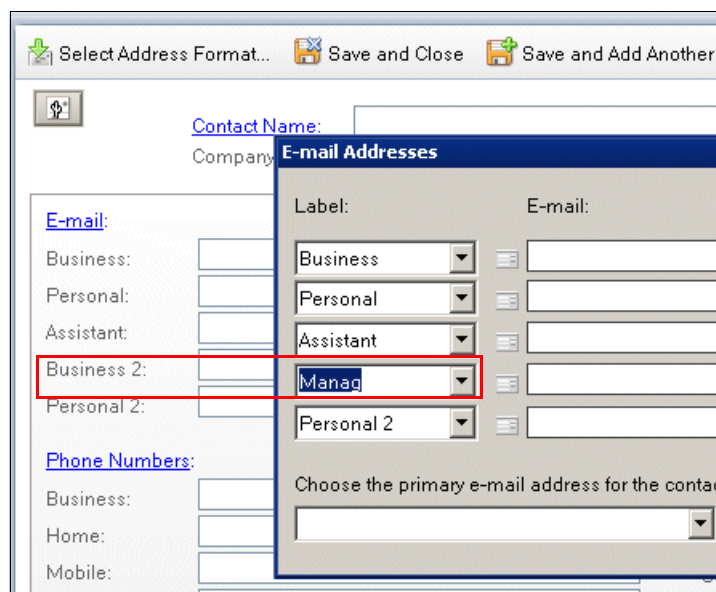


Figure 6-53 Changing headings in the contact form



With Lotus Notes 8, you can store a photo in your contact record by clicking the icon in the top left corner of the contact form, as shown in Figure 6-54.

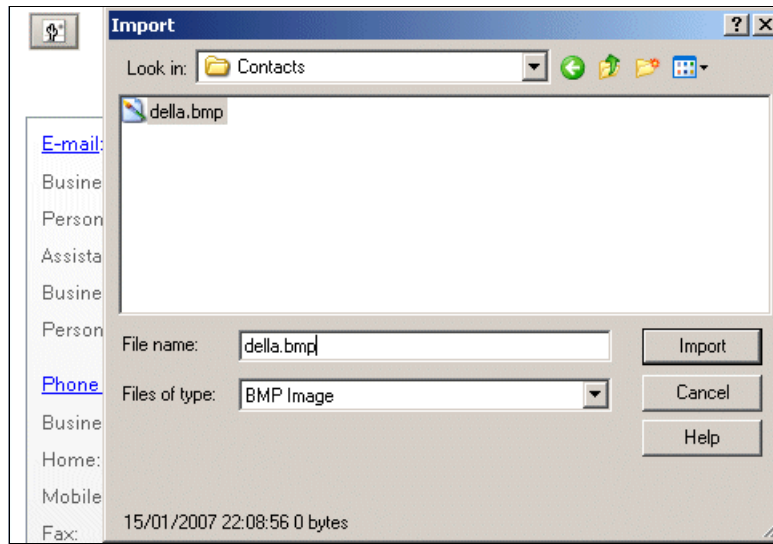


Figure 6-54 Insert contact picture

## 6.5.2 Business card view

To help you quickly locate the contact information you need, the Lotus Notes 8 client provides the ability to display contact information in a business card view, as shown in Figure 6-55. This enables you to quickly scan through your contacts and potentially identify all of the information that you need from the business card rather than having to open up the contact record. If you do need to open the contact record to get further information, double-click the business card.

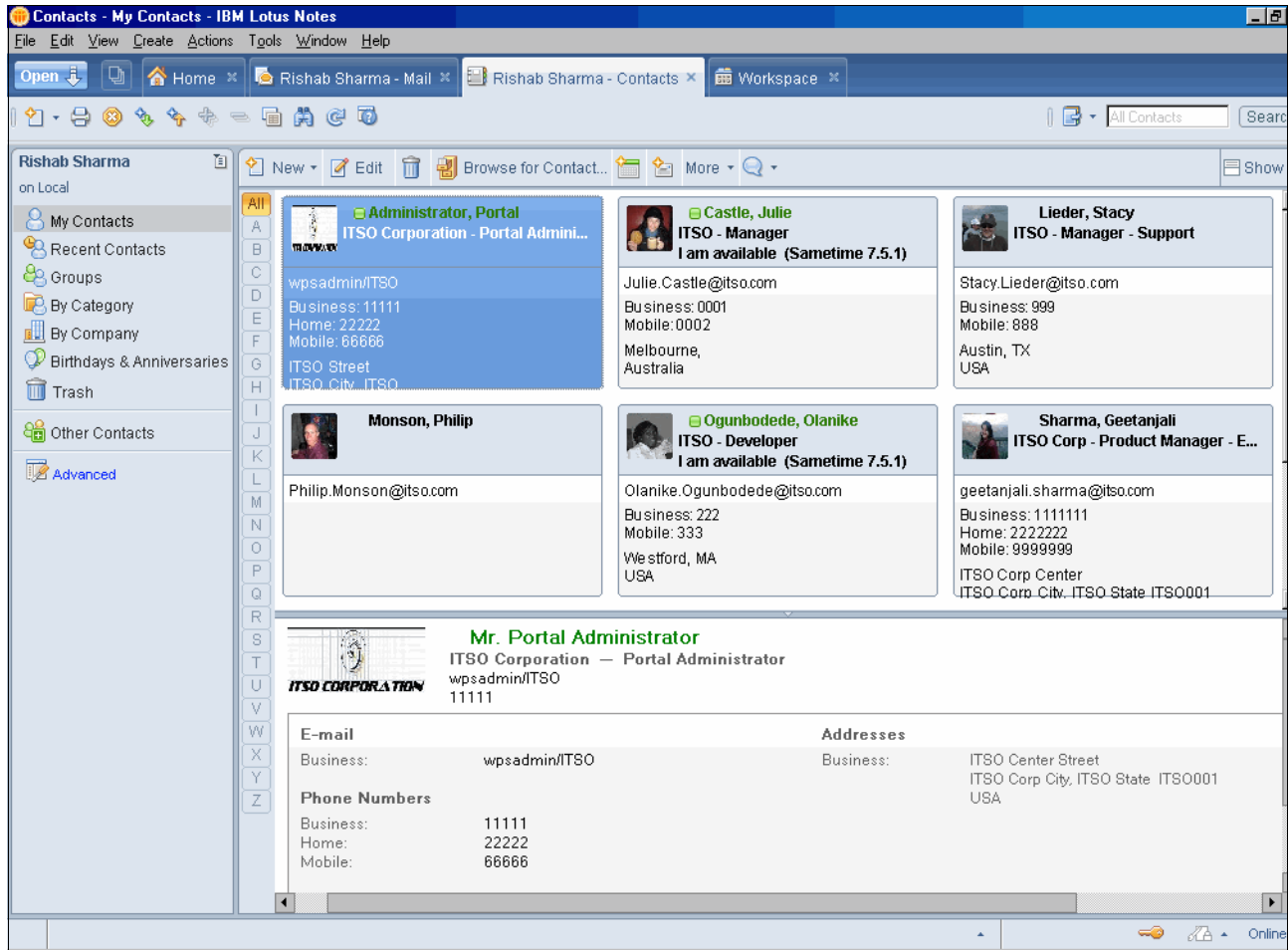
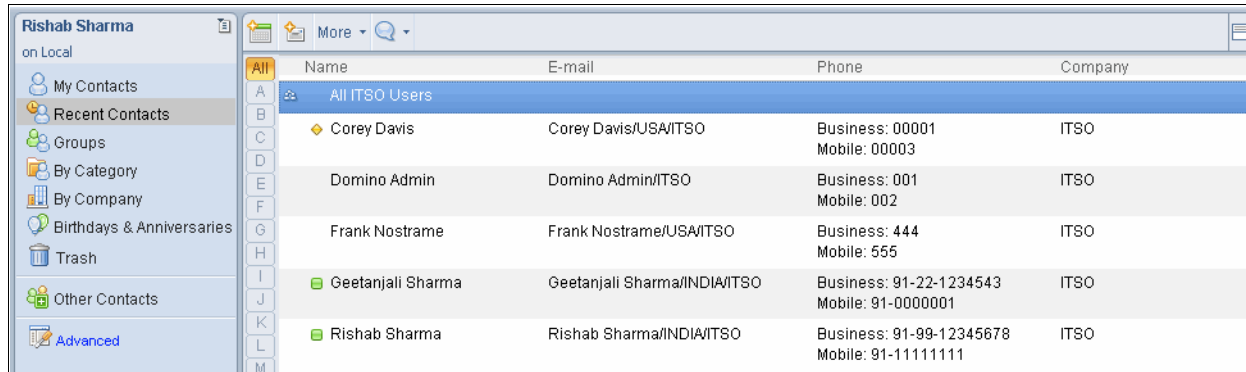


Figure 6-55 Business card view

### 6.5.3 Recent contacts

The Lotus Notes 8 client includes a Recent Contacts view, as shown in Figure 6-56. This view lists all the people with whom you have been collaborating recently regardless of whether you have their names listed in your local or server-based address book.

The names in the Recent Contacts view is dynamic and reflects your recent activity, such as e-mail or chats.



	Name	E-mail	Phone	Company
All	All ITSO Users			
A	Corey Davis	Corey Davis/USA/ITSO	Business: 00001 Mobile: 00003	ITSO
B				
C	Domino Admin	Domino Admin/ITSO	Business: 001 Mobile: 002	ITSO
D				
E	Frank Nostrame	Frank Nostrame/USA/ITSO	Business: 444 Mobile: 555	ITSO
F				
G	Geetanjali Sharma	Geetanjali Sharma/INDIA/ITSO	Business: 91-22-1234543 Mobile: 91-0000001	ITSO
H				
I	Rishab Sharma	Rishab Sharma/INDIA/ITSO	Business: 91-99-12345678 Mobile: 91-11111111	ITSO
J				
K				
L				
M				

Figure 6-56 Recent contacts

The Recent Contacts view is used as the source for the drop-down menu or type-ahead addressing when you are addressing e-mails, as shown in Figure 6-57, or while setting up meeting invitations.

You can now automatically select the e-mail address of anyone who has sent you an e-mail or who has been copied on an e-mail sent to you, and pull this into an e-mail or meeting invitation that you are addressing.

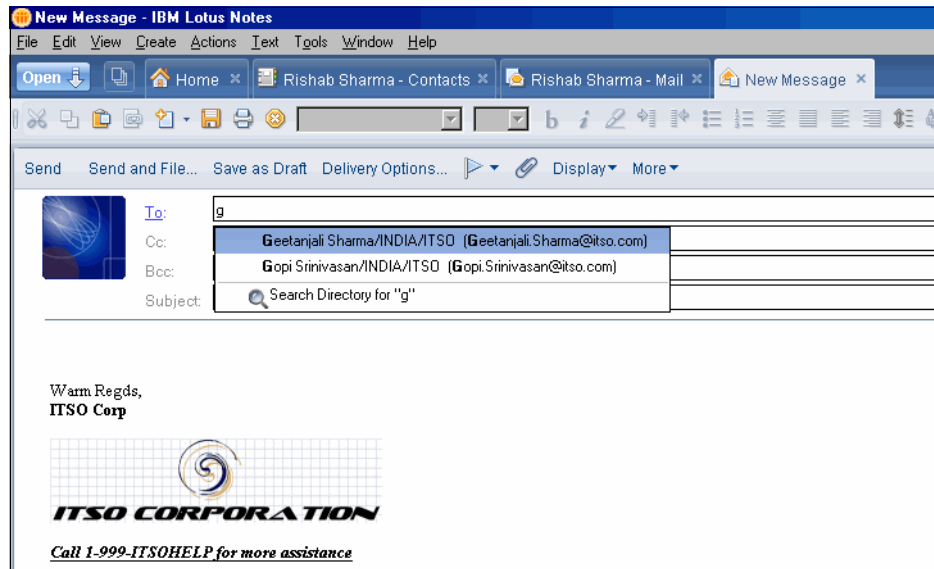


Figure 6-57 Type-ahead addressing in Lotus Notes 8 client

Recent contacts also allows the client to query the address locally. This can potentially save a lot of name resolutions calls to the server, thereby improving responsiveness.

## 6.5.4 Synchronize contacts with Domino Web Access

Contacts in Lotus Notes 8 can now be synchronized between Domino Web Access and Lotus Notes 8 clients.

To synchronize contacts, you have to modify the preferences to enable Synchronize Contacts via the Replicator tab.

You can access the preferences for contacts from the Contacts page, as shown in Figure 6-58, or by clicking **File** → **Preferences** → **Contacts**.

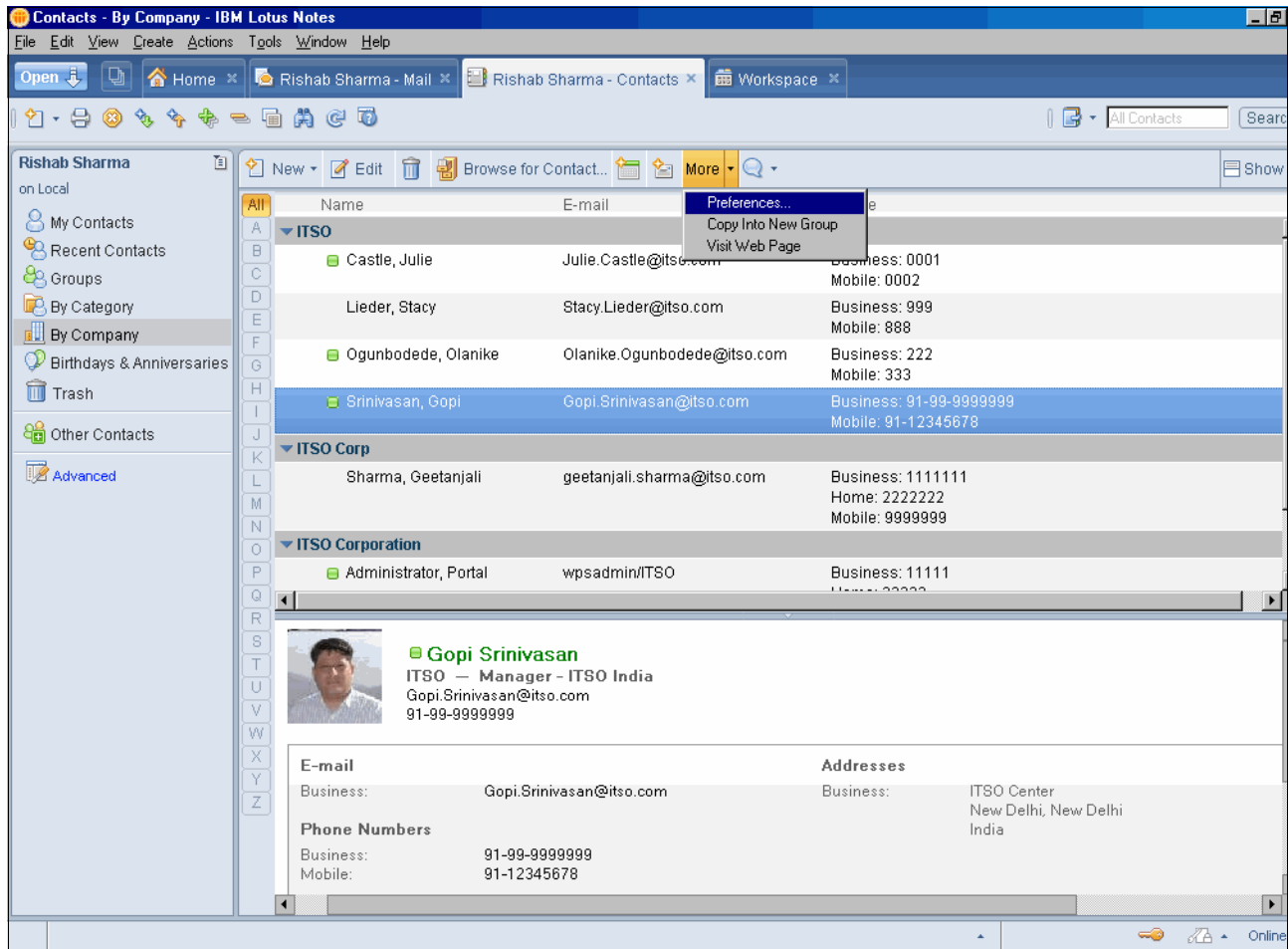


Figure 6-58 Access contact preferences

You must enable Synchronize Contacts (as shown in Figure 6-59) in the Contact Preferences page.

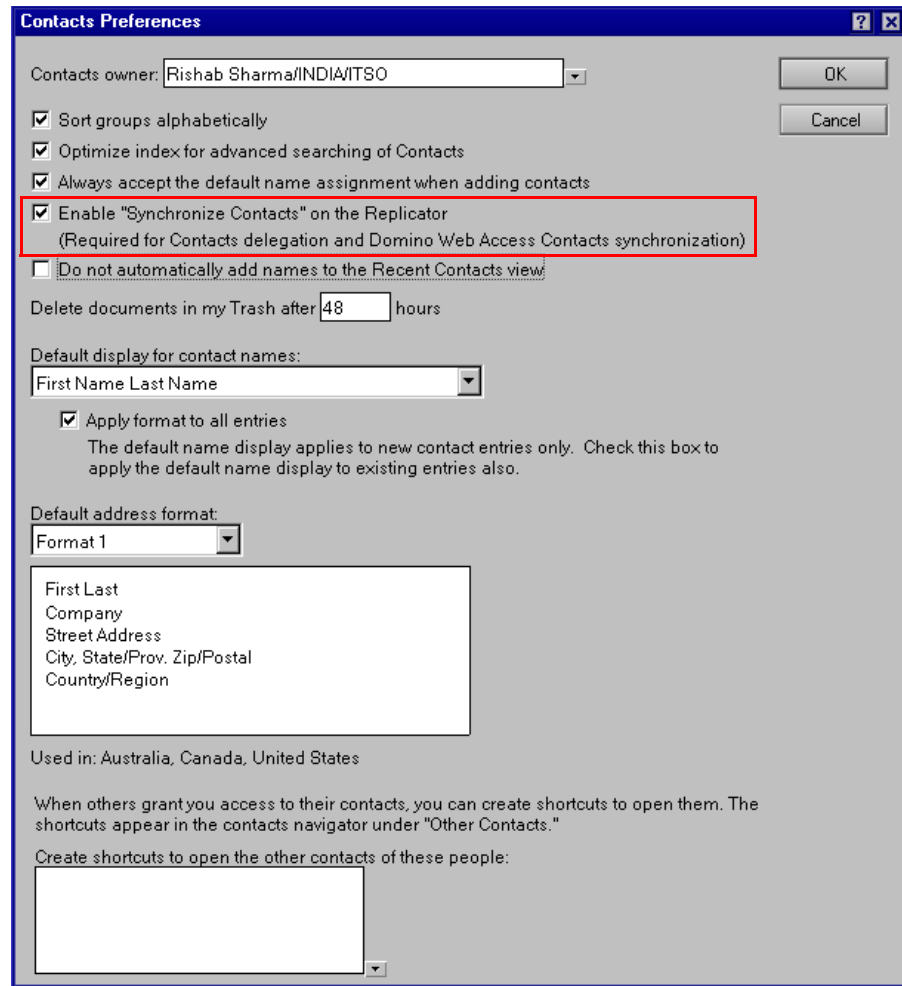


Figure 6-59 Enable Synchronize Contacts in the Contact Preferences page

Synchronize Contacts would now be enabled and visible on the Replicator page, as shown in Figure 6-60.

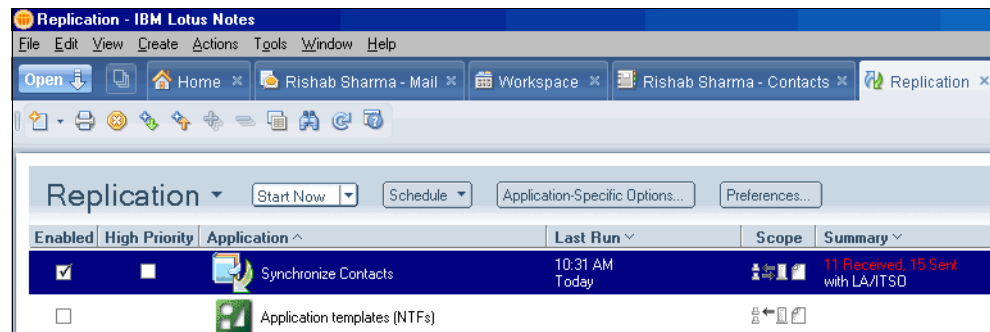


Figure 6-60 Synchronize Contacts - Replicator tab

Once the replication task is complete, contacts from your local NAMES.NSF would be available in the Domino Web Access client, as shown in Figure 6-61.

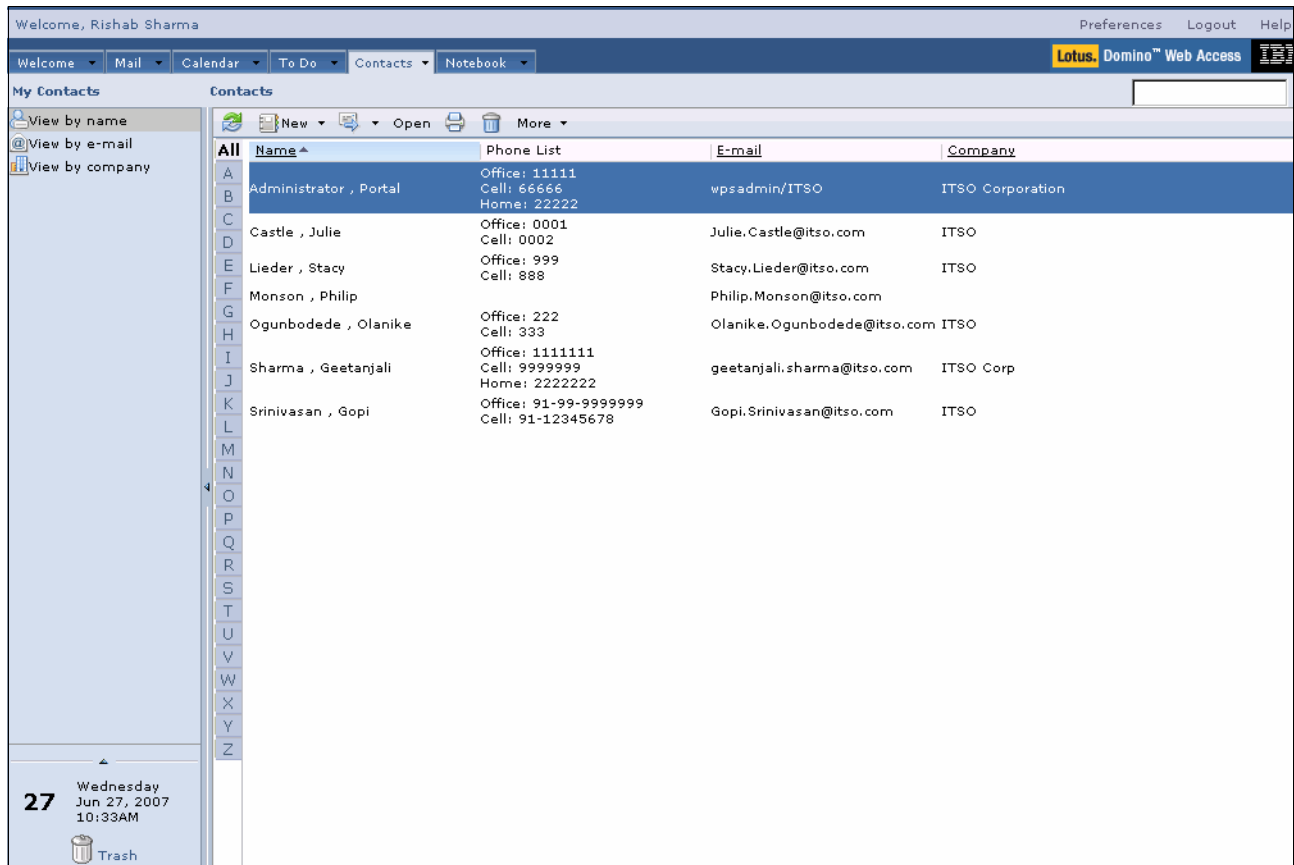


Figure 6-61 Synchronized contacts visible in Domino Web Access client

## 6.5.5 Contact delegation

Lotus Notes 8 client allows you to access and manage other users' contacts using contact delegation.

**Important:** You must synchronize your contacts, as explained in 6.5.4, "Synchronize contacts with Domino Web Access" on page 158, for this feature to work.

You need to provide delegated access to a user or group using the mail preferences, as shown in Figure 6-62.

**Add People/Groups**

**Person or Group**

To whom do you want to give access to your mail file?

☐ Everyone

☒ Just this person or group: All ITSO Users

**Components**

Which components of your mail file do you want to give access to?

☐ Mail, Calendar, To Do and Contacts

☒ Calendar, To Do and Contacts

☐ None

**Access**

How much access do you want to give?

Read any Calendar Entry, To Do or Contact

**Read any Calendar Entry, To Do or Contact**

Read, create, edit and delete any Calendar Entry, To Do or Contact

Enabling automatic forwarding makes it easier for someone to manage your calendar when it is not open and on display. These settings apply even if no components are delegated, and they apply to all auto-forwarded messages.

Forward calendar notices I receive for meetings where:

☐ I am the chair

☐ I am a participant

For notices associated with calendar entries I have marked as private:

Do not forward

Figure 6-62 Delegated access to allow contacts to be shared

Once delegated access has been provided, you can click **Other Contacts** → **Open other contacts** in the Contacts view, as shown in Figure 6-63.

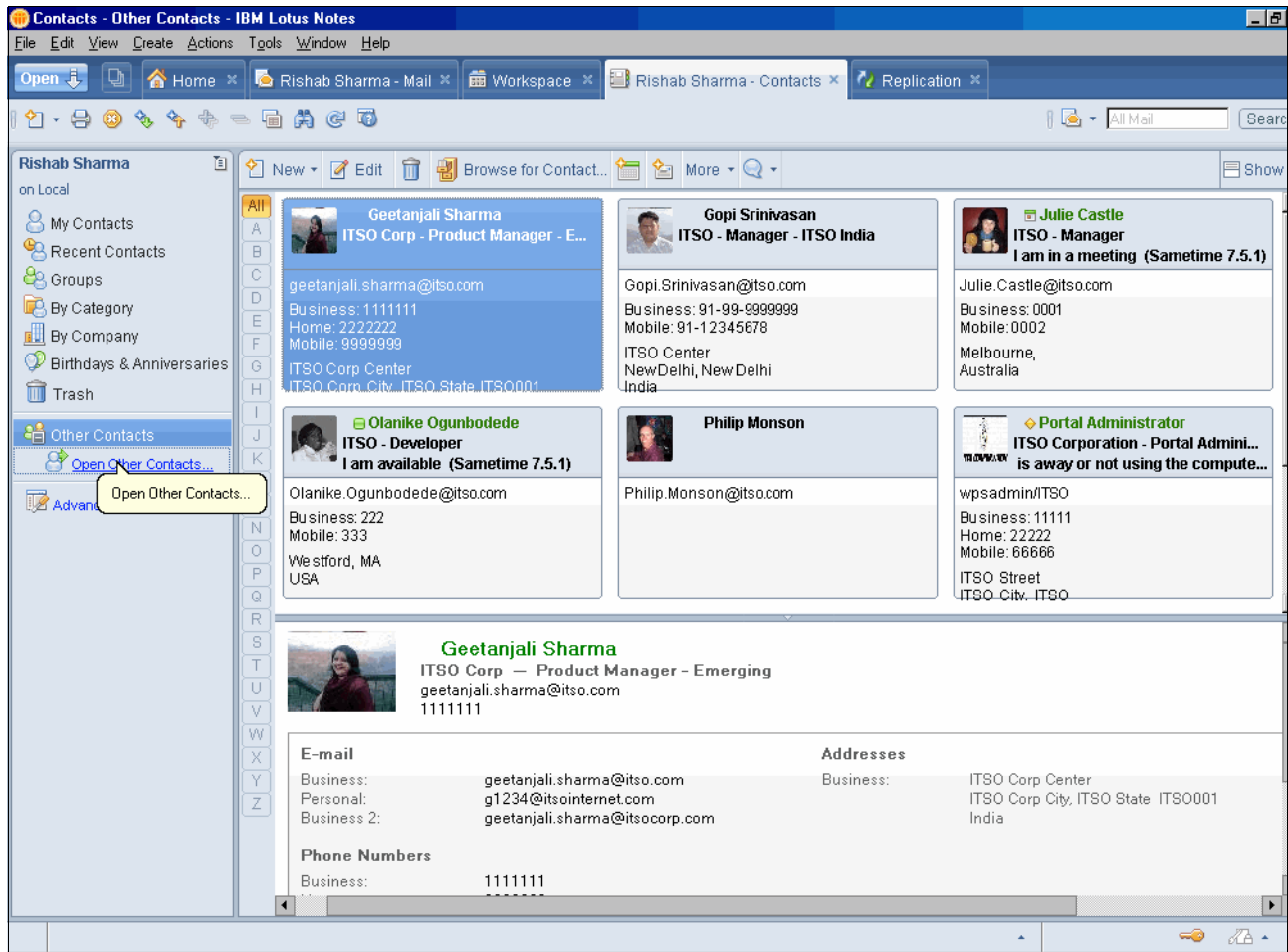


Figure 6-63 Open other users contact information



You can select the user whose contact information has been shared with you. The contact view, as shown in Figure 6-64, shows the Lotus Notes 8 client accessing other users' contact information using the contact delegation feature.

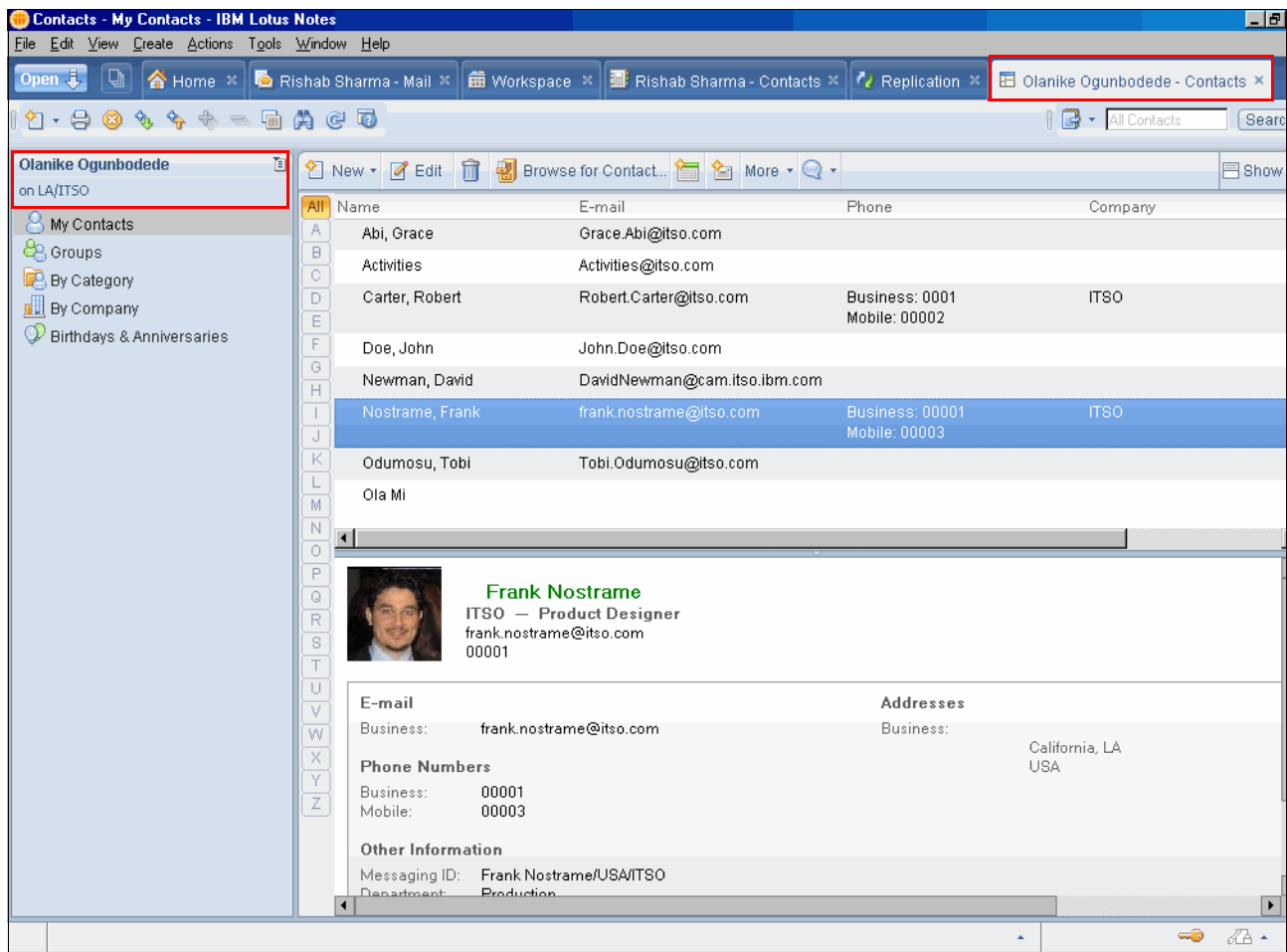


Figure 6-64 Lotus Notes 8 client with the contact delegation feature

## 6.5.6 Enhanced support for printing contacts

Printing of contact information in the Lotus Notes 8 client has been enhanced. You can now print the contact information in the following ways:

- ▶ Print contact entries as labels.
- ▶ Print full contact or group documents.
- ▶ Print contact information as it appears in a view.

Figure 6-65 shows the new enhancements while printing contact information.

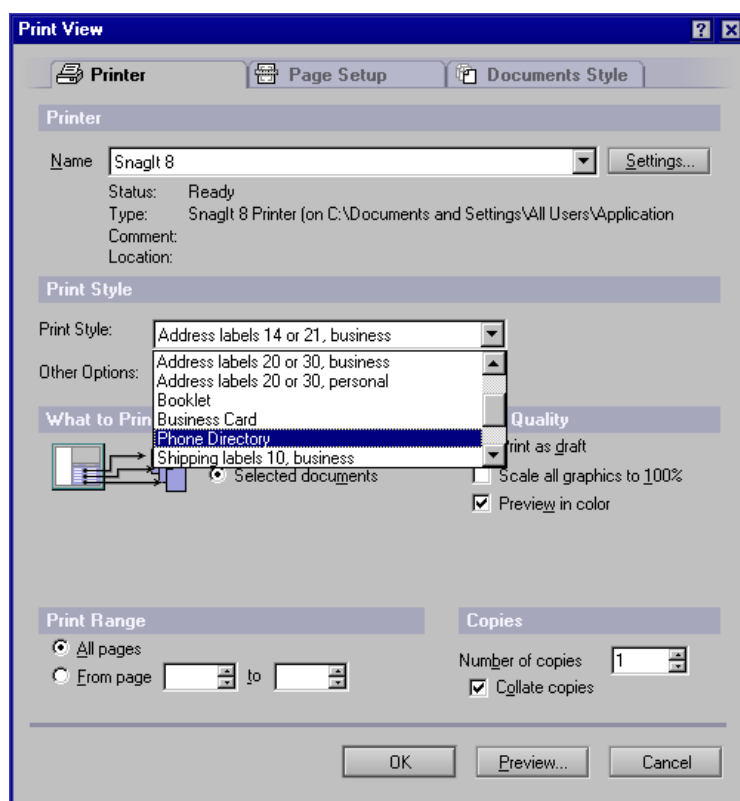


Figure 6-65 Printing enhancements for contact information

## 6.6 Document editing

Document editing has been enhanced in Notes 8 for all Lotus Notes documents in any Lotus Notes database, which includes your mail file, contacts, custom applications, and so on.

### 6.6.1 Multi-level undo

Multi-level undo functionality for text editing in the Lotus Notes 8 client enables you to retrace your steps through more than 50 levels of edits.

## 6.6.2 Instant spell checking

You now have the option to turn on in-line spell checking. As you type words into a rich text field, a red squiggle appears underneath a word that is spelled incorrectly or that is not present in your dictionary. You can configure this option in the unified preferences panel, as shown in Figure 6-66.

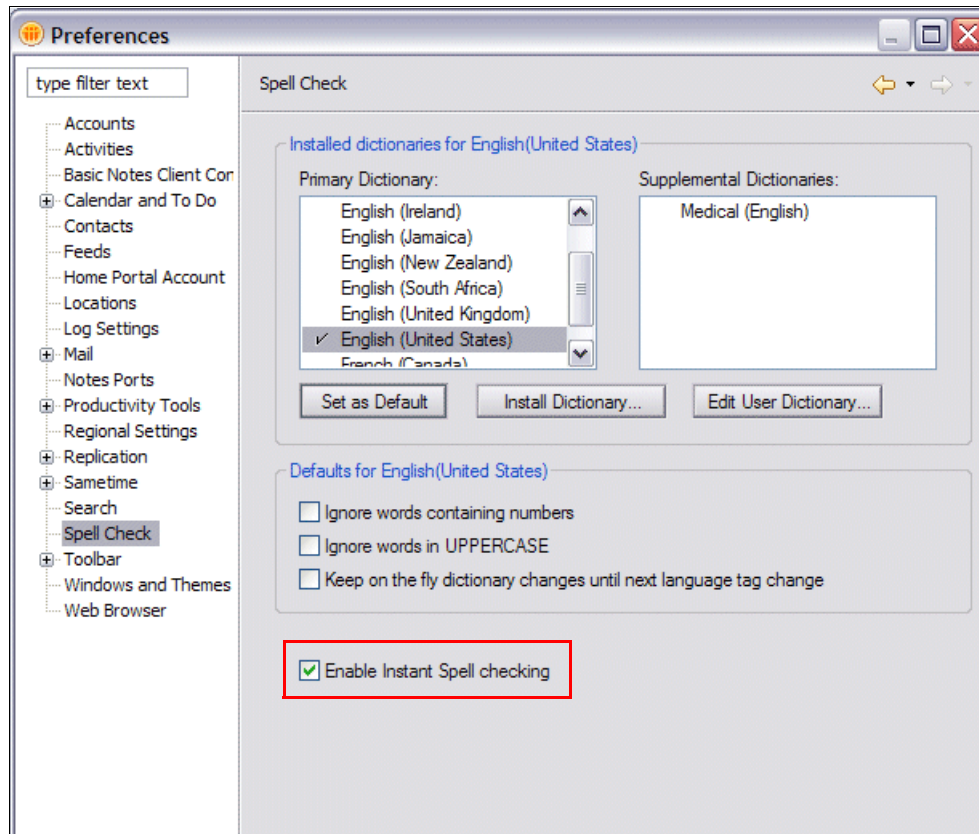


Figure 6-66 Spell check preference

If you right-click the offending word, a list provides suggestions for the correct spelling for the word. You can then choose one of the suggestions, as shown in Figure 6-67, or add the word to the dictionary so that it will be recognized on future occurrences.

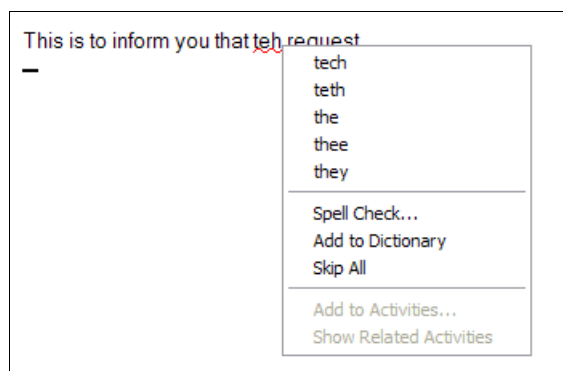


Figure 6-67 Instant spell checking

## 6.7 Sidebar plug-ins

On the right side of the panel, there is a sidebar into which plug-ins can be installed. Four plug-ins are supplied with the Lotus Notes 8 client installation. See the example in Figure 6-68. Organizations can develop their own plug-ins for the sidebar to extend the interface to meet specific business requirements.

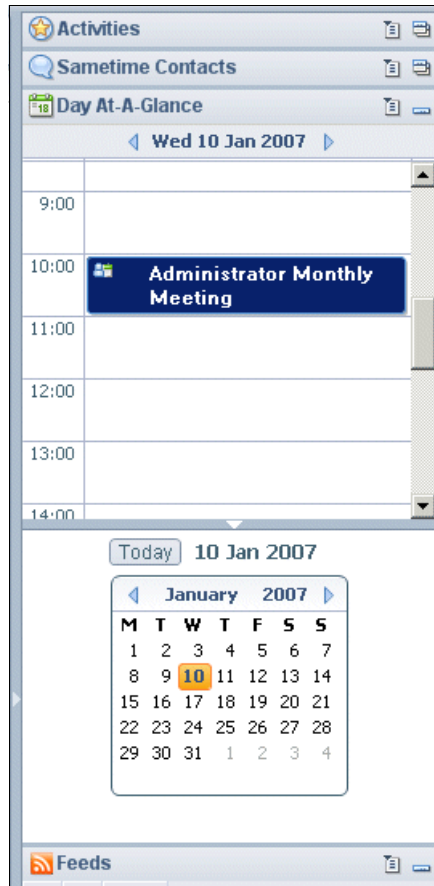


Figure 6-68 Lotus Notes 8 client sidebar

### Activities

This plug-in enables you to view, access, and interact with your activities. See 6.9, “Activities” on page 176, for more information about activities.

### Lotus Sametime contacts

This plug-in enables you access to your instant messaging contacts list. See 6.8, “Sametime contacts” on page 167, for more information about the integrated instant messaging functionality.

### Day at a glance

This plug-in enables you to navigate your calendar by selecting a day and month from the calendar picker, as shown in Figure 6-68. The calendar entries for the selected day then appear in the panel above it. If you do not select a day, the current day is selected and displayed by default.

## Feeds

The Really Simple Syndication (RSS) feed reader plug-in allows users to scan information from their favorite news feeds and use it to answer questions and complete tasks. Note that the feed reader supports Atom feeds as well as RSS feeds. See 6.10, “Reading feed content in Lotus Notes 8 client” on page 192, for more information.

Each of the sidebar plug-ins can be detached from the sidebar with the **Open in New Window** plug-in option, as shown in Figure 6-69. With this option, users can move the plug-ins to different locations on the panel and work in the way in which they are most comfortable.

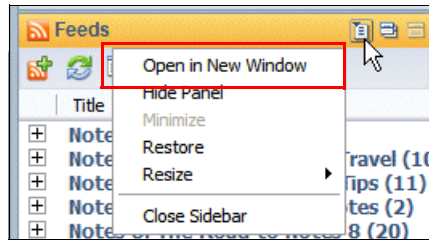


Figure 6-69 Open in New Window option

## 6.8 Sametime contacts

IBM Lotus Sametime instant messaging software gives you quick and easy access to your coworkers. It is simple and versatile so that you can work with your colleagues in whatever way suits your need.

### 6.8.1 Introduction

Lotus Notes instant messaging was first introduced in the Lotus Notes 6.5 Client for instant messaging and presence awareness features, without having to install a client. However, Lotus Notes instant messaging had limited features in comparison to the Sametime Connect Client. The Lotus Notes instant messaging features continued to be enhanced with later releases of the Lotus Notes client.

With Lotus Notes 8, you get an instant messaging experience based on IBM Lotus Sametime Connect 7.5.1 Client, as shown in Figure 6-70, called the Lotus Sametime Contacts. The Sametime 7.5.1 Client, just like the Notes 8 client, is based on the Eclipse technology.

Based on your license, you can have all of the same instant messaging features available in the Sametime Connect 7.5.1 Client in your Lotus Sametime Contacts.

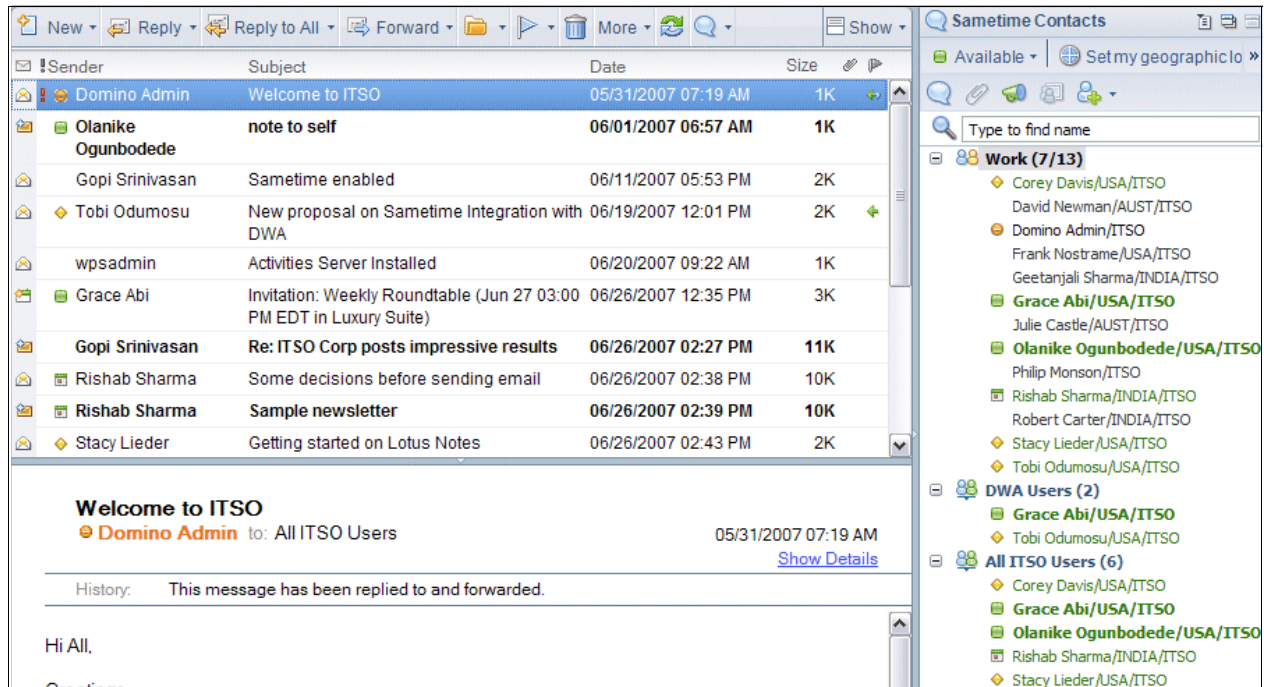


Figure 6-70 Instant messaging and presence awareness

The new Notes 8 Sametime Contacts features are discussed in the next few sections. Depending on your installation and your Sametime server configuration, some features mentioned in these sections might not be available to you.

**Important:** In order to use Notes 8 Sametime Connect you must have it installed, and also have a Sametime server installed.

## 6.8.2 Log-in

After logging in to the Notes 8 client, you need to provide a password and other start-up information to log in to the IBM Lotus Sametime instant messaging software. See Figure 6-71.

**Log In to Sametime**

Lotus Sametime 7.5.1

**Welcome to Sametime**

Please enter your username and password for the default Sametime community.

Host server: Sametime.itso.com

User name: Olanike Ogunbodede

Password: \*\*\*\*\*

☐ Remember password

☐ Automatically log in

☒ Work online ☐ Work offline

Log in status: Available

Status message: I am available

Log In Connectivity... Cancel

Licensed Materials - Property of IBM. L-KBIM-6V7N64 (C) Copyright IBM Corporation 1997, 2007. All Rights Reserved. IBM, the IBM logo, Lotus and Sametime are trademarks of IBM Corporation, in the United States, other countries, or both.

Figure 6-71 Initial Log-in dialog

At login, you can choose to have the IM client remember your password as well as log you in automatically when you start the Lotus Notes client. In addition, you can set your awareness state and your status message.

If you have saved your password or you have enabled Domino single sign-on, you can log-in with two clicks. See Figure 6-72.

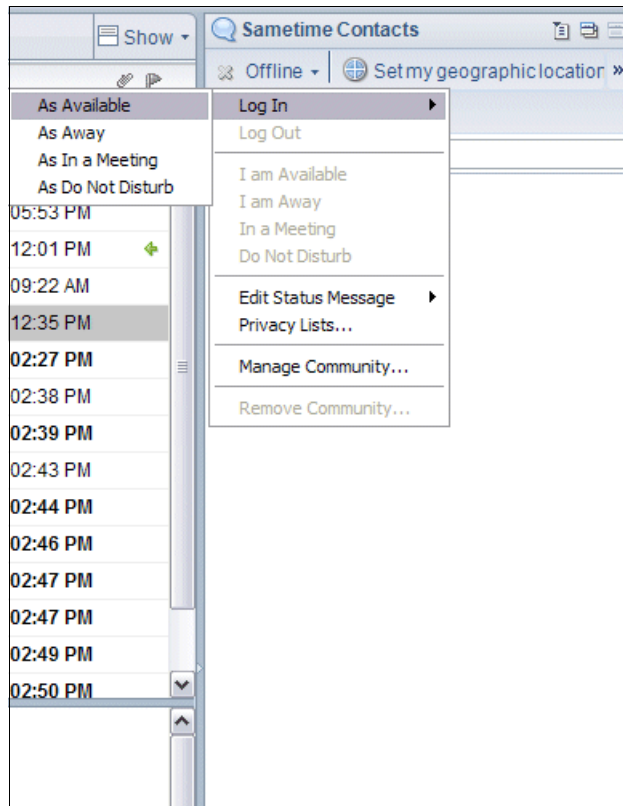


Figure 6-72 Log-in with two clicks

### Support multiple Sametime communities from a single client

An instant messaging community is a group of people belonging to the same directory or user registry, such as your corporate directory, or external communities outside of your organization. Public instant messaging providers might also be linked to one or more of your instant messaging communities, allowing you to communicate with members of these networks. There are usually one or more Sametime servers in a community.



### 6.8.3 Instant contacts

It is easy to have quick access to the people you want to keep in touch with. Just add the names of those people to your contact list. Figure 6-73 shows an example of the contact list, pointing out actions that you can perform.

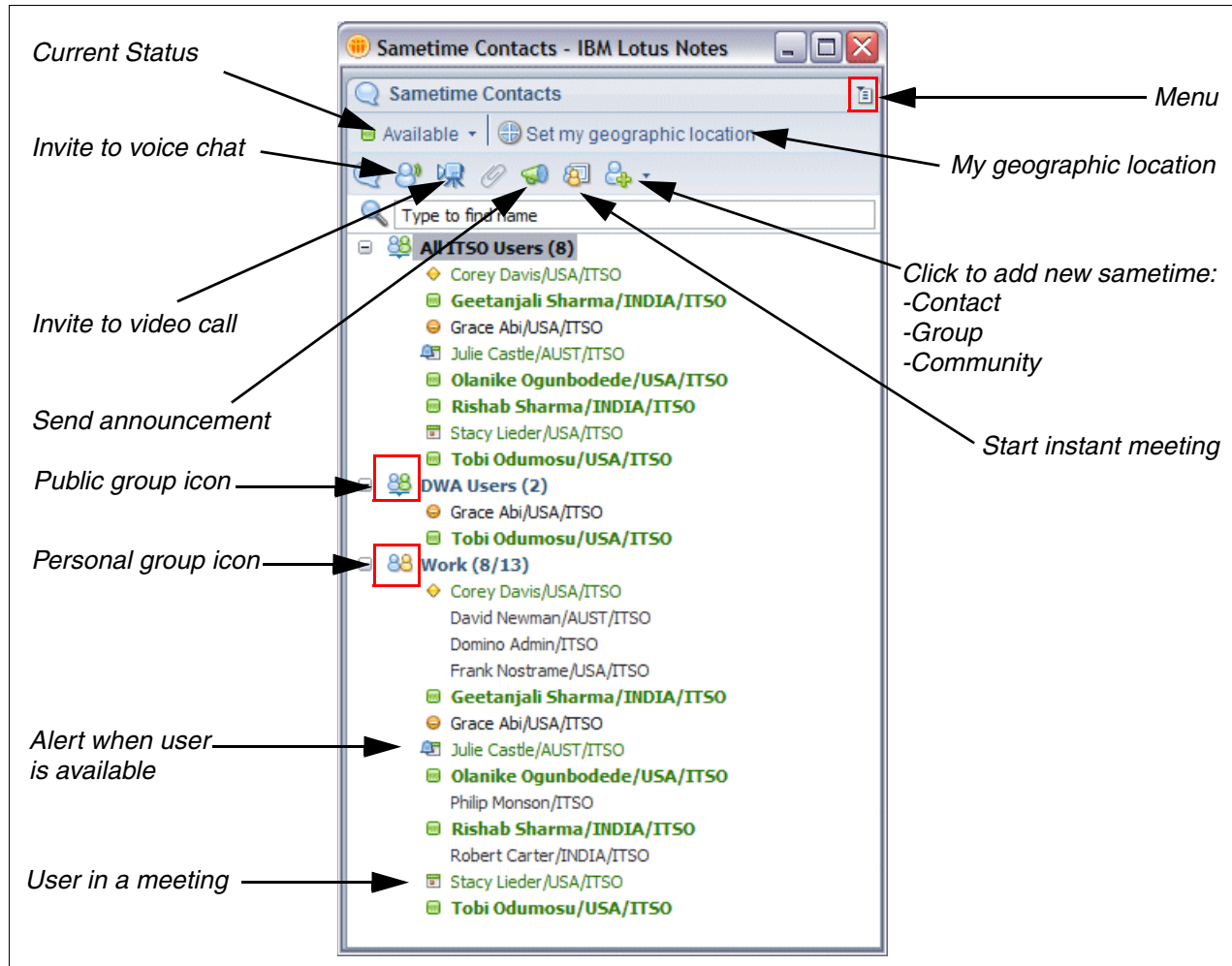


Figure 6-73 Contacts list

**Note:** Most of the actions shown in Figure 6-73 can also be carried out from the Notes 8 window menus.

In addition to allowing you to quickly find contacts in your contact list, the Type to find name field also allows you to search the directories for users not currently in your list (Figure 6-74) and to be able to directly chat without first adding them to your list.

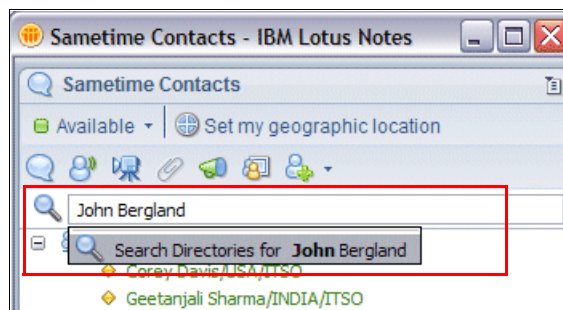


Figure 6-74 Type to find name

Use the Business card view to display information about your chat partner, including his picture (if available), professional title, availability status, location, phone number, and local time.



Figure 6-75 A business card

## 6.8.4 Chat panel

In the chat panel, you can now do more than exchange typed chat messages with one or more chat partners. You can do much more, such as send files, Web addresses, document, view, or database links, and so on (Figure 6-76).

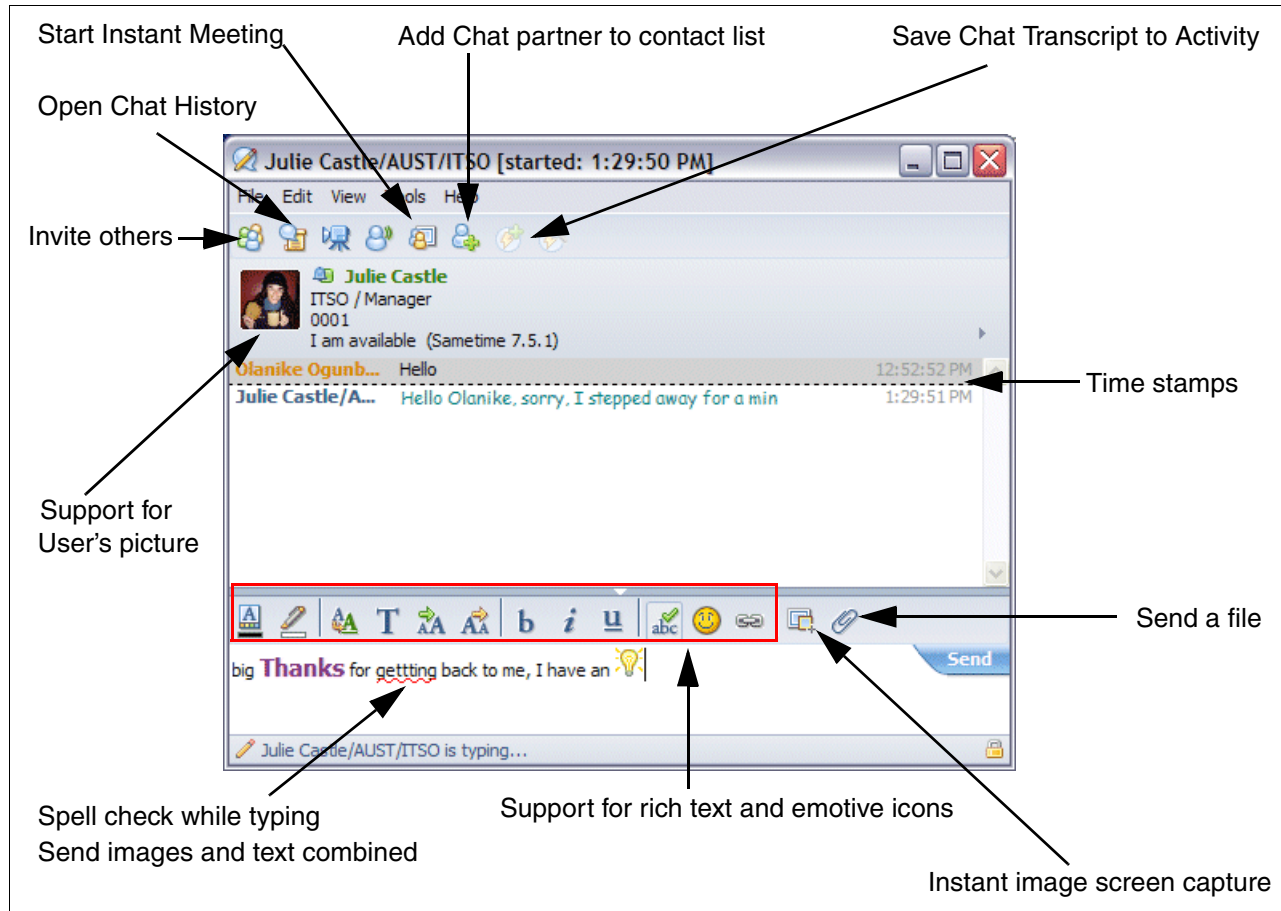


Figure 6-76 Chat panel

Additional features available, but not shown in Figure 6-76, include:

- ▶ Change your online status or see your partner's online status from the chat panel.
- ▶ Customize the view of your chat panel.
- ▶ Configure the Enter key to insert a carriage return instead of sending the message.
- ▶ A Send e-mail feature.
- ▶ Voice chat, using embedded VoIP.
- ▶ Print from the chat panel.
- ▶ See a message when a chat partner leaves a chat.

## 6.8.5 Chat history

With the Notes 8 Instant Messaging Client, you have the option to automatically, manually, or not save a chat. The option to save a chat allows you to later refer back to important information shared during a chat session.

Chat transcript can be saved to either your mail application or to a local file, but not both. This as well as enabling saving chat transcript can be set in the Sametime chat history preference.

Open the chat history either from the chat panel, as pointed out in Figure 6-76 on page 173, or from the Sametime Contacts menu. Figure 6-77 shows an example of the chat history panel.

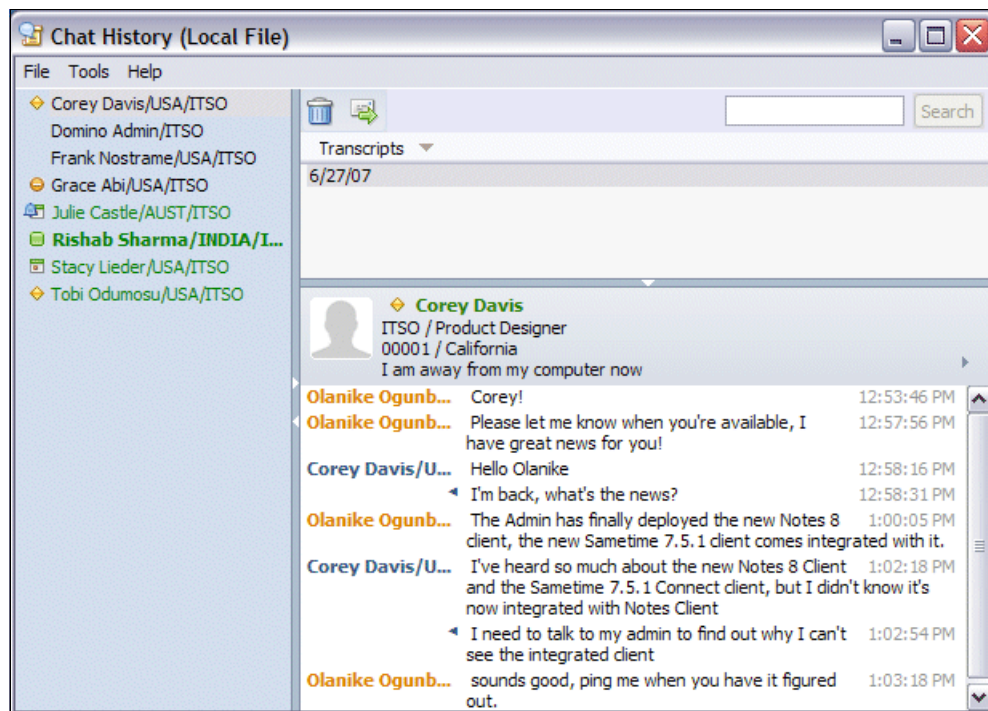


Figure 6-77 Chat History

## 6.8.6 Presence awareness

With presence awareness in the Lotus Notes application, you are able to immediately tell the availability status of a document's author from the application view, as well as the availability status of other users listed in fields enabled for awareness within a document.

With Notes 8, you can do more than just tell users' availability status from an application view or document. You now have a lot more instant messaging options from a right-click menu, as shown in Figure 6-78. This gives you the ability to immediately perform an instant messaging action without having to first go to the Sametime contact list.

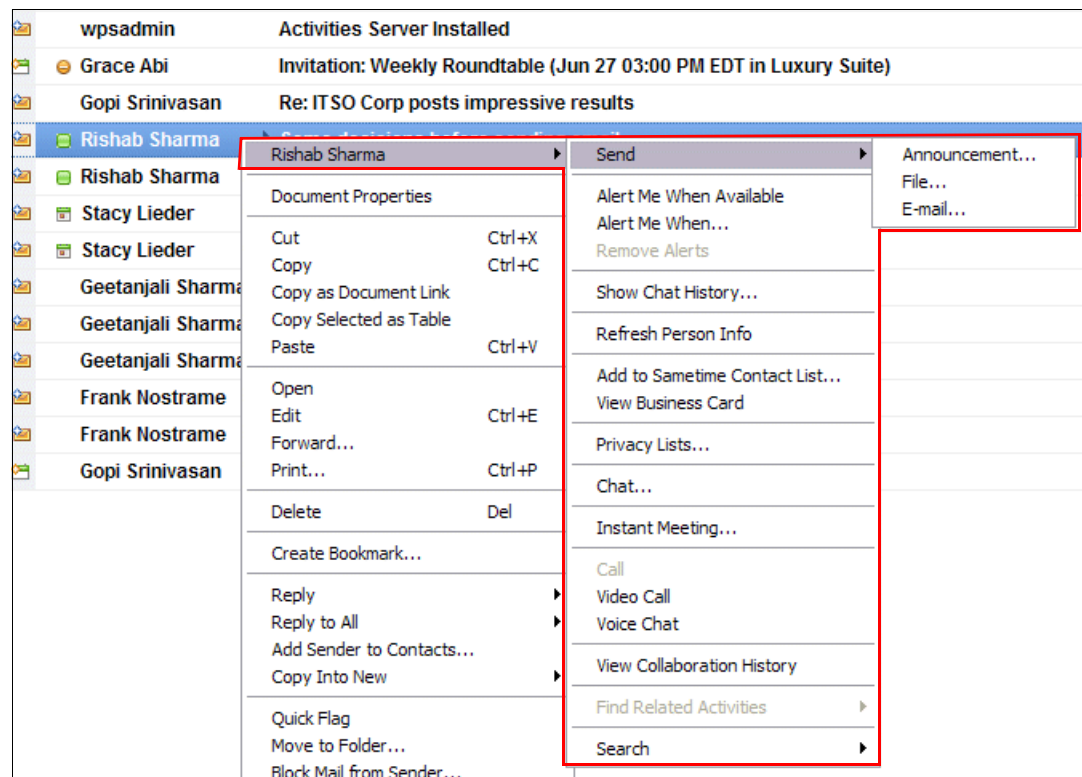


Figure 6-78 Right-click menu options available with presence awareness

## 6.8.7 Preferences

The Sametime preference, which is part of Notes 8 unified preference, allows you to adjust the Sametime settings to better suit your needs. Depending on the installation and the policy set on your Sametime server, you might not have some of the Sametime settings shown in Figure 6-79.

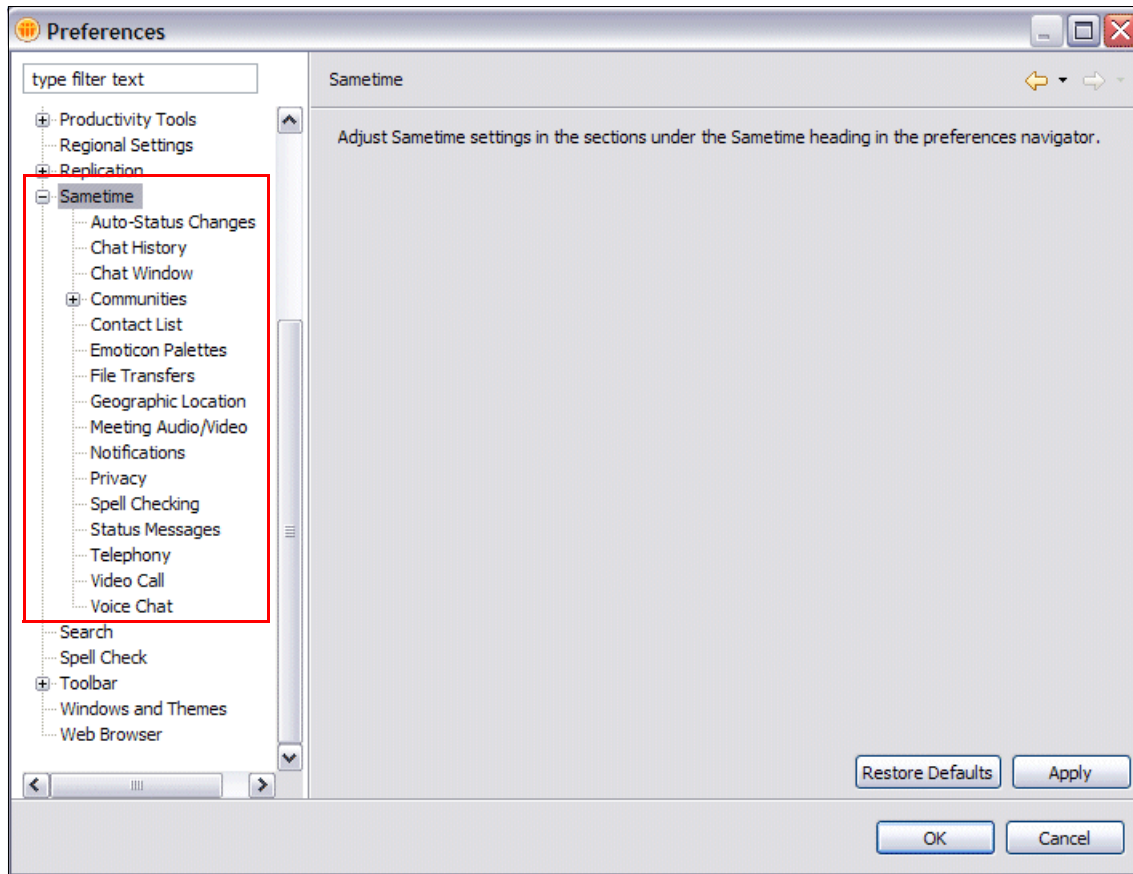


Figure 6-79 Sametime preferences

For more information about the features available in Lotus Sametime 7.5.1, see the following Web site:

<http://www.ibm.com/lotus/sametime>

**Note:** If you configure instant messaging settings in the Lotus Notes 8 client location document, the embedded instant messaging client that was available in Lotus Notes 6.5/7 opens. To avoid having two different Sametime user interface experiences, remove the settings from the location document and instead log in to your Lotus Sametime server by selecting **File** → **Sametime** → **Log In** from the Lotus Notes 8 menu, or log in from the Sametime contacts sidebar menu.

## 6.9 Activities

In our day-to-day working environment all of us perform simple and complex tasks. In order to accomplish these tasks we use a set of organized, simple sequences. If these organized simple sequences, like sending an e-mail or initiating a chat, were to be observed in isolation

without any context they would seem meaningless. It is this context that, when applied to a range of simple sequenced operations used to accomplish complex tasks, is called an activity.

## 6.9.1 Introduction

Activities provides a new way of Web-based collaboration that lets you organize work around what you are doing rather than what tool you are using.

Activities is a part of IBM Lotus Connections social software, which is designed to empower people to be more effective and innovative by building professional networks of coworkers, partners, and customers. With this software, you can find and collaborate with experts; easily locate people and information; build closer partner and customer relationships; and foster bottom-up, community-based innovation.

## 6.9.2 Examples of activities

Some examples of an activity can be:

- ▶ Driving a sales process to a close
- ▶ Preparing for an important meeting
- ▶ Writing a report for a client
- ▶ Hiring a new employee

## 6.9.3 How you get started

To improve awareness and team coordination, identify a goal (new employee orientation, new product innovation, or top talent retention, for example) and create an activity for that goal. All documents, messages, to-do's, and bookmarks you post to this activity are automatically shared with the activity member, which keeps them in sync with the latest updates. Content can be posted using various tools and tagged for further search and cross-references.

## 6.9.4 Notes 8 client - activities plug-in

The Notes 8 client has an activities plug-in in the Side Bar panel, which allows the user to work with activities that have been hosted on the IBM Lotus Connections Server.

**Important:** In order to use activities, you must have an Activity server part of the Lotus connections software installed. Refer to the following URL for more information:

<http://www.ibm.com/lotus/connections>

The following steps can be used as an example of the functionality available in Lotus Notes 8 client for activities:

1. In order to use activities, you would have to first connect your Lotus Notes 8 client to the Lotus Connections Server. Launch the activities plug-in, as shown in Figure 6-80.

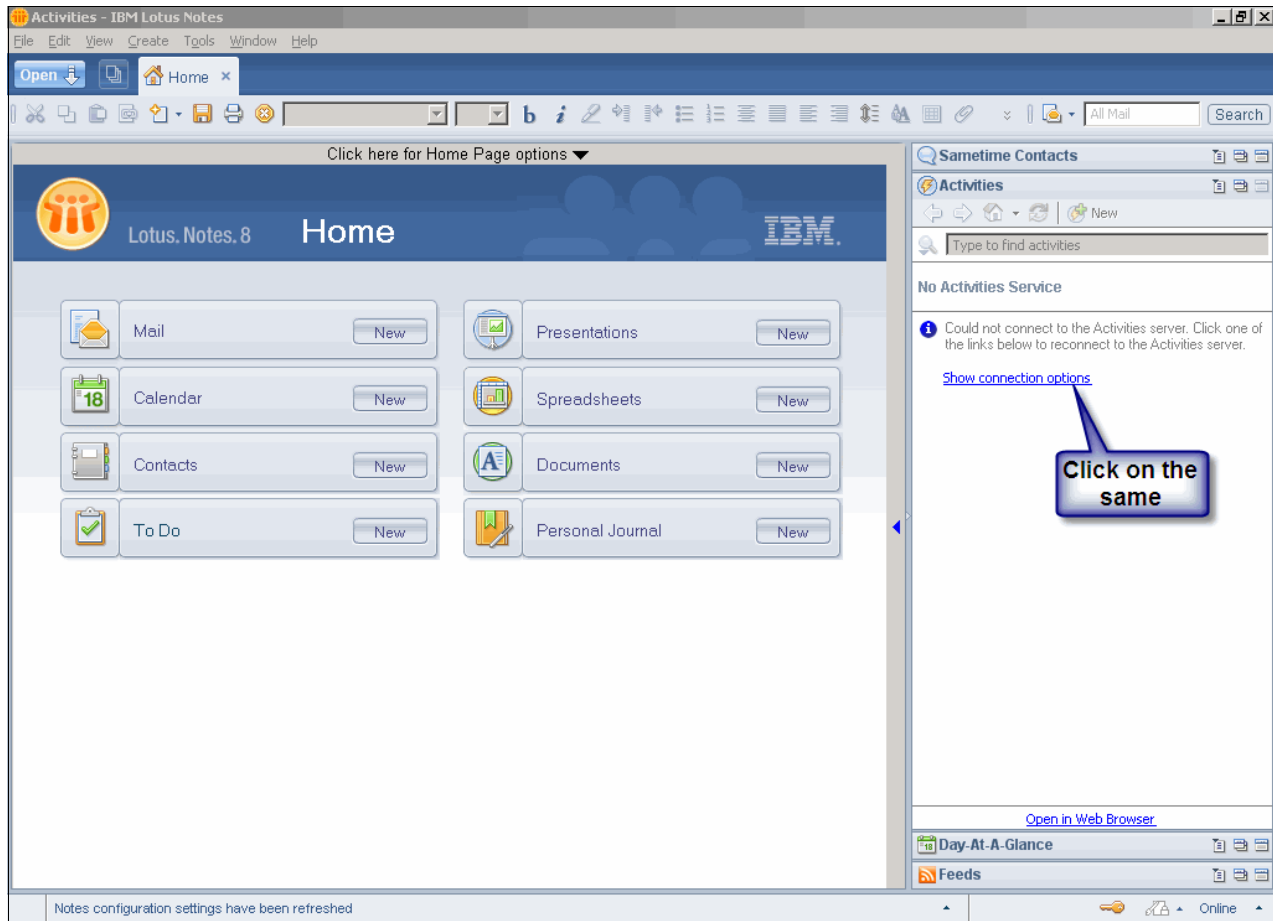


Figure 6-80 Launching the activities plug-in from the Lotus Notes 8 client side bar



2. Provide the details of the Lotus connections server that hosts the activities, as shown in Figure 6-81. The Lotus connections server administrator can provide you with details such as the Activity task URL, your user ID, and password.

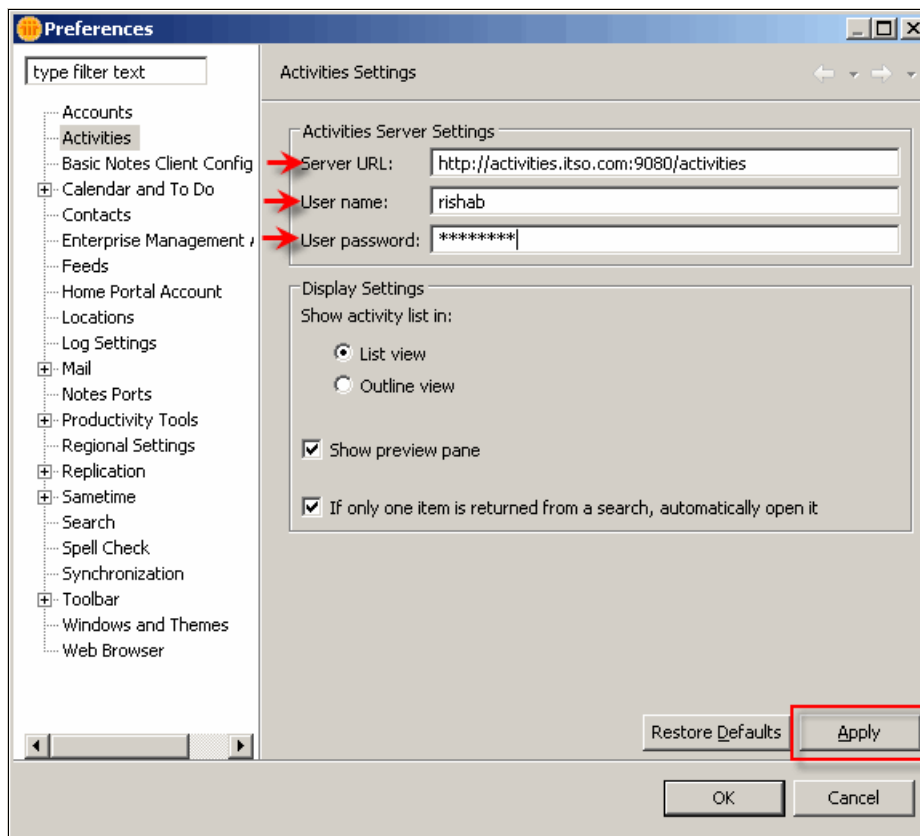


Figure 6-81 Details being provided in Lotus Notes 8 client for activities connection

3. Activities are initialized in the Lotus Notes 8 client, as shown in Figure 6-82.

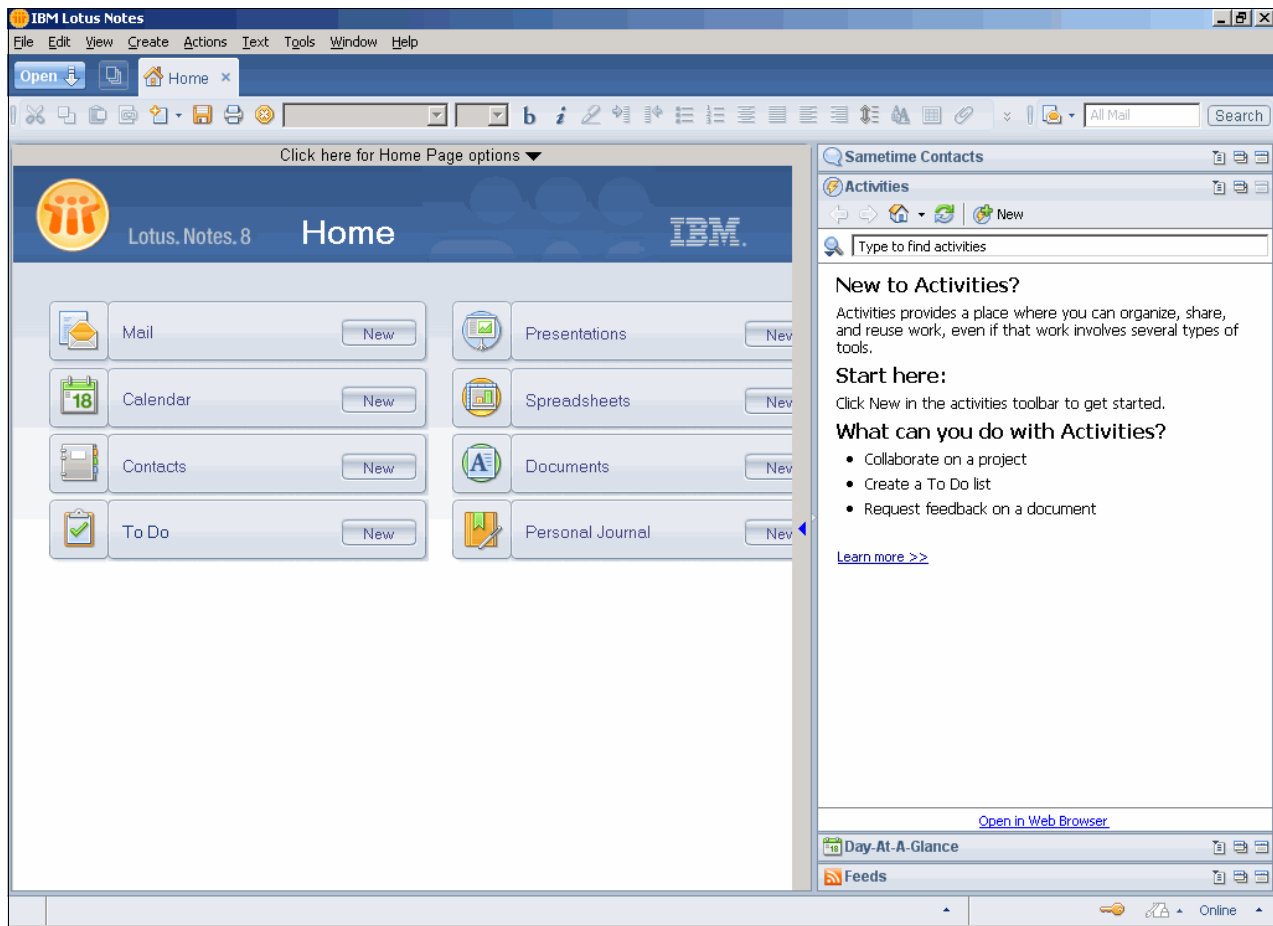


Figure 6-82 Activities initialized in a Lotus Notes 8 client

4. You can click **Launch more >>** to learn more about activities, as shown in Figure 6-83.

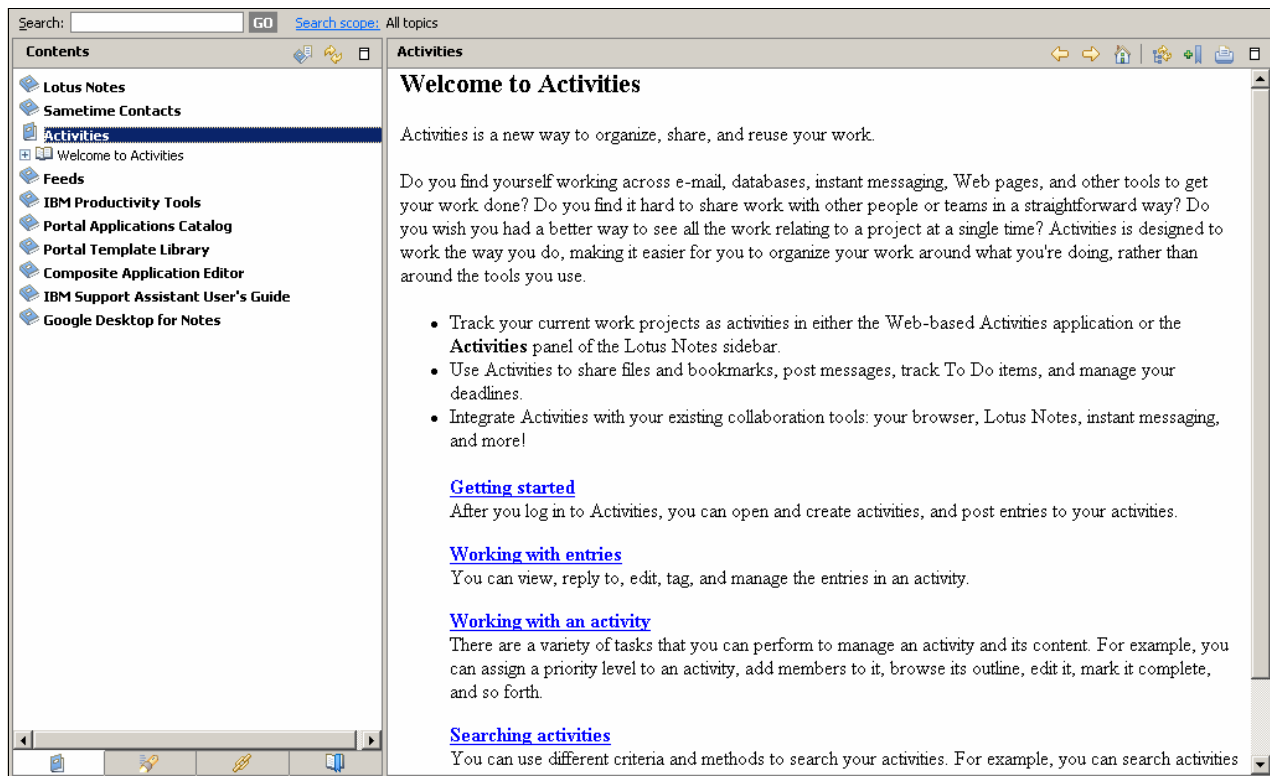


Figure 6-83 Context-sensitive help for activities

5. You can create a new activity from the Notes client, as shown in Figure 6-84.

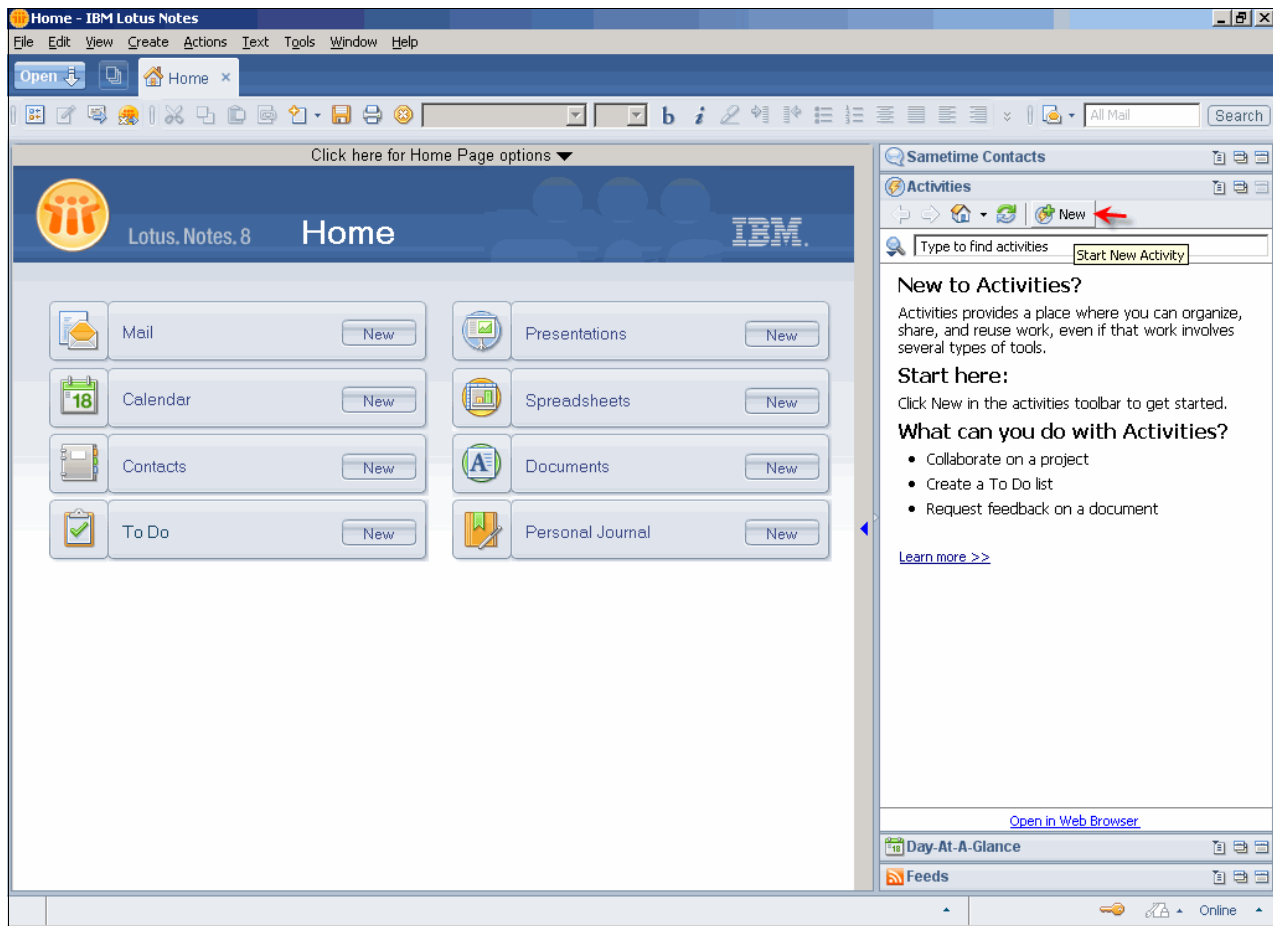


Figure 6-84 Creating a new Activity

6. Fill in the details about the new Activity. Click **Display** → **Membership Options**, as shown in Figure 6-85.

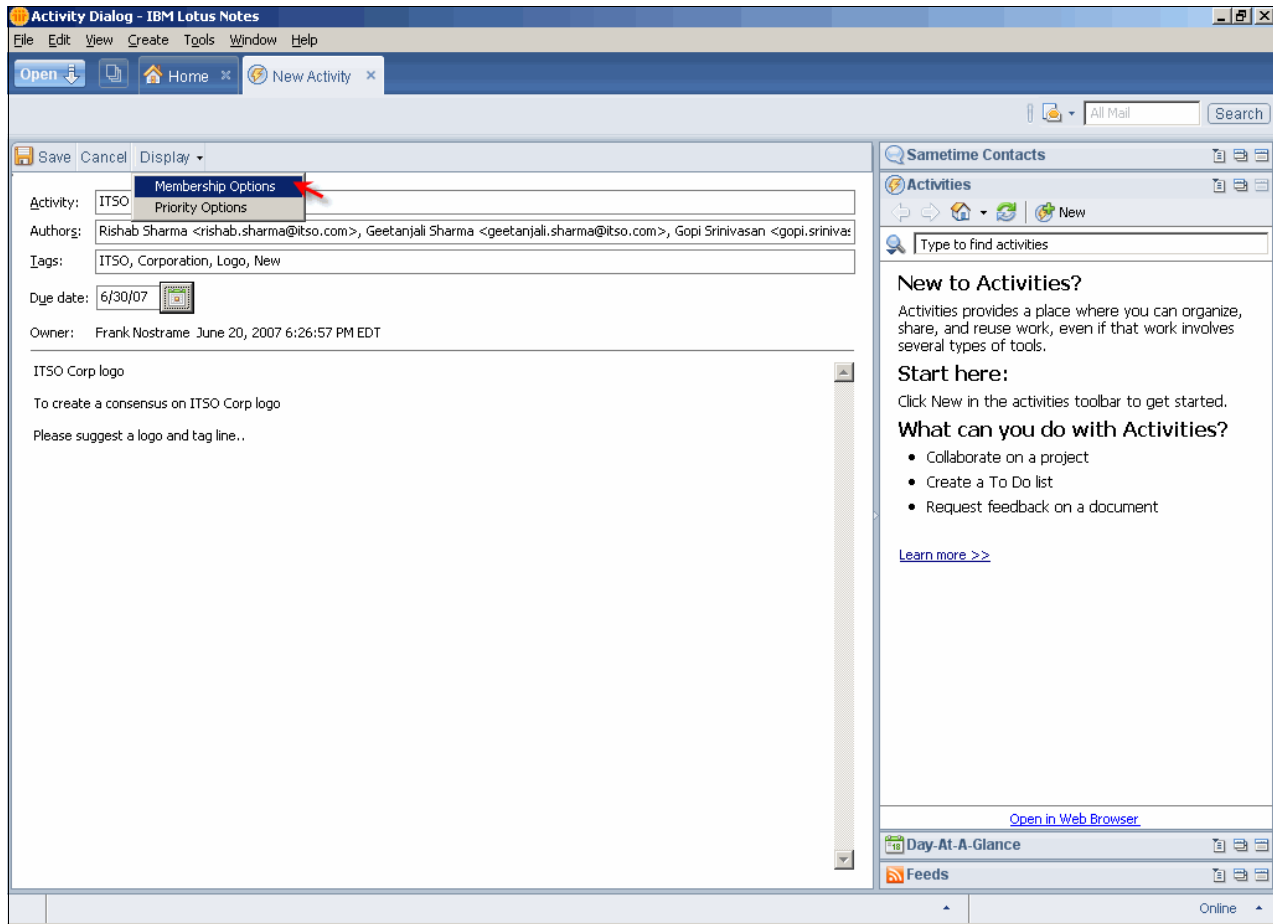


Figure 6-85 New Activity being displayed

7. In the membership options you can define owners, readers, authors, and tags related to an activity. Click **Save**, as shown in Figure 6-86, to save this activity.

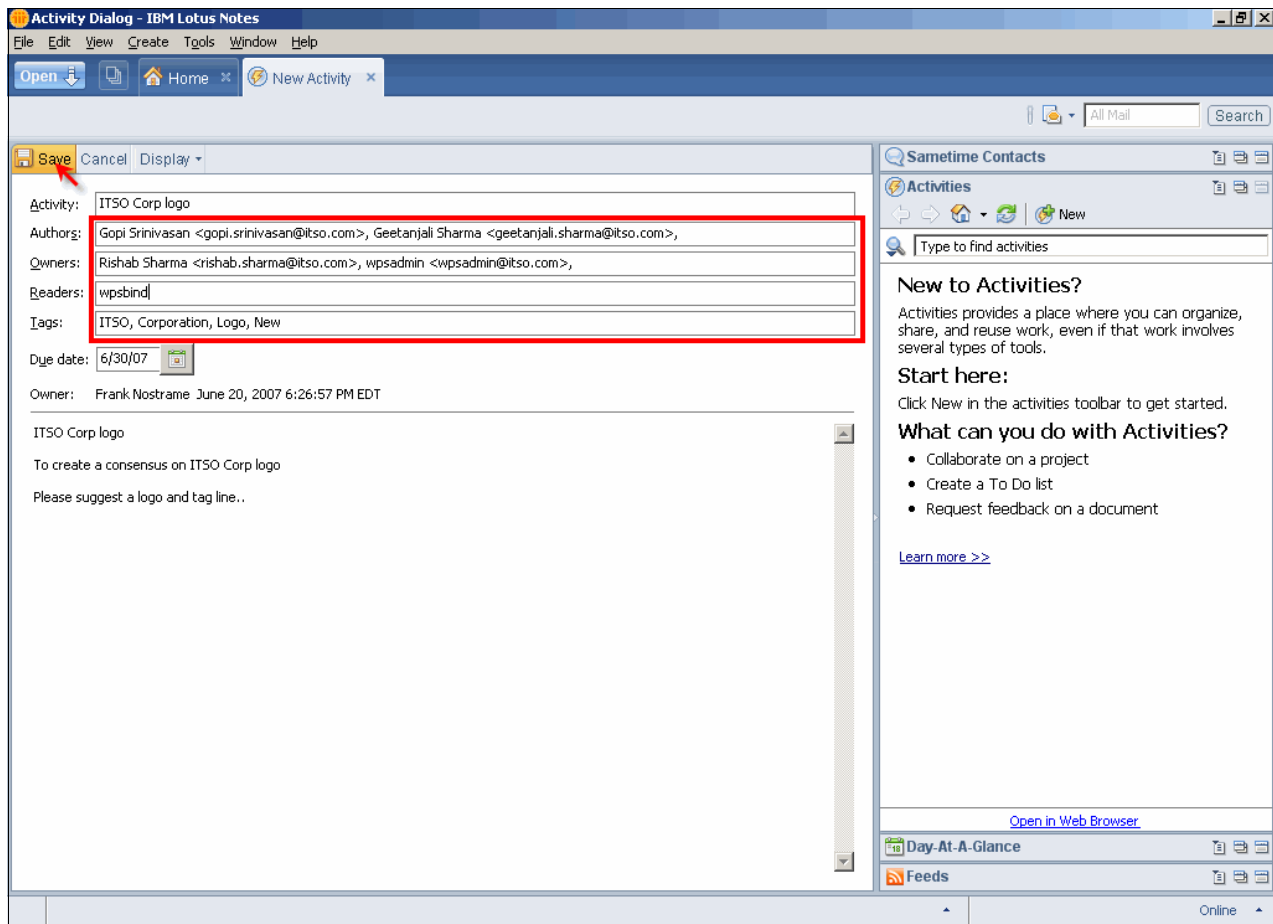


Figure 6-86 Saving a new activity

8. The new activity created is shown in Figure 6-87 under activities in the Lotus Notes 8 client side bar.

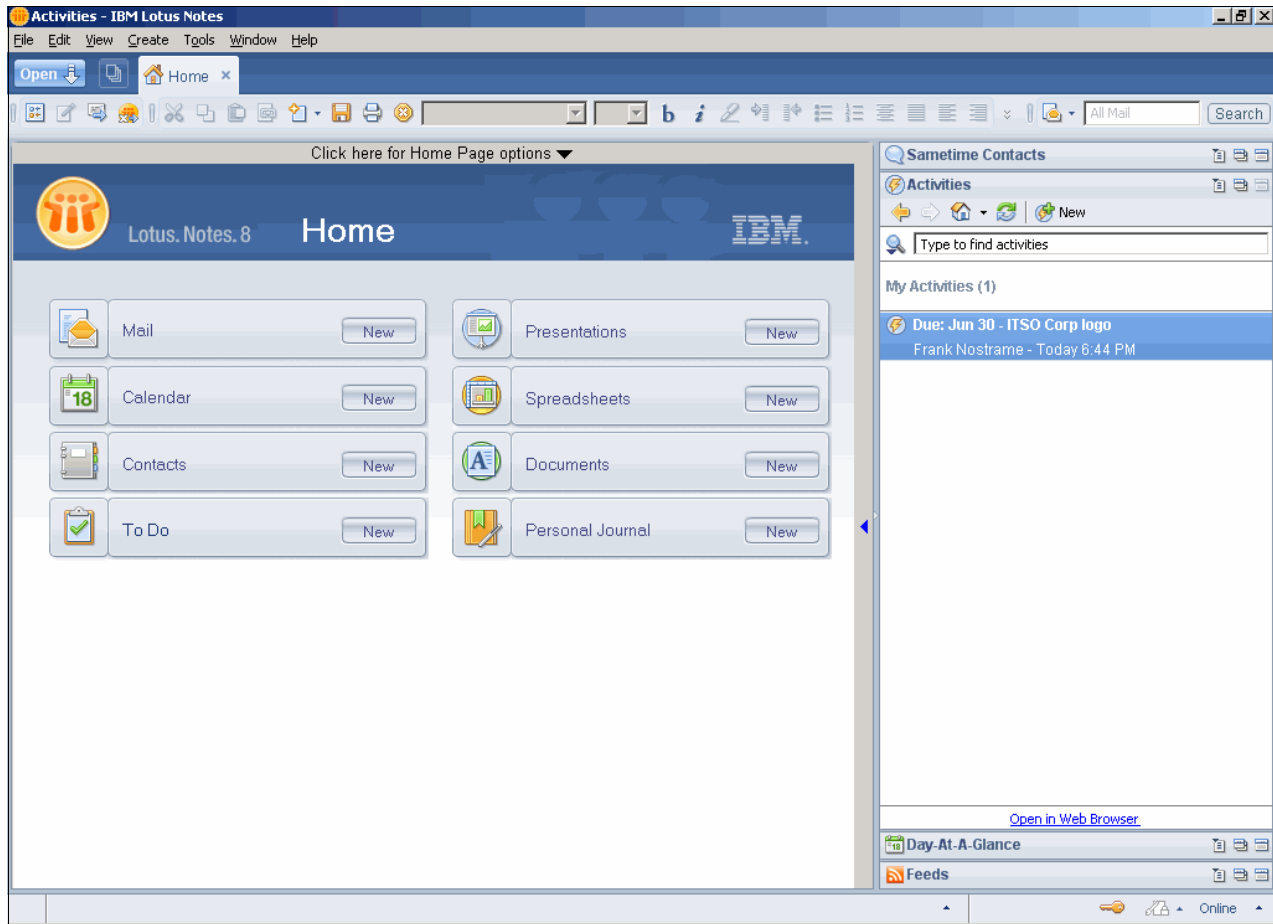


Figure 6-87 Newly created activity visible in Lotus Notes 8 client

9. You cannot only look at activities that have been created by you. In addition to this you can also view prioritized, tuned out, completed, and public activities, as shown in Figure 6-88.

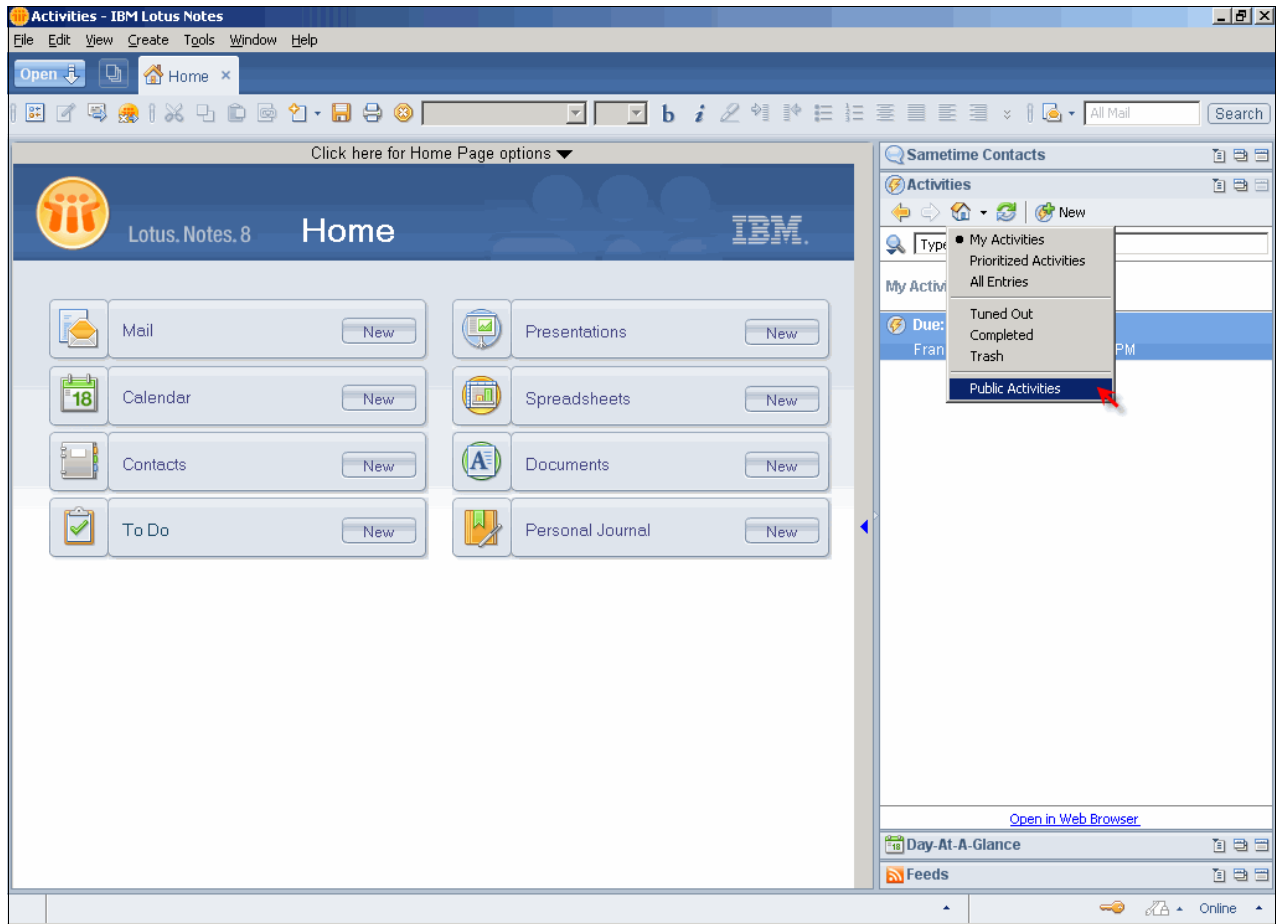


Figure 6-88 Viewing different types of activities



10. You can add a file, to do, related activity, bookmark, or message to an existing activity. We add a new file to an existing activity, as shown in Figure 6-89.

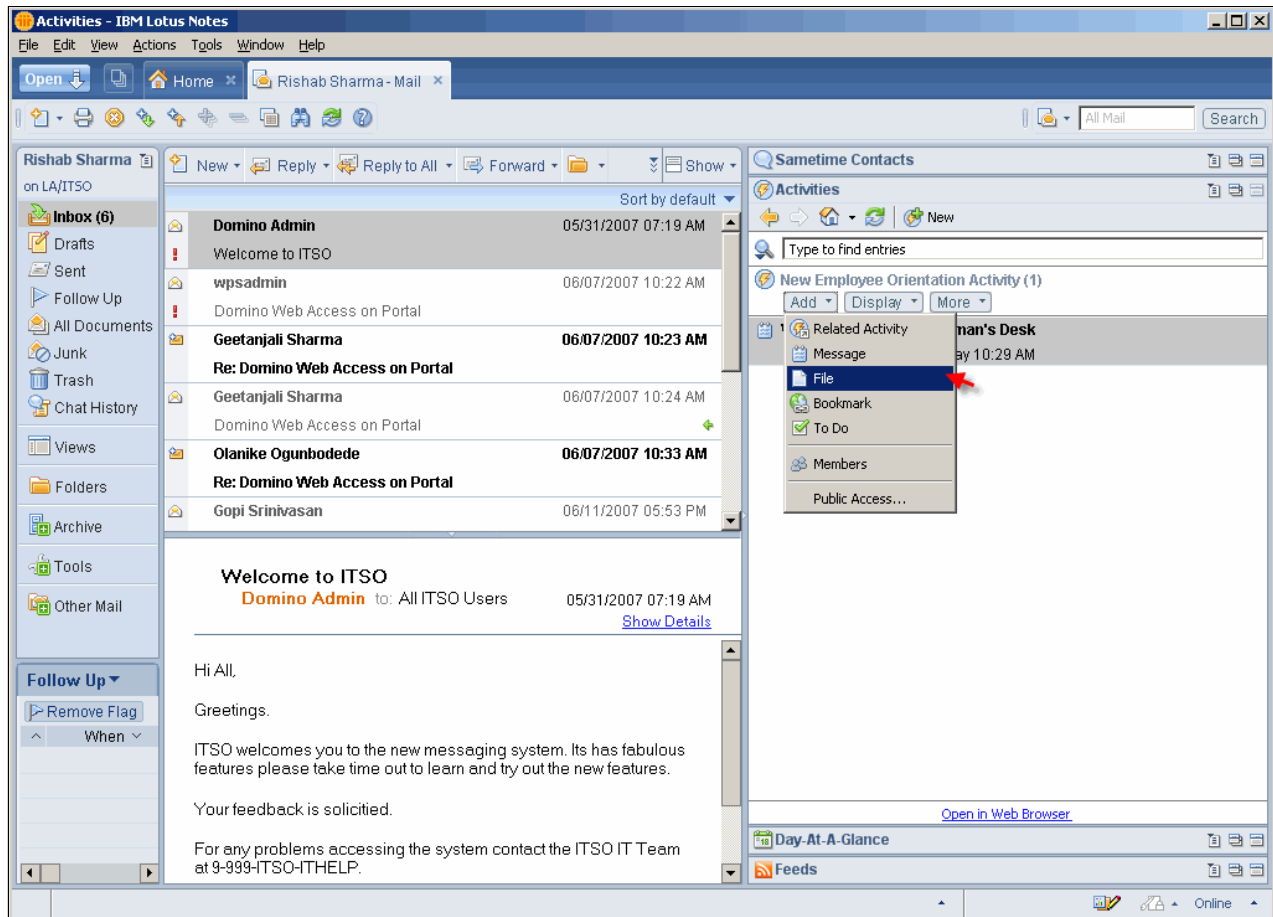


Figure 6-89 Adding a new file to an existing activity

11. You can provide details of the file, as shown in Figure 6-90, which will be saved as a part of an existing activity.

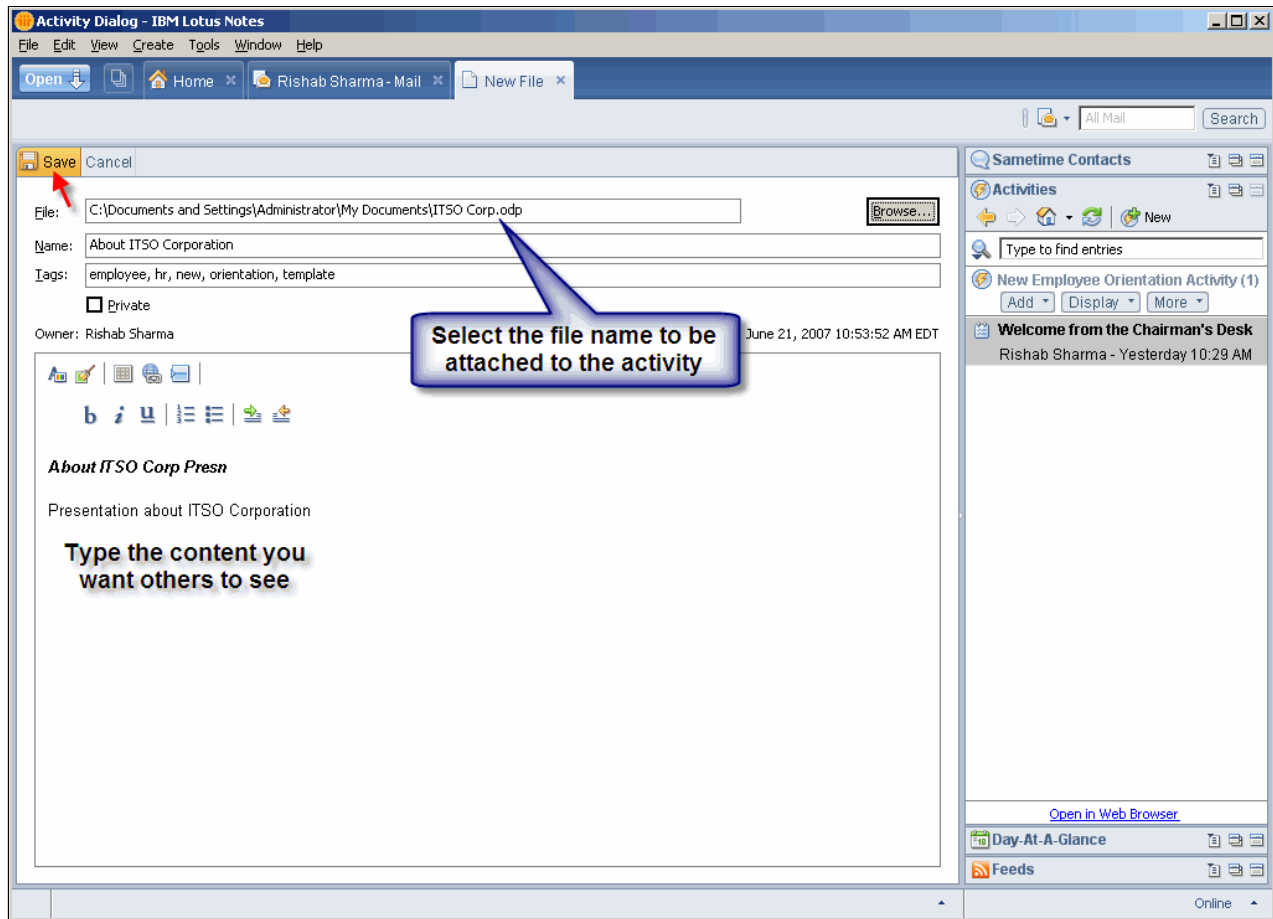


Figure 6-90 Saving a file to an existing activity

12. Any new event, such as adding a new file, message, or bookmark to an activity, can trigger an e-mail update to the members of that activity, as shown in Figure 6-91. This will provide information to the members even when they are not connected to the activities server.

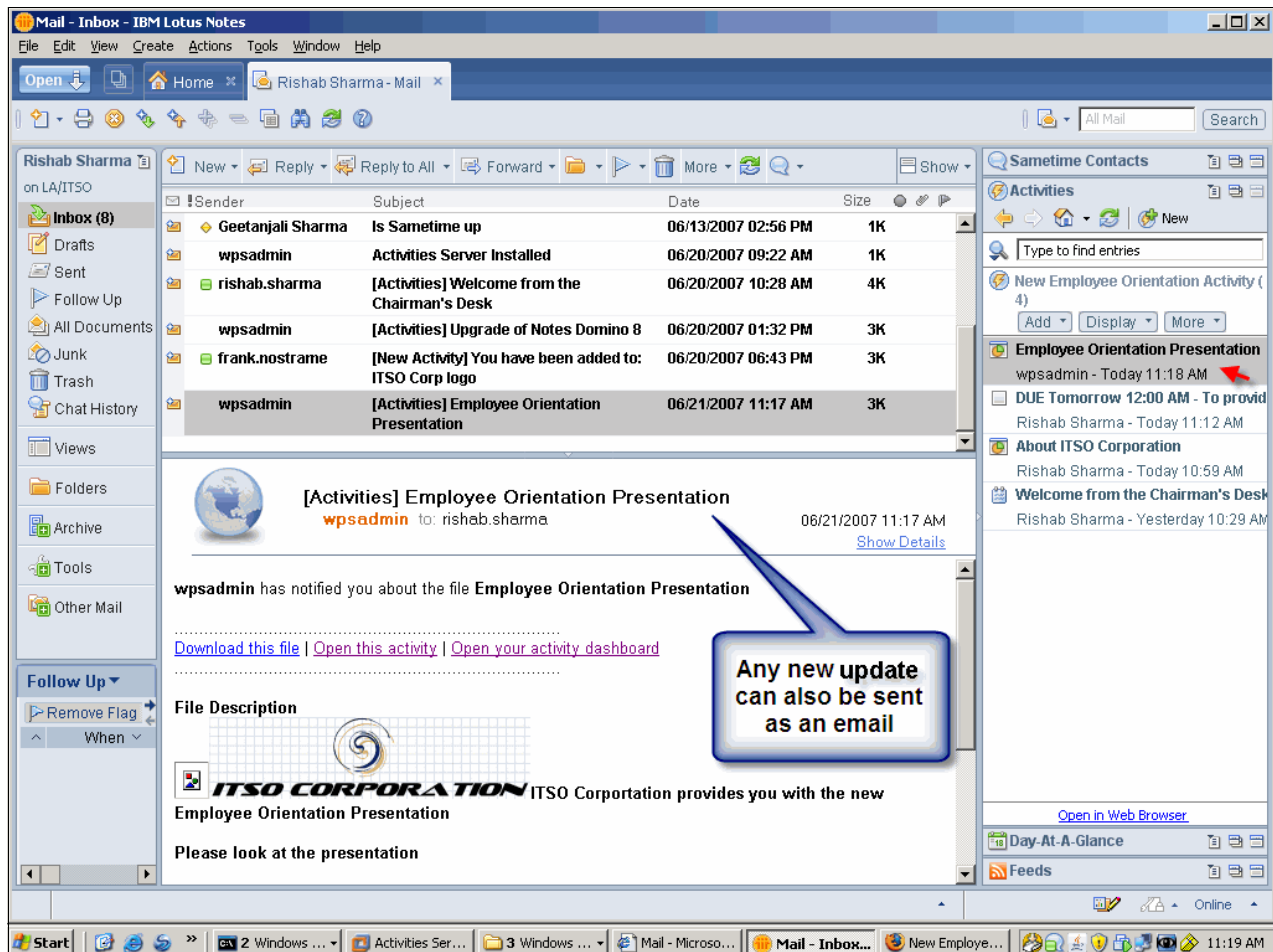


Figure 6-91 E-mail informing members of any new updates to an activity

13. You can also convert any e-mail into an activity, as shown in Figure 6-92.

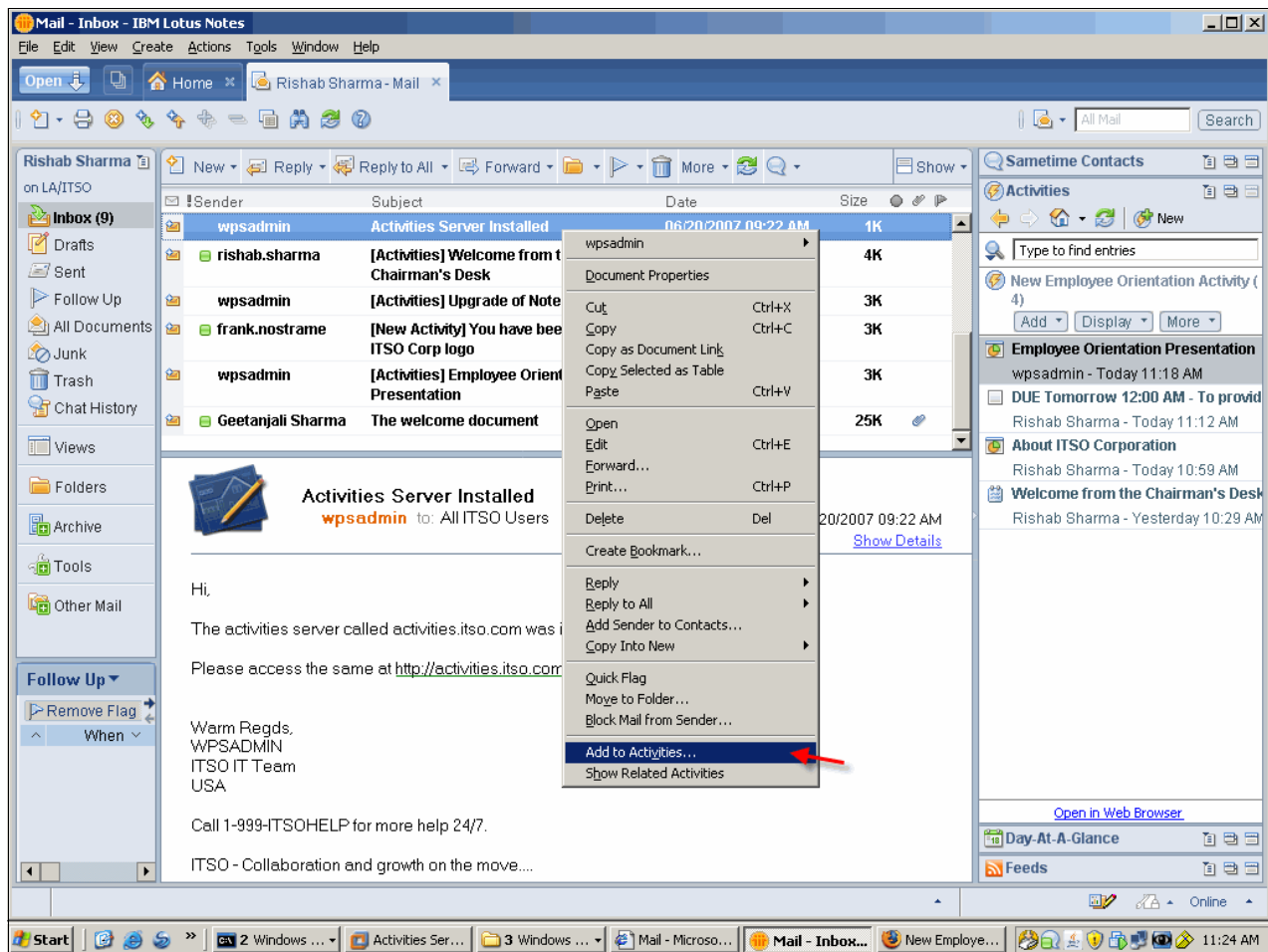


Figure 6-92 Existing e-mail being added to an activity

14. You can also add a Lotus Sametime chat to an activity, as shown in Figure 6-93.

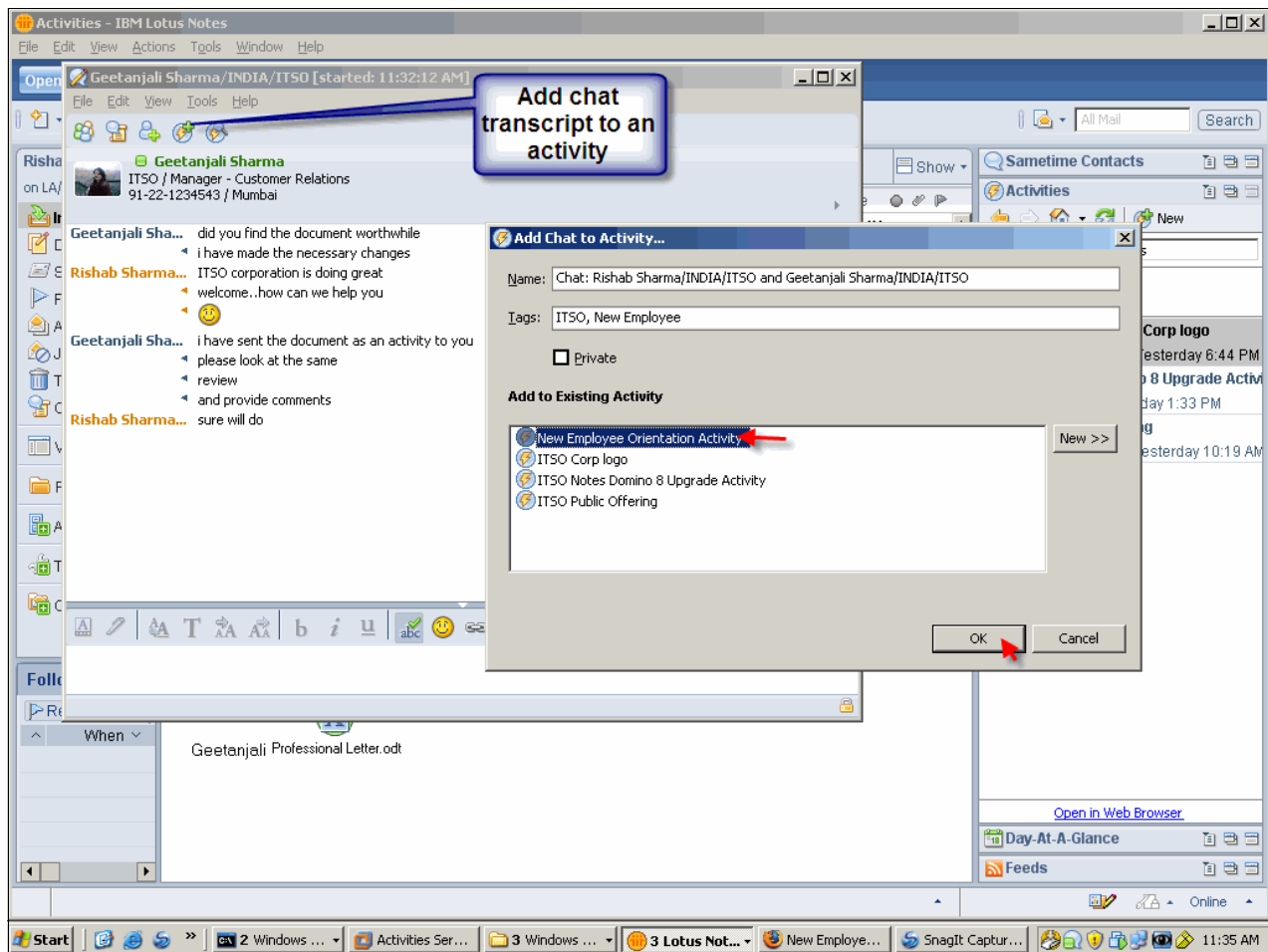


Figure 6-93 Lotus Sametime chat being added to an activity

## 6.9.5 In conclusion

Users can use activities as a form of ad-hoc collaboration tool from within the Lotus Notes 8 client to solve complex business tasks.

Using the activities plug-in from the Lotus Notes 8 client side bar we have been able:

- ▶ Track your current work projects as activities in the activities panel of the Lotus Notes sidebar.
- ▶ Use activities to share files and bookmarks, post messages, track to do items, and manage your deadlines.
- ▶ Integrate activities with your existing collaboration tools: your browser, Lotus Notes, instant messaging, and more.

For more information about activities and Lotus connections refer to:

<http://www.ibm.com/lotus/connections>

## 6.10 Reading feed content in Lotus Notes 8 client

In today's online and connected world you sift through hundreds of e-mails, documents, or Web sites to get the information or content you need. Content syndication can be used as a means of publishing Web content in a push format. Users can subscribe to this content in the form of a feed, such as really simple syndication (RSS) and the Atom publishing protocol (APP).

Using technology like RSS or ATOM, you can subscribe to these feeds using a feed reader software. This allows you to receive online and updated content in a single panel from various applications and Web sites in an aggregated format.

Lotus Notes 8 client also provides you a feed reader via the side bar panel. This displays the list of feeds to which you subscribe. Feed content — specifically, news items and stories — appears below the feed name.

### 6.10.1 Set up Lotus Notes 8 client to read feed content

The Lotus Notes 8 client has a feed reader plug-in that is part of the side bar panel, as shown in Figure 6-94.

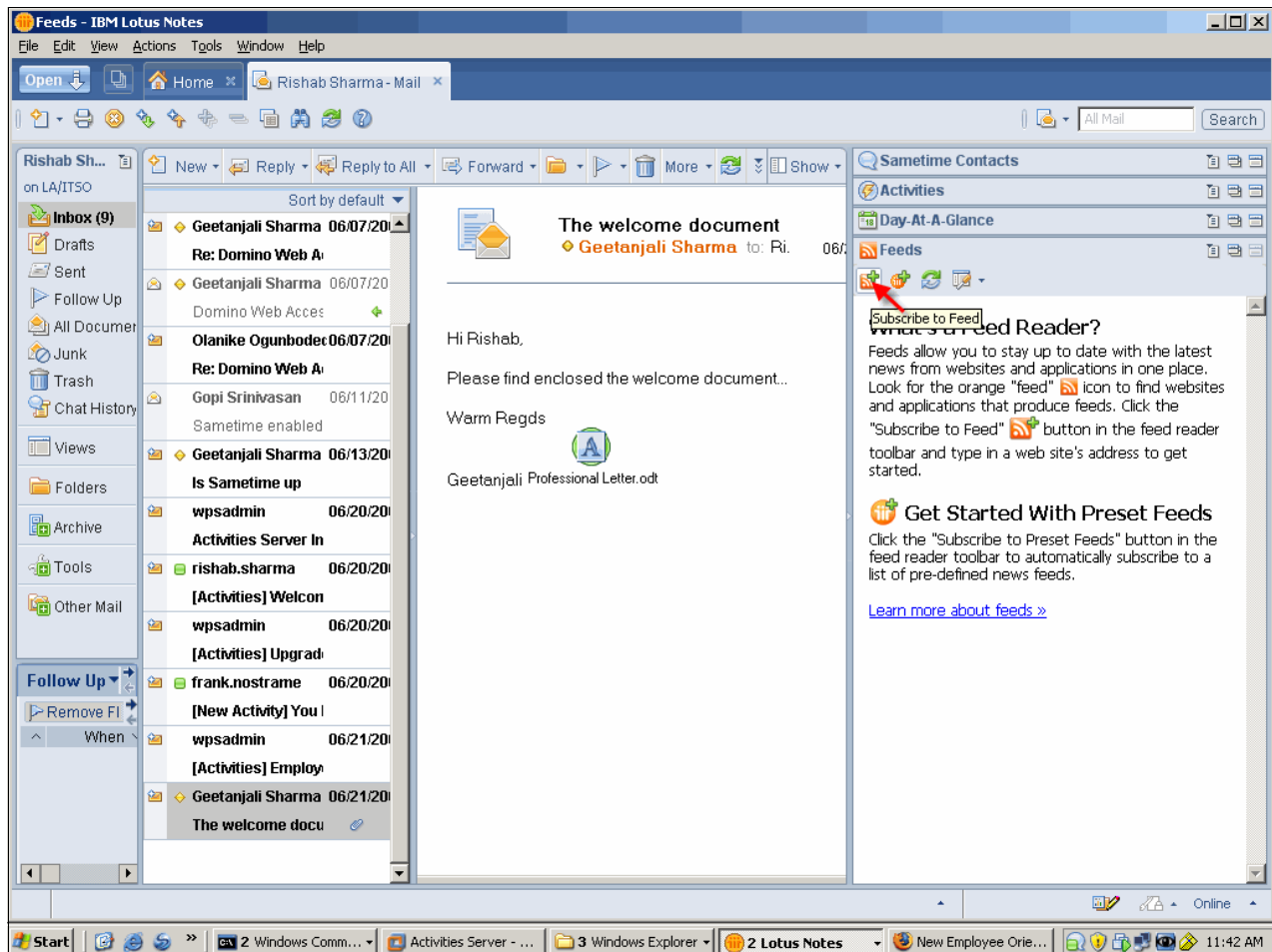


Figure 6-94 Feed reader plug-in in Lotus Notes 8 client

Web pages that support content syndication would provide feed icons denoting the page that is available as a feed. A Web site may also sometimes display the icon after the URL in the browser address bar, as shown in Figure 6-95.

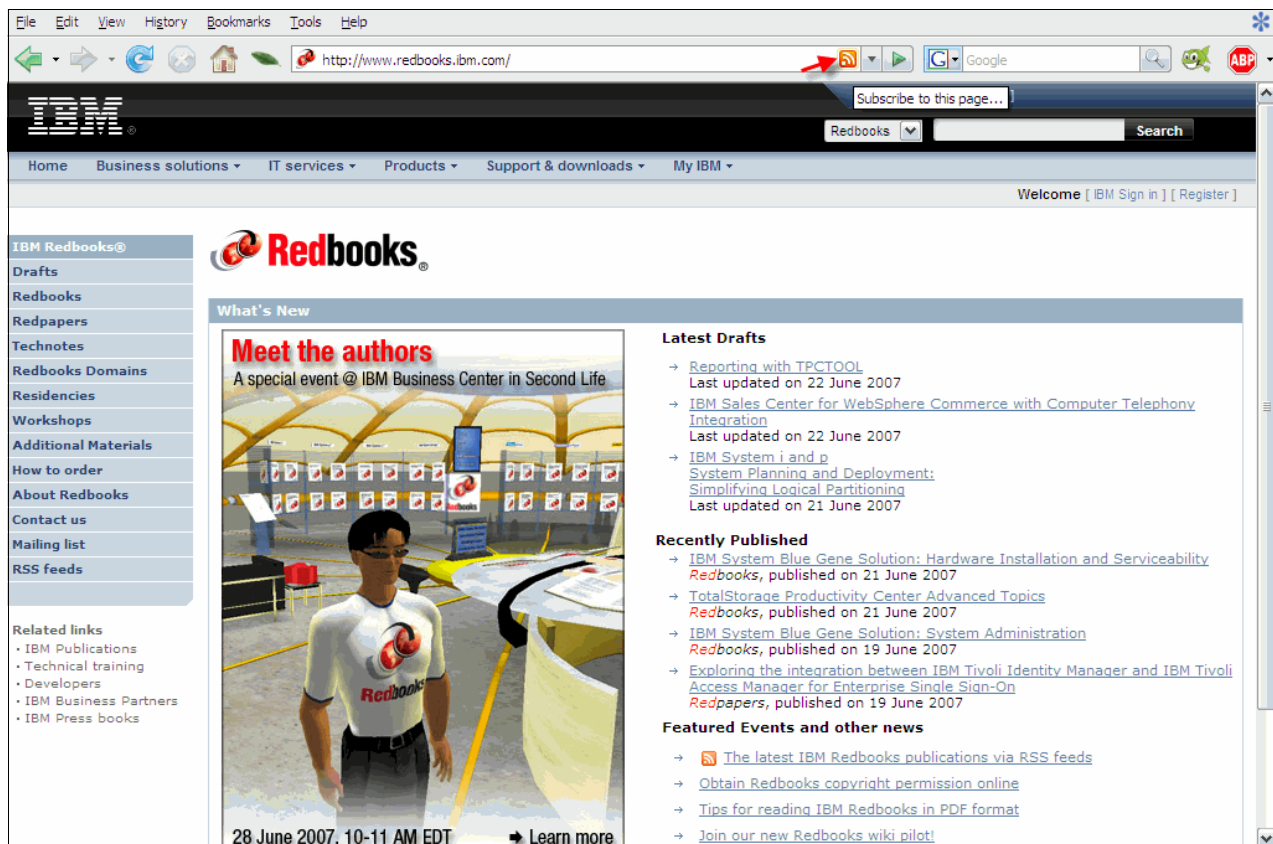


Figure 6-95 Web page showing a feed icon

You can either drag and drop the icon or Web URL into the feed reader plug-in on the Lotus Notes 8 client, or you can subscribe to a new feed, as shown in Figure 6-96.

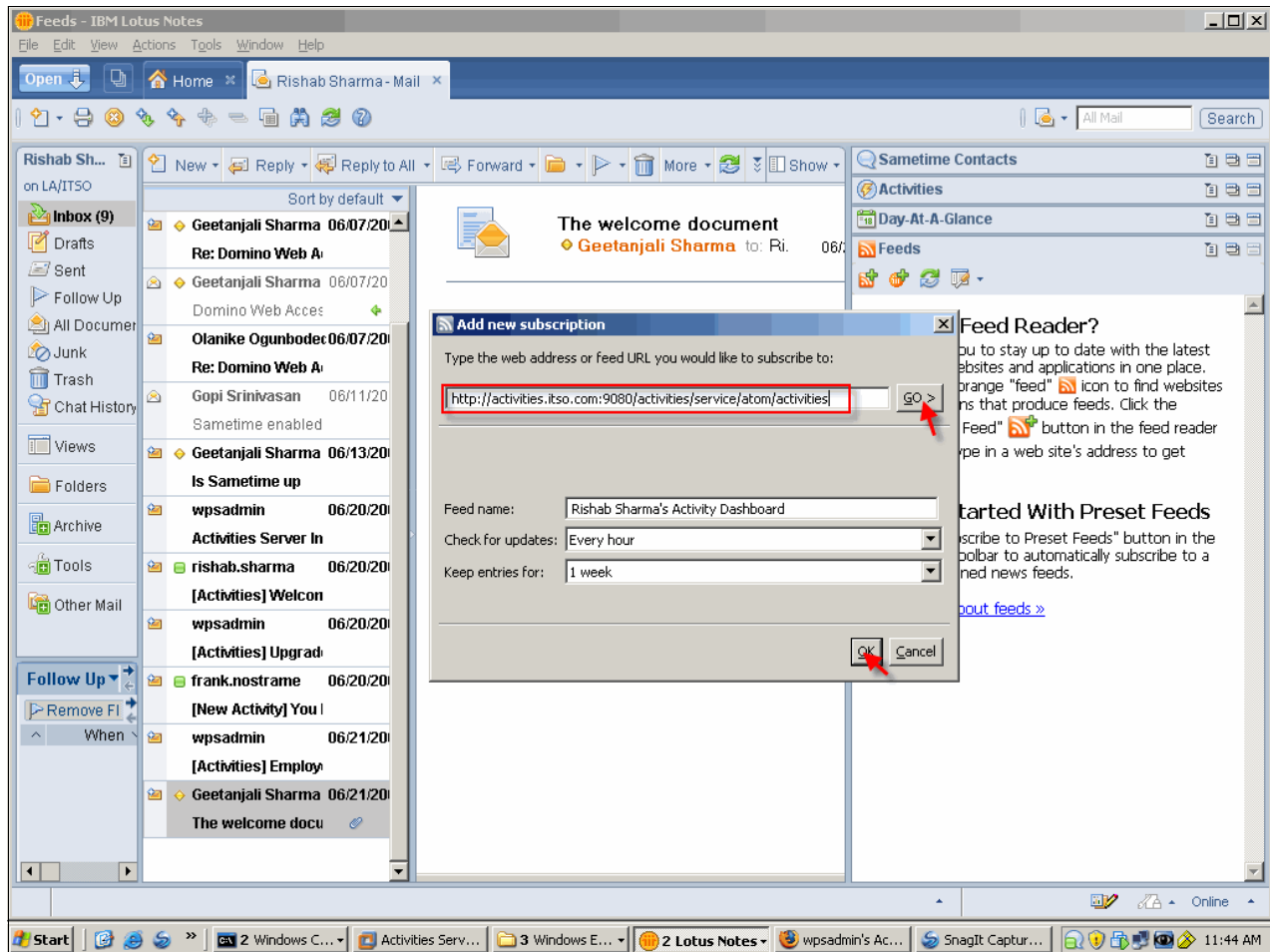


Figure 6-96 Subscribing to a feed



The feeds you have subscribed to are now available as a single view in the feed reader inside the Lotus Notes 8 client, as shown in Figure 6-97. Real-time updates to various activities created in 6.9, “Activities” on page 176, are also available as feeds.

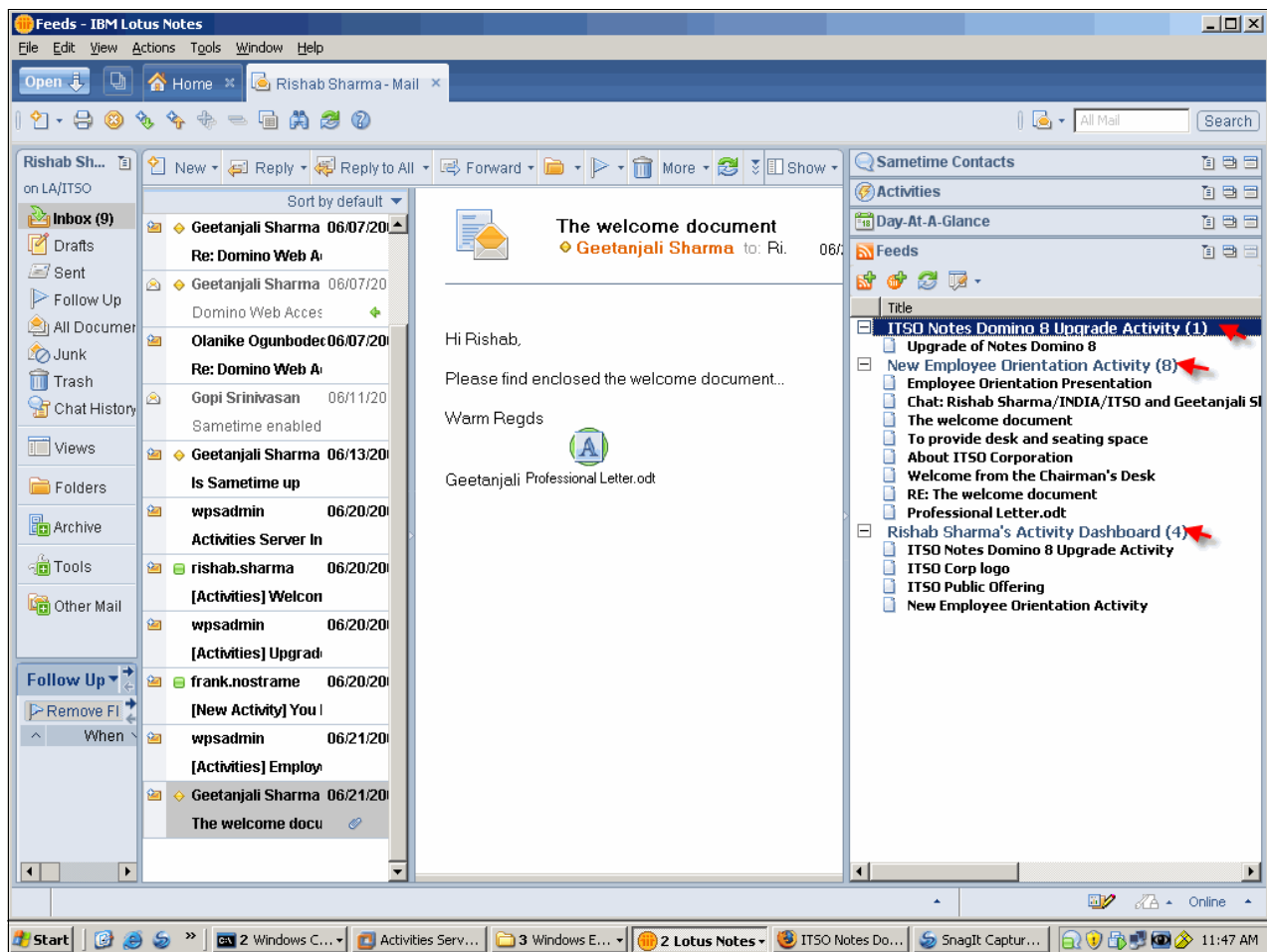


Figure 6-97 Subscribed feeds visible in the Lotus Notes 8 client

You can view these feeds in the Web browser or via a preview panel, as shown in Figure 6-98.

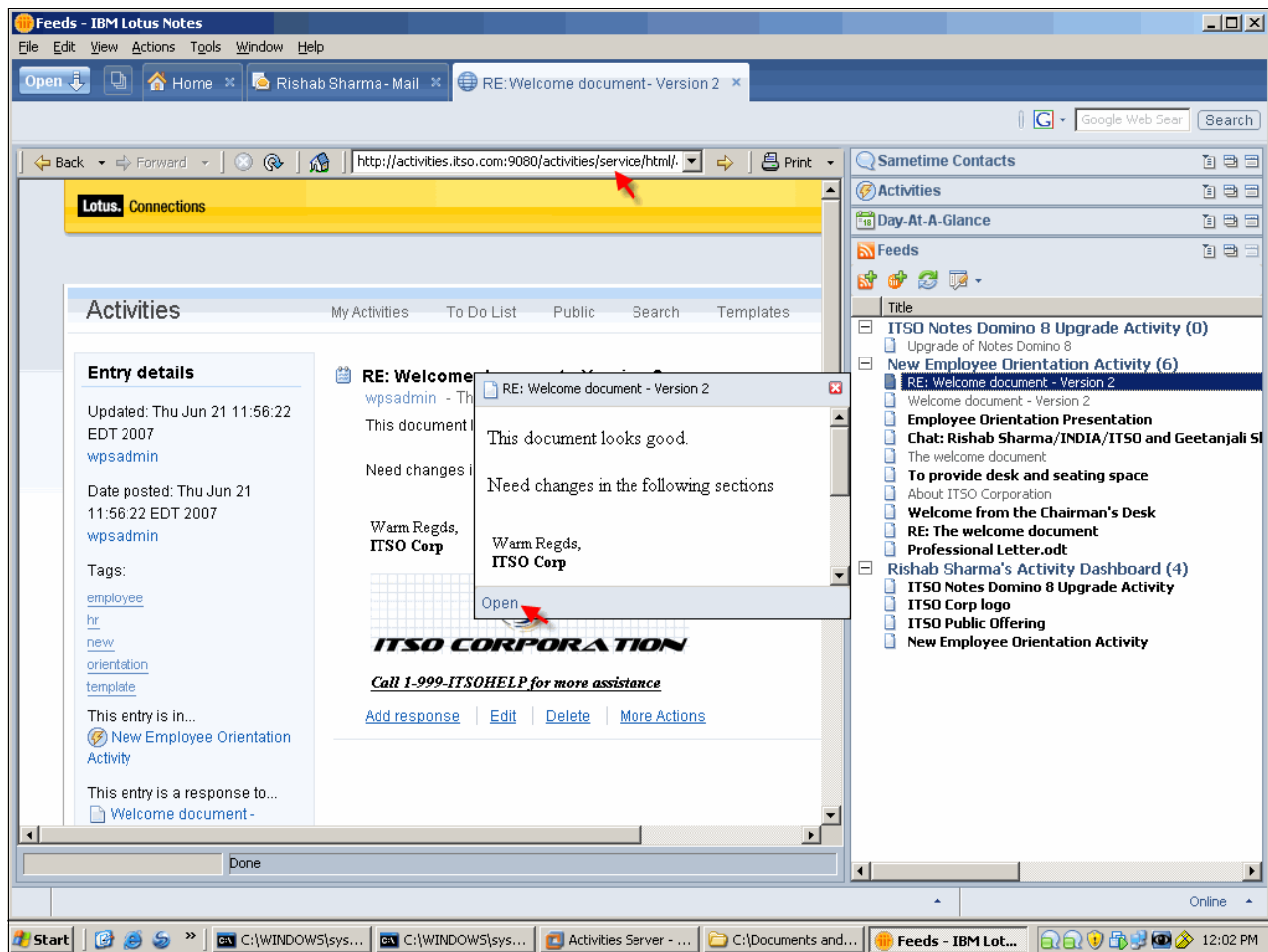


Figure 6-98 Viewing the feed

You can also manage the feed subscriptions by grouping them or presenting them, as shown in Figure 6-99.

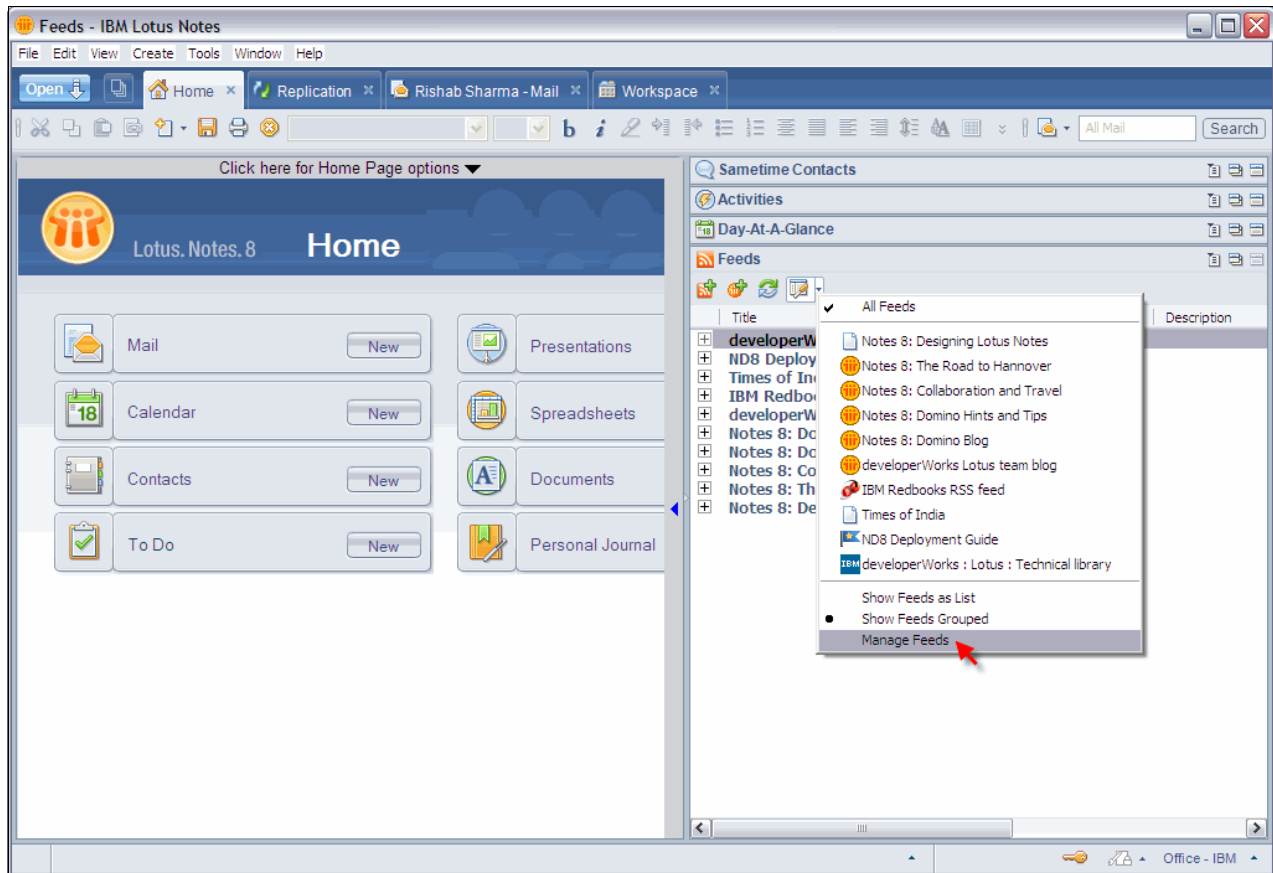


Figure 6-99 Listing feeds individually or grouped together

Feed management may also offer functions such as:

- ▶ Unsubscribe to the feed - Remove the feed from the list.
- ▶ Edit feed subscription - Change the feed settings that were set when you first subscribed to the feed.
- ▶ Delete offline content - Delete the content that appears in the Feed Reader pane for the feed.
- ▶ Copy as link - Copy the feed listing and use it as a URL, for example, in a browser or in an e-mail.

This is shown in Figure 6-100.

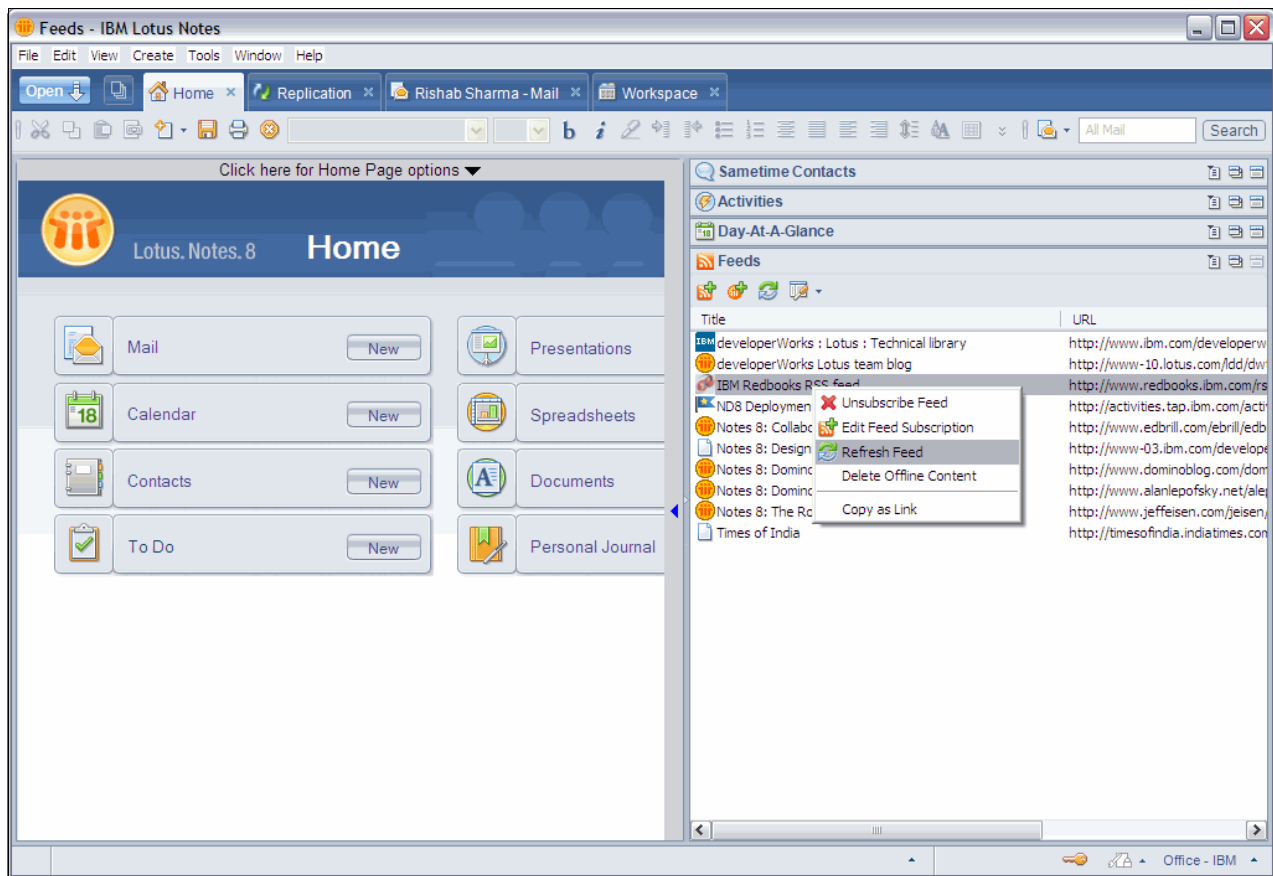


Figure 6-100 Feed management functions

In short, the feeds plug-in available in the Lotus Notes 8 client allows you to access real-time Web site or blog updates in an aggregated fashion through a single panel. It helps you to get the information on your desktop rather than actively going and searching for it.



## Productivity tools

This chapter discusses the new productivity tools that ship with Notes 8, which include:

- ▶ IBM Lotus Documents, for creating and editing word processing documents
- ▶ IBM Lotus Presentations, for creating and running presentations
- ▶ IBM Lotus Spreadsheets, for creating and editing spreadsheets
- ▶ IBM Lotus Productivity Tools Toolkit

Additionally, this chapter discusses installing and configuring IBM Lotus Productivity Tools.

## 7.1 About productivity tools

IBM Lotus Notes 8 includes a set of office productivity tools that support the Open Document Format (ODF) standard. These productivity tools include word processing, spreadsheet, and presentation capabilities. Lotus Notes users are able to create, manage, edit, and import documents in ODF. The IBM productivity tools can also import and edit Microsoft Office documents and export those documents to ODF for sharing with ODF-compliant applications and solutions.

For organizations, ODF provides the ability to access, use, and maintain documents over the long term without concern about end-of-life uncertainties or ongoing software licensing and royalty fees. By using ODF-compliant tools, customers are not locked into one particular vendor for their productivity tools. ODF helps provide interoperability and flexibility.

For users, the IBM Lotus Productivity Tools offer easy, immediate access to viewing, editing, and creating documents from directly in Notes, without a need to launch a separate program. This ease of access makes your workforce more productive and efficient by integrating document processing functions directly into the Notes interface, using the same menus and intuitive design already familiar to your users. Support for commonly used formats mean that users can immediately transition to using the productivity tools with existing documents.

For more detailed information about IBM Lotus Productivity Tools, see the Productivity Tools User Guide, available on IBM developerWorks in the Lotus section.

### **IBM Lotus Productivity Tools compared with traditional office suites**

IBM Lotus Productivity Tools are not designed to match a standalone office suite, such as Microsoft Office, on a feature-by-feature basis. Instead, the productivity tools are meant to be an alternative to standalone office suites for users who perform relatively basic document viewing and editing tasks. This class of users is well served by the productivity tools found in IBM Lotus Notes 8.

The productivity tools support Microsoft Office document formats and enable users to read these documents. The productivity tools also provide editing capabilities that closely approach the feature set in a full office suite. These features enable users to create or edit existing documents with ease.

### 7.1.1 Open Document Format (ODF)

OpenDocument Format is an open format for creating, saving, and exchanging editable office documents, spreadsheets, charts, and presentations. ODF is application-independent, created by the OpenDocument Format Technical Committee within the Organization for the Advancement of Structured Information Systems (OASIS) standards organization.

Adopting ODF-supporting applications in your business or service means that you are not required to purchase an application from a single vendor in order to share and communicate your document data. You now have a choice.

ODF is:

- ▶ The open standard developed by a multivendor committee at OASIS and submitted to ISO for certification
- ▶ The open standard adopted by many vendors
- ▶ The standard that meets the common test for openness, including for IBM

- ▶ The default format in Open Office and IBM Workplace™ Managed Client
- ▶ An XML-based specification describing the content and formatting of a document
- ▶ The option that gives you the most choice for interoperability and future-proofing your information

ODF is important and valuable because it provides greater choice, greater freedom of action, greater cost effectiveness, greater access to innovation, and greater control over the use of your documents and the intellectual property contained therein. ODF also enables efficient interchange of information between various parts of an organization and between organizations.

## 7.1.2 Exporting to PDF

One of the most exciting features of IBM productivity tools is the ability to export a document as a PDF. Portable Document Format (PDF) is widely used to share documents without a need for all users to have the program that created the document. Before IBM productivity tools, while any user could view a PDF document using a free viewer, the person who created the document had to have a specialized program to create the PDF. Now, the ability to export a document as a PDF is freely available, and easy to use, by anyone with Lotus Notes 8 installed.

To create a PDF, all you have to do is choose **Export as PDF** from the File menu from within an open document, as shown in Figure 7-1.

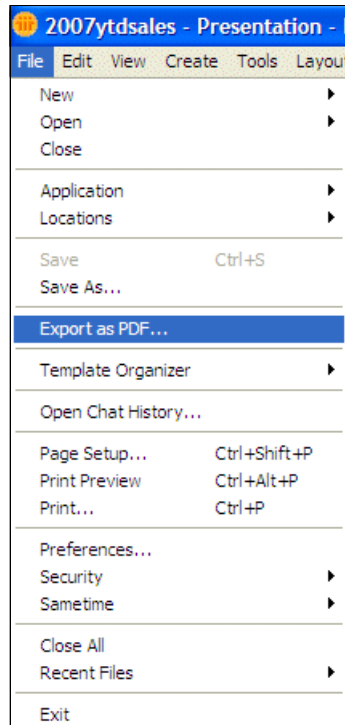


Figure 7-1 Exporting a document as a PDF

## 7.2 .Installing and configuring IBM Lotus Productivity Tools

This section discusses installing IBM Lotus Productivity tools, setting preferences, and using the new productivity tools settings document to manage your productivity tools deployment.

### 7.2.1 Installing IBM Lotus Productivity Tools

Installing IBM Lotus Productivity Tools does not require a separate action. It is available as an installation option during the Lotus Notes 8 installation process. Figure 7-2 shows the custom setup available during Notes 8 installation. The red box indicates the option to install IBM productivity tools.

**Note:** IBM Productivity tools is not selected by default when you install Notes, and you need to select it during the installation process.

For more information about installing Lotus Notes 8, see Chapter 4, “Deploying the Notes 8 client” on page 63.

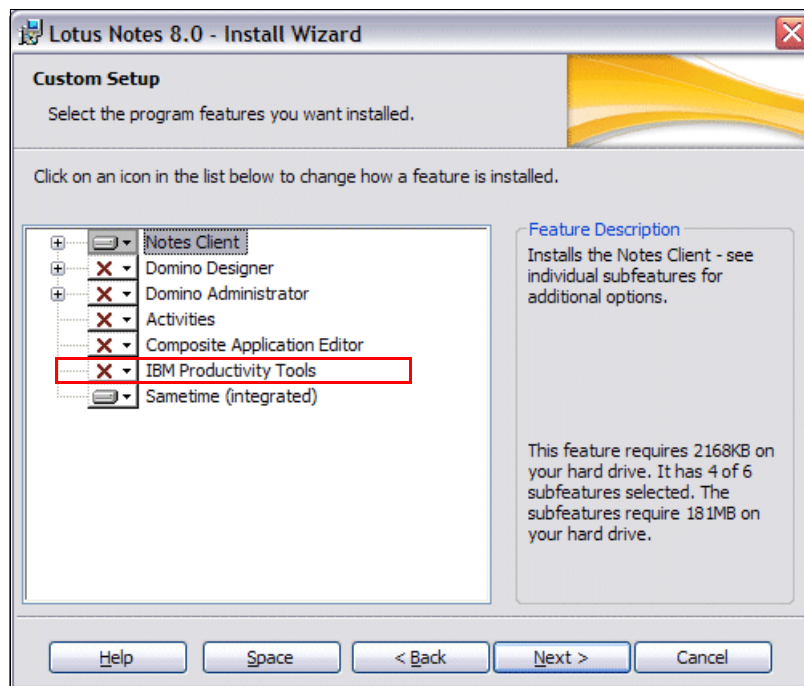


Figure 7-2 Custom Setup options during Lotus Notes 8 installation

**Tip:** The default home page in Lotus Notes 8 includes links to create new spreadsheets, documents, and presentations. If you do not install IBM productivity tools during Notes 8 installation, those links will still be on the home page, although they will be inactive. Nothing will happen if they are clicked. Because of this, you may wish to deploy a customized home page to your users if you choose not to deploy IBM productivity tools.

In addition to being available directly from within Notes, selecting IBM productivity tools during Notes 8 installation places three additional icons on the desktop to allow direct access to the productivity tools. Using one of these icons while Notes is not running launches the productivity tools in stand-alone mode, which does not provide full access to Notes.



**Note:** If installed, IBM productivity tools can be used with the basic configuration of Notes 8. Using any of the home page links from the basic configuration to create a new productivity tools document launches the productivity tools separately. If file association preferences have been set as described in 7.2.2 “Productivity tools preferences” on page 203, those file associations are honored by the basic configuration. For example, if .doc files have been associated with the productivity tools, opening an attachment with a .doc file extension will launch the productivity tools.

## 7.2.2 Productivity tools preferences

There are many preferences available for users to customize their interaction with Lotus Productivity Tools. Because the productivity tools are a Notes installation option, the preferences for them are housed with the rest of the Notes preferences.

Some highlights of the preferences are listed in Table 7-1.

Table 7-1 Selected preferences for productivity tools

Category	Setting	Comments	Default
<b>Productivity tools</b>			
	Preload options: <ul style="list-style-type: none"> <li>▶ Launch IBM productivity tools in the background when the operating system starts.</li> <li>▶ Launch IBM productivity tools in the background when this client starts.</li> <li>▶ Do not preload productivity tools.</li> </ul>	Allows you to set productivity tools to load in the background when starting the operating system or the Notes client. This may save time when first starting to use the productivity tools during a session, because the tools will already be in memory when invoked. Note that when IBM productivity tools is launched, a separate executable, soffice.exe, appears in the task list.	Launch IBM productivity tools in the background when the operating system starts.
<b>File associations</b>			
	Open MS Office files with the productivity tools.	Associates specified MS Office document extensions with the productivity tools.	Disabled.
	Open MS Office templates with the productivity tools.	Associates specified MS Office template extensions with the productivity tools.	Disabled.
	Open Smartsuite files with the productivity tools.	Associates specified SmartSuite document extensions with the productivity tools.	Disabled.
	Open SmartSuite templates with the productivity tools.	Associates specified SmartSuite template extensions with the productivity tools.	Disabled.
<b>File supervision</b>			
	Automatic save.	Defines whether auto-save is enabled for document editors, and the time interval between automatic saves.	Enabled, every 10 minutes.
	Recent files.	Defines how many files are displayed in the file list. Recent files are accessed by clicking File → Recent Files.	Enabled, 5 Files.
<b>Memory</b>			
	Undo.	Defines the maximum number of undo steps allowed, between 1 and 100.	20.

Category	Setting	Comments	Default
	Total Cache Size.	Defines total cache size for all graphic objects.	9 MB.
	Maximum per Object.	Defines maximum size for any one graphic object in memory.	2.4 MB.
	Remove from memory after.	Specifies the amount of time graphics should be kept in memory, in hours and minutes.	10 minutes.
	Maximum number of objects.		20.

**Tip:** File associations can be managed via policies. For more information about using policies to manage file associations, see 7.2.3 “Using policies to manage Lotus Productivity Tools” on page 205.

**Note:** IBM productivity tools loads an additional executable called soffice.exe into memory. The Preload Options preference listed in table Table 7-1 determines when this executable is loaded.

Many other preferences are available to allow users to customize their interaction with Lotus Productivity Tools. Figure 7-3 shows the productivity tools preferences in the Preferences dialog, accessed by choosing **File** → **Preferences** from within your Lotus Notes 8 client.

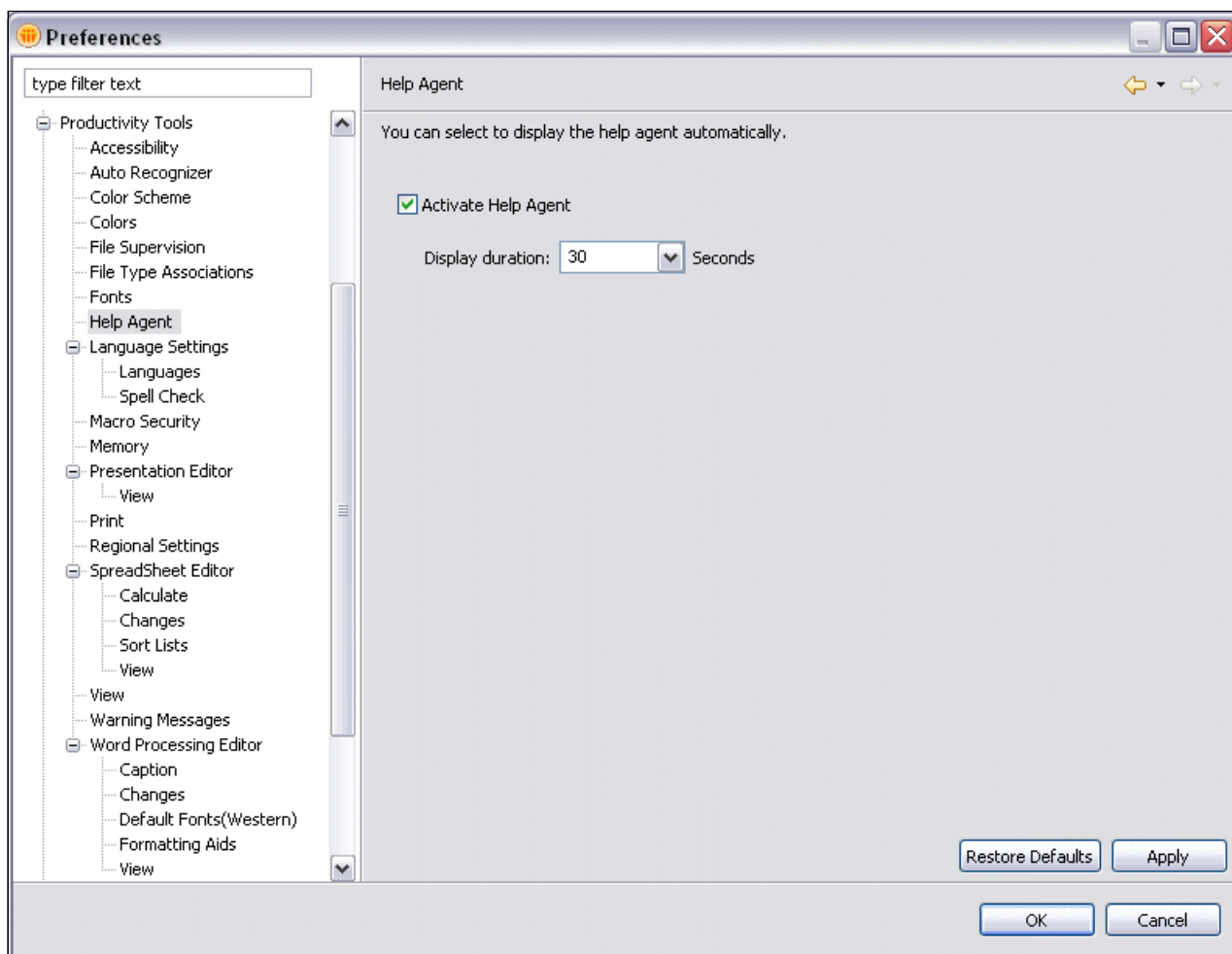


Figure 7-3 Preferences for Lotus Productivity Tools

These preferences are discussed at length in the help system. To access the help system, choose **Help** → **Help Contents** from within your Lotus Notes 8 client.

### 7.2.3 Using policies to manage Lotus Productivity Tools

A new policy is available in Domino 8 to help manage use of IBM Lotus Productivity Tools. With the new settings document, you can manage:

- ▶ Access to productivity tools
- ▶ File associations for productivity tools
- ▶ Access to run macros within productivity tools

Figure 7-4 shows the policy settings document, which allows administrators to control the usage of productivity tools for their organization.

<div> <div>Basics</div> <div>Comments</div> <div>Administration</div> </div>				
<div>Basics</div>				
Name:		ProdTools		
Description:				
Productivity Tools		How to apply this setting:	Inherit from parent policy:	Enforce in child policies:
Allow users to run macros in IBM productivity tools:	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Allow IBM productivity tools:	<input type="checkbox"/> Yes	Set value and prevent changes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Open MS Office files with IBM productivity tools:	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.doc	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.ppt	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.xls	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.rtf	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Open MS Office templates with IBM productivity tools:	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.dot	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.pot	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.xlt	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Open SmartSuite files with IBM productivity tools:	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.lw3	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.123	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.prz	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Open SmartSuite templates with IBM productivity tools:	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.mwp	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.12m	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.mas	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
.smc	<input type="checkbox"/> Yes	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce

Figure 7-4 Policy settings document for Lotus Productivity Tools

Table 7-2 Policy settings available for managing Lotus Productivity Tools

Field	Action
Allow user to run macros.	Click <b>Yes</b> to allow the rich client users to run macros in the IBM Word document, spreadsheet, and presentation editors.
Allow IBM productivity tools.	Click <b>Yes</b> to allow users to use the Word document, spreadsheet, and presentation editors.
Open MS Office templates with IBM productivity tools.	Click <b>Yes</b> and then choose the MS Office templates that you want to open with IBM productivity tools.
Open SmartSuite files with IBM productivity tools.	Click <b>Yes</b> and then choose the SmartSuite file types to open with IBM productivity tools.

For more information about the use of policies with IBM Lotus Productivity Tools, refer to Lotus Domino Administrator 8 Help.

## 7.3 Overview of IBM Lotus Productivity Tools

IBM Lotus Productivity tools are integrated into Lotus Notes 8, so getting started with the productivity tools is easy. You can create a new document, spreadsheet, or presentation directly from the Open menu or from the Home page, as show in Figure 7-5.

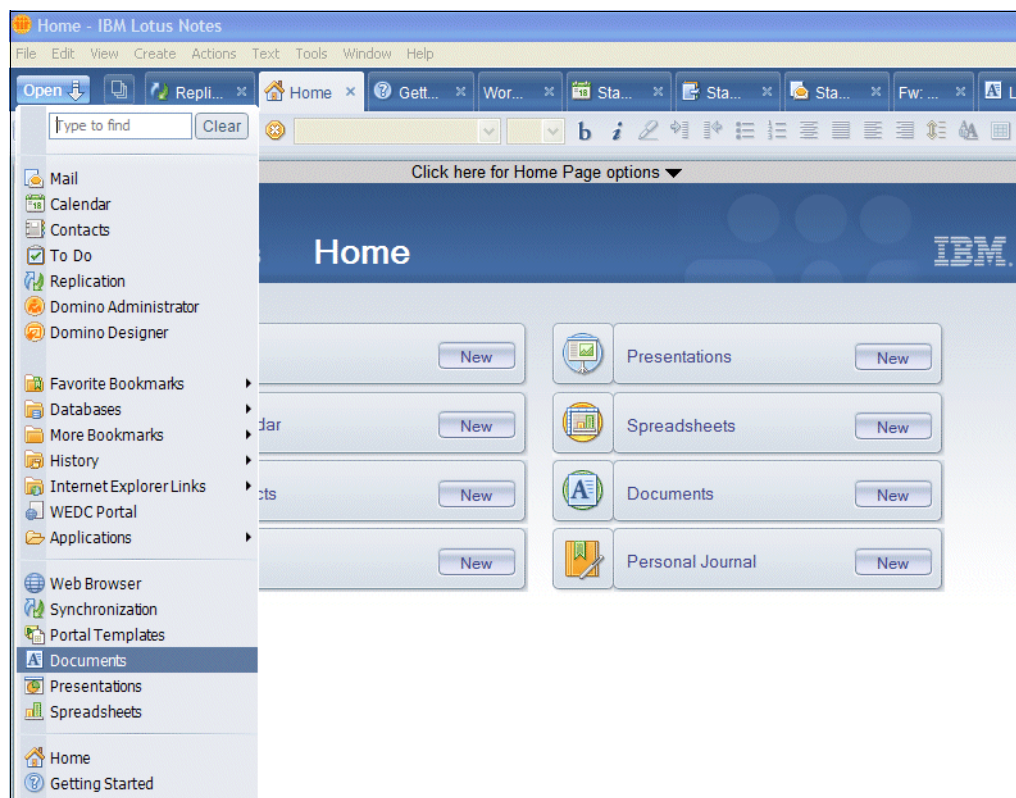


Figure 7-5 Creating a new document from the Open menu or the Home page

To open and edit an existing document, from the File menu, simply choose **Open** → **File**, as shown in Figure 7-6, to get to the Open file dialog, shown in Figure 7-7 on page 208. From here, you can navigate to the file location and open a document in any supported format.

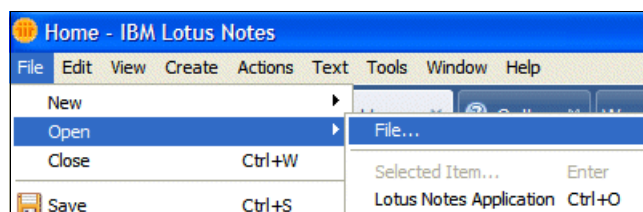


Figure 7-6 Opening an existing file in Lotus Documents

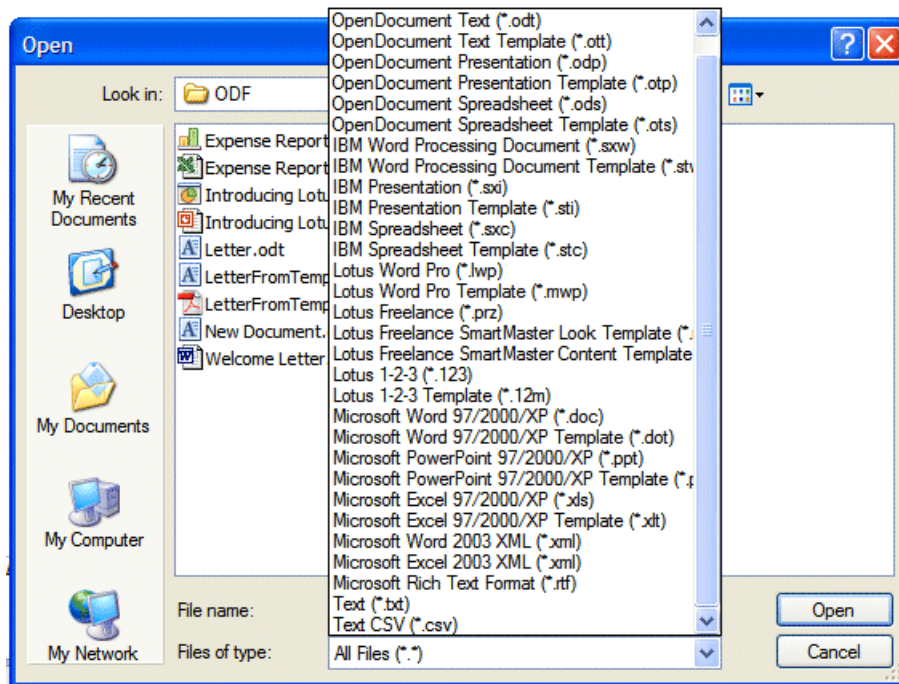


Figure 7-7 The Open file dialog

### 7.3.1 IBM Lotus Documents

With IBM Lotus Documents, your workforce cannot only create simple documents like memos and letters, it can also create highly structured documents that include graphics, tables, charts, and spreadsheets. A number of features give you a fine degree of control over the formatting of text, pages, sections of documents, and entire documents. You can even create complex documents that include bibliographies, reference tables, and indexes. Finally, you can save the documents in a variety of formats.

Also, the Lotus Documents drawing tool lets you create drawings, graphics, legends, and other types of drawings directly in your documents. You can insert graphics in JPG or GIF format into a document, and edit them directly with the image editor. In addition, the gallery provides a collection of graphics organized by theme.



Figure 7-8 shows a memo created from a template, which includes graphics, a table, and some rich text formatting, demonstrating the power of IBM Lotus Documents.

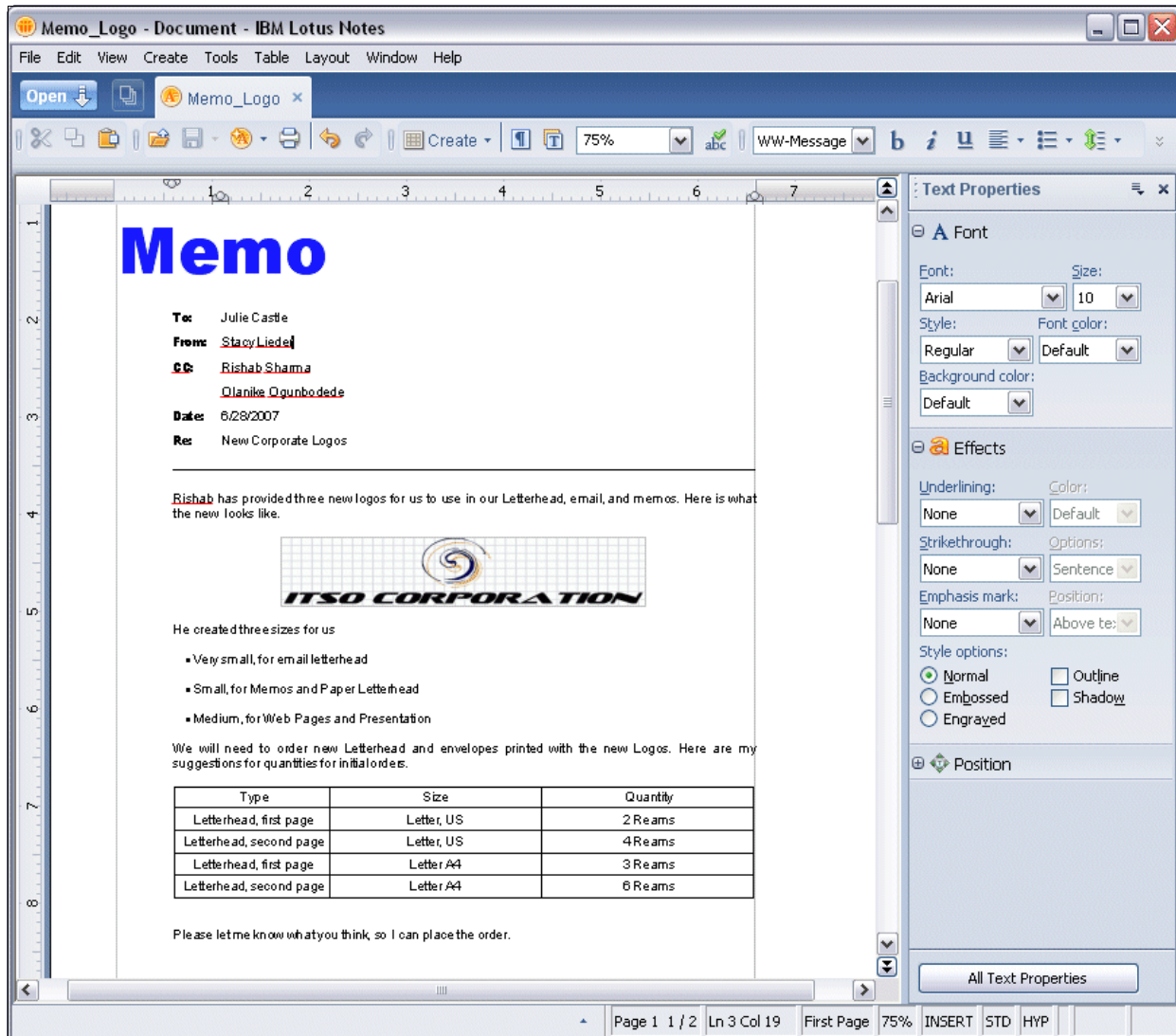


Figure 7-8 Document with logo, table, and formatting in IBM Lotus Documents

## Supported formats

IBM Lotus Documents can work with documents in the following formats:

- ▶ OpenDocument Text (.odt)
- ▶ OpenDocument Text Template (.ott)
- ▶ IBM Word Processing Document (.sxw)
- ▶ IBM Word Processing Document Template (.stw)
- ▶ Microsoft Word 97/2000/XP Document (.doc)
- ▶ Microsoft Word 97/2000/XP Document Template (.dot)
- ▶ Lotus Word Pro® document (.lwp)
- ▶ Lotus Word Pro template (.mwp)
- ▶ Microsoft Rich Text Format (.rtf)
- ▶ Text (.txt)
- ▶ Microsoft Word 2003 (.xml) — open only; must be saved in another format after editing

Additionally, IBM Lotus Documents can export documents in Portable Document Format (PDF).

## 7.3.2 IBM Lotus Spreadsheets

IBM Lotus Spreadsheets is a spreadsheet application that you can use to calculate, analyze, and manage your data. You can also use it to import and modify Microsoft Excel® spreadsheets. You can even use formulas and generate charts to make your data more clear.

Figure 7-9 shows a spreadsheet, including calculations and a chart.

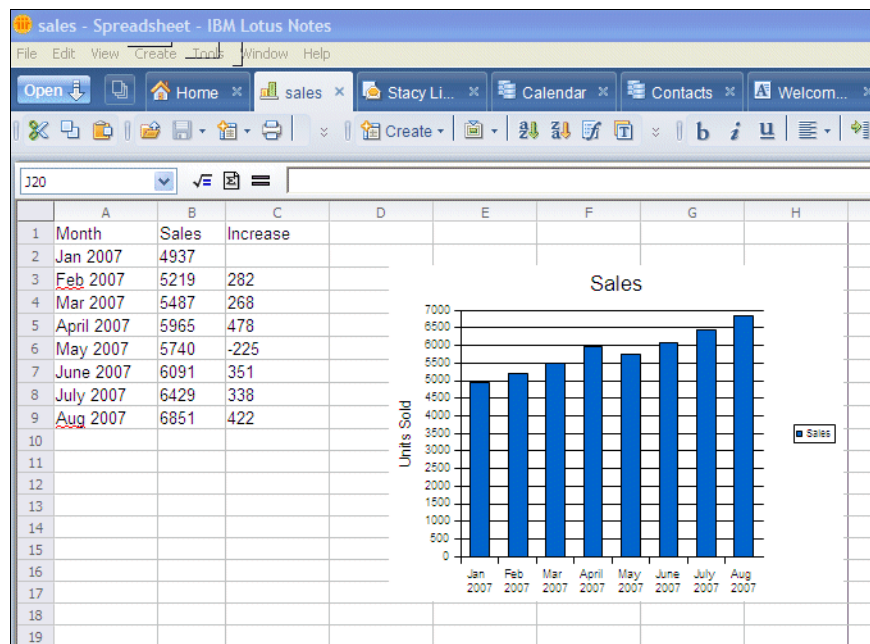


Figure 7-9 Spreadsheet with chart in IBM Lotus Spreadsheets

For more information about the features available to you in IBM Lotus Spreadsheets, see the Productivity Tools User Guide, available on IBM developerWorks in the Lotus section.

For information about performing calculations and creating charts, access the help system in Lotus Notes 8 by choosing **Help** → **Help Contents**.

### Supported formats

IBM Lotus Spreadsheets can work with documents in the following formats:

- ▶ OpenDocument Spreadsheet (.ods)
- ▶ OpenDocument Spreadsheet Template (.ots)
- ▶ IBM Spreadsheet (.sxc)
- ▶ IBM Spreadsheet Template (.stc)
- ▶ Microsoft Word 97/2000/XP Spreadsheet (.xls)
- ▶ Microsoft Word 97/2000/XP Spreadsheet Template (.xlt)
- ▶ Comma-Separated Text (.csv)
- ▶ Microsoft Excel 2003 (.xml) — open only; must be saved in another format after editing

Additionally, IBM Lotus Spreadsheets can export documents in Portable Document Format.



### 7.3.3 IBM Lotus Presentations

IBM Lotus Presentations lets you create professional slide shows that can include charts, drawing objects, text, multimedia, and a variety of other items. Templates are included to help you create professional-looking slides. You can use data and chart objects from Lotus Spreadsheets, and you can also assign dynamic effects to your slides, including animation and transition effects. When you have finished creating your presentation, you can run it as a screenshow, print your presentation as handouts, or publish it to the Web as HTML documents.

Figure 7-10 shows a presentation created from one of the included templates. The chart in the middle was generated by Lotus Spreadsheets and pasted into the presentation as a spreadsheet object.



Figure 7-10 Presentation created from template with chart from Lotus Spreadsheets

For more information about the features available to you in IBM Lotus Presentations, see the IBM Lotus Productivity Tools User Guide, available at:

[http://www.ibm.com/developerworks/lotus/documentation/notes/index.html?S\\_TACT=105A GX13&S\\_CMP=LPLLOTUS](http://www.ibm.com/developerworks/lotus/documentation/notes/index.html?S_TACT=105A GX13&S_CMP=LPLLOTUS)

For information about using templates and creating animations, access the help system in Lotus Notes 8 by choosing **Help** → **Help Contents**.

## Supported formats

IBM Lotus Presentations can open, edit, and save documents in the following formats:

- ▶ OpenDocument Presentation (.odp)
- ▶ OpenDocument Presentation Template (.otp)
- ▶ IBM Presentation (.sxi)
- ▶ IBM Presentation Template (.sti)
- ▶ Microsoft Word 97/2000/XP Presentation (.ppt)
- ▶ Microsoft Word 97/2000/XP Presentation Template (.pot)

Additionally, Lotus Presentations can open documents in the following formats, but, if edited, they must be saved in one of the formats listed above.

- ▶ Lotus Freelance Presentation (.prz)
- ▶ Lotus Freelance Presentation SmartMaster Look Template (.mas)
- ▶ Lotus Freelance Presentation SmartMaster Content Template (.smc)

Additionally, Lotus Presentations can export documents in Portable Document Format.

## 7.4 IBM Lotus Productivity Tools Toolkit

Lotus Productivity Tools wraps productivity tool applications as Eclipse components to provide rich a document-editor service to Lotus Notes 8.

The toolkit provides two sets of Java APIs for developer use:

- ▶ Control API

The control API lets users integrate the rich functionalities of Lotus Productivity Tools into Lotus Notes 8 and the Lotus Expeditor platform as an Eclipse SWT control. For example, you can build a rich client application to open, view, edit, and save Microsoft Office documents, SmartSuite documents, and ODF documents.

- ▶ DOM API

You can use the DOM API, which is based on W3C standards, to access and manipulate the content and styles of rich documents. The structure of the document is a sub-set of the ODF specification.

With these Java API interfaces, users can build business components that include the rich functionalities of Lotus Productivity Tools.

**Note:** In 8.0, the functionality of the API Toolkit will be limited to word processing documents. Toolkit support for presentation and spreadsheet functions will be included in a later release.

### 7.4.1 Getting started with the IBM Lotus Productivity Tools API Toolkit

When you install the API Toolkit, you will also get some good references and sample code to help get you started.

These items are included in the API Toolkit installation package:

- ▶ HTML reference for all classes in the toolkit
- ▶ IBM Lotus Productivity Tools Application Development Guide (PDF)
- ▶ Sample code to help you get started

## 7.4.2 Samples included with the API Toolkit

To help you get started with the IBM productivity tools API Toolkit, several samples for Lotus Productivity Tools are supplied in the toolkit. The samples are designed to show the use of the Lotus Productivity Tools in Notes 8. Once you have installed or deployed the samples, they are visible in the target platform.

### Simple Editor

This sample demonstrates how to create a simple editor. It has two kinds of menus. The MyEditor menu includes some simple editor functions, such as copy, paste, undo, and redo. The MyFile menu has the options to open, save, and print items. These menus are added in two ways. The first way adds MyEditor1 and MyFile1 by actionSet with extension points. The second way adds MyEditor2 and MyFile2 by MenuSet with control API.

### DOM tree viewer

This sample demonstrates the DOM tree view. This view shows the entire document as a tree. Each element in the text is a tree node, with its parent node, sibling nodes, and descendant nodes. The detailed information of the node, such as name, type, value, and attributes are displayed on the right of the view.

### DOM field

This sample demonstrates how to operate user field elements in a document. It loads a notice template that has some user fields in it, such as title, date, text, attachment, key words, collation, and so on. The view uses APIs to access each user field with its name and sets the proper content in it, and a new notice is completed. There are five buttons with labels and icons on the view that perform the actions:

- ▶ Insert a new date field element.
- ▶ Edit the user fields in the document.
- ▶ Remove the newly created date fields.
- ▶ Print the current view with printer after content setting.
- ▶ Save the view as another file.

### DOM table

This sample demonstrates how to operate table elements in a document. It loads a cargo transporting sheet template that has three tables. One is a cargo arrangement table. The other two are header and footer, with some relational information in them. The view uses API to access each item in tables with the name of table cell, sets the proper content in the cell, and then a new cargo transporting sheet is completed. There are four buttons with labels and icon on the view which that these actions:

- ▶ Edit the already existing table.
- ▶ Create and insert a newly created footer table.
- ▶ Remove the newly created footer table.
- ▶ Print the current view with printer after content setting.
- ▶ UNO API.

This sample demonstrates how to manipulate text fields in rich documents with UNOAPI. The view opens an empty word processing document with three buttons in the upper-left toolbar area. Datetime and User fields will be created and inserted into this document by clicking these buttons in sequence.

### **Auto recognizer**

This sample demonstrates how to develop C2A applications based on Lotus Productivity Tools. Two keywords are predefined in the sample recognizer: PropertyBroker and AutoRecognizer. The AutoRecognizer engine calls the detector to check whether there are such keywords found. When users click the context menu for recognized tags, a message box is opened.

### **Composite application**

This sample instructs the user to create a new composite application and edit this composite application with the Notes CAE tool. One feature and two plug-ins are provided by this sample.



## Domino Web Access

Domino Web Access is a Web client that delivers leading Domino messaging, collaboration, and personal information management (PIM) capabilities to Web browsers. Browser users can take full advantage of Domino services through an ultra-intuitive, easy-to-use interface, both online and offline, seamlessly.

Domino Web Access provides the browser users with a number of features that were previously only available for users of non-browser clients, such as the Lotus Notes client. These features are in the area of messaging, calendar and scheduling, personal information management, and personal journals.

This chapter discusses the new and improved features in the IBM Lotus Domino Web Access 8 client, the Web client alternative to the Lotus Notes client. Specifically, we discuss:

- ▶ New features of IBM Lotus Domino Web Access 8
- ▶ Changes for instant messaging
- ▶ Deploying IBM Domino Web Access 8
- ▶ Domino Web Access and WebSphere Portal
- ▶ RSS feeds for Domino Web Access
- ▶ NOTES.INI parameters specific to Domino Web Access 8

## 8.1 New features of IBM Lotus Domino Web Access 8

The following list is an overview of what is new in Domino Web Access 8:

- ▶ Domino Administrators can now enable Domino Web Access security settings via policies using a security policy settings document. For additional information, see the release note "Using Security Policy Settings."
- ▶ Domino Web Access has a new look and feel, allowing the color scheme to best fit in WebSphere Portal when the URL includes the "&client=wps" argument.
- ▶ There is an added support and integration of LanguageWare libraries and dictionaries, which provides spell check dictionary support for German Reform language, along with a multi-threaded server spell check engine for Domino Web Access.
- ▶ New integrated instant contact list manger interface and refresh of awareness icons.
- ▶ More feature parity with Notes mail client — Feature interoperability enhancements including support for preview pane, calendar view filters, preferred rooms and resources, and managed mail and calendar.
- ▶ Support for RSS feed-enabling of Notes databases. See "Enable RSS feeds for mail Inbox" in these release notes for additional information.

### 8.1.1 User interface

The Lotus Domino Web Access 8 interface has been updated with an interface similar to the Lotus Notes 8 client. In fact, the default mail template (MAIL8.NTF) for Lotus Notes 8 also provides support for Domino Web Access 8. The fonts, color scheme, and icons are also more consistent with WebSphere Portal software. See Figure 8-2 on page 218.

**Note:** Previous beta releases included a DWA8.NTF template. This template is no longer shipped with Domino.

The welcome page shown in Figure 8-1 has undergone very minimal changes from the Domino Web Access 7 Welcome page.

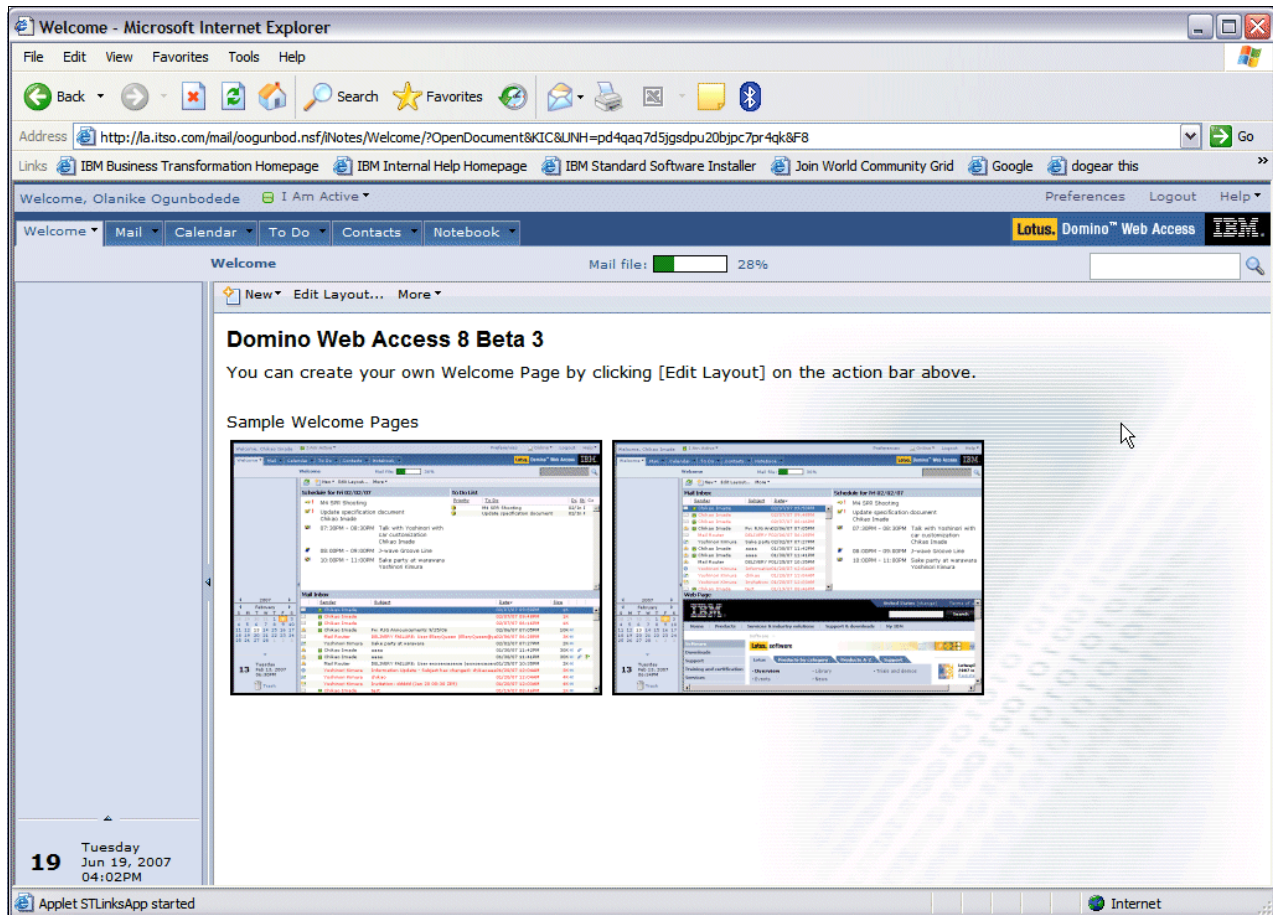


Figure 8-1 Domino Web Access 8 Welcome page

## 8.1.2 Mail enhancement

In Domino Web Access 8, your mail action bar now has similar action buttons to what is available in Notes 8 client (Figure 8-2). This gives you more options and flexibility when it comes to managing your mail file. Also new in Domino Web Access 8 is the ability to open another user's mail file directly from the inbox without having to first create a shortcut to, or knowing the URL of, the user's mail file. To open another user's mail file when there is no shortcut, Open the **Mail** tab and from the navigator click **Open Mail for** (Figure 8-2).

**Note:** Even though you have access to another user's mail file, you cannot read encrypted mail that he receives, and you cannot send signed or encrypted messages on his behalf.

Lotus Domino Web Access 8 offers a new preview pane that lets you preview the text of your e-mail messages as you scan through your inbox. As with Lotus Notes 8, you can choose to display the preview pane horizontally, vertically, or not at all. See Figure 8-2.

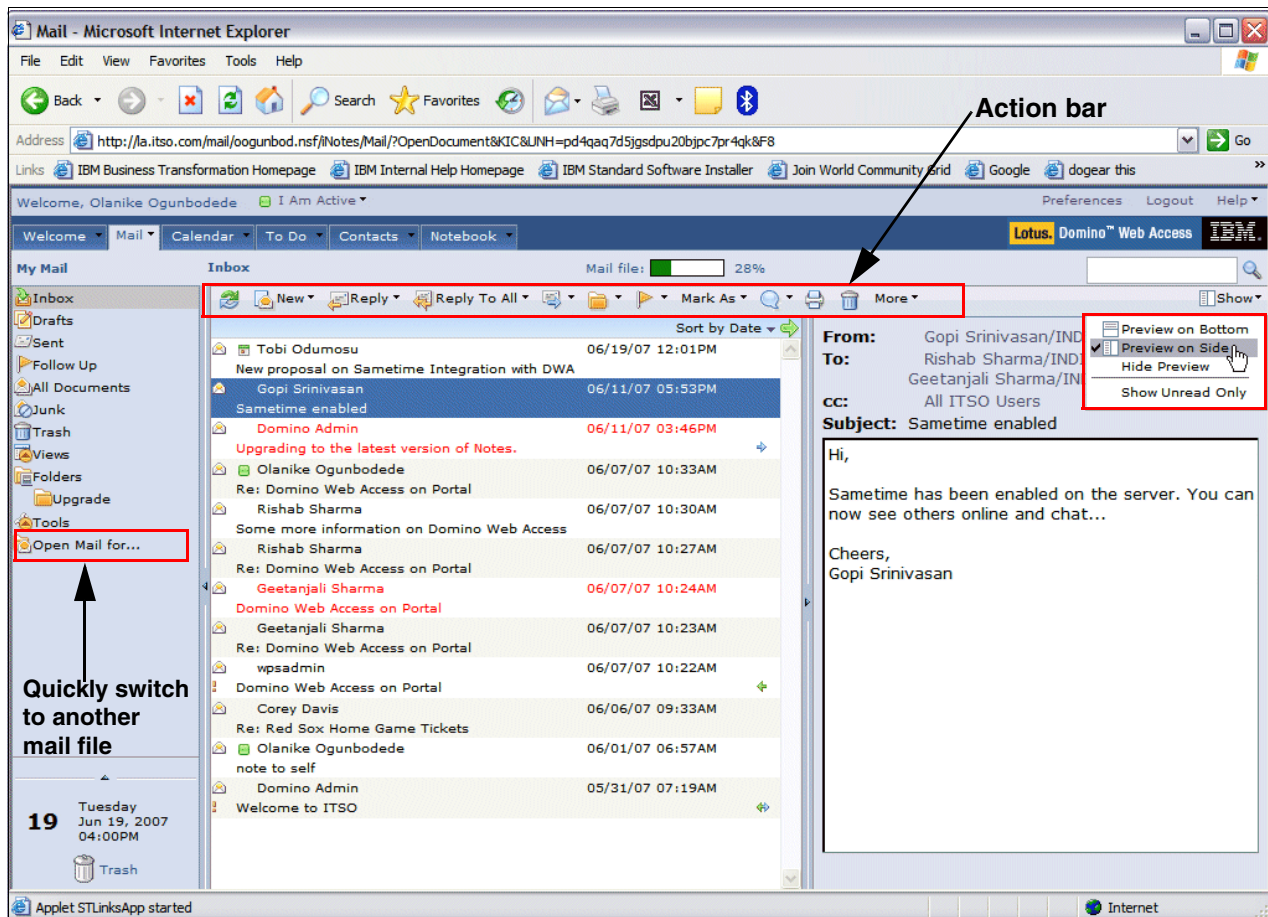


Figure 8-2 Preview pane in Domino Web Access 8



Domino Web Access 8 gives you the ability to customize the mail header to change what is displayed in the form when you create a new message. An example is shown in Figure 8-3.

The screenshot shows the 'New' message form in Domino Web Access 8. The form has a menu bar at the top with options: New, Send, Send & File..., Save As Draft, Delivery Options..., Format, Display, and More. Below the menu bar, there are three text input fields: 'To:' with the value 'Grace Abi/USA/ITSO@ITSO', 'CC:', and 'Subject:' with the value 'New in DWA 8'. To the right of the 'To:' field, there is a red rectangular box containing a list of options: 'Bcc', 'Additional Mail Options', and 'Sender Information'. Below the input fields, there is a rich text editor toolbar with various icons for text formatting (bold, italic, underline, link, unlink, list, indent, outdent, text color, background color) and other functions (undo, redo, print, insert image, insert link, insert table, insert signature, insert attachment). The main body of the form is a large empty text area. At the bottom of the form, there is a section labeled 'Attachments' with a dropdown arrow.

Figure 8-3 Customized mail header

Domino Web Access 8 supports the enhanced out-of-office capabilities of Lotus Domino 8 outlined in 9.2, “Out of Office router service” on page 242. The user interface for the out of office has also been enhanced. A summary of the out-of-office configuration is displayed on top of the panel. A new option to append return date to subject has also been included, which lets the recipient know the return date without opening the message. See Figure 8-4.

New Save & Close

**Out of Office agent will be enabled**  
**Alternate Notification:**No one will receive an alternate notification  
**Exclusions:** You have specified no exclusions

Dates Standard Notification **Alternate Notification** Exclusions

Specify the contents for the out-of-office notification.

To: Whomever  
Subject: Grace Abi is out of the office  
(returning Thu 06/21/2007)  
☒ Append return date to Subject

Body: I am out of the office from Wed 06/20/2007 until Thu 06/21/2007.  
Additional body text:

Reset Defaults

Figure 8-4 Out-of-office configuration

In addition, Domino Web Access 8 gives you the ability to publish your inbox through an RSS or Atom feed by clicking an icon. This can give you the flexibility to view your mail using other client software when you are away from your usual work environment or to easily allow access to shared mail boxes. See the Domino Web Access Help topic “Use RSS Feeds for Your Mail Inbox” for more information.

### 8.1.3 Calendar enhancement

New calendar features in Domino Web Access 8 include calendar filters, preferred rooms and resources, and improved delegation capabilities.

Calendar filters give you the option to display only certain kinds of entries at one time. For example, you can choose to display your calendar entries by chairperson, by type (meetings, appointments, reminders, events, private entries), or by invitee status (confirmed or tentatively accepted). To do so, click **Show** in the top right-hand corner of the calendar, select **Filter by**, and click a filtering option.

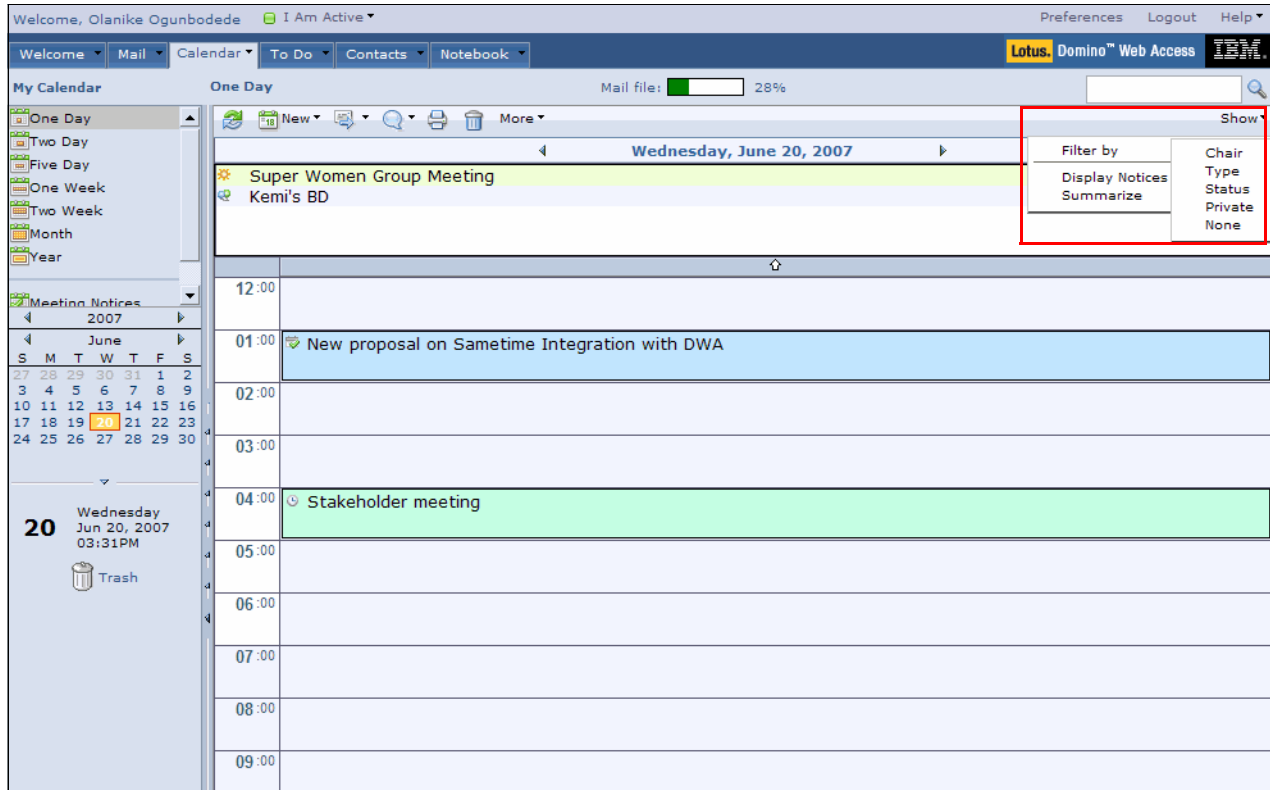


Figure 8-5 Option to filter Calendar view

Through your Lotus Domino Web Access 8 calendar preferences, you can set up a default site and one or more default rooms and resources that display when you schedule meetings (Figure 8-6).

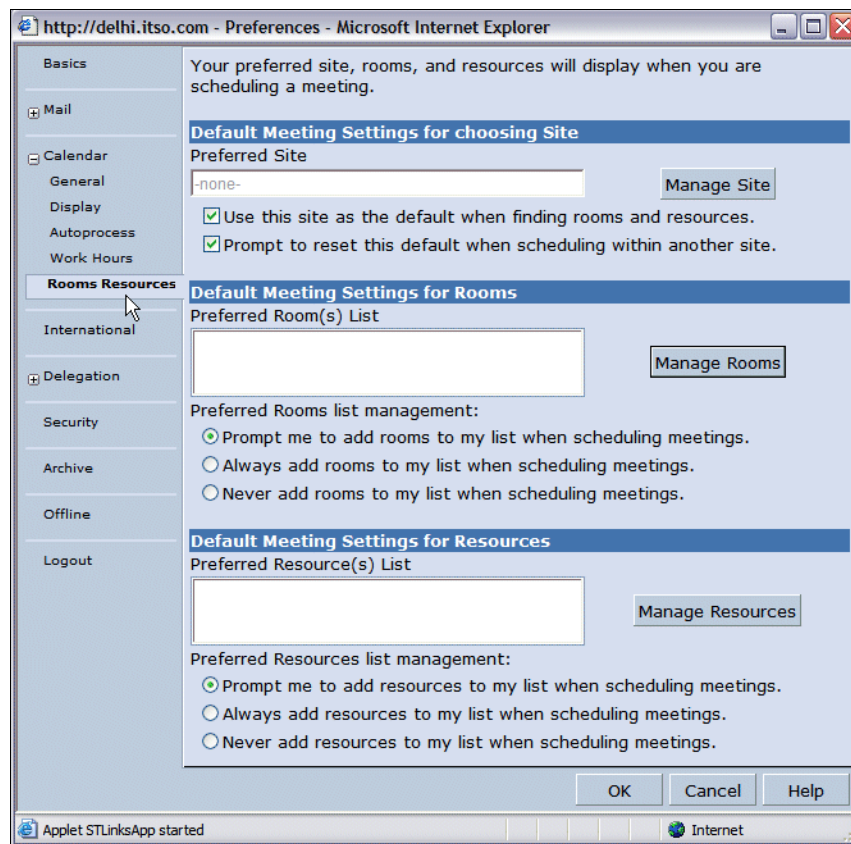


Figure 8-6 Set the default site or a default room and resource list

If you manage other people's calendars, you can easily access their calendars from within your own calendar. To do this, click **Calendar** → **Open Calendar for Another Person** and enter the person's name in the Select whose calendar to open field. An example is shown in Figure 8-7.

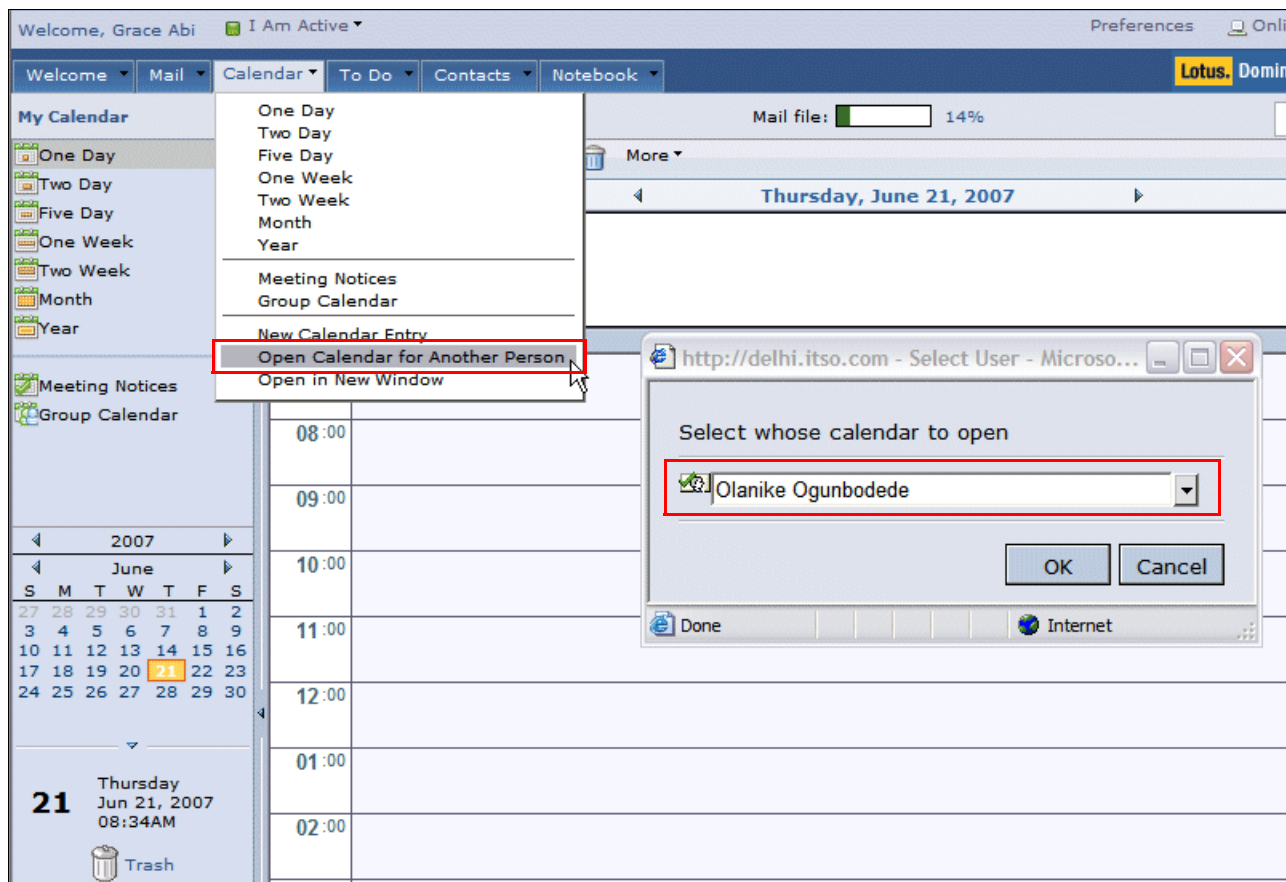


Figure 8-7 Open calendar for another person

## 8.1.4 PIM enhancement

You may choose to use Lotus Notes 8 in the office but access your mail from a Web browser from home or when traveling. Lotus Domino Web Access 8 offers two features to easily keep your work in sync.

When you update the password in the Lotus Notes ID that is embedded in your mail file, Lotus Domino Web Access 8 automatically updates the Internet password. This management feature can help reduce the administrative burden of managing passwords. To use this feature, you need to implement an organizational or explicit policy to synchronize users' Internet passwords with their Notes passwords.

Figure 8-8 shows the Security tab of a user with an embedded Notes ID, but no security policy to synchronize the internet password with the Notes ID password. You would notice that there are two different places to change the passwords. In Figure 8-9, there is only one place to change the password. Although the dialog you get as a result of the clicking the **Change** button is requesting the Notes ID password, the internet password would be automatically updated with the new Notes ID password.

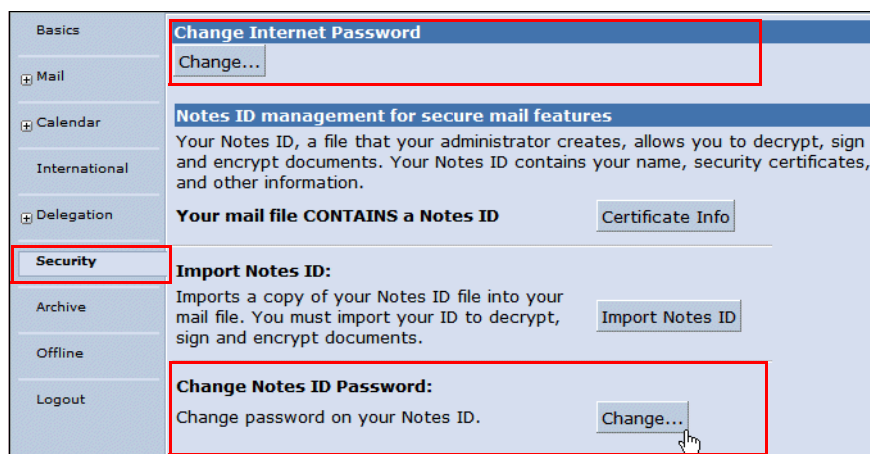


Figure 8-8 Two different places to change internet and Notes ID password

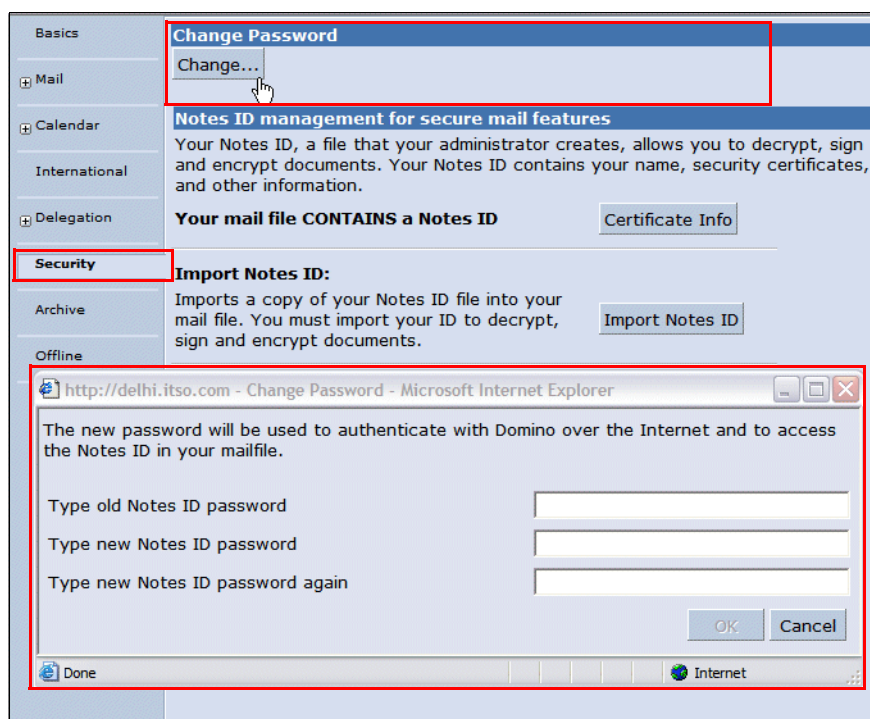


Figure 8-9 One place (Change Password section) to change both Internet and Notes ID passwords

To set up a security settings policy to synchronize the internet password with the Notes ID password, see the Lotus Software Knowledge Base Document "How to Synchronize Notes and Internet Password with Policy Documents in Notes Domino 6":

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21110671>

**Note:** For more on policy, refer to the Domino Administrator Help.

In Domino Web Access 8, the mail file is automatically synchronized with changes to your Notes 8 mail file and your business contacts in the Notes 8 Contacts database. You no longer need to run the Synchronize Address Book agent. See 6.5.4, “Synchronize contacts with Domino Web Access” on page 158, for more information about how to set up automatic synchronization between Domino Web Access 8 and Notes 8 Contacts.

## 8.2 Changes for instant messaging

The integrated instant messaging capabilities of Domino Web Access have been enhanced in Version 8. This section discusses the enhancements in instant messaging.

You can now work in your mail file without being online and available to other users for chats. The option to log off instant messaging is now conveniently listed in the Instant Messaging drop-down list. See Figure 8-10. Also new in the drop-down list is the ability to change your status to In A Meeting, and your inbox would now properly display the icon for that status.

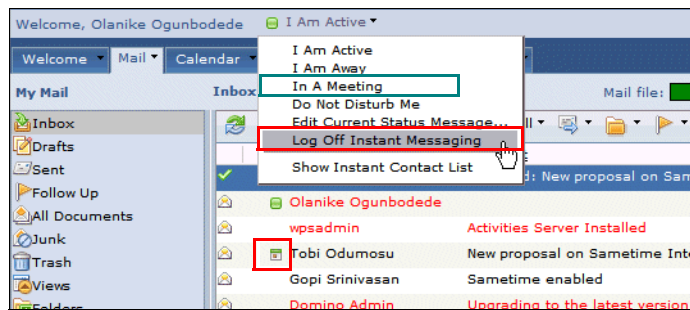


Figure 8-10 Additional options added to the Instant Messaging drop-down list

Awareness icons are automatically refreshed in the Domino Web Access views.

Domino Web Access 8 has its own Instant Contact list (shown in Figure 8-11) to replace the Sametime Connect for browsers, which was used in Version 7.

**Note:** By default, the Sametime 7.5 server no longer ships with a version of the Sametime connect for browser (also known as the Java Connect Client). Version 7.0 Connect for browsers can be deployed on a Sametime 7.5 server as a workaround. See the Lotus Software Knowledge Base Document *Deploying Sametime 7.0 Connect for browsers on a Sametime 7.5 server* for more information:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21243158>

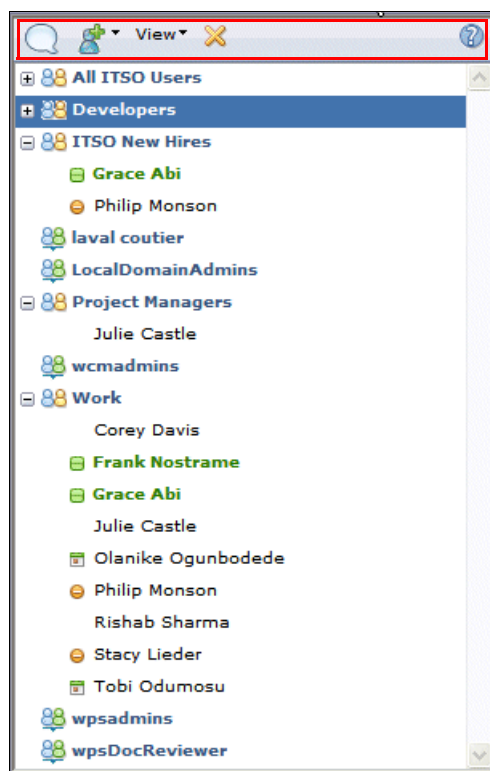


Figure 8-11 Domino Web Access 8 Contact list

If you are already using the Sametime Connect Client for desktop, Sametime Connect Client for browsers, or Notes Instant Messaging Client, you already have an instant contact list store on the Sametime server. Domino Web Access 8 pulls the instant contact list from the Sametime server and stores it back on the Sametime server, making your contact list available for you regardless of your client.

**Note:** If you are using Domino Web Access 6.5.x and your instant contact list is stored in your mail file, you can send your contact list to the Sametime server before your mail file is upgraded to Domino Web Access 8.

**Tip:** The instant messaging contact lists are stored in the `vpuserinfo.nsf` database on the Sametime server.



The Domino Web Access 8 instant contact list also allows you how to customize how your Instant contact list is displayed, giving you the option to show only online users, only short names for users, or have the names sorted alphabetically. See Figure 8-12.

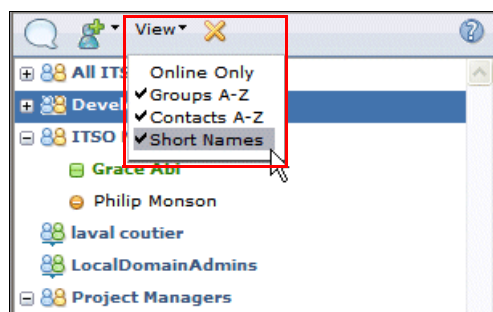


Figure 8-12 Customize instant contact list display

## 8.3 Deploying IBM Domino Web Access 8

In this section we discuss deploying IBM Domino Web Access 8.

### 8.3.1 Systems requirements

Note that these requirements are often updated with additional support for future versions of browsers and operating systems. Always refer to the Release Notes for the most up-to-date information.

#### Client hardware requirements

The client hardware requirements are:

- ▶ Recommended for better performance:
  - Windows - Pentium IV 1 GHz with 512 MB of memory
  - Linux - Pentium IV 1 GHz with 512 MB of memory
  - Macintosh - G4 1.25 GHz with 512 MB of memory
- ▶ Minimum requirements:
  - Windows - Pentium III 400 MHz with 128 MB of memory
  - Linux - Pentium III 500 MHz with 192 MB of memory
  - Macintosh - G4 1 GHz 256 MB of memory

#### Client operating systems and supported browsers

Domino Web Access runs on the following client operating systems:

- ▶ Windows XP and Vista using the following browsers:
  - Internet Explorer 6 and 7
  - Mozilla Firefox 2.0 or later
- ▶ Novell Linux Desktop (NLD) 10 using Mozilla Firefox 2.0 or later
- ▶ Linux RedHat RHEL 5.0 using Mozilla Firefox 2.0 or later
- ▶ Macintosh OS 10.4.x using Mozilla Firefox 2.0 or later

**Note:** Mozilla Firefox 2.0 or later on the Linux platform does not support Domino Off-Line Services (DOLS), local archiving, or Lotus Sametime awareness.

## Server requirements

See "Notes 8 and Domino 8 Beta platforms and system requirements" in the Release Notes for a complete list of server operating systems and requirements.

## Certified proxy servers

Certified proxy servers are:

- ▶ SunOne Portal Server 6.2
- ▶ IBM WebSphere Edge Server 2.0.2 efix 49
- ▶ Tivoli Access Manager 5.1

## Adobe Acrobat

Use Adobe® Acrobat® Reader Version 4.0 or later to print calendars.

**Important:** Mozilla Firefox is supported by the Domino Web Access7 and Domino Web Access 8 mail templates only. It is not supported by iNotes6 templates.

Attempting to access Domino Web Access through unsupported browsers results in the display of an unsupported browser notice. Netscape 4.x users may see hangs or crashes when encountering the Domino Web Access unsupported browser page. If you are a Netscape 4.x user and you encounter these problems, you should open your mail file using the WebMail UI directly through the &ui=webmail switch. This is documented in the topic Switching to WebMail in the Domino Web Access help.

Domino Web Access does not work if JavaScript is disabled or if session cookies are disabled.

## 8.3.2 Upgrading the Domino Web Access design

Use one of the following options to upgrade the Domino Web Access Web users templates:

- ▶ Mail Conversion Utility (issue **load convert** from the Domino Console).
- ▶ Select **File** → **Database** → **Replace Design** (from the Notes, Administrator, or Designer client).

To upgrade Domino Web Access users using the load convert utility, use the following syntax:

```
load convert [-r] [-u] filepath\filename OldDesignName NewTemplateName
```

[-r] recursively converts through subdirectories of the path you specify.

[-u] upgrades the design of the folders to the same design as \$inbox.

**Note:** Previous releases included a Domino Web Access mail template, for example, Domino Web Access 7 (DWA7.NTF). For this release, Domino Web Access uses the MAIL (R8) template (MAIL8.NTF).

Consider the following examples:

- ▶ The following command converts all users in the mail subdirectory from their current template to the Mail 8 template:

```
load convert mail/*.nsf * mail8.ntf
```

- To convert only Domino Web access users, use the following command:

```
load convert mail/*.nsf dwa7 mail8.ntf
```

This command skips databases not based on the DWA7.NTF (Domino Web Access 7) template.

- To convert all mail files to the Mail 8 template and convert the design of folders, use the following command:

```
load convert -u mail/*.nsf * mail8.ntf
```

- To create a list of mail files by reading people's mail files from the Domino directory, use the following command:

```
load convert -l <filename>
```

After this list is created, you can edit the list to include only the people you want to upgrade to a particular template. To read the list of databases from the text file and convert only those listed, use the following command:

```
load convert -u -f <filename> * mail8.ntf
```

[-f] reads the list of databases to process from a text file

**Important:** Use extreme caution when using a wildcard character (\*). A simple mistake such as forgetting to specify the mail directory will replace *all* your databases with the Domino Web Access template.

**Tip:** To easily view switches, descriptions, and some examples for the load convert utility, type `load convert -?` in the Domino Console.

## 8.4 Domino Web Access and WebSphere Portal

Domino Web Access has a new look and feel when viewed via WebSphere Portal. The color scheme has been enhanced when the DWA URL includes the “&client=wps” argument.

You can see the new Domino Web Access interface via WebSphere Portal in Figure 8-13.

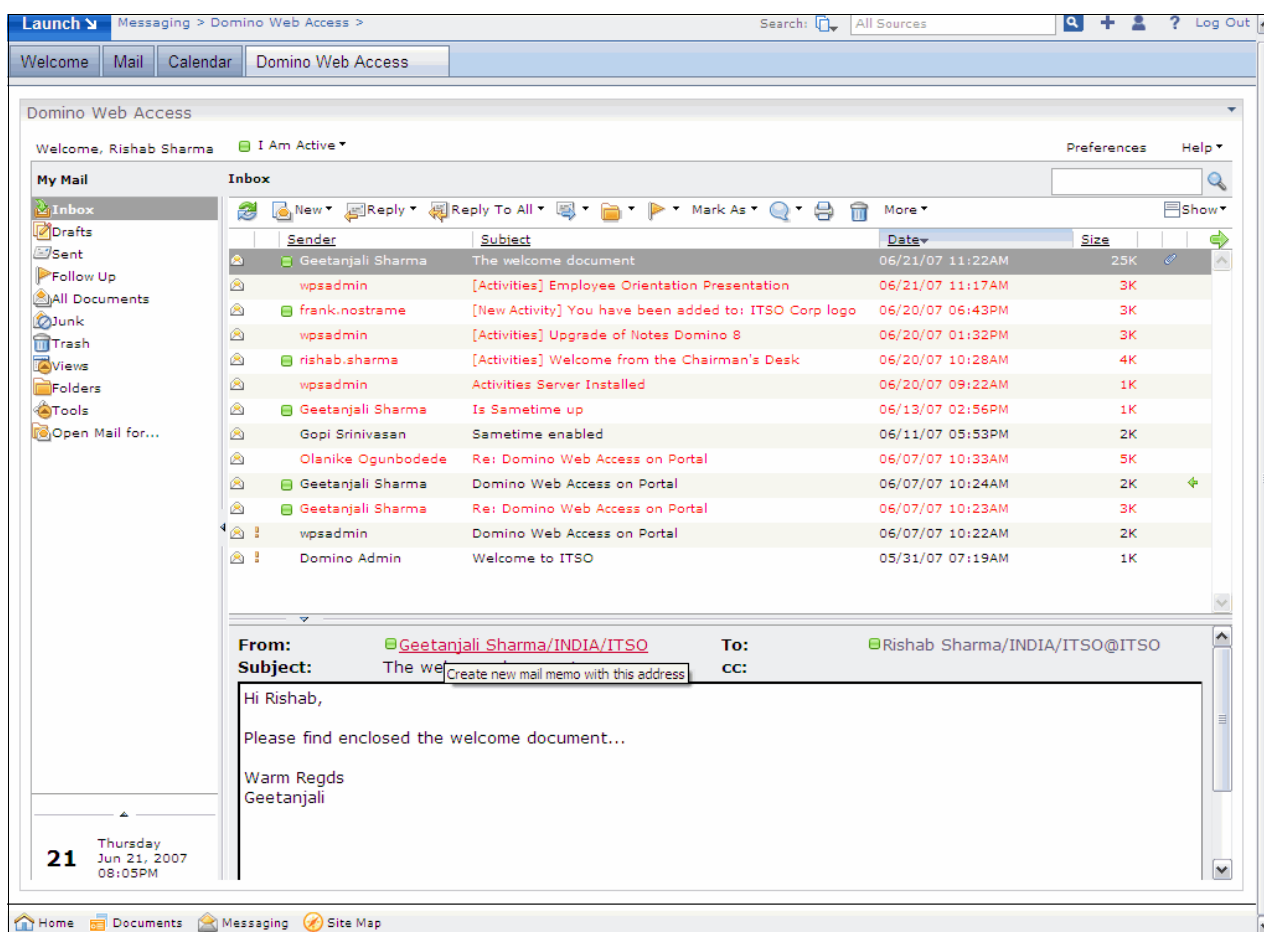


Figure 8-13 Domino Web Access 8 interface via WebSphere Portal

**Tip:** To add the "&client=wps" argument you can customize the Domino Web Access redirect database:

1. From the Domino Designer, open the IWAREDIR.NTF file.
2. Open the WMRProfile form.
3. Open the properties for the WMRProfileURL field, which is an editable Combo box.
4. From the Control tab, change the following to the list of choices:
  - Inbox | /iNotes/Mail/?OpenDocument&ui=wps
  - Default | /iNotes/Mail/?OpenDocument&ui=wps
5. Replace all entries with ui=wps, if needed.
6. Save the form and close Domino Designer.
7. Update the design of the Domino Web Access redirect database with the modified IWAREDIR.NTF template.
8. Make sure that you enable Personal Options in the Domino Web Access redirect database configuration and select **INBOX** as the default value.

## 8.5 RSS feeds for Domino Web Access

Lotus Domino 8 allows you to gain the flexibility to view your mail from Internet and non-Lotus clients when you are away from your usual work environment by enabling RSS or ATOM feeds for your Domino Web Access inbox.

When feeds are enabled, a feed icon is displayed in the inbox, as shown in Figure 8-14. This allows feed readers or browser extensions to automatically detect that a feed link is present from a user's Domino Web Access inbox.

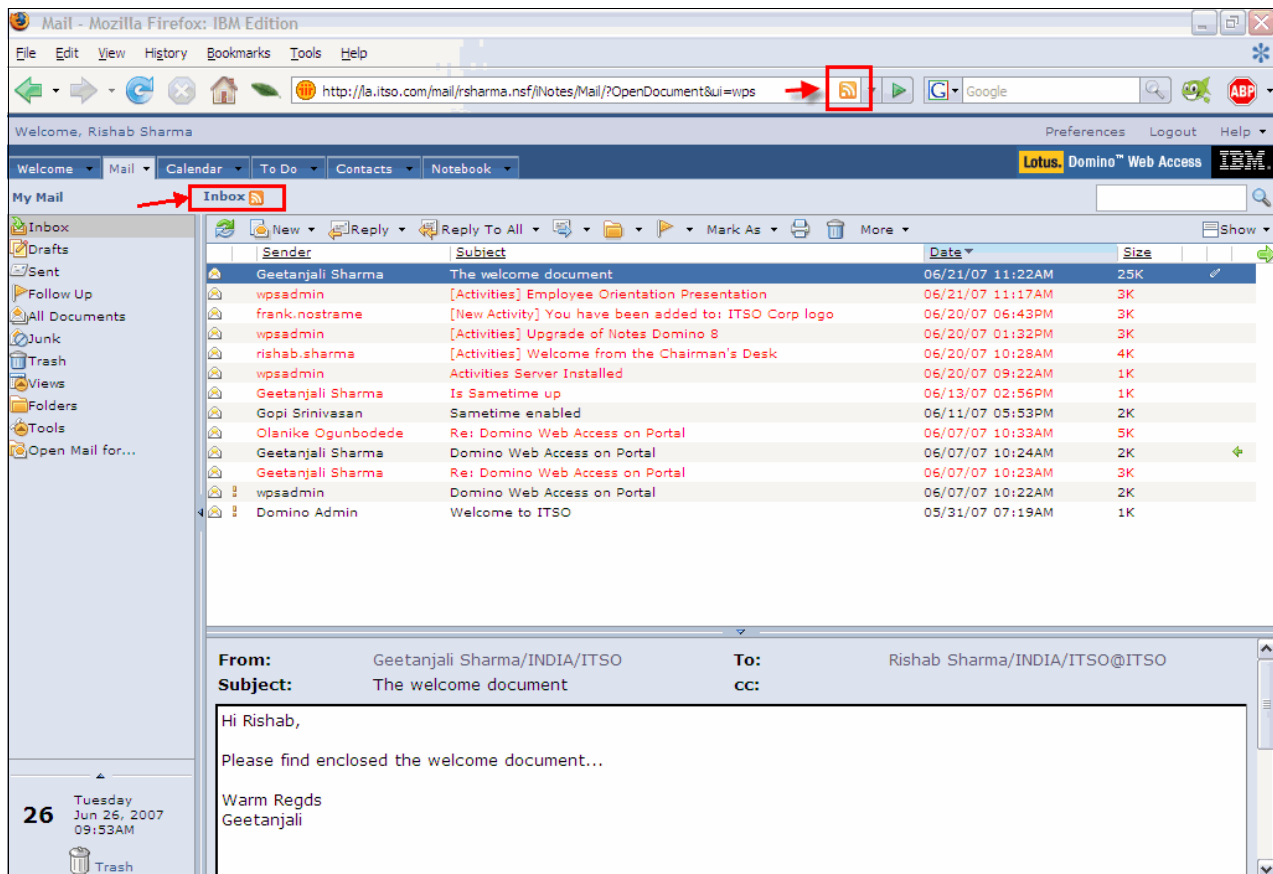


Figure 8-14 Domino Web Access inbox with feed icons

Take into considerations the following observations for enabling RSS feeds for Domino Web Access inbox:

- ▶ Domino Web Access mail files are generally not accessible by anonymous users. The feed reader application must support storing authentication information.
- ▶ You should also be aware that HTTP traffic to your IBM Lotus Domino mail server may increase if many users subscribe to these feeds within external feed readers. This may impact server performance.

RSS feeds for Domino Web Access inbox are enabled by using Domino server NOTES.INI entries. The NOTES.INI entries listed in Table 8-1 are related to enabling the Domino Web Access inbox for RSS.

Table 8-1 NOTES.INI entries related to enabling RSS feeds for Inbox

Setting	Description	Example
iNotes_WA_Feeds	Applies to Domino Web Access clients. Use this setting to enable the advertisement and access to various inbox feed formats for Domino Web Access mail files. Possible values are: <ul style="list-style-type: none"> <li>▶ iNotes_WA_Feeds = rss</li> <li>▶ iNotes_WA_Feeds = atom</li> <li>▶ iNotes_WA_Feeds = atom,rss</li> </ul> By default, no feeds are enabled or advertised.	iNotes_WA_Feeds=atom,rss
iNotes_WA_FeedsSecured	Applies to Domino Web Access clients. Use this setting to enable non-HTTP (non-secure) feeds. By default only, secure feeds are enabled to the mail file. This is to avoid insecure authentication occurring as part of a feed retrieval. <ul style="list-style-type: none"> <li>▶ 0 - Use this setting to allow non-secure feeds.</li> <li>▶ 1 (default) - Use to allow feeds to be accessed via http rather than https.</li> </ul>	iNotes_WA_FeedsSecured=0  This allows HTTP to be used instead of HTTPS. Make sure that HTTPS is enabled.
iNotes_WA_DisableForceBasicAuthForFeeds	Feed readers are not able to properly authenticate to access Domino Web Access inbox RSS feeds if form-based authentication is used. This setting forces basic authentication for feeds. You can use the following variants: <ul style="list-style-type: none"> <li>▶ iNotes_WA_DisableForceBasicAuthForFeeds=1 (to disable basic authentication for both Atom and RSS requests)</li> <li>▶ iNotes_WA_DisableForceBasicAuthForRSS=1 (to disable basic authentication for RSS requests only)</li> <li>▶ iNotes_WA_DisableForceBasicAuthForAtom=1 (to disable basic authentication for Atom requests only)</li> </ul>	iNotes_WA_DisableForceBasicAuthForFeeds=1

Setting	Description	Example
iNotes_WA_FeedsProtocol (optional)	<p>Applies to Domino Web Access clients. Use this setting to have further control of the feed protocol advertised by the inbox page. It is applicable only when iNotes_WA_FeedsSecured is disabled (set to 0). Possible values are:</p> <ul style="list-style-type: none"> <li>▶ iNotes_WA_FeedsProtocol = http (http is the default advertising protocol)</li> <li>▶ iNotes_WA_FeedsProtocol = https (http is the default advertising protocol)</li> <li>▶ iNotes_WA_FeedsProtocol = not specified (default)</li> </ul> <p>By default, the feed protocol is not specified. The advertised feed uses the same protocol as the current page on which the feed advertisement occurs.</p>	iNotes_WA_FeedsProtocol=http

**Note:** A current listing of all NOTES.INI settings can also be found on the Lotus developerWorks Web site at:

<http://www.ibm.com/developerworks/lotus/documentation/notes-ini/>

In the ITSO Corporation example, we enabled the following entries on our Lotus Domino 8 Server NOTES.INI, as shown in Figure 8-15. Restart the Lotus Domino 8 Server after making these changes.

```

notes.ini - Notepad
File Edit Format View Help
LAST_DOMINO_TIME=0050CE2D85257306
ServerRestarted=1
CLEANUP_EVENTS4_DDMFILTERS_VIEW=0
CLEANUP_EVENTS4_DDMCONFIG_VIEW=0
CLEANUP_EVENTS4_METHODS_VIEW=0
DB2_PW_EXP_ALARM_DAYS_PRIOR=15
DDM_WAS_HOSTNAME=portal.itso.com
DDM_WAS_SOAP_ADDR=10005
DDM_WAS_APPS_00=Add_to_Sam_st_Portlet_qazgduk, Application_Catalog_PA_dlvzac1, Banner_Ad_PA_
DDM_WAS_APPS_01=Credential_nistration_PA_dlvv867, DefaultApplication, Document_Manager_PA_d1:
DDM_WAS_APPS_02=FileServer_PA_dlvkpo, FrequentUsers_web_app_PA_dlvv0yx, Groups_Vie_pplicati
DDM_WAS_APPS_03=LWP_Mail_Servlets, LWP_People, LWP_Scheduler_Resource, LWP_Security_Ext, LWP
DDM_WAS_APPS_04=Manage_Vir_al_Portals_PA_dlvxqc, Manage_webservices_PA_dlvucxs, Markups_Man
DDM_WAS_APPS_05=Palette_Po_pplication_PA_dlv9kr, ParamConfig_PA_dlvylg2, People_Finder_Port
DDM_WAS_APPS_06=PolicyExplorer_PA_dlvvvc1, Policy_Status_qazg7kf, Portlet_Manager_PA_dlvu625
DDM_WAS_APPS_07=QuickPlacePortlet_PA_dlvohwu, Reminder_PA_dlvwi46, ResourceView_web_app_PA_d
DDM_WAS_APPS_08=Search_Sit_ap_Portlet_PA_dlvv0ch, Selfcare_P_pplication_PA_dlvxo22, ServletI
DDM_WAS_APPS_09=StrutsPortlet_PA_dlvwm4i, SyncMLServer, TemplateLibrary_Servlets, Template_C
DDM_WAS_APPS_10=WCM_Administration_PA_dm01j5p, WCM_Local_ng_Portlet_PA_dm010y1, WPSPortlet_ai
DDM_WAS_APPS_11=XSLT_Portlet_PA_dlvx59j, appearance_web_app_PA_dlvvk0q, content_j2ee, dmdesk
DDM_WAS_APPS_COUNT=12
DDM_WAS_CONSOLEURL=https://portal.itso.com:10003/ibm/console
DDM_WAS_USERNAME=wpsadmin
iNotes_WA_SametimeServer=sametime.itso.com
iNotes_WA_SametimeNameFormat=111
*
#Start - Enabling RSS feeds for DWA Inbox
iNotes_WA_Feeds=atom,rss
iNotes_WA_FeedsSecured=0
iNotes_WA_FeedsProtocol=http
iNotes_WA_DisableForceBasicAuthForFeeds=1
#End - Enabling RSS feeds for DWA Inbox
*
TRANSLLOG_MaxSize=192
TRANSLLOG_Path=logdir
Previous_TRANSLLOG_Path=D:\Lotus\pomino\data\logdir\

```

Figure 8-15 NOTES.INI entries for enabling RSS feeds

This allows the Domino Web Access inbox to be available as an RSS/ATOM feed. The default URL formats to retrieve the feeds are as follows:

<mailfile>/iNotes/Proxy/?OpenDocument&Form=s\_RSS&NKA (for RSS)  
 <mailfile>/iNotes/Proxy/?OpenDocument&Form=s\_Atom&NKA (for Atom)

As shown in Figure 8-16, you can now access the inbox using the Firefox RSS reader.

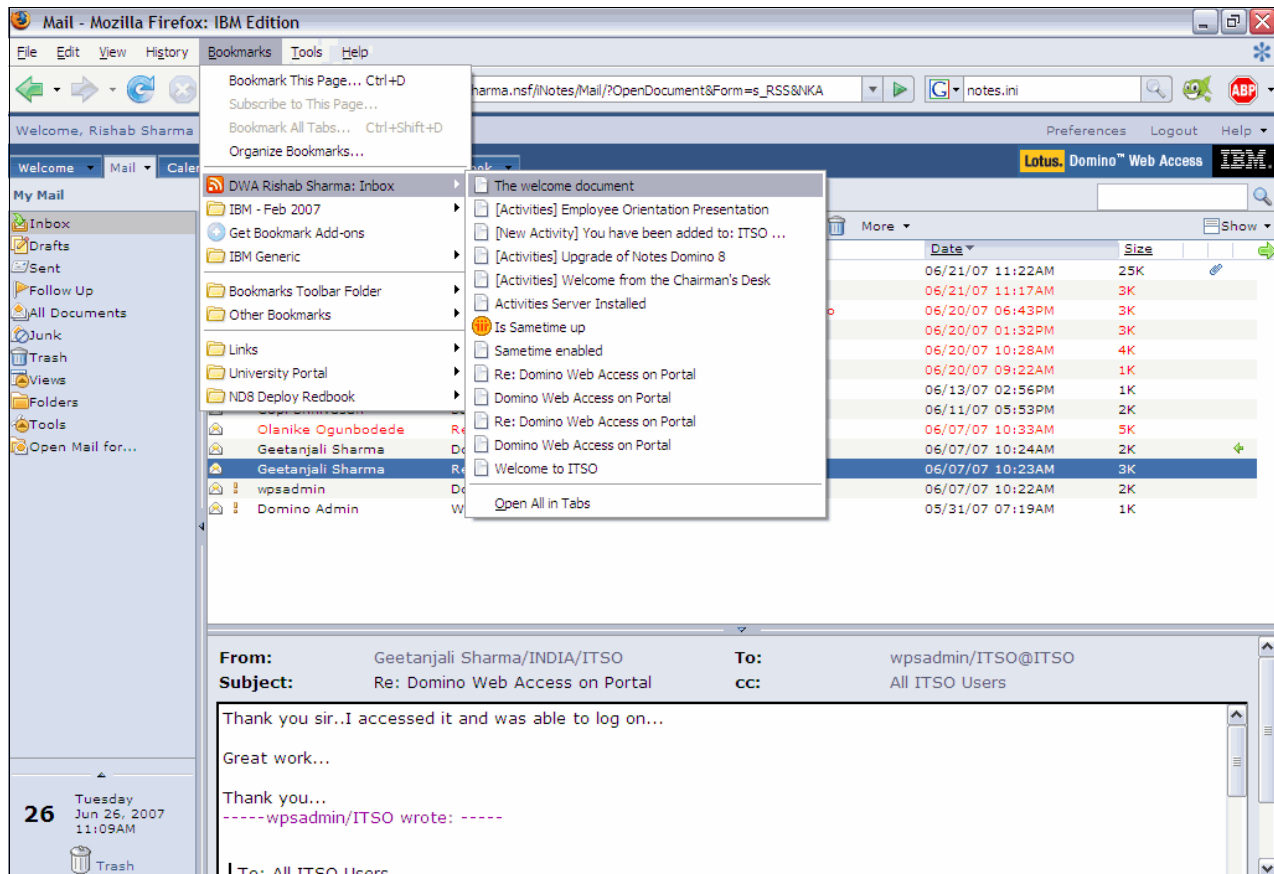


Figure 8-16 Domino Web Access inbox being accessed as a RSS feed



## 8.6 NOTES.INI parameters specific to Domino Web Access 8

Table 8-2 summarizes the consolidated list of new additions to Lotus Domino 8 specific to Domino Web Access.

Table 8-2 *NOTES.INI parameters specific to Domino Web Access 8*

Setting	Description	Example
iNotes_WA_Areas	<p><i>Applies to Domino Web Access clients. Use this setting to disable any combination of the six functional areas in Domino Web Access: Welcome, Mail, Calendar, To Do, Contacts, or Notebook. Each area can contain a value of 0 to disable an area, or 1 to enable an area. The format is</i></p> <p><i>iNotes_WA_Areas = ABCDEF,</i> <i>where:</i></p> <ul style="list-style-type: none"><li>▶ A = Welcome</li><li>▶ B = Mail</li><li>▶ C = Calendar</li><li>▶ D = ToDo</li><li>▶ E = Contacts</li><li>▶ F = Notebook</li></ul> <p>Example: In this example, all sections except for Mail and Contacts are disabled: iNotes_WA_Areas = 010010. The default setting is 111111. If this setting is not used, all functional areas are enabled by default.</p>	iNotes_WA_Areas = value

Setting	Description	Example
iNotes_WA_ConfirmBlocked	<p>Applies to Domino Web Access clients. If a user has not installed the latest Domino Web Access ActiveX® control and if the installation is blocked by the browser, she will be asked once per session to confirm that Domino Web Access should continue to try to utilize the ActiveX control on subsequent pages (which is necessary to get the control installed). This setting provides a way to disable this prompt and for Domino Web Access to not use the Domino Web Access ActiveX control on subsequent pages (if it is not already installed).</p> <ul style="list-style-type: none"> <li>▶ 0 - Suppresses confirmation box</li> <li>▶ 1 (default) - Confirmation box displays</li> </ul> <p>If the confirmation box is suppressed, a user can now install the ActiveX control from the Domino Web Access Preferences dialog.</p>	iNotes_WA_ConfirmBlocked ActiveX = value
iNotes_WA_DefaultDictionary	<p>Applies to Domino Web Access clients. This value can be set by the administrator to specify the default spell check dictionary for Domino Web Access users. When used, it should be set to one of the dictionary file names found in the Domino server's data directory (for example, us.dic). Users can override this default by selecting a default dictionary from Domino Web Access Preferences. The default setting is none. wpdic.dic is used if no dictionary is supplied.</p>	iNotes_WA_DefaultDictionary = dictionary name

Setting	Description	Example
iNotes_WA_DisplayArchiveList	<p>Applies to Domino Web Access clients. Use this setting when users may have more than one private archive policy or the administrator has assigned an archive policy to the user. When this variable is set to one, a dialog opens when the user clicks the Archives button or tries to perform an archive operation on a selected document from the virtual list or from an open message. The dialog displays a list of archive criteria that the user has set or the archive criteria settings as assigned through an archive policy by the administrator. The user can select the desired archive on which to perform the archive operation.</p> <ul style="list-style-type: none"> <li>▶ 0 (default) - Disables this setting</li> <li>▶ 1 - Enables this setting</li> </ul>	iNotes_WA_DisplayArchiveList = value
iNotes_WA_Feeds	<p>Applies to Domino Web Access clients. Use this setting to enable the advertisement and access to various inbox feed formats for Domino Web Access mail files. Possible values are:</p> <ul style="list-style-type: none"> <li>▶ iNotes_WA_Feeds = rss</li> <li>▶ iNotes_WA_Feeds = atom</li> <li>▶ iNotes_WA_Feeds = atom,rss</li> </ul> <p>By default, no feeds are enabled or advertised.</p>	iNotes_WA_Feeds = value

Setting	Description	Example
iNotes_WA_FeedsProtocol	<p>Applies to Domino Web Access clients. Use this setting to have further control of the feed protocol advertised by the inbox page. It is applicable only when iNotes_WA_FeedsSecured is disabled (set to 0). Possible values are:</p> <ul style="list-style-type: none"> <li>▶ iNotes_WA_FeedsProtocol = http (http is the default advertising protocol.)</li> <li>▶ iNotes_WA_FeedsProtocol = https (http is the default advertising protocol.)</li> <li>▶ iNotes_WA_FeedsProtocol = not specified (default)</li> </ul> <p>By default, the feed protocol is not specified. The advertised feed uses the same protocol as the current page on which the feed advertisement occurs.</p>	iNotes_WA_FeedsProtocol = value
iNotes_WA_FeedsSecured	<p>Applies to Domino Web Access clients. Use this setting to enable non-HTTP (non-secure) feeds. By default only secure feeds are enabled to the mail file. This is to avoid insecure authentication occurring as part of a feed retrieval.</p> <ul style="list-style-type: none"> <li>▶ 0 - Use this setting to allow non-secure feeds.</li> <li>▶ 1 (default) - Use to allow feeds to be accessed via http rather than https.</li> </ul>	iNotes_WA_FeedsSecured = value
iNotes_WA_LogoutRedirect	<p>Applies to all Domino Web Access clients. Use this setting to specify a URL to redirect users to a Web page after logging out from server. The setting provides normal cache clearing with the Domino Web Access control and clearing of browser credentials. It also allows sites that perform additional actions on a logout, such as logging out of a reverse proxy server, to specify a URL to do this additional activity. You can use this variable to return people to an initial login page. For example: iNotes_WA_LogoutRedirect = http://www.ibm.com</p>	iNotes_WA_LogoutRedirect = URL

Setting	Description	Example
iNotes_WA_PreferWebEngine CacheControl	<p>Applies to Domino Web Access clients. Domino Web Access now sets Cache-Control response headers that prevent the Domino Web Engine from remapping them in certain scenarios. Previously, the default Domino Web Engine logic did not allow returning a cache-control response header for HTTP 1.0 requests, which lead to content being left in the browser cache unintentionally. Use this setting to revert to the prior behavior.</p> <ul style="list-style-type: none"> <li>▶ 0 (default) - disables this setting</li> <li>▶ 1 - enables this setting</li> </ul>	iNotes_WA_PreferWebEngine CacheControl = value
iNotes_WA_PreferXMLHttpRequest	<p>Applies to Domino Web Access clients. Set this variable to 1 to use the Microsoft.XMLHTTP ActiveX object instead of the load() method of &lt;xml&gt; tag where possible.</p> <ul style="list-style-type: none"> <li>▶ 0 (default) - disables this setting</li> <li>▶ 1 - enables this setting</li> </ul>	iNotes_WA_PreferXMLHttpRequest = value

**Note:** A current listing of all NOTES.INI settings can also be found on the Lotus developerWorks Web site at:

<http://www.ibm.com/developerworks/lotus/documentation/notes-ini/>





## New administration features

In this chapter we introduce each of the major new administration features in Notes and Domino 8. For each new feature, details of the installation and configuration are described.

This chapter discusses the following:

- ▶ Out of Office router service
- ▶ Message recall
- ▶ Inbox maintenance
- ▶ Administration process improvements
- ▶ Database redirects
- ▶ Streaming cluster replication
- ▶ Policy enhancements
- ▶ New Domino domain monitoring features
- ▶ The new optional On Disk Structure (ODS48)
- ▶ Domino and DB2 deployment
- ▶ Other administrative enhancements

## 9.1 Introduction to new administration features

Throughout the history of Notes and Domino, each new Domino version has presented opportunities for administrators to simplify and automate administrative tasks, and provided new features that can be implemented to enhance the Domino environment. In this regard, Domino 8 is no exception.

In Domino 8, enhancements to existing administrative tools such as Domino domain monitoring and policies aim to automate more administrative tasks and to provide proactive management of the Domino environment. New features such as the Out of Office Router option and the new On Disk Structure (ODS48) provide new opportunities to improve performance and functionality.

This chapter introduces the new and notable features and enhancements in Notes and Domino 8. Implementation and configuration options for the new features are also provided.

**Tip:** For any Notes and Domino upgrade, it is generally good practice to upgrade the Notes and Domino environment to achieve a *steady state* with the current features and functions of the environment before implementing new features. Review Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15, for best practice recommendations for your upgrade. Review Chapter 3, “Deploying the Domino 8 server” on page 45, for information about upgrading your Domino servers.

## 9.2 Out of Office router service

In previous Notes and Domino versions, the out-of-office functionality was implemented using an agent stored in each user’s mail file.

In Domino 8, administrators have the option of implementing router-based out-of-office processing. This has several advantages over the agent-based approach. A comparison of the functions of each approach is given in Table 9-1.

*Table 9-1 Comparison of out-of-office agent versus Out of Office router service*

Comparison Item	Agent	Router Service
User execution rights	Required (either manager access to mail, agent execution rights, depositor access to admin request database, or a combination of these).	Not required.
When out-of-office responses are sent back to mail senders	At next agent run time.	Immediately when the router processes the new message.
Setting out-of-office start and end times (hours)	No ability to set start and end times. Only whole days (dates) can be set for start and end of out-of-office period.	Users can set specific times when out-of-office period starts and ends.
Load on the server	Higher at agent run time, if several out-of-office responses need to be processed.	Spread out - Each message is processed as it is received by the router.
Disabling out-of-office	Manual by user.	Automatic.



## 9.2.1 How to configure the Out of Office router service

The Out of Office router service is configured in the server configuration document in the Domino directory.

**Important:** The Out of Office router service can only be configured for Domino 8 servers. Earlier server versions do not support this functionality.

We recommend that the Out of Office router service only be implemented after completing the upgrade to Domino 8 on all Domino servers. This is particularly important for clustered servers. For Lotus Domino 6.5 or 7 servers or clusters that contain these servers, the out-of-office service must be configured as an agent.

It is not a requirement for your Notes clients and mail files to be upgraded to Version 8 before you enable the Out of Office router service. However, when a user enables out-of-office in a mail file that is based on an earlier template version, the router service setting will simply be ignored, and the out-of-office agent will be used instead for that user.

To configure the Out of Office router service on a Domino 8 server:

1. In the Domino Administrator client, while connected to the server, go to the **Configuration** tab.
2. Navigate to **Servers** → **Configurations** in the left navigation pane.
3. Click **Edit Configuration** to update an existing configuration document, or click **Add Configuration** to create a new one (Note: Only use **Add Configuration** if a configuration document for the desired server does not already exist.)

If you are creating a new configuration document, add the server name to the Group or Server Name field (for example, Boston/ITSO).

4. Go to the **Router/SMTP** → **Advanced** → **Controls** tab.
5. Change the Out-of-Office type field to Service, as shown in Figure 9-1.

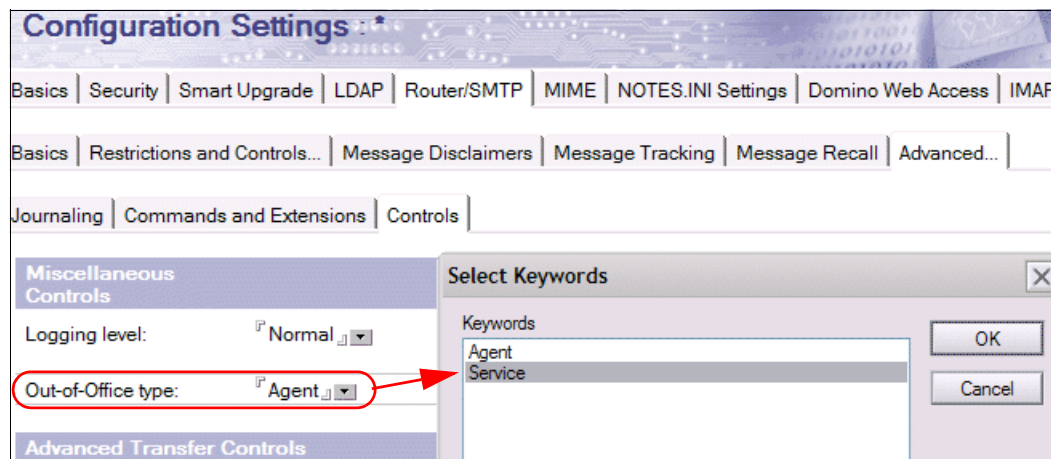


Figure 9-1 Configuring the Out of Office router service

6. Save and close the configuration document.

**Tip:** It is not necessary to restart the router process on the server. The new setting is detected automatically by the router.

## 9.2.2 Viewing Out of Office router service status information

When the Out of Office router service is enabled on a server, the administrator can use the Domino Administrator client or the Domino server console to view a list of users who are currently using the service.

**Note:** Only users who enabled out-of-office after the router service was configured on the Domino server are shown in this list. Users who enabled out-of-office while the agent-based function was in use continue to use the agent for the remainder of their out-of-office periods. Similarly, users with mail files based on a pre- Version 8 mail template also continue to use the agent and therefore do not display in the list.

### Viewing Out of Office router service status on the server console

In Domino 8 there is a new tell router server console command that displays a list of databases on the server that are currently utilizing the Out of Office router service. To use this command, at the Domino server console type:

```
tell router o
```

An example of this command and the output is displayed in Figure 9-2.

```
19/06/2007 05:02:37 PM Out of office service is activated in the following data
bases:
19/06/2007 05:02:37 PM mail file: Julie Castle <mail\jcastle.nsf>
>
```

Figure 9-2 Example output for tell router o command

### Viewing Out of Office Service status in the Domino Administrator client

The Files tab in the Domino Administrator client contains a new Out of Office column that you can use to view out-of-office service status for mail files on the server.

The Out of Office column is the right-most column on the Files tab of the administrator (use the horizontal scroll bar to scroll to the right to view this column). The column contains a Yes for those users who are utilizing the Out of Office router service.

## 9.2.3 How the out-of-office service process works

Out of Office router service processing occurs after the server mail rules and user mail rules are applied, after the *before mail delivery* agent processing completes, but prior to the *after mail delivery* agent processing. This allows the user to pre-process mail using rules or using the *before delivery mail agent*. A user can pre-process mail in order to control spam or to forward messages.

Out-of-office processing for each user becomes active when a user enables it. The service disables itself when processing the first e-mail after the user's designated out-of-office time has expired or during routine router maintenance if the user receives no e-mails after the out-of-office time period has expired.

The Out of Office router service runs as part of the mail router. This means that out-of-office responses are immediate and server failover is supported.

Delegation of out-of-office functionality is supported and fully integrated with calendar management. Note that a delegate must have a minimum of editor access in the ACL to allow him to enable out-of-office in the mail file.

**Note:** Enabling the Out of Office router service is not retrospective. In other words, any out-of-office agents that were already active prior to the activation of the service on the Domino server will still use the out-of-office agent. These mail files are not included in the list of active Out of Office router service users displayed on the server console or in the Out Of Office column in the administrator client because they do not use the service.

In the reverse, if the Out of Office router service was previously enabled on a server, any mail files that had the Out Of Office option enabled while the router service was enabled on the server will continue to use the service even after it is disabled in the server configuration document. These mail files also continue to display in the list of files currently using the service.

Disabling and re-enabling the Out of Office option in the mail file forces it to use whichever configuration (agent or service) is currently enabled on the Domino server.

For information about the new client out-of-office features, refer to 6.3.5, “Improved out of office” on page 143.

## 9.3 Message recall

Message recall is a new feature of Notes and Domino 8 that allows users to recall e-mail messages that they sent in error. Message recall is enabled by default on all Domino 8 servers. The settings for this feature can be configured in the server configuration document.

**Important:** It is a good idea to decide whether your organization will allow message recall prior to your Domino 8 upgrade. Once the Domino directory design has been upgraded to the Domino 8 design, message recall will be enabled by default. This occurs whether or not you have any existing configuration documents. Existing configuration documents have the message recall settings already enabled. However, even if you do not have a configuration document created, message recall is still enabled with the default settings.

Therefore, if you do not want to allow message recall, disable the feature in existing configuration documents as part of the Domino server upgrade process. If you do not have a configuration document for a server that you are upgrading (or a new Domino server) you need to create a configuration document for the server so that you can specifically disable message recall if you do not want to use it.

Message recall is designed to work within the Domino environment. It is only available for messages delivered to Domino 8 servers via NRPC. The sender and recipient servers do not need to be in the same Domino domain, but must be using NRPC to route mail between them. It is not possible to recall a message that was delivered via SMTP.

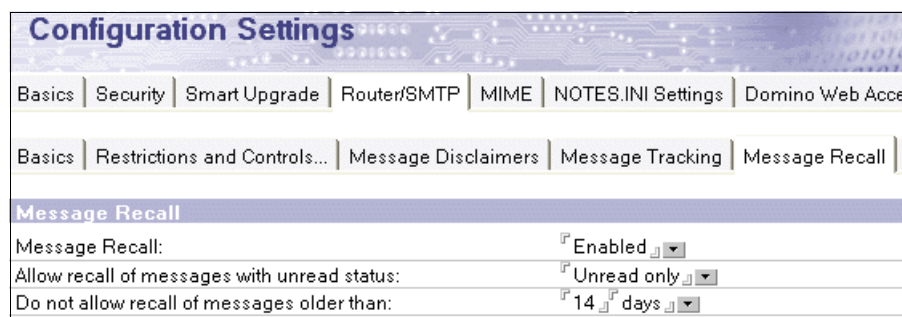
### 9.3.1 How to configure message recall on the Domino server

Message recall is configured in the Domino directory in the server configuration document on the Router/SMTP → Message Recall tab. The configuration document settings can also be optionally overridden by settings in a mail policy settings document.

**Important:** Remember, the default settings (with message recall enabled) are active even if a configuration document does not exist for the server.

## Configuration document settings for message recall

The configuration document settings and their default values for message recall are shown in Figure 9-3.



The screenshot shows the 'Configuration Settings' dialog box with the 'Message Recall' tab selected. The settings are as follows:

Configuration Settings	
Message Recall	
Message Recall:	Enabled
Allow recall of messages with unread status:	Unread only
Do not allow recall of messages older than:	14 days

Figure 9-3 Message recall settings in the server configuration document

**Tip:** A configuration document for a specific server takes precedence for setting configuration options. However, if there is no specific server configuration document in existence, you can use the \* - [Default] server configuration document to set the same message recall settings for all servers in your Domino domain. For information about how to create a default server configuration document, refer to the topic “Creating a Configuration Settings document” in the Domino 8 Administrator Help.

**Note:** The settings shown in Figure 9-3 are the default message recall settings used if no server configuration document exists.

The options for the settings are shown in Table 9-2.

Table 9-2 Options for message recall settings in the server configuration document

Message recall setting	Options	Comments
Message recall.	<ul style="list-style-type: none"><li>► Enabled (Default)</li><li>► Disabled</li></ul>	Enables message recall to be used to recall messages from mail recipients on this server.
Allow recall of messages with unread status.	<ul style="list-style-type: none"><li>► Unread only (default)</li><li>► Both read and unread</li></ul>	Allows recall for only unread messages, or for both read and unread messages.
Do not allow recall of messages older than.	<ul style="list-style-type: none"><li>► x minutes</li><li>► x hours</li><li>► x days (default - 14 days)</li><li>► x weeks</li></ul>	Sets the time limits before recall is refused. Setting this field to 0 (zero) means that there is no time limit for recall.

## Optional mail policy settings for message recall

Message recall settings can be overridden for specific users by configuring message recall settings in a mail policy settings document then applying the settings to specific users through a policy.

The mail policy settings document contains more granular settings than the configuration document. It contains settings for specifying whether a user can recall messages, and whether she can have messages recalled from her. The latter is the equivalent of the user preference *Allow others to recall mail sent to me*, and this setting can be locked down so that users cannot change it.

**Tip:** The message recall functionality can be invoked from the Notes mail file in several ways. In the Sent view, the **Recall message** button or menu option **Actions → Recall message** can be used on a highlighted message. The right-click context menu also contains the **Recall message** option. In the All Documents view, **More → Recall message** can be selected or the menu option **Actions → Recall message** for a highlighted sent message. The right-click context menu can also be used in this view.

If you disable message recall in the mail policy settings document by setting “User is allowed to recall sent messages” to **No**, these message recall options are removed from the Notes client interface. Note, however, that the Mail Policy setting “User is allowed to recall sent messages” only controls whether the recall action is visible in the user's mail file. The router does not use this setting to determine whether the requestor is allowed to recall messages.

To override the configuration document message recall settings based on a policy, perform these steps:

1. Create or edit a mail policy settings document and go to the **Mail → Message Recall** tab, shown in Figure 9-4.

Message Recall		How to apply this setting:	Inherit from parent pol
User is allowed to recall sent messages:	<input type="button" value="v"/>		<input type="checkbox"/> Inherit
Other users are allowed to recall messages they sent to this user:	Yes <input type="button" value="v"/>	Don't set value <input type="button" value="v"/>	<input type="checkbox"/> Inherit
Allow recall of messages with unread status:	<input type="button" value="v"/>		<input type="checkbox"/> Inherit
Do not allow recall of messages older than:	<input type="text"/> <input type="button" value="v"/>		<input type="checkbox"/> Inherit

Figure 9-4 Message recall settings in the mail policy settings document

2. Fill in the message recall settings as required to control which functionality users will have. Set one or more of the settings shown in Table 9-3.

Table 9-3 Options for message recall settings in the mail policy settings document

Setting	Options
User is allowed to recall sent messages.	<ul style="list-style-type: none"> <li>▶ Yes</li> <li>▶ No</li> </ul>
Other users are allowed to recall messages they sent to this user.	<ul style="list-style-type: none"> <li>▶ Yes</li> <li>▶ No</li> </ul>
Allow recall of messages with unread status.	<ul style="list-style-type: none"> <li>▶ Unread only</li> <li>▶ Both read and unread</li> </ul>
Do not allow recall of messages older than.	<ul style="list-style-type: none"> <li>▶ x minutes</li> <li>▶ x hours</li> <li>▶ x days</li> <li>▶ x weeks</li> </ul>

3. Save and close the mail policy settings document.

4. If not already in place, create or update a policy document that references this mail policy settings document, then apply it to the required users.

**Note:** In order for a mail policy settings document to be applied to users, it must be referenced in a policy document, in the Mail field. The policy needs to be applied to the appropriate users either explicitly in their person document or via an organizational policy assignment.

If you are new to policies, refer to the Policies section in the Lotus Domino Administrator 8 Help database for information about how to plan and implement policies.

5. (Optional) Apply the mail policy settings to the users immediately by typing the following command at the Domino server console of the user's mail server:

```
tell adminp process mailpolicy
```

**Note:** By default, the administration process to apply the mail policy settings runs every twelve hours. Therefore, changes do not take effect until the next time the administration process runs. The above command forces it to run immediately.

### 9.3.2 How message recall works

A user can initiate a message recall on an individual sent message as long as the message was saved to sent mail when it was originally sent.

**Note:** A mail file delegate cannot recall a message sent by the mail file owner. However, a mail file owner can recall a message sent by a mail delegate from the owner's mail file.

Once a recall request has been initiated, the following occurs:

1. The recall request message is sent to the recipient server's mail router.
2. The mail router determines whether the message can be recalled. (Table 9-4 lists the main factors used by the Domino router to determine whether a message may be recalled. This list of factors is a useful guide for configuring message recall, and will also help troubleshoot when the result of a recall attempt is not as expected.)
3. If the message can be recalled, the router handles the recall process and sends any requested recall notifications back to the sender.

*Table 9-4 Factors used by Domino to determine whether a message recall is possible*

Factor	Option	Recall possible?
Mail delivery protocol.	NRPC	Yes
	SMTP	No
Overall message recall setting (configuration document).	Enabled	Yes
	Disabled	No
Mail policy setting for user.	User is allowed to recall sent messages - Yes.	Yes (for the recall requester)
	Other users are allowed to recall messages they sent to this user - Yes.	Yes (for the original message recipient)
Allow recall of both read and unread messages (configuration document or mail policy settings document).	Both read and unread.	Yes
	Unread only.	Only for messages that have not been read by anyone  Note: Even if a delegated user has read the message but the mail owner has not, recall will be refused.
User preferences - Allow others to recall mail sent to me.	Enabled.	Yes
	Disabled.	No

**Tip:** Debug logging is available to help troubleshoot message recall processing using the following notes.ini variables:

- ▶ DebugRouter=3
- ▶ Log\_MailRouting=40

## 9.4 Inbox maintenance

The Domino 8 inbox maintenance feature allows administrators to automate the process of removing old documents from a user's inbox folder. This has the potential to improve performance on the Domino server and the speed at which the inbox opens for users.

The inbox mail folder (\$Inbox) is the default folder in the mail file. Its view index is set to refresh every time it is opened. The more documents there are in a user's inbox, the higher the processing load on the server each time the folder is indexed, and the longer it takes for

the folder content to display for the user. For very large inbox folders, this problem is greatly magnified.

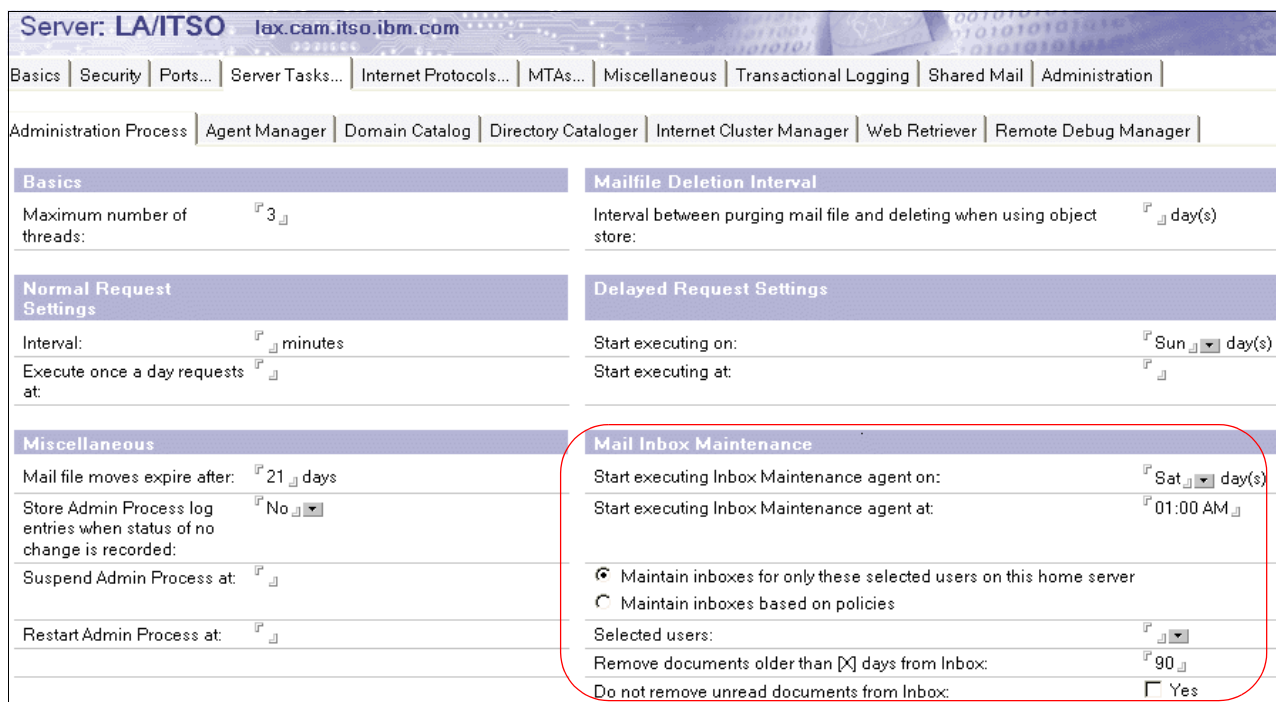
In past releases of Notes and Domino, inbox cleanup largely relied on the user manually filing, deleting, or archiving inbox documents. In Domino 8, administrators can automate this task.

**Note:** The inbox maintenance process does not delete any documents. It simply removes them from the inbox folder, so they are still available in the All documents view of the user's mail file.

Only the inbox folder is updated by the inbox maintenance process. No other folders are changed by the process.

### 9.4.1 How to enable inbox maintenance

The inbox maintenance function is configured on a by-server basis in the server document in the Domino directory, on the Server Tasks → Administration Process tab, and optionally in the mail policy settings document. The server document settings are shown in Figure 9-5.



Server: LA/ITSO lax.cam.itso.ibm.com	
Basics   Security   Ports...   Server Tasks...   Internet Protocols...   MTAs...   Miscellaneous   Transactional Logging   Shared Mail   Administration	
Administration Process   Agent Manager   Domain Catalog   Directory Cataloger   Internet Cluster Manager   Web Retriever   Remote Debug Manager	
<b>Basics</b>	
Maximum number of threads:	3
<b>Normal Request Settings</b>	
Interval:	minutes
Execute once a day requests at:	
<b>Miscellaneous</b>	
Mail file moves expire after:	21 days
Store Admin Process log entries when status of no change is recorded:	No
Suspend Admin Process at:	
Restart Admin Process at:	
<b>Mailfile Deletion Interval</b>	
Interval between purging mail file and deleting when using object store:	day(s)
<b>Delayed Request Settings</b>	
Start executing on:	Sun day(s)
Start executing at:	
<b>Mail Inbox Maintenance</b>	
Start executing Inbox Maintenance agent on:	Sat day(s)
Start executing Inbox Maintenance agent at:	01:00 AM
<input checked="" type="radio"/> Maintain inboxes for only these selected users on this home server <input type="radio"/> Maintain inboxes based on policies	
Selected users:	
Remove documents older than [X] days from Inbox:	90
Do not remove unread documents from Inbox:	Yes

Figure 9-5 Inbox maintenance settings in server document

**Note:** By default, inbox maintenance is disabled. The default option “Maintain inboxes only for those users on this home server” shows as selected by default, but it only becomes active if user names are added to the Selected users field. In other words, the Selected users field is a *none means none* field, so if you leave it blank, no inbox maintenance occurs.



The basic options available for inbox maintenance in the server document are:

- ▶ Maintain inboxes only for these selected users on this server (default).
- ▶ Maintain inboxes based on policies.

### Enabling inbox maintenance in the server document (for all users on a server)

To enable inbox maintenance based on users listed in the Mail inbox maintenance section of the server document:

1. Edit the server document and go to the **Server Tasks** → **Administration Process** tab.
2. In the Mail inbox maintenance section, select the option **Maintain inboxes only for these selected users**.
3. In the Selected users field, enter user or group names, or type an asterisk (\*) to enable inbox maintenance for all users on the server.
4. Fill in the remove document older than [x] days from inbox field (default value is 90).
5. (Optional) Select the **Do not remove unread documents from Inbox** option.

**Note:** This option only applies if a document has not been read in the mail file by anyone. For example, if a mail delegate has read a message but the mail owner has not, the message will be considered read, and will be removed by the inbox maintenance process.

6. Set a schedule for inbox maintenance by selecting days and times in the Start executing Inbox maintenance fields. Multiple days may be selected.
7. Save and close the server document.

### Enabling inbox maintenance in a policy (for selected users on a server)

To enable inbox maintenance based on a policy:

1. Edit the server document and go to the **Server Tasks** → **Administration Process** tab.
2. In the Mail inbox maintenance section, select the option **Maintain inboxes based on Policies**.
3. Set a schedule for inbox maintenance by selecting days and times in the Start executing Inbox maintenance fields. Multiple days may be selected.
4. Save and close the server document.
5. Create or Edit a mail policy settings document and go to the **Mail** → **Basics** tab.
6. Fill in the Remove document older than [x] days from inbox field (default value is 90).
7. (Optional) Select the **Do not remove unread documents from Inbox** option.

**Note:** This option only applies if a document has not been read in the mail file by anyone. For example, if a mail delegate has read a message but the mail owner has not, the message will be considered read, and will be removed by the inbox maintenance process.

8. Save and close the mail policy settings document.

**Note:** In order for a mail policy settings document to be applied to users, it must be referenced in a policy document, in the Mail field. The policy needs to be applied to the appropriate users either explicitly in their person document or via an organizational policy assignment.

If you are new to policies, refer to the Policies section in the Lotus Domino Administrator 8 Help database for information about how to plan and implement policies.

9. (Optional) Apply the mail policy settings to the users immediately by typing the following command at the Domino server console of the user's mail server:

```
tell adminp process mailpolicy
```

**Note:** By default, the administration process to apply the mail policy settings runs every twelve hours. Therefore, changes do not take effect until the next time the administration process runs. The above command forces it to run immediately.

## 9.4.2 How the inbox maintenance process works

Inbox maintenance is an administration process that is carried out according to the schedule set in the server document, Mail inbox maintenance section. The default schedule is Saturday at 1 a.m. This can be changed, but we recommend that the task be scheduled to complete outside of business hours.

**Tip:** When planning the inbox maintenance schedule, try to select a day and time when there are no other intensive processes running on the server. For example, the server upcall task runs at 2 a.m. each night by default (ServerTasksAt2=Updall in the notes.ini). Since upcall can be an intensive process on a large server, it is a good idea to schedule the inbox maintenance at a different time. Remember to also consider the timing and requirements of your server's backup schedule.

Inbox maintenance processes inbox documents based on the date of the e-mail. Document dates (such as created, modified, and added dates) are not used for this process.

If the option Do not remove unread documents from Inbox is selected, the document is retained in the inbox only if the document has not been read at all. This means that if a delegated mail user has read the e-mail but the mail file owner has not, the mail will still be removed from the inbox folder.

When inbox maintenance runs, a single line message is displayed on the Domino server console (and to miscellaneous events in the server's log.nsf), for example:

```
11/08/2007 01:02:38 AM Admin Process: Completed maintenance of mailfiles for 102 databases, 0 databases reported errors.
```

**Tip:** Inbox maintenance can be run manually by typing the following command at the server console:

```
tell adminp process mb
```

Remember that inbox maintenance can be an intensive server process, so use caution when deciding when to run the process manually from the server console.

## 9.5 Administration process improvements

The administration process (Adminp) automates many administration tasks in the Domino environment. Several enhancements to the administration process have been made in Domino 8 to implement new features (such as inbox maintenance and database redirects) and to improve the overall efficiency of the administration process.

Three specific areas of improvement aimed at enhancing the efficiency of the administration process are:

- ▶ Direct Deposit of administration requests onto the target server
- ▶ Redefine time interval default for administration requests
- ▶ Database names list for user renames

These three new features are described below.

### 9.5.1 Direct Deposit of administration requests onto the target server

In previous Domino versions, administration requests were deposited into the administration database on the server where the request was created. Replication was then used to propagate the request to other servers in the domain. Using this method, a request that required processing by another server would not process until it had replicated to that server's database replica.

In Domino 8, administration requests are now deposited directly into the target server's administration requests database replica. Administration requests may be processed sooner using this method, since they are not reliant upon replication schedules to deposit the request on the target server prior to processing.

Direct deposit of administration requests is the default behavior in Domino 8, but it can be disabled on a by-server basis. To disable direct deposit of administration requests, add the following parameter to notes.ini on the originating server (the server where the request is created):

```
ADMINP_DONT_ATTEMPT_DIRECT_DEPOSIT=1
```

**Tip:** This parameter could also be set in the server configuration document in the Domino directory by adding the following settings to the NOTES.INI Settings tab:

Item: ADMINP\_DONT\_ATTEMPT\_DIRECT\_DEPOSIT  
Value: 1

Refer to Figure 9-30 on page 281 for an example of setting a notes.ini parameter using this method.

### 9.5.2 Redefine time interval default for administration requests

All administration requests are assigned a default time interval that determines when they are processed. The default time intervals are:

- ▶ Immediate: These requests typically execute within one minute.
- ▶ Interval: These requests are processed according to the interval timing set either in the server document or in notes.ini. The default setting is 60 minutes.
- ▶ Daily: These requests are processed once a day as defined by a setting in the server document.

- **Delayed:** These requests are processed according to the timing set in the server document.

In Domino 8, the default timing of administration requests can be changed for each individual administration request type by specifying a new timing interval in the server's notes.ini. The available override settings are:

- ADMINP\_IMMEDIATE\_OVERRIDE
- ADMINP\_INTERVAL\_OVERRIDE
- ADMINP\_DAILY\_OVERRIDE
- ADMINP\_DELAYED\_OVERRIDE

The format for the NOTES.INI variable is:

ADMINP\_variable\_OVERRIDE=X, X, X

Where each X represents the request number of an administration process request.

**Tip:** Each administration request has a unique request number associated with it. The Lotus Domino 8 Administration Help database contains a full list for administration requests with their associated request numbers and default time intervals. To view the list, refer to the Redefining time interval defaults for administration requests topic in the Lotus Domino 8 Administration Help.

A practical example of where this override may be useful is for parts of the user rename process. User rename processing consists of a number of different administration requests, some of which are reliant on successful processing of earlier requests in the process. The two perhaps most critical requests for user rename are shown in Table 9-5.

*Table 9-5 Two important administration requests that form part of the user rename process*

Admin process	Default timing	Request number	Why it is important
Rename person in Domino directory.	Interval	5.00	Successful processing of this request triggers the creation of all subsequent user rename requests.
Rename in person documents.	Daily	19.00	This request must be processed to remove "AdminpOld" fields in person documents, a requirement for successful rename completion.

You may decide to process these two processes immediately, so that you can act more quickly on any errors that would slow down or prevent the remainder of the rename processes from completing successfully. To change the interval for these two processes, add their request numbers to the notes.ini file on the Domino server where the requests are carried out (in this case, the administration server for the Domino directory), as follows:

ADMINP\_IMMEDIATE\_OVERRIDE=5.00, 19.00

### 9.5.3 Database names list for user renames

During a Notes user rename, a series of administration requests are processed to update the user's name details in all areas that affect authentication, mail routing, and access control for that user. Part of this processing involves updating the user name in Reader and Author fields. This administration process can be resource intensive, since it must check inside every document in every database to determine whether a given user's name is present for updating.

For databases that use the new ODS48, this area of the user rename process has been streamlined. These databases store a names list, which is a master list of all the user names listed within any document in that database.

**Note:** This feature requires implementation of the new ODS48. For more information about ODS48, refer to 9.10, "The new optional On Disk Structure (ODS48)" on page 278.

The names list is created automatically for all ODS48 databases. There is no requirement to enable the function and no options to configure it. In a mixed environment with a Domino 8 administration server and Adminp template, Domino 7 servers process renames in their usual way.

During a user rename process, the administration process first checks the master names list (in ODS48 databases) to determine whether any of the documents in that database list the user in reader or author fields. If the user's name exists in the names list, the administration process searches through every document in the database to process the rename. If the user's name does not exist on the names list, no more processing is completed for that database.

**Note:** The new names list has a size limit of 4 Kb. Once this size is exceeded, the previous method is used for reader and author field checking.

## 9.6 Database redirects

In Domino 8, administrators can select to automatically create a pointer reference to redirect users to new a database replica or notify them of a deleted database. This option allows administrators to more easily manage client updates to reflect database moves and deletions.

This option is available through the administration client as an option that can be selected in the following interfaces:

- ▶ Move database.
- ▶ Delete database.
- ▶ Create redirect.

### 9.6.1 How to create a database redirect

The interfaces for move database and delete database in the Domino 8 administrator client have additional check boxes to allow administrators to automatically create a database redirect during these processes.

The new options are shown in Figure 9-6 and Figure 9-7.

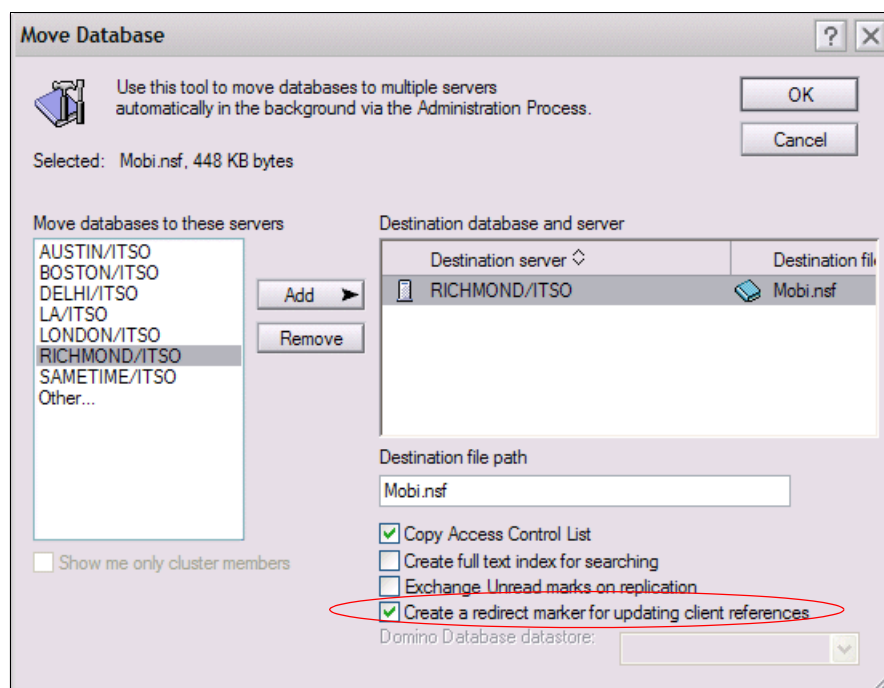


Figure 9-6 Option in Move Database dialogue to create a database redirect

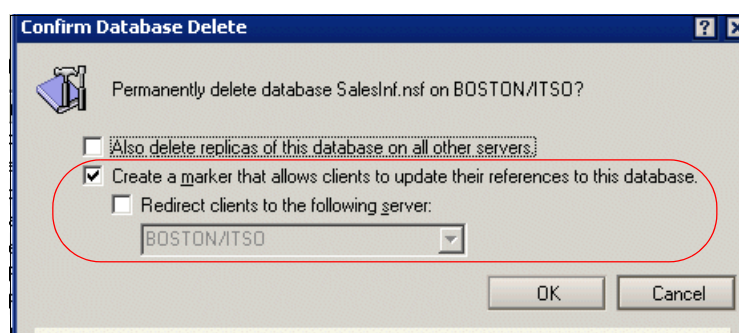


Figure 9-7 Option in Confirm Delete Database dialogue to create a database redirect

There is also a new create redirect tool on the Files tab of the administrator client. This tool allows administrators to create a redirect for a database, usually in preparation for an upcoming database move or deletion. This redirect can be used to switch users to one or more different replicas, or notify them when the database is deleted.

**Attention:** A database redirect created using the create redirect tool does not become active until the original (source) database is actually removed.

Using the Create redirect option allows you to specify more than one server to redirect users to, and the order used to redirect them (random or sequential). This provides more flexibility than the option within the Move database interface, which only allows you to choose one redirection server.

To create a new redirect for a database replica:

1. In the Domino Administrator client connect to the server containing the replica that you want to redirect (that is, the source server).
2. Go to the **Files** tab and highlight the database to redirect.
3. From the Tools pane on the right, select **Database** → **Create redirect** to display the Create Database Redirect dialogue shown in Figure 9-8.

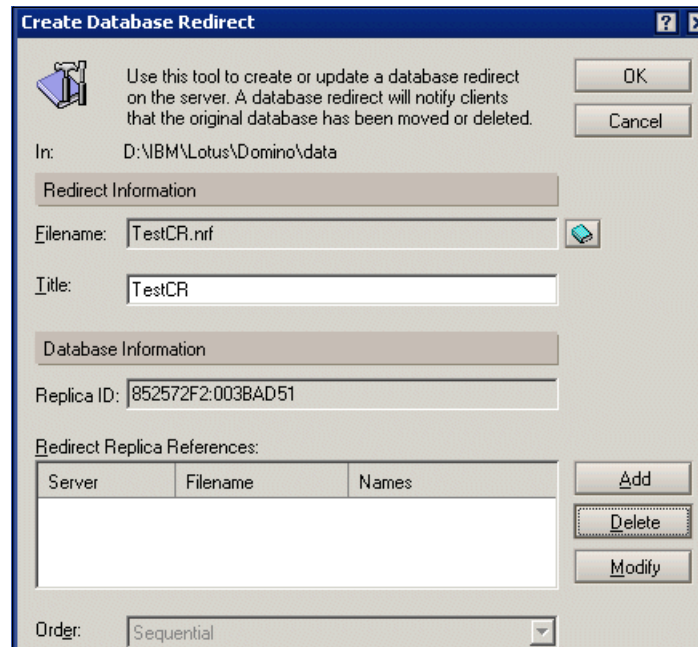


Figure 9-8 Create Database Redirect dialogue

4. Click the **Add** button to open the Configure Redirect Replica Reference dialogue shown in Figure 9-9.

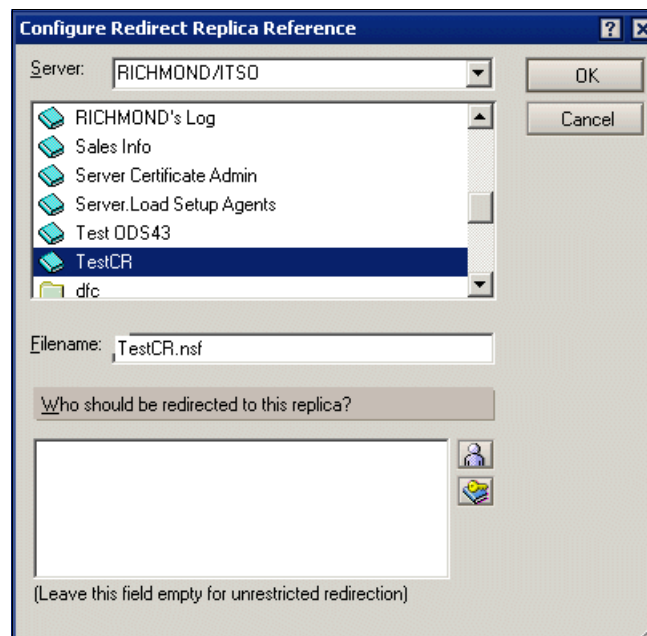


Figure 9-9 Create redirect configuration dialogue

5. In the Server field, select the name of the redirect destination server.
6. Select the database in the list. (Note: This must be a replica of the original database. You cannot choose a different database to direct users to.)
7. (Optional) Choose users or groups to redirect to the selected server by clicking one of the two icons to the right of the Who should be redirected to this replica? field:
  - User icon: Choose users or groups from the Domino directory.
  - Lock (Access control) icon: Choose users from the database ACL.

**Note:** If you are redirecting selected users to different servers for a database move, make sure that you include all users in one of the references. If no references apply to a particular user, that user sees the redirect as a deletion, not as a move, and is not redirected to another replica.

8. Click **OK** to close the Configure dialogue.
9. (Optional) Complete steps 4–7 above to add additional redirect servers.
10. (Optional) If more than one redirect server has been added, the Order field becomes active. Choose either **Random** or **Sequential** to specify how users will be redirected.
11. Click **OK** to close the Create redirect dialogue.

**Tip:** You can also use the Create Redirect tool to create a redirect for a database replica that has already been deleted from the source server, to redirect users to other replicas of the database. To do this, on the Files tab:

1. Select **Database** → **Create Redirect**, without highlighting a database first.
2. Click the database button to the right of the empty, but non-editable, Filename field.
3. Type the file name of the database, including the .nsf extension, and click **OK**.
4. Click the **Add** button to open the Configure Redirect Replica Reference dialogue.
5. Navigate and add an existing database to redirect users to (typically on a different server).

Notice that the last step automatically fills in the replica ID on the Create Database Redirect dialogue.

## 9.6.2 How to update a database redirect

There are two ways to update a database redirect:

- If you created the redirect using the Create redirect tool, and the original replica is still in place (that is, the redirect is not yet active):
  - a. Select the database on the File tab of the Domino Administrator client.
  - b. From the Tools pane on the right, select **Database** → **Create redirect**.
  - c. This displays the Update redirect dialogue where you can update the redirect details.



- If the original replica is no longer in place:
  - a. On the Files tab of the Domino Administrator client, change the Show Me field to Database redirects only, as shown in Figure 9-10.

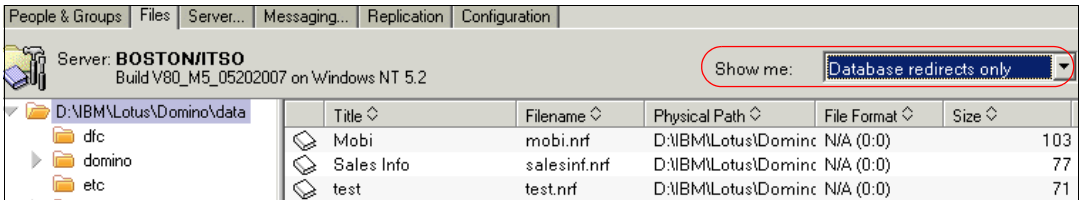


Figure 9-10 Showing Database redirects only on the Files tab

- b. Highlight the redirect to update.
  - c. From the Tools pane on the right, select **Database** → **Update redirect**.
  - d. This displays the Update redirect dialogue where you can update the redirect details.

9.6.3 What happens behind the scenes

When a redirect request is initiated from the Domino Administrator client, a redirect file is automatically created on the original server in the Domino data directory. The name of the file is in the following format:

dbFileName.nrf

The exact content of the file varies slightly depending on the type of redirect and options chosen. It is a simple text file, so it can be viewed in any text editor. Examples of the redirect files are shown in Figure 9-11, Figure 9-12, and Figure 9-13.

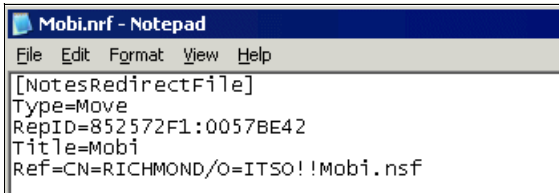


Figure 9-11 Redirect file created by a database move action

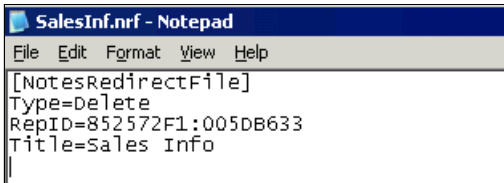


Figure 9-12 Redirect file created by a database delete action

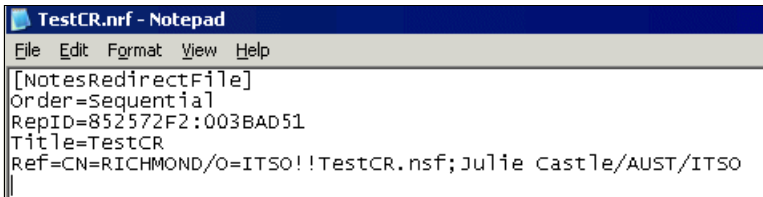


Figure 9-13 Redirect file created by a create redirect action

**Note:** Even though the .nrf files are simple text files, we recommend that they are not created or edited manually, as any typing errors or mistakes in the file will prevent Domino from being able to use it.

For the delete database and create redirect actions, the .nrf file is created immediately on the source server. For the move database action, creation of the .nrf file is controlled by the administration process so that it can be coordinated with the administration requests associated with the database move process.

Each of the administration requests associated with the move has a field specifying that a database redirect is required. An example of one of these documents is shown in Figure 9-14.

ADMINISTRATION PROCESS - Request	
*Action:	Delete Replica After Move
*Server(s) to perform the action:	BOSTON/ITSO
Replica ID:	852572F1:0057BE42
*Name(s) to perform the action on:	Mobi
*Action requested by:	Julie Castle/AUST/ITSO
*Name of process to perform action:	Adminp
Source server:	BOSTON/ITSO
Source database path:	Mobi.nsf
Create redirect marker after database deletion:	Yes

Figure 9-14 Admin request for a database move with redirect

## 9.7 Streaming cluster replication

Domino 8 introduces improvements to cluster performance and I/O through the use of streaming cluster replication.

Domino clustering was introduced in Domino 5 to provide failover and load balancing within a Notes and Domino environment. With each new major Notes and Domino release, the performance and functionality of the clustering feature has been enhanced.

Cluster replication helps ensure that replica databases in a cluster are as up-to-date as possible in order to support failover and load balancing. It is event-driven, rather than schedule-driven, so when a cluster replicator learns of a change to a database, it immediately pushes that change to other replicas in the cluster.

Streaming cluster replication improves the way in which the event-driven cluster replication is performed on Domino 8 servers.

Streaming cluster replication is used automatically for Domino 8 clusters.

**Note:** For Domino clusters that contain any combination of Domino 8 servers and pre-Domino 8 servers, regular cluster replication is used to replicate between the Domino 8 and pre-Domino 8 servers.

## 9.7.1 Benefits of streaming cluster replication

Streaming cluster replication in Domino 8 has the following performance benefits over regular cluster replication:

- ▶ Database changes are sent to the replicas with the assumption that the database replicas need the change. (With regular cluster replication, the target database and documents are opened across the network before being updated, to check whether the update is really still required.)
- ▶ Streaming cluster replication does not require one-to-one replication with each cluster-mate for a database that has changed.
- ▶ The latency time for cluster replication is reduced with streaming cluster replication, because the queuing system for updates has been improved.

## 9.7.2 How streaming cluster replication works

With previous versions of Lotus Domino, the cluster replicator checked each clustered database in turn to identify whether there were changes to replicate. If changes were found, all changes queued for that one database would be replicated before moving onto the next database.

This section describes how the new streaming cluster replicator functions in Domino 8.

**Tip:** If you are new to clustering, refer to the Clusters section in the Lotus Domino Administrator 8 Help database for information about how to plan and implement clusters.

### Update queuing and cluster replication management

In Lotus Domino 8, the cluster replicator propagates events (for example, note changes, unread changes, and folder changes) to destination servers as changes occur.

As a change occurs to a clustered server's database, the specific change is *captured* in memory and the change is immediately queued for replication to the cluster member servers that have a replica of the database. This generally reduces latency because the cluster replicator does not get tied up replicating updates for a single busy database at the expense of others.

Streaming cluster replication uses in-memory information, so it generally does not need to read data from disk or reopen databases to get the updates that need to be synchronized with other cluster member servers.

**Important:** Streaming cluster replication does not negate the need for scheduled replication. For all Domino clusters, scheduled replication should be set to occur on a regular basis. This ensures that any changes that are missed by the cluster replicator (usually due to an unplanned server outage) are caught by the scheduled replicator.

For more information, refer to the topic Using standard replication in a cluster in the Lotus Domino Administrator 8 Help database.

### Coordination with scheduled replication

Streaming cluster replication in Domino 8 provides coordination with the scheduled replicator to help reduce the processing for scheduled replication. To do this, the streaming cluster replicator process updates the scheduled replication history periodically. This reduces the burden on the scheduled replicator process.

## Error checking and correction

If the streaming cluster replicator encounters any errors during replication, it reverts back to the standard cluster replicator to replicate the changes required to synchronize the database.

## 9.8 Policy enhancements

Policies were introduced to Notes and Domino 6 to assist administrators with the task of implementing standardized Notes client configuration settings. With each new major release of Notes and Domino, policies have been enhanced to provide additional configuration options and more complete standardization.

**Tip:** If you are new to policies, refer to the Policies section in the Lotus Domino Administrator 8 Help database for information about how to plan and implement policies.

### 9.8.1 New features of policies in Notes and Domino 8

In Notes and Domino 8, the following policies features have been added:

- ▶ Additional policy settings
- ▶ New policy settings documents for productivity tools and activities
- ▶ New option: How to apply this setting

#### Additional policy settings

Several additional preferences can now be controlled through policy settings documents.

Table 9-6 is a listing of the new settings that have been added in Domino 8 to the existing policy settings document types (desktop, mail, registration, security, archive, setup).

*Table 9-6 New Domino 8 policy settings added to existing policy settings document types*

Settings document	Tab	Setting and comments
Desktop (dynamic desktop)	Basics	Default Web search engine (new setting).
		Allow user-initiated updates (new setting for provisioning).
	Preferences → Miscellaneous	Several new settings, for example, Do not prompt when exiting Notes.
	Preferences → Window Management (new tab)	Contains settings for window and sidebar management.
	Preferences → Replication	Contains a new section for default replication schedule (the settings in the location documents on Notes clients).

Settings document	Tab	Setting and comments
Mail	Mail → Basics	Warn about blank message subject (new setting).
		New settings to prompt user when he deletes collapsed conversations and calendar entries.
	New tabs: Follow up, Attention indicators, message recall	Contain settings for controlling these features.
	Calendar → Display	Settings for displaying unprocessed and deleted meetings.
	Calendar → Scheduling	Show 24-hour scheduler (new setting).
Registration	Mail	New settings for advanced mail options, for example, to create mail file replicas on cluster members, mail file owner/manager settings.
Security	Password management → Password management basics	Override server's Internet lockout settings (new setting).
	Keys and certificates	Enable online certificate status protocol checking (new setting).
	New tabs: Signed plug-ins, Portal server	Contain settings for accepting signed plug-ins and for Portal home server settings.
Archive - no change		
Setup - no change (initial desktop setup)		

## New policy settings documents for productivity tools and activities

Two new policy settings document types have been added to Domino 8:

### ► Productivity tools

To allow or prevent the use of productivity tools, allow the use of macros, and to set file type associations

### ► Activities

To set server, port, and SSL encryption preferences for connection to the activities server from the Notes client

**Tip:** For additional information about productivity tools, refer to Chapter 7, "Productivity tools" on page 199.

## New option: How to apply this setting

Domino 8 introduces a new How to apply this setting option, which is available for all desktop, mail, productivity tools, and activities policy settings. This standardizes the method that administrators can use to set and lock down policy settings. It replaces various control

methods introduced in earlier Domino versions, such as the “Allow user to change settings on this tab” and “Apply this setting” (Don’t change, Always, Initially) options introduced in Domino 7.

The new How to apply this setting option is a per-field setting. Possible value for this setting are:

- ▶ Don’t set value.  
Allow users to set their own value for the preference.
- ▶ Set initial value.  
Set an initial value for the preference, but then allow users to change and keep any new value they choose.
- ▶ Set value whenever modified.  
Set an initial value, allow users to change it, but then change the value back to the initial value whenever the user re-authenticates (usually after Notes client restart).
- ▶ Set value and prevent changes.  
Set a value and do not allow it to be changed by the user.

An example of this setting is shown in Figure 9-15.

Default for New Calendar Entries		How to apply this setting:	Inherit from parent policy:	Enforce in child policies:
Entry type:	Meeting	Don't set value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Duration of meetings and appointments (in minutes):	60	Set initial value	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
Repeat duration for anniversaries (in years):	10	Set value whenever modified	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		Set value and prevent changes	<input type="checkbox"/> Inherit	<input type="checkbox"/> Enforce
		Don't set value		

Figure 9-15 Example of the How to apply this setting field

There is also a new How to Apply document action, which sets the value for all How to apply this setting fields in a document. By setting the initial value of all fields in this way, administrators may reduce the number of How to apply this setting fields they need to set manually.

Possible values for this action are:

- ▶ Don’t set value for all fields.
- ▶ Set initial value for all fields.
- ▶ Set value whenever modified for all fields.
- ▶ Set value and prevent changes for all fields.

This action is initiated from the action bar while in edit mode in any desktop, mail, productivity tools, or activities policy settings document. An example of the action bar is shown in Figure 9-16.

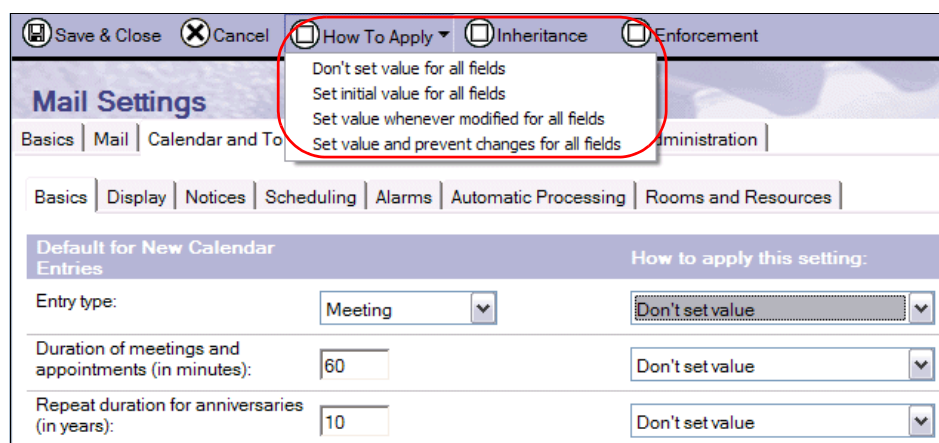


Figure 9-16 Example of the How to Apply action

## 9.9 New Domino domain monitoring features

Domino domain monitoring, first introduced with Domino 7, provides Domino Administrators with a single feature-oriented Notes database through which administrators can see the status of multiple servers, using the information to prioritize, track, and resolve problems.

Domino domain monitoring automates problem determination and analysis in order to help reduce the costs and time associated with monitoring and troubleshooting your Domino environment. With Domino domain monitoring, you can quickly locate and resolve issues before they cause more serious problems or outages.

The IBM Redbooks publication *Lotus Domino Domain Monitoring*, REDP-4089, provides a complete Domino domain monitoring overview with example monitoring scenarios and is located at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4089.html?Open>

Domino 8 improves Domino domain monitoring to assist you in resolving your server issues. IBM Lotus is committed to making Domino domain monitoring an essential tool in your monitoring and problem management toolkit with new features like:

- ▶ Modular documents
- ▶ Automatic report closing probe
- ▶ LDAP search response probe

### 9.9.1 Modular documents for cause, solution, and corrective actions

Domino 8 introduces a new type of configuration document into the monitoring configuration (events4.nsf) database: the modular document.

Modular documents have been introduced to provide more flexibility and manageability of the problem determination and automation capabilities of Domino domain monitoring and can take one of three forms:

- ▶ Probable cause (PC)
- ▶ Possible solution (PS)
- ▶ Corrective action (CA)

Before we dive into describing the new modular documents, we need to take a step back to understand where the probable cause, possible solution, and corrective actions information was defined prior to Domino 8.

In Domino 7, Probable Cause, Possible Solution, and Corrective Action fields were located on two tabs directly in the event message documents, as shown in Figure 9-17.

**Tip:** An event message document, sometimes referred to as a server and addin task event document, exists for every message that is displayed on the Domino server console. The event message documents can be found in the **Advanced** → **Event Messages by Text** view in events4.nsf.

The screenshot shows a web browser window displaying the 'Server and Addin Task Event' document. At the top, there is a header 'Server and Addin Task Event'. Below the header, there are three tabs: 'Basics', 'Probable Cause/Possible Solution', and 'Corrective Action(s)'. The 'Probable Cause/Possible Solution' tab is currently selected and highlighted with a red border. The 'Corrective Action(s)' tab is also highlighted with a red border. The 'Basics' tab is not highlighted. The 'Probable Cause/Possible Solution' tab contains the following text: 'Probable cause: 1) The server on which the database resides crashed or was rebooted while Notes was running. 2) An API program is improperly accessing the database.' The 'Corrective Action(s)' tab contains the following text: 'Possible solution: The database should be fixed-up automatically the next time it is opened. You can also run the LOAD FIXUP task from the Domino server console. For more information about the database Fixup task, see the Domino Administrator documentation.' The 'User comments' field is empty.

Figure 9-17 Pre-Domino 8 event message document

**Note:** Multiple probable causes, possible solutions, and corrective actions can be defined in a Domino 7 Event Message document.

With Domino 8, instead of the probable cause, possible solution, or corrective action information being hardcoded into each and every event message document, the new Domino 8 event message documents reference (or *point to*) one or more modular



documents. Each modular document defines either a probable cause, possible solution, or corrective action.

Figure 9-18 provides a visual representation of how probable cause, possible solution, and corrective actions are associated with event message documents in Domino 7 versus Domino 8.

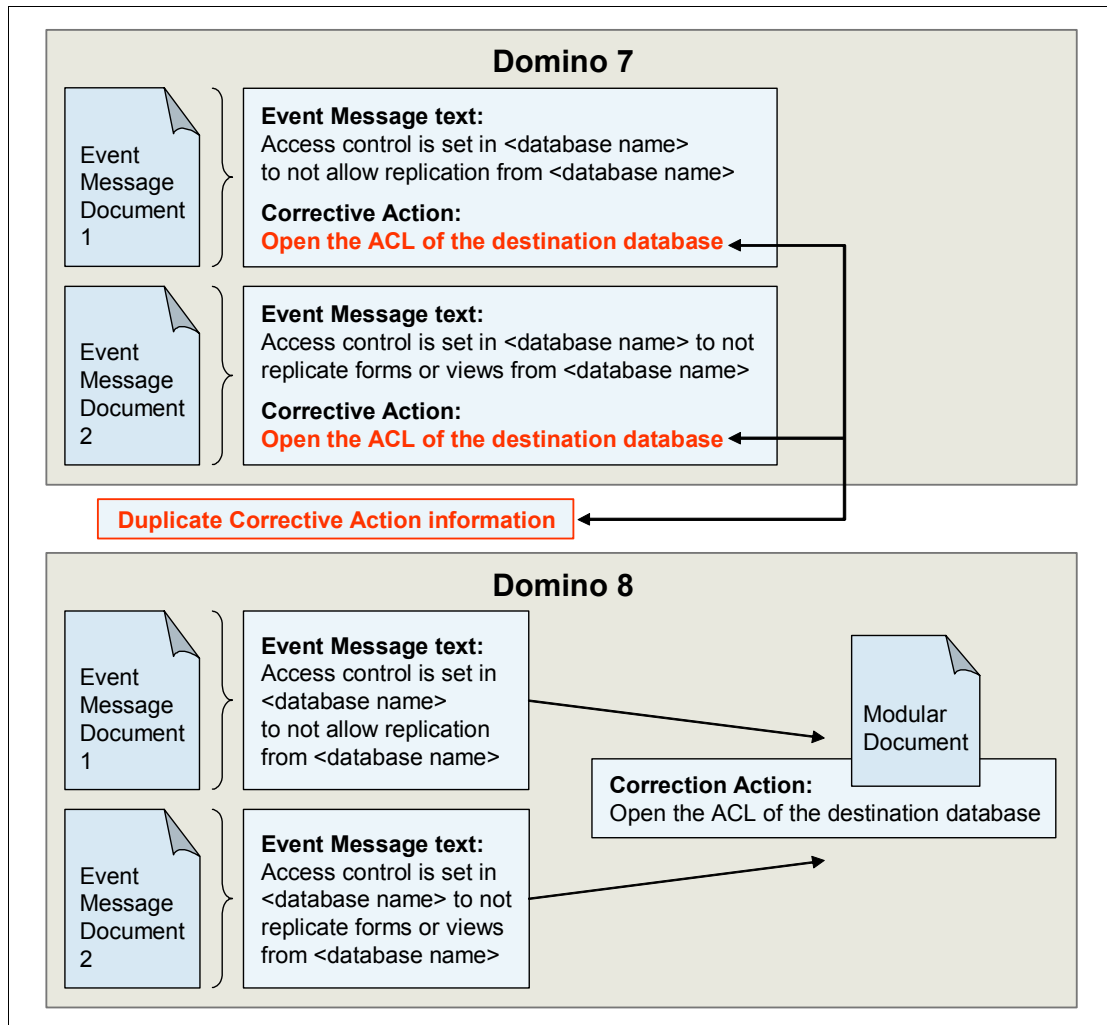


Figure 9-18 Management of PC, PS, and CAs in Domino 7 versus Domino 8

Figure 9-18 shows how in Domino 7 corrective action code can be duplicated on two separate event message documents. If the corrective action needs to be changed, it must be changed in each event message document.

With Domino 8, the corrective action code resides in a separate modular document. Each event message document simply references the corrective action modular document defining the corrective action. If the corrective action needs to be updated, it only has to be updated in the corrective action modular document. No changes are needed to the event message documents.

In effect, the use of modular documents decouples the relationship between the event message documents and the probable cause, possible solution, or corrective action, allowing more flexibility and ease of management when customizing Domino domain monitoring. If you create a custom corrective action and want to apply the code to multiple event message

documents, you can do that without having to copy and paste the code into multiple documents, which is error-prone and time consuming. Furthermore, if you want to change the code in the future, you only need to update it in the modular document once and it will automatically apply to the event message documents that refer to that modular document.

**Important:** Due to the caching of event message and modular documents, you may find that updates to event message and modular documents are not reflected in DDM.nsf immediately. You can restart the event task to ensure that updates to event message and modular documents are reflected in DDM.nsf immediately.

Figure 9-19 shows an example modular document that runs a fixup on a target database. The last section of the document is an embedded view that lists the event message documents that reference this modular document.

☒ Enable

**Modular Action - LotusScript**
Last modified by [Scott O'Keefe/Westford/IBM](#) on 04/18/2007 at 09:43:00 AM

**Basics**

Type: LotusScript Code

Description: Issue a command to the server %TargetServer%

Code:

```

Dim s As New NotesSession

Dim sCmd As String
sCmd = |load fixup -F "%TargetDatabase%"|
Call s.SendConsoleCommand("%TargetServer%", sCmd)

```

The following message documents will be updated when this document is saved:

Message Text
Admin Process: Could not rename <name> in an appointment document in <string>.
Admin Process: Could not rename <string> in a calendar profile in <string>.
Admin Process: Error creating a names list for <name> sending <string> requests to domain <string>.
Admin Process: Received the following error enumerating archives in database <database name>.
Application or Network program error. Document identifier in document doesn't match search results
B-tree structure is invalid
Could not open <string>'s calendar profile in <string>.
Database compactor error
Database is corrupt — Cannot allocate space

Figure 9-19 Example modular document to run fixup on a target database

If you need to disassociate a certain event message document with a modular document, this is a perfect view to use. For example, perhaps you need to make a code change to a corrective action modular document and, after the change, that corrective action is no longer applicable to certain event message documents with which it is currently associated. A quick search through the embedded event message document view is all you need to find the documents that should be disassociated with the updated action.

**Attention:** Disassociating a modular document from an event message document is done from the event message document and is covered in 9.9.2, “Updated event message documents” on page 269.

## 9.9.2 Updated event message documents

In addition to the removal of the Probable Cause/Possible Solution and Corrective Action(s) tabs, there are other enhancements to the event message document form in Domino 8 that are worth looking at more closely.

The event message document for the “Database is corrupt -- Cannot allocate space error” is shown in Figure 9-20. The document is in edit mode in order to highlight the new features.

**Server and Addin Task Event** Last modified by David Schneck/Westford/IBM on 09/26/2006 at 10:24:25 AM

Event Type: Server  
Event Subtype: Monitoring  
Event Severity: Warning (high)  
Correlation: No correlation  
Original Text: Server task <string> on <name> is no longer responding

Addin Name: None specified  
Value: 0x3DE8  
Suppression Time: 0 minutes

Lotus Entries | Custom Entries | Stock Entries

Probable Cause/Possible Solution | Corrective Actions

Type	Description	Status
Probable Cause 1:	The task is not updating its timestamp because it is either waiting for a resource to become free or it is executing time intensive functionality.	<input checked="" type="checkbox"/> Enabled
<a href="#">Modify</a> <a href="#">Delete</a>		
Probable Cause 2:		<input checked="" type="checkbox"/> Enabled
<a href="#">Add</a>		
Probable Cause 3:		<input type="checkbox"/> Enabled
<a href="#">Add</a>		
Probable Cause 4:		<input type="checkbox"/> Enabled
<a href="#">Add</a>		
Possible Solution 1:	Examine ddm.nsf and/or log.nsf for other errors issued by this task.	<input checked="" type="checkbox"/> Enabled
<a href="#">Modify</a> <a href="#">Delete</a>		
Possible Solution 2:	Change the probe to not look for this task on this server.	<input checked="" type="checkbox"/> Enabled
<a href="#">Modify</a> <a href="#">Delete</a>		
Possible Solution 3:		<input type="checkbox"/> Enabled
<a href="#">Add</a>		
Possible Solution 4:		<input type="checkbox"/> Enabled
<a href="#">Add</a>		

Figure 9-20 Event message document for Database is corrupt — Cannot allocate space

**Important:** The stock entries, which are explained in detail in “Stock entries” on page 270, are hidden by default, but you can display them by selecting the **Display Stock Entries** button on the top right of the Event Message form. Hide them again by selecting the **Hide Stock Entries** button, as shown in Figure 9-20.

As mentioned in 9.9.1, “Modular documents for cause, solution, and corrective actions” on page 265, the main Probable Cause/Possible Solution and Corrective Action(s) tabs have been removed. Also, the Basic tab has been hidden to protect the configuration fields in that tab. If you click the **Edit Basic Settings** button, you are warned that changing any of the

basic settings other than severity and/or suppression time may result in unexpected behavior. One reason that you might need to modify the basic settings in an event message document could be if you have developed a Domino add-in task and supply your own event message documents. If you have your own event message documents you might have to modify the basic settings as your Domino add-in functionality changes.

As shown in Figure 9-20 on page 269, are the three new tabs, Lotus Entries, Custom Entries, and Stock Entries, which are where the Modular documents are referenced.

## Lotus Entries

The Lotus Entries tab contains the probable cause, possible solution, and corrective actions defined by IBM Lotus Development and shipped with Domino. There can be up to four references for each type of modular document.

**Important:** Do not modify or delete the Lotus entries. If you want to disassociate a modular document defined in the Lotus Entries tab with an event message document, uncheck the **Enabled** setting to the right of the modular document reference. As of this writing, there are plans to prevent users from modifying or deleting modular documents from the Lotus Entries tab in later versions of Domino 8.0.

You can either modify the modular document currently selected or delete it completely with the **Modify** and **Delete** options, respectively.

## Custom entries

The Custom Entries tab is where you can add your own references to probable cause, possible solution, and corrective action modular documents. The interface looks similar to the Lotus Entries tab, although you only have the option to add up to two probable cause, possible solution, and corrective actions and there is no Enabled setting.


**Note:** The Enabled setting is only available in the Lotus Entries tab as a means to disassociate a modular document with an event message document without having to delete it from the event message document.

## Stock entries

Stock entries consist of all pre-Domino 8 entries for probable causes, possible solutions, and corrective actions, and are available for backwards compatibility. The Lotus entries have replaced the stock entries for Domino 8 and all subsequent releases. Therefore, if you are creating custom probable causes, possible solutions, or corrective actions with the Domino 8 monitoring configuration template (events4.ntf) on Domino 7 servers, use the stock entries. If customizing on Domino 8 servers use custom entries.

Figure 9-21 shows the warning message displayed in the Stock Entries tab, stating that stock probable cause, possible solution, and corrective actions only execute on Domino 7 or earlier servers.

Lotus Entries
Custom Entries
Stock Entries


**CAUTION:** Stock Probable Causes, Possible Solutions and Corrective Actions will only execute on Domino 7 or earlier servers. To affect Domino 8 or later servers, Custom Entries should be modified using modular capabilities.

Probable Cause/Possible Solution
Corrective Actions

Probable cause:

1) The server on which the database resides crashed or was rebooted while Notes was running.  
2) An API program is improperly accessing the database.

Possible solution:

The database should be fixed-up automatically the next time it is opened. You can also run the LOAD FIXUP task from the Domino server console.  
  
For more information about the database Fixup task, see the Domino Administrator documentation.

User comments:

Figure 9-21 Stock entries tab in the Domino 8 Event Message document

**Important:** If you have made modifications to event message documents on Domino 7, those modifications can be overwritten when you upgrade to Domino 8. To preserve your modifications, complete the steps in the “Merging modified Stock entries” sections in the Lotus Domino Administrator 8 help documentation.

### 9.9.3 Automatic report closing probe

The automatic report closing probe automatically closes event report documents that have been inactive for a specified number of days. This feature is perfect for time-sensitive errors or lower severity issues that you only want to address if you have enough time.

As an example, when users attempt to access a Domino server or application to which they have not been granted access, the server denies them access and displays a message on the Domino console. These warning messages are on the lower end of the priority list compared with other types of failures. Ideally, it would be nice to know if there are certain users who are repeatedly attempting to access resources on your Domino servers, but there may well be other issues of greater importance in your environment.

Given the lower priority of these event report documents and the diminishing administrative value that they provide as they remain inactive, you may want to automatically close them after a certain number of days. This is now possible with the automatic report closing probe.

As shown in Figure 9-22, selecting the **Add Error Codes to List** button provides a pop-up box where you select one or more event messages to auto-close. You can also define your own schedule for this probe on the Schedule tab.

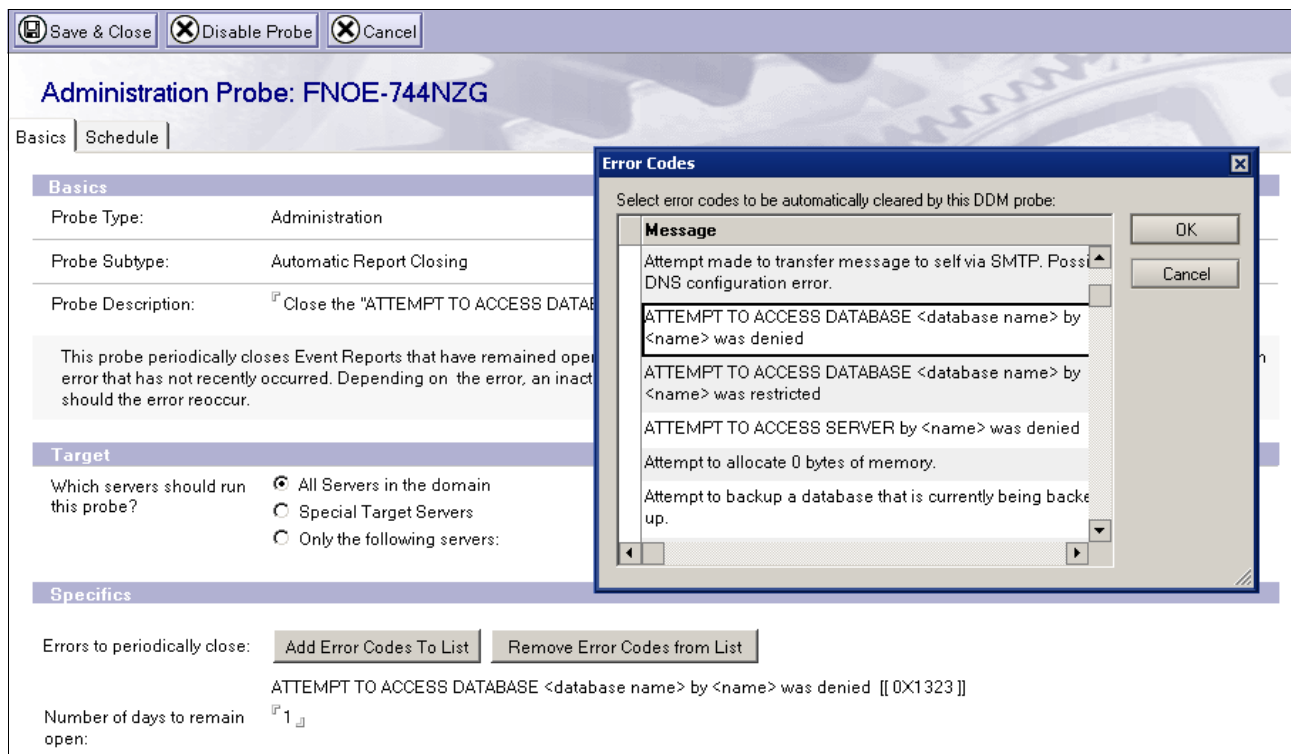


Figure 9-22 Automatic report closing probe configuration document

**Tip:** There are several other ways to control the volume and type of data that are available in DDM, including filter documents, lowering event message severities, and permanently closing event report documents.

For more information about these methods, refer to *Lotus Domino Domain Monitoring*, REDP-4089, at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4089.html?Open>

Figure 9-23 shows an Event report document that has been automatically closed by an automatic report closing probe, which is noted in the event change history at the bottom of the document. The event change history also states that another occurrence of that event will cause the event report document to be reopened.


Assign...
Change State
Add Comments...
Common Actions

### Closed Event

(This event is not assigned to anyone)

Generated by: la/itso
For server: LA/ITSO
in Domain: ITSO
Database: names.nsf
Event class: Enhanced
Agent: -
User: David Newman/AUST/ITSO

Most Recent Event






Wednesday, June 06, 2007 - 8:06:32 AM
(12 occurrences, first seen at 8:06:30 AM that day)

ATTEMPT TO ACCESS DATABASE names.nsf by David Newman/AUST/ITSO was denied

Warning High

Explanation

- Reported by: Server
- Severity and type:  Warning High in Security: Access 
- Probable cause: The specified user does not have appropriate privileges in the database's ACL.
- Possible solution: This behavior may be intentional and may require no action. Modify the ACL for names.nsf on LA/ITSO.
- Corrective action:  Edit the ACL for names.nsf on LA/ITSO.

**Event Change History:**

06/13/2007 03:30 AM : LA/ITSO - Another occurrence of this event will cause this report to be reopened.

06/13/2007 03:30 AM : LA/ITSO - Closed by an Automatic Report Closing probe after remaining Open, but inactive for 1 days.

06/06/2007 08:06 AM : LA/ITSO - changed state to Open

Figure 9-23 Event report document that has been automatically closed

**Tip:** The automatic report closing probes work retroactively, so they are a great way to clean up your DDM.nsf databases. If you find that you are overwhelmed with open Event Report documents as you are working through your Domino issues with Domino domain monitoring, consider implementing an automatic report closing probe to close *stale* events.

In many cases Domino domain monitoring can detect when an issue is resolved and automatically closes that event report document, without the use of an automatic report closing probe. For all other event report documents you should utilize an automatic report closing probe for auto-closure. There are certain events that are especially good candidates, including server down/slow and failed replication events.

### 9.9.4 LDAP search response probe

The LDAP search response probe monitors the LDAP search response time and generates an event if a certain threshold is exceeded. The event can be triggered with either a millisecond threshold or if the percentage of the LDAP server timeout is exceeded. If both are populated with a value, the percentage of the LDAP server timeout takes precedence.

Figure 9-24 shows an example LDAP search response probe configuration document. Note the use of the special target group, which dynamically builds a list of the servers running LDAP.

## New DDM Directory Probe

Basics

Probe Type:

Directory

Probe Subtype:

LDAP Search Response

Probe Description:

Alert if my LDAP servers are exceeding 50% of the LDAP Server timeout (10 seconds) with a Warning High

This probe monitors the average response time for LDAP searches on the target server. Thresholds are configured to define acceptable user response times. An event will be issued in the Domino Domain Monitor if LDAP search response times meet or exceed configured thresholds. The schedule for this type of probe is not configurable.

Target

Which servers should run this probe?

☐ All Servers in the domain
 ☒ Special Target Servers
 ☐ Only the following servers:

LDAP Servers

Specifics

Event generation status:	If the average LDAP search response exceeds:	Generate an event of severity:
<input type="checkbox"/> Enabled	2000 milliseconds or 0% of the LDAP Server timeout	Fatal
<input type="checkbox"/> Enabled	1500 milliseconds or 0% of the LDAP Server timeout	Failure
<input checked="" type="checkbox"/> Enabled	milliseconds or 50% of the LDAP Server timeout	Warning High
<input type="checkbox"/> Enabled	500 milliseconds or 25% of the LDAP Server timeout	Warning Low
<input type="checkbox"/> Limit reporting to the average search responses times stored by the LDAP Server		

Figure 9-24 LDAP search response probe configuration document

**Note:** To use percentages, the LDAP server timeout must be set to a value other than the default of unlimited (0). The LDAP server timeout is defined in the server configuration document. If the LDAP server timeout is set to unlimited and only a percentage is specified in the LDAP search response probe, the probe does not run.



Figure 9-25 provides an example event report document from a triggered LDAP search response probe.

Assign...
Change State
Add Comments...
Common Actions

### Open Event

(This event is not assigned to anyone)

Generated by: lafitso  
in Domain: ITSO  
Event class: Enhanced

For server: LA/ITSO  
Database: -  
Agent: -  
User: -

Most Recent Event
Prior Events

Warning Low

Tuesday, June 26, 2007 - 5:05:30 PM

The LDAP search response (3 ms) on LA/ITSO has reached its threshold (1 ms).

Explanation

- Triggered by:
- Reported by: LDAP Server
- Auto-closing: Once this issue has been corrected, its resolution will be detected. This report's status will automatically be changed to Closed and its Severity changed to Normal.
- Severity and type: Warning Low in Directory: LDAP
- Probable cause: The user response to LDAP searches is less than the configured threshold.
- Possible solution: Decrease the configured search timeout on this LDAP server.  
Add an additional LDAP server to your environment to provide better user response times.

Figure 9-25 Event report document triggered by an LDAP search response probe

**Note:** The event report document in Figure 9-25 was not generated by the LDAP search response probe configuration document shown in Figure 9-24. As you can see in Figure 9-25, the event report document was triggered by a probe with an extremely low threshold of 1 millisecond, which we do not recommend as a production threshold for monitoring.

## 9.9.5 Additional Domino Domain monitoring features

The following sections provide more high-level coverage of some of the new Domino domain monitoring features.

## Execute CA role

Domino 8 introduces a new DDM database ACL role, which allows for the display and execution of the corrective actions within event report documents in DDM.nsf. The new role, called execute CA, is highlighted in Figure 9-26.

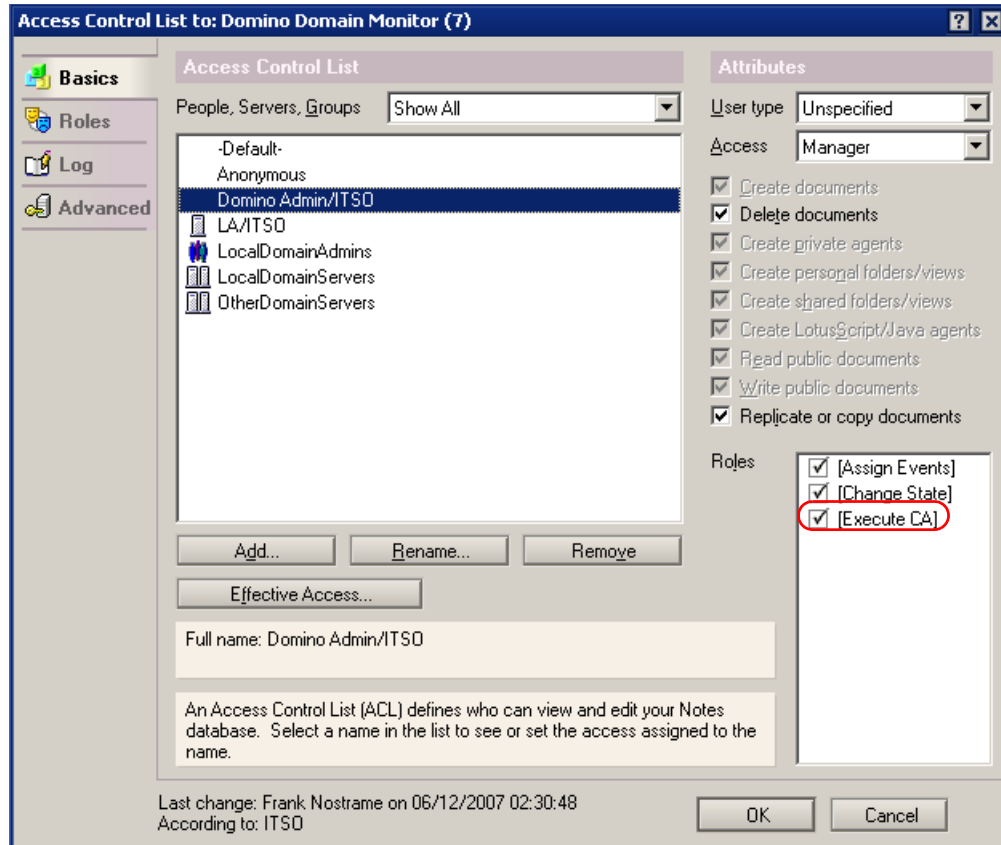


Figure 9-26 New execute CA role in ACL of DDM.nsf

As discussed in “Common Actions button” on page 276, this role is also necessary in order to see the Common Action button within the event report documents.

## Common Actions button

The Common Actions button provides context-sensitive common actions that might need to be performed to resolve the documented issue. Figure 9-27 shows the Common Actions button displaying actions for an event report document based on the server and database name target information available in the event report document.

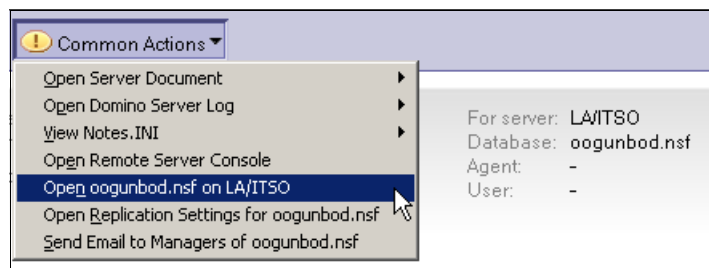


Figure 9-27 Common actions list is dynamically built based on available target information

**Important:** The Common Actions button is only displayed for users who have the execute CA role checked in the ACL of DDM.nsf. For more information about the execute CA role, refer to “Execute CA role” on page 276.

**Tip:** The Common Actions button is implemented from the Domino domain monitoring template only. Therefore, it is available on Domino 7 generated event report documents, as well as on Domino 8.

## By Database view

The new DDM.nsf design provides a By Database view, which allows you to manage specific applications across your Domino domain, regardless of whether the applications are located on multiple servers. Figure 9-28 shows an example of the By Database view.

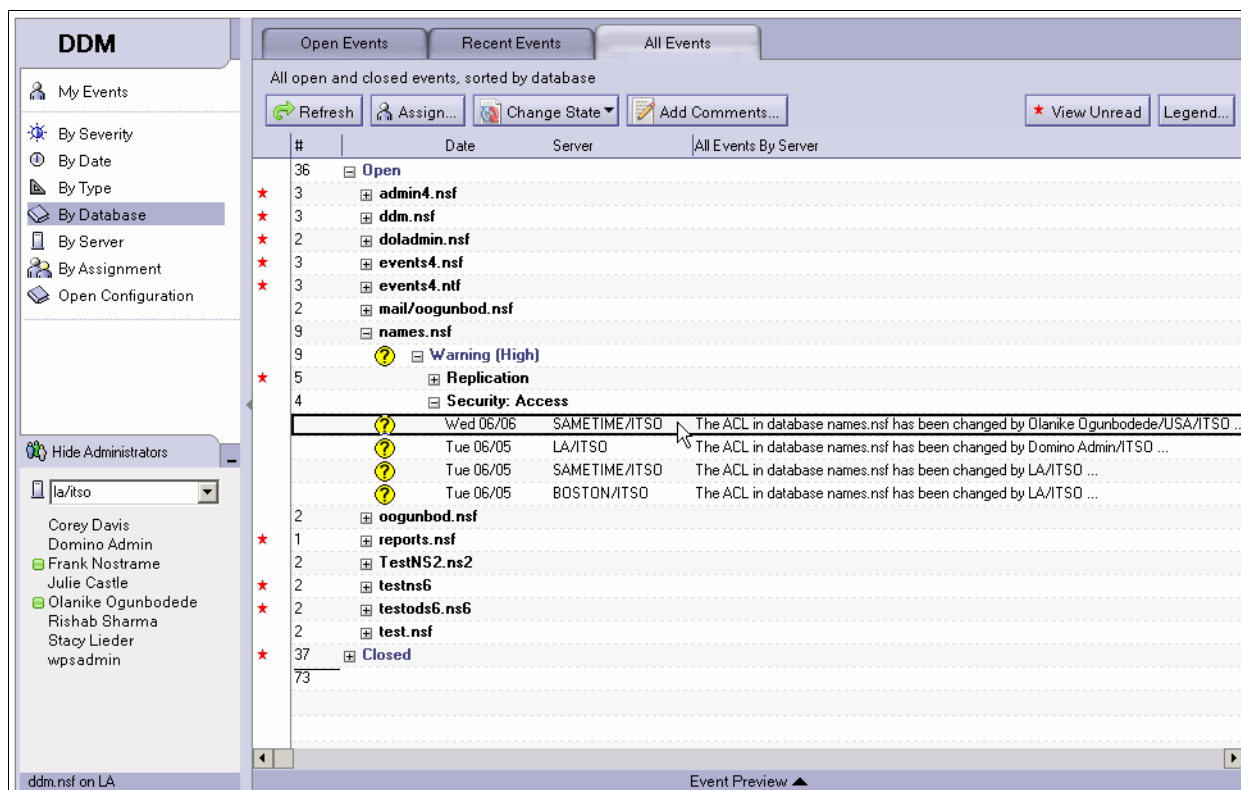


Figure 9-28 By Database view in DDM.nsf

## Filter by database

The filter documents have been enhanced to provide more granularity, allowing you to filter not only by type, severity, and server, but also by database, as shown in Figure 9-29.

The screenshot shows the 'Domino Domain Monitor Filter' configuration window. It has several sections: 'Description' with a text area containing 'Filter IN errors on the Administration server related to names.nsf, admin4.nsf and events4.nsf'; 'Event Filter' with two radio buttons, 'Apply filter to enhanced and simple events' (selected) and 'Only apply filter to simple events'; 'Event Types and Severities to Log' with two radio buttons, 'Log All Event Types' (selected) and 'Log Selected Event Types', and five checkboxes: 'Fatal' (checked), 'Failure' (checked), 'Warning(High)' (checked), 'Warning(Low)' (checked), and 'Normal' (unchecked); 'Servers on which the filter will be applied' with three radio buttons, 'All Servers in the domain' (unchecked), 'Special Target Servers' (selected), and 'Only the following servers:' (unchecked), followed by a dropdown menu showing 'Administration Server of the Domino Directory'; 'Filter events only for these databases:' with a text box containing 'names.nsf, admin4.nsf, events4.nsf'; and two radio buttons at the bottom, 'Exclude indicated databases' (unchecked) and 'Include indicated databases' (selected).

Figure 9-29 Filter document that filters in only errors on names.nsf, admin4.nsf and events4.nsf

## 9.10 The new optional On Disk Structure (ODS48)

The term On Disk Structure (ODS) describes the internal architecture of Notes databases. With the exception of Notes and Domino 7.x, each major new release of Notes and Domino has included an update to the ODS to accommodate new features and functionality for that release.

In Notes and Domino 8, the new ODS is an optional upgrade. Unlike previous ODS conversions, the ODS48 upgrade does not occur automatically when a database is compacted. This has the benefit of allowing administrators to decouple the ODS upgrade from the server upgrade, and to control when and how the new ODS will be implemented on servers and clients.

The implementation procedure for the ODS upgrade is different in this version than for previous versions. This section describes:

- ▶ New features of the Notes and Domino 8 On Disk Structure
- ▶ How to enable the new On Disk Structure on Domino servers
- ▶ How to revert to an earlier On Disk Structure

**Note:** You may be interested to know the ODS version for each major release of Notes and Domino, so here they are:

<u>Version</u>	<u>ODS</u>	<u>Extension to force ODS*</u>
ND8	ODS48	Not required
ND6/ND7	ODS43	NS6
R5	ODS41	NS5
R4	ODS20	NS4
R3	ODS17/17.1	NS3
R2	ODS16/16.3	NS2

\*Note: Once you force an ODS version using its extension, it cannot be removed. The only way to remove it is to create a new replica or new copy of the database with a .NSF extension.

## 9.10.1 New features of the Notes and Domino 8 On Disk Structure

The new ODS provides potential improvements for I/O and folder optimization. It is also a requirement for the implementation of these new features:

- Database names list for user renames
- Design compression

### Database names list for user renames

For databases that use the new ODS48, the *update user name in reader and author fields* process (part of the user rename process) has been streamlined. This administration process can be very resource intensive, so streamlining it may improve performance on busy or complex Domino server environments.

ODS48 databases store a names list, which is a master list of all the user names listed within any document in that database. Using the new database names list feature, the master names list is checked first to determine whether any documents in the database contain the user's name in Reader or Author fields. If the user's name is found in the master list, document processing continues in the usual way. If the name is not found, the database is skipped.

This feature is enabled automatically on all ODS48 databases, so no additional configuration is required.

For more information about this feature, refer to 9.5.3, "Database names list for user renames" on page 255.

### Design compression

The option to compress design notes within a database has been added to the new ODS in Notes and Domino 8. This feature reduces the size of databases by compressing design elements by up to 60%. For example, the design elements in a database based on the standard Notes 8 mail template (Mail8.ntf) reduce in size from approximately 25 MB to 11 MB once design compression is implemented. The compression percentage achieved varies from database to database based upon the individual compression ratio achieved for each design element in each database.

The design compression function is available on the Advanced tab of the database properties box of ODS48 databases, as shown in Figure 9-31 on page 283. It is also available on the Advanced tab of the properties box of ODS43 databases and can be selected. However, the compression does not occur unless the database is subsequently upgraded to ODS48.

Note that this property is new to Notes and Domino 8. It is not visible when viewing the database properties using an earlier client.

**Tip:** Since design compression does not actually occur on ODS43 databases, you may ask why the option can be selected. There are two situations where this feature is particularly useful:

- ▶ When upgrading to Domino 8, administrators can select design compression on the ODS43 databases prior to running a copy style compact to upgrade them to ODS48. Then when the copy style compact is run, both the ODS upgrade and the design note compression are implemented with the single copy style compact process.
- ▶ Administrators can select design compression on an ODS43 template. By doing this, the template file itself remains an ODS43 database, while ODS48 databases created from it automatically have design note compression enabled.

By default, design compression is disabled for existing databases. For information about enabling design compression, refer to “Optional tasks” on page 282.

**Attention:** Design note compression is enabled in the standard Notes 8 mail template (Mail8.ntf). This means that design note compression is automatically enabled for:

- ▶ Any new mail databases created from the Notes 8 mail template
- ▶ Any existing mail databases that are converted to the Notes 8 mail template (using either Design → Replace or the **load convert** server command)

It is important to think about how and when ODS48 and design note compression will be implemented in your Domino environment. If you do not want to automatically enable design note compression for mail files, deselect the option in the Notes 8 mail template (mail8.ntf) before using it for new and existing mail files.

Note that mail8.ntf is the only standard system template that has design note compression selected by default. All other templates have the option deselected.

## 9.10.2 How to enable the new On Disk Structure on Domino servers

For databases to be created with the new ODS, set the following variable in the Lotus Domino 8 server's NOTES.INI file:

Create\_R8\_Databases=1

**Important:** Remember that setting this parameter only enables ODS48 for new databases created after the parameter is set. For instructions on how to upgrade existing databases to ODS48, refer to “Optional tasks” on page 282.

There are three methods that may be used to set this (or in fact, any) parameter in the server's notes.ini file:

- ▶ Set the parameter directly on a Domino server console by typing:  
Set conf Create\_R8\_Databases=1
- ▶ Add the parameter directly to a Domino server's notes.ini file.
- ▶ Add the parameter to the configuration document in the Domino directory for a single server, or for all servers in the domain (using the \* - [All Servers] configuration document).

We recommend that the parameter be added via a configuration document so that there is an easy way to view and audit which servers have the parameter set. Setting the parameter this way means that it will be refreshed automatically without requiring a server restart. In addition, setting the parameter in the \* - [All Servers] configuration document allows the administrator to set the parameter on all servers without having to add it to each server individually.

**Tip:** Pre-Domino 8 servers ignore the Create\_R8\_Databases=1 setting, even if they have it set through the \* - [All Servers] configuration document, so it is safe to set this parameter even in a mixed version environment.

To set the parameter using a configuration document:

1. In the Domino Administrator client while connected to the server, go to the **Configuration** tab.
2. Navigate to **Servers** → **Configurations** in the left navigation pane.
3. Click **Edit Configuration** to update an existing configuration document or **Add Configuration** to create a new one. (Note: Only use **Add Configuration** if a configuration document for the desired server does not already exist.)

If you are creating a new configuration document, add the server name to the Group or Server Name field, for example, Boston/ITSO.

4. Go to the NOTES.INI Settings tab.
5. Click the **Set/Modify Parameters** button and fill in the Item and Value fields:
  - Item: Create\_R8\_Databases
  - Value: 1

This interface is shown in Figure 9-30.

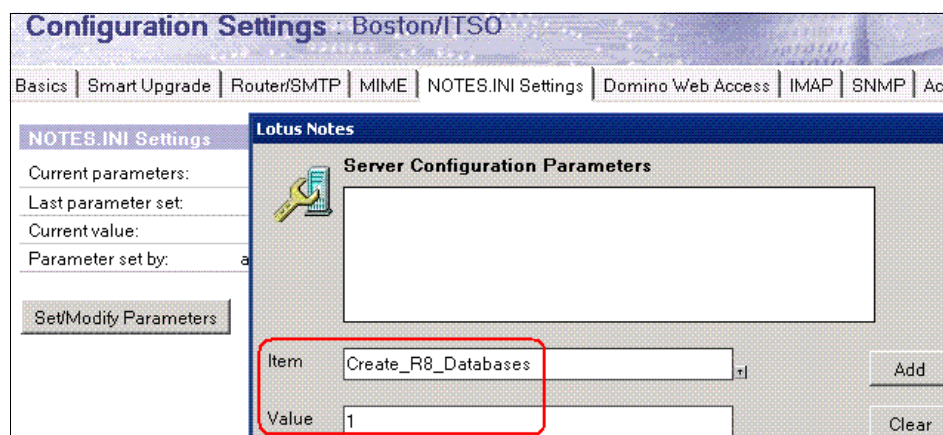


Figure 9-30 Updating the configuration document for ODS48

6. Save and close the configuration document.
7. You may restart the server to have the parameter take effect immediately, or wait for the confirmation of the parameter change to display on the server (Create\_R8\_Databases changed to 1).
8. To check the current setting for this parameter, at the server console type:
 

```
sh conf Create_R8_Databases
```

 Press Enter to display the current setting.

## Optional tasks

Once the new ODS has been enabled on the server, there are additional optional tasks that can be used to take advantage of the new ODS. The optional tasks are:

- ▶ Upgrading existing databases to ODS 48
- ▶ Enabling design compression

### *Upgrading existing databases to ODS 48*

Use copy style compact to upgrade existing databases to ODS 48 after the `Create_R8_Databases=1` parameter has been set. To run a copy style compact, type the following command at the server console:

```
lo compact -c filename.nsf
```

**Tip:** **compact -c** is not the only copy style compact switch. Copy-style compact switches include the switches in the following list:

```
load compact [-C] [-D] [-f] [F] [-h] [-H] [-L] [i]
```

When you run the compact command with any of the copy style compact switches, the database is upgraded to ODS48 if the database is modified by the compact. For example, using **compact -F** upgrades the database to ODS48 unless the compact does not make any changes to the database.

For a full listing of compact command switches, refer to Compact Options in Lotus Domino Administrator 8 Help.

**Note:** In-place compacting has been changed in Notes and Domino 8. When a pre-ODS 48 database is detected, Domino does not automatically convert to copy-style compacting to upgrade the database.



### Enabling design compression

Design compression is an optional feature that can be enabled in the advanced properties of ODS48 databases, as shown in Figure 9-31.

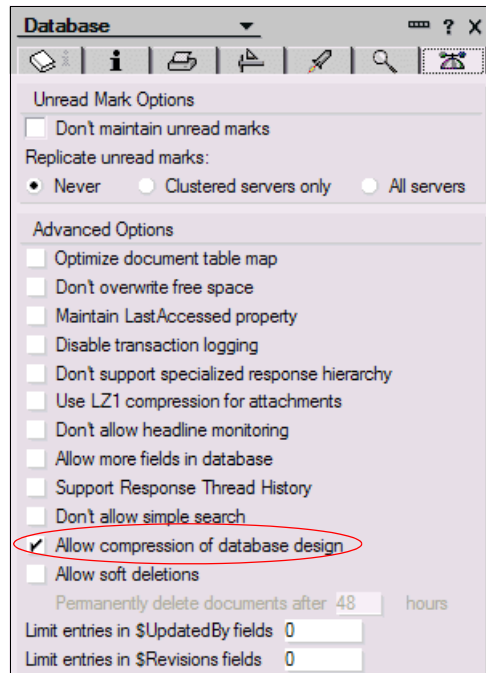


Figure 9-31 Design compression in database advanced properties

Once the setting is enabled, performing a copy-style compact implements the compression of the database's design notes.

**Note:** Once enabled, the Design Compression setting replicates to other replicas of the database so that you only need to set the option on one replica of the database. Remember, however, that the ODS itself does not replicate, so if you allow the Design Compression setting to replicate to existing database replicas, you would still need to run a copy-style compact on each server's replica to actually implement the compression.

There are two ways that administrators may implement design compression: either individually on each database, or on several databases at once.

To enable design compression on a single database:

1. In the Domino Administrator client, connect to the server containing a replica of the database.
2. Open the **Files** tab.
3. Navigate to the database.
4. Right-click the database title and select **Properties** to open the Database Properties box.
5. Change to the **Advanced** tab and select (enable) the **Allow compression of database design** check box, as shown in Figure 9-31 above.

- Run a copy-style compact to compress the design by entering this command at the server console:

```
lo compact -c filename.nsf
```

An example of this command and the output is shown in Figure 9-32.

```
> lo compact -c testods48
06/04/2007 01:58:39 PM Compacting testods48 <Test ODS48>
06/04/2007 01:58:40 PM Compacted testods48, 64K bytes recovered <14%>
06/04/2007 01:58:40 PM Database compactor process shutdown
```

Figure 9-32 Compressing database design using copy style compact

Note the space saving shown. This varies depending on the size of the design notes in the database and the ratio of compression achieved.

To enable design compression on several databases at once:

- In the Domino Administrator client, connect to the server containing a replica of the databases.
- Open the **Files** tab.
- Select the databases to enable by clicking each one with Shift+click or Ctrl+click.
- Right-click one of the highlighted database titles and select **Advanced Properties** to open the multi-database Advanced Properties box.
- Select (enable) the **Allow compression of database design** check boxes, as shown in Figure 9-33.

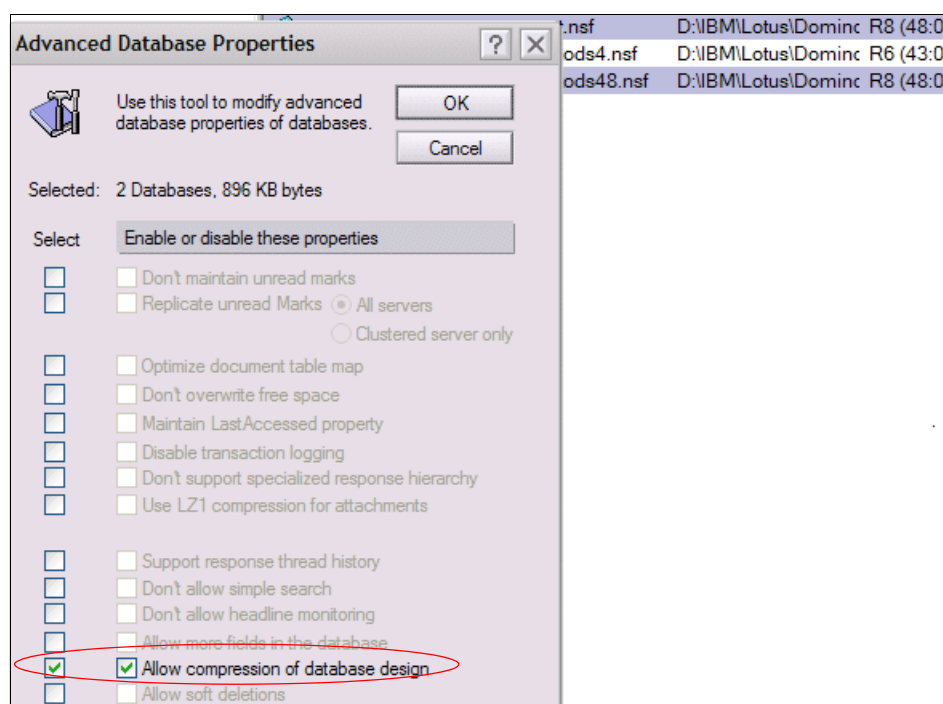


Figure 9-33 Enabling design compression for multiple databases

- Click **OK** to save the setting.
- Run a copy-style compact to compress the design by entering this command at the server console:

```
lo compact -c
```

**Note:** This command runs compact across the entire data directory. Alternatively, you could run compact against a single database or a single subdirectory of databases.

### Using the new On Disk Structure on Notes clients

The new ODS48 can be enabled on Notes clients by adding the following notes.ini parameter to the notes.ini on the client:

```
Create_R8_Databases=1
```

Once the notes.ini parameter is in place and the Notes client has restarted, any new database created is ODS48 format.

To upgrade existing databases, run a copy-style compact against the existing databases you wish to upgrade. For example, to run a copy-style compact on a Windows Notes client:

1. Exit the Notes client.
2. Open a DOS panel.
3. Change to the Notes data directory. For example:  

```
cd\progra~1\lotus\notes\data
```
4. Type in the command to run a copy style compact on a single database. For example:  

```
..\ncompact -c mail\jcastle.nsf
```

Or type in the command to run a copy style compact for an entire subdirectory. For example:

```
..\ncompact -c mail
```

**Tip:** The notes.ini parameter Create\_R8\_Databases=1 can be set via a policy. This is done by adding a new field to the desktop policy settings document. For the ODS48 parameter, the field to add is:

```
$PrefCreate_R8_Databases
```

The value of the field is 1.

For full details of how to add a notes.ini parameter to the desktop policy settings document, refer to Lotus Software Knowledge Base Technote #1196837 "Using a Desktop Policy to set notes.ini and Location parameters":

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21196837>

### 9.10.3 How to revert to an earlier On Disk Structure

To revert any database on a Domino server to ODS43, type the following command at the server console:

```
lo compact -r filename.nsf
```

To revert a database on a Notes client:

1. Exit the Notes client.
2. Open a DOS panel.
3. Change to the Notes data directory, for example:

```
cd\progra~1\lotus\notes\data
```

4. Type in the command to run a compact -r on a single database, for example:

```
..\ncompact -r mail\jcastle.nsf
```

## 9.11 Domino and DB2 deployment

The Domino and DB2 feature, now fully supported with Domino 8, enables Notes applications to utilize a DB2 back end for data storage and retrieval. In addition to DB2-enabling a Notes application, the feature allows for data federation from a Notes view, which means that you can query non-Notes SQL data from within a Notes view. Utilizing the Domino and DB2 feature means that you can take advantage of the strengths of both data storage systems, including the security and user interface of Domino and the scalability and flexibility of DB2.

**Attention:** Domino 8 licensed users will be entitled to a copy of a DB2 9.1 Enterprise Server Restricted License at no additional charge. This limited-use license allows you to utilize DB2 for storage and access of Notes application data. Non-Notes data is not authorized for use with this limited DB2 license. More information is provided in the Domino 8 license agreement.

Enabling DB2 as a back-end data store for Domino requires the administration support required to install, configure, and maintain both the Domino and DB2 servers, and this section provides an overview of those deployment steps. The overall Domino deployment steps are similar to those laid out in 3.5, “Performing the Domino 8 deployment” on page 51. Therefore, we do not go into as much detail on the Domino deployment, nor do we discuss the complete details of the DB2 and DB2 Runtime Client installations. The goal of this section is to provide a more high-level picture of the deployment of the Domino and DB2 feature.

In the final section, we verify the connectivity and successful creation of a DB2-enabled database. Creating this test database required the creation of a DB2 Access View (DAV) and a Query view, which are described in detail in 9.11.4, “Testing the end-to-end Domino and DB2 connectivity” on page 302.

DAV and Query views are the essential building blocks of the Domino and DB2 feature, and we highly recommend that you understand how these views enable the use of DB2 and federated data by reviewing the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120:

<http://www.redbooks.ibm.com/abstracts/redp4102.html?Open>

**Note:** The Domino and DB2 feature were first available with Domino 7 through a feature trial program, with support provided through a Web-based feedback forum. There was also a limited availability program for nominated IBM customers, in which formal support was provided.

For customers who are interested to know about the new Domino and DB2 features available with Domino 8, refer to IBM Lotus Notes and Domino 8 Reviewer's Guide located at the following URL:

[ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8\\_Reviewers\\_Guide.pdf](ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8_Reviewers_Guide.pdf)

This section provides an overview of the Domino and DB2 deployment process and is not intended to only show the new Domino and DB2 features available in Domino 8 versus the Domino 7 features.

### 9.11.1 Planning for Domino and DB2

This section briefly discusses the personnel, platform, performance, and functionality considerations that need to be discussed prior to committing to the new feature and beginning the installation phase.

Planning for the deployment of Domino and DB2 is especially important since you are, for the first time, introducing the direct integration of DB2 with Domino. While there are products that integrate Domino and DB2 data, like Lotus Enterprise Integrator® (LEI) and Domino Enterprise Connection Services (DECS), they do not involve a direct linkage.

**Important:** The crux of the Domino and DB2 linkage lies at the DB2 Access View (DAV), also referred to as the DAV view. When you create a DAV view a new DB2 table is created on the DB2 back end.

Domino and DB2 integration in Domino 8 introduces many new concepts, features, and configurations, which are necessary because of this very close linkage between Domino and DB2. While we cover the steps required to deploy the Domino and DB2 feature, including the planning considerations in this section, we cannot cover all of the new concepts and features that are available with the Domino and DB2 feature.

Reference the Lotus Domino Administrator 8 help documentation and the additional resources provided in 9.11.5, “Additional Domino and DB2 resources” on page 308, before enabling and building applications around the Domino and DB2 feature.

#### Personnel required to support Domino and DB2

To provide DB2-enabled Notes applications, you need to engage an existing DB2 administration team within your organization. If you do not have DB2 skills within your organization you need to hire skilled DB2 administrators or train existing employees as DB2 administrators, as mentioned in 2.1.1, “Identifying team members” on page 16.

Assuming a separate DB2 administration team will be engaged for support of your deployment, we also highly recommend that you train your existing Domino Administrators on at least the basics of DB2 administration. This is required so that the Domino administration team can effectively interpret installation, configuration, and troubleshooting documentation, providing the appropriate steps to the DB2 administration team.

#### Platforms and required hardware, software, and features

The full platform, hardware, and software requirements are listed in the Lotus Domino Administrator 8 help documentation, but a summary is provided here for reference.

The Domino 8 32-bit application is supported on the following platforms:

- ▶ MS Windows 32-bit and MS Windows 64-bit
- ▶ IBM AIX 5.3, 64-bit
- ▶ Linux (SLES10, RHEL v5) 64-bit

DB2 9.1 can be installed on the following platforms:

- ▶ MS Windows 32-bit and MS Windows 64-bit
- ▶ IBM AIX 5.3, 64-bit
- ▶ Linux (SLES10, RHEL v5), 64-bit

Software requirements include:

- ▶ IBM Lotus Domino server 8.0
- ▶ IBM Lotus Domino Administrator and Designer 8.0
- ▶ IBM DB2 Universal Database™ Enterprise Server Edition Version 9.1 FP 2 for Windows or Version 9.1 FP 2a for UNIX/Linux platforms
- ▶ DB2 Run-Time Client is required for remote configurations
- ▶ IBM DB2 Access for Lotus Domino 8.0 for SQL access to Domino data
- ▶ IBM Lotus Notes client 7.x or 8.0

**Important:** The Notes 6.x client is not supported for Query views. Also, the Domino Administrator and Designer 7.x and earlier client versions are not supported for administration or development of DB2-enabled servers or applications.

Feature requirements include:

- ▶ Transactional logging on Domino server
- ▶ Administration process running successfully on Domino server

## Deciding on a Domino and DB2 configuration

There are two supported configurations for Domino and DB2: local or remote. In both cases, a DB2 instance can support one or more Domino servers, although IBM Lotus recommends only supporting one Domino server per DB2 instance. Each Domino server creates and connects to its own DB2 database, with the default database name being DOMINO. The default DB2 instance name is DB2 on Windows and is defined by the administrator on AIX or Linux.

### Local configuration

A local configuration has Domino and DB2 installed and running on the same server, as depicted in Figure 9-34. We recommend a local configuration for a test or smaller Domino and DB2 installation. You can configure DB2 to support one or more Domino servers with a local installation.

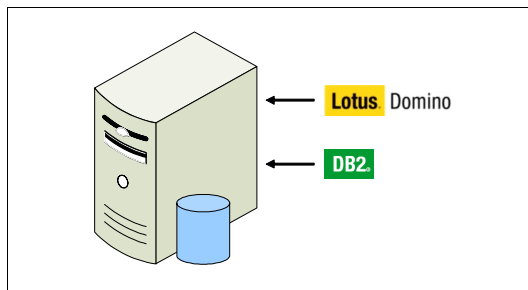


Figure 9-34 Domino and DB2 local installation

### Remote configuration

In a remote configuration, Domino and DB2 run on separate servers. Mixed platforms are supported with a remote installation (for example, Domino running on MS Windows and DB2 running on AIX).

The configuration depicted in Figure 9-35 is provided for example purposes. The Lotus Domino Administrator 8 help documentation provides more remote configuration scenarios, including a larger deployment involving multiple DB2 servers and partitioned Domino servers.

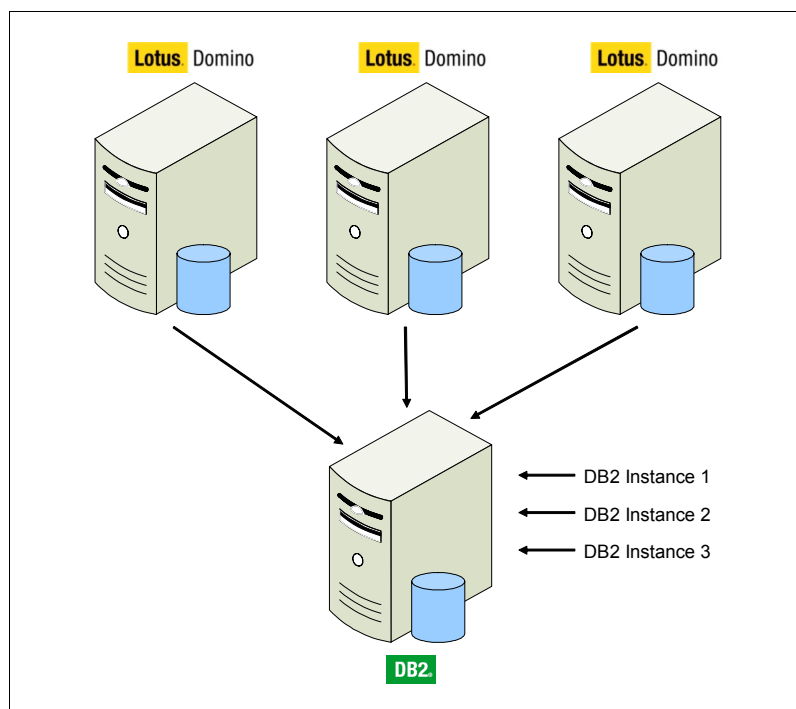


Figure 9-35 Domino and DB2 remote installation

**Attention:** In a remote configuration, only one DB2 instance per server is supported for Windows.

There are two important installation and configuration steps to note for a remote configuration:

- ▶ The DB2 Run-Time Client needs to be installed on the Domino servers and acts as the intermediary between the Domino and DB2 servers.
- ▶ When configuring connectivity between the Domino and DB2 server, you need to perform an extra step to catalog the new DB2-enabled database from the DB2 Runtime Client on the Domino server.

### 9.11.2 Installing and configuring Domino and DB2

Installing and configuring Domino and DB2 requires a good deal of coordination and communication between the Domino and DB2 administration teams. There are several times during the Domino and DB2 feature deployment when the team responsible for a given task alternates between one of the three main support teams, either the Domino, DB2, or operating system team, as documented in Table 9-7 on page 290.

Typically, your Domino administration team drives the Domino and DB2 installation. The Domino administration team provides the DB2 and operating system installation and configuration requirements to the DB2 and OS teams, ensuring that the installation tasks are occurring in the required sequence.

## A note on upgrading versus a new installation

This book was written assuming a new installation versus an upgrade of a Domino 7 installation of Domino and DB2. While upgrading from Domino 7 and DB2 8.2 is possible, you should take great care to follow the specific steps outlined in the Lotus Domino Administrator 8 help documentation.

Keep the following information in mind when deciding whether to upgrade or perform a new Domino 8 and DB2 9.1 installation:

- ▶ Mixed Domino and DB2 versions are not supported:
  - Domino 7.x and DB2 9.1.0 are not supported together.
  - Domino 8.0 and DB2 8.2.2 are not supported together.
- ▶ After a Domino 7 server has been upgraded to Domino 8, it cannot be downgraded back to Domino 7.
- ▶ You must create NSF replicas of your DB2-enabled Notes databases, upgrade to Domino 8 and DB2 9.1, and then convert the NSF replicas back into DB2-enabled versions.

Given the above restrictions with mixed versions of Domino and DB2 and the requirement to convert your DB2-enabled databases back to NSF, we recommend that you perform a new installation in order to start fresh at the fully supported level of Domino 8 and DB2 9.1.

## The ITSO Domino and DB2 servers

In order to provide an example deployment of the Domino and DB2 feature, we utilize two servers in our ITSO Domino environment, both of which are running Windows 2003 server. The servers are London/ITSO for the Domino server and DB2.cam.itso.ibm.com for the DB2 server, as depicted in Figure 9-36.

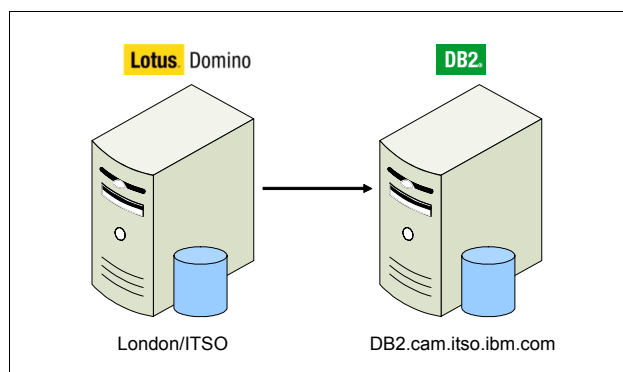


Figure 9-36 Domino and DB2 servers in the ITSO Domino domain

## Installation and configuration overview

Table 9-7 outlines the steps completed to deploy Domino and DB2 in the ITSO Domino domain. The second column specifies the administration team that completed the task.

Table 9-7 Steps completed to install Domino and DB2 feature in ITSO Domino domain

Step completed for Domino and DB2 deployment in ITSO Domino domain	Team
Install Domino on London/ITSO.	Domino
Install the DB2 Runtime Client on London/ITSO (for remote configurations only).	DB2
Create an ID for the DB2 installation on db2.cam.itso.ibm.com.	Windows
Install the DB2 server on db2.cam.itso.ibm.com.	DB2



Step completed for Domino and DB2 deployment in ITSO Domino domain	Team
Create a DB2 administration ID on db2.cam.itso.ibm.com (optionally, create during the DB2 installation)*.	Windows
Set DB2DOM as the SYSCtrl group*.	DB2
Enable Domino to communicate with DB2.	Domino
Grant the SETSESSIONUSER privilege to the Domino server user*.	DB2
For remote installations, catalog the DOMINO DB2 database from london.cam.itso.ibm.com*.	DB2
<b>Setting up the DB2 Access Server (optional)</b>	
Create a server ID for the DB2 Access server in the ITSO Domino domain.	Domino
Install the DB2 Access servers on db2.cam.itso.ibm.com.	Domino
Enable and test the DB2 Access server from the Notes Admin client.	Domino
Map Notes IDs to DB2 IDs and set a default DB2 user ID mapping*.	Domino

**Attention:** The steps marked with an asterisk (\*) are not described in further detail in this book. While these steps are important, they are fairly straightforward. For more information regarding these steps, reference the Lotus Domino Administrator 8 help documentation.

**Important:** Table 9-7 does not contain all of the steps involved to install and configure Domino and DB2. The table is provided as a high-level guide of the tasks required for the Domino, DB2, and operating system teams, assuming Windows 2003 servers. Both the order of the steps and the actual steps themselves are different for an AIX or Linux Domino and DB2 installation.

The order of installing and configuring the Domino and DB2 components is crucial to a successful deployment. The latest steps documented in the Lotus Domino Administrator 8 help documentation should be followed.

Also, the Team column is provided to help give you an idea of what support team performs what high-level task and, again, should only be used as a guideline. Your enterprise IT support structure might mandate that certain software installations are performed by a separate installation or deployment team.

## Performing the installation and configuration

This section provides additional details on the more important installation and configuration steps that are documented in Table 9-7 on page 290.

**Important:** Not all steps from Table 9-7 on page 290 are documented in this section. For the latest and most complete deployment steps, see Lotus Domino Administrator 8 help documentation.

### *Install Domino 8*

The steps to install and configure a DB2-enabled Domino 8 server are similar to the steps for a regular NSF-based Domino server installation and configuration, which are documented in

Chapter 3, “Deploying the Domino 8 server” on page 45. With that said, there are a few special configuration and installation steps that are required for the Domino and DB2 feature:

- ▶ For Windows Domino servers and as a best practice, run Domino as an application, not a Windows service. If you run Domino as a Windows service, ensure that the DB2 server is started and fully initialized prior to starting Domino, whether manually or via a Windows service.
- ▶ Transaction logging is required and either linear, circular, or archival transaction logging can be used. Domino transaction log space will be used to store only data from NSF databases that have logging enabled. If you will not be running transaction logging on any NSF-based applications, you can set the maximum log space setting in the Server document to the minimum of 192 MB.
- ▶ The administration process is required to be working properly from your Domino administration server to your DB2-enabled Domino server in order to populate the DB2 tab in the Server document with the necessary configuration information.

### ***Install the DB2 Runtime Client***

For a remote configuration, install the DB2 Run-Time Client on the Domino servers. The DB2 Run-Time Client acts as the intermediary between the Domino and DB2 servers.

Figure 9-37 shows the main DB2 Run-Time Client installation splash window.

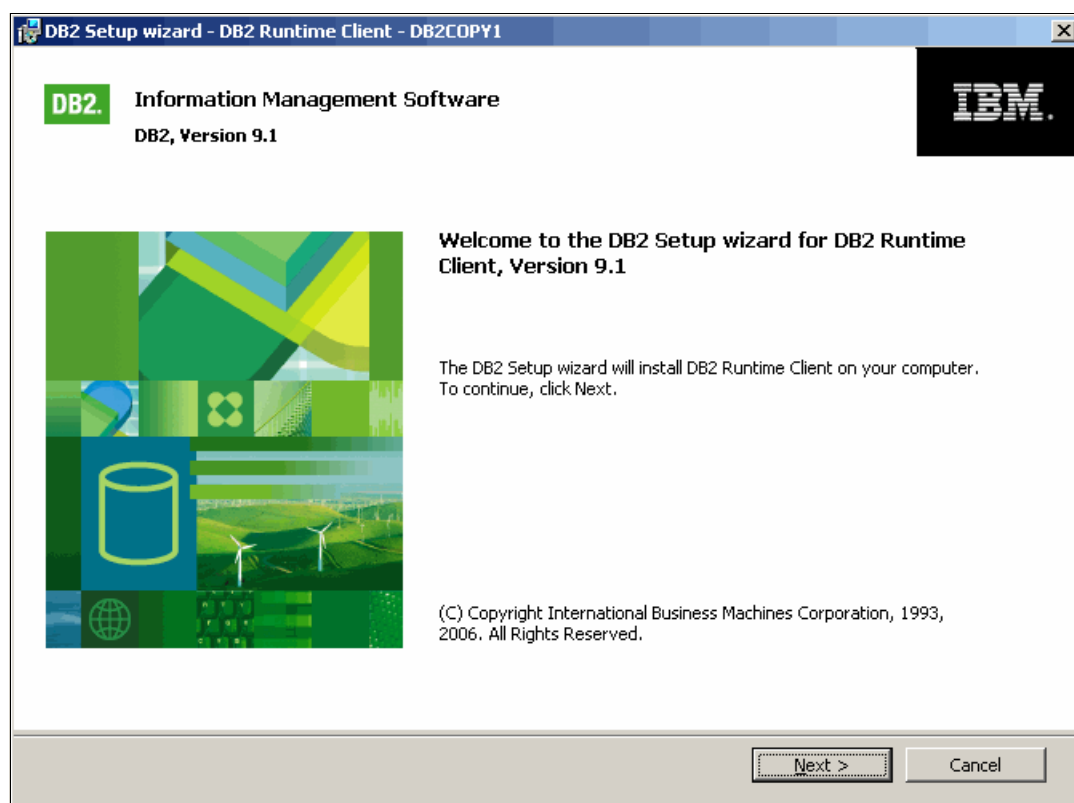


Figure 9-37 DB2 Runtime Client Version 9.1 installation

**Tip:** An alternative to installing the DB2 Run-Time Client, which requires a separate installation executable, is the DB2 client from the Enterprise Server Edition installation. The benefits are that you will already have the installation code from the DB2 server installation and you can install the GUI tools, like the DB2 Control Center, with the Enterprise Server Edition version for the DB2 client.

### ***Install DB2 server***

Install the DB2 server, which will give you the option to create a DB2 administration account.

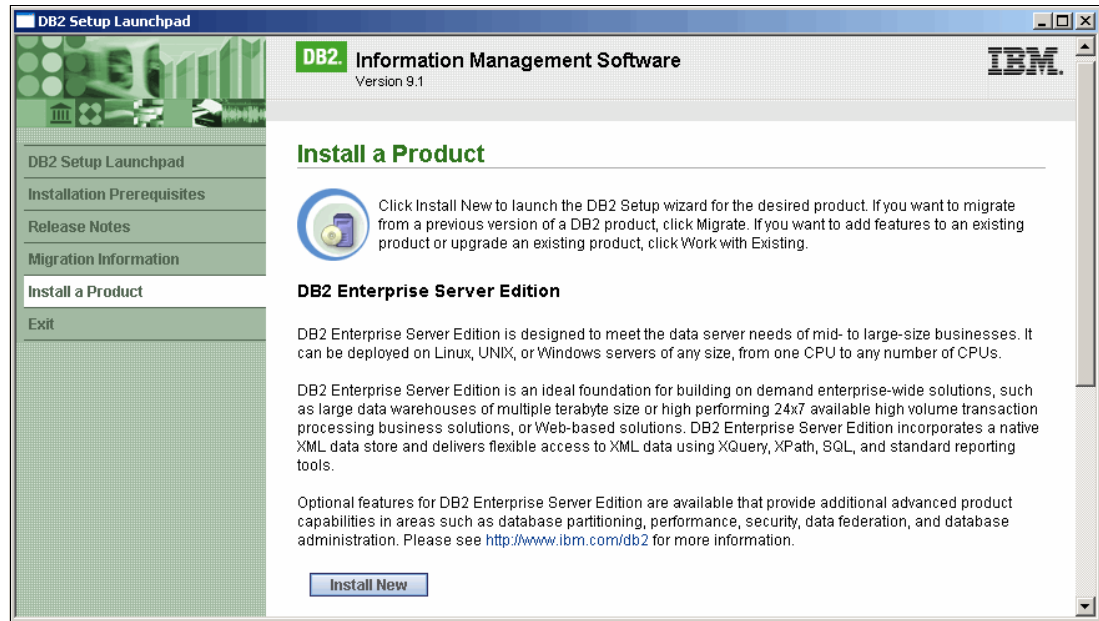


Figure 9-38 DB2 Enterprise Server Edition Version 9.1 installation

**Important:** On AIX and Linux, the order and steps to create DB2 IDs and groups is very different from Windows servers. If you are installing Domino and DB2 on AIX or Linux, follow the Lotus Domino Administrator 8 help documentation carefully to make sure that you do not miss any steps.

### ***Enable Domino to communicate with DB2***

We are now ready to enable the communication of Domino and DB2 with the DB2 Server Enablement Tool in the Domino Administrator client. While you can manually enable Domino to access a DB2 server, we do not recommend using the DB2 Server Enablement Tool, which is the tool we cover in this section.

As shown in Figure 9-39, when you click the **Enable Server for DB2** button in the DB2 Server section on the Configuration tab, you are presented with a warning to complete all of the prerequisite steps prior to enabling the Domino server for DB2.

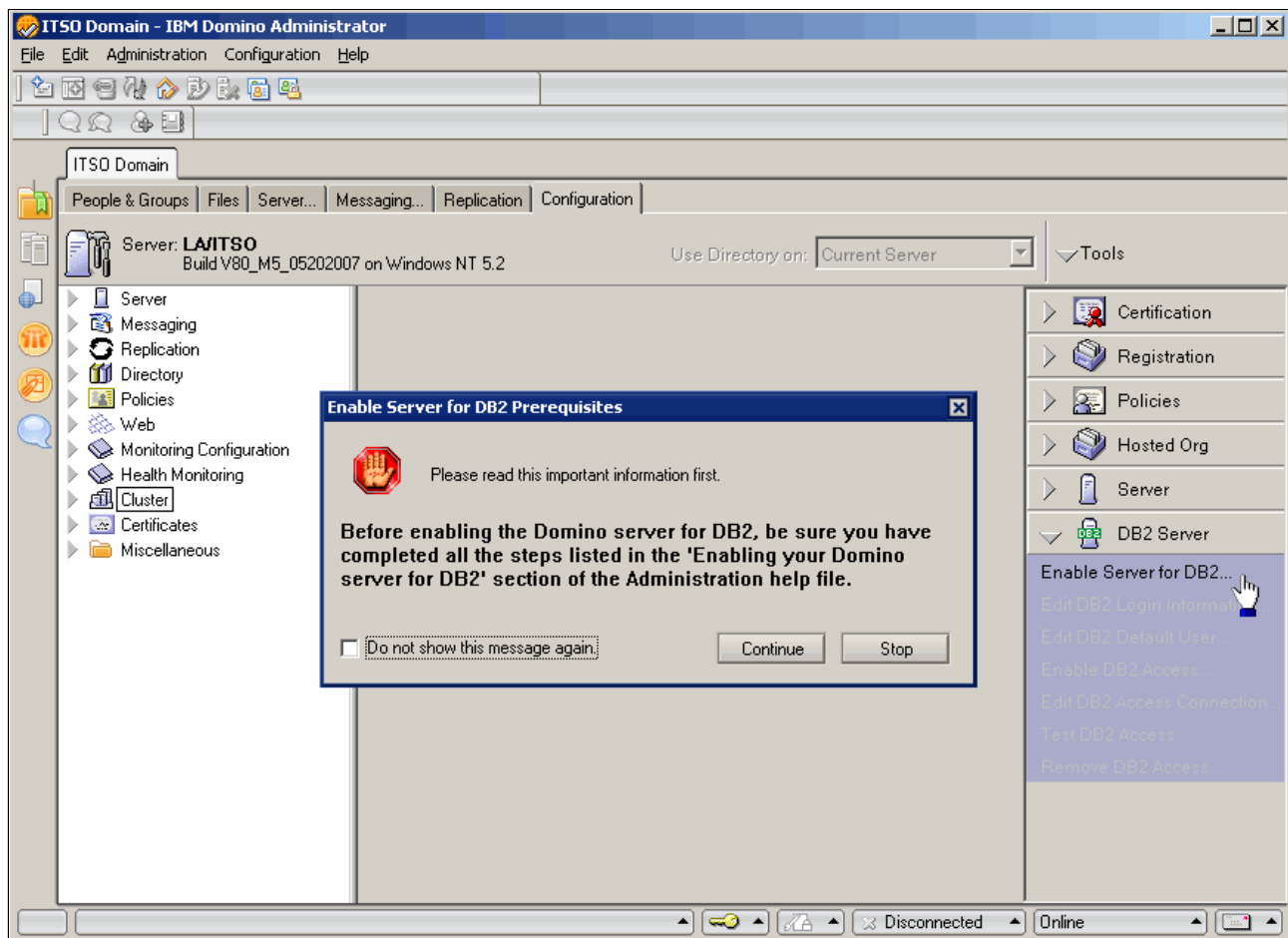


Figure 9-39 Pop-up box warning that DB2 prerequisites need to be installed

If you click the **Enable Server for DB2** button without meeting certain prerequisites, like installing the DB2 server or enabling transactional logging, you will receive an error stating which prerequisite needs to be completed.

After clicking the **Continue** button, you are presented with a configuration pop-up box, as shown in Figure 9-40.

Figure 9-40 Enable Domino for DB2 data configuration pop-up

Three settings are automatically defined when the configuration pop-up first opens:

1. The DB2 database name of DOMINO.
2. The DB2 password expiration of 90 days.
3. By default, create databases as DB2.

The rest of the settings in Figure 9-40 have to be entered manually. As you move the cursor to each setting there is context-sensitive help provided in the light gray box at the bottom of the pop-up box to guide you through the configuration.

After you click **Enable** you are presented with a results pop-up box stating that the DB2 enablement is complete, as shown in Figure 9-41.

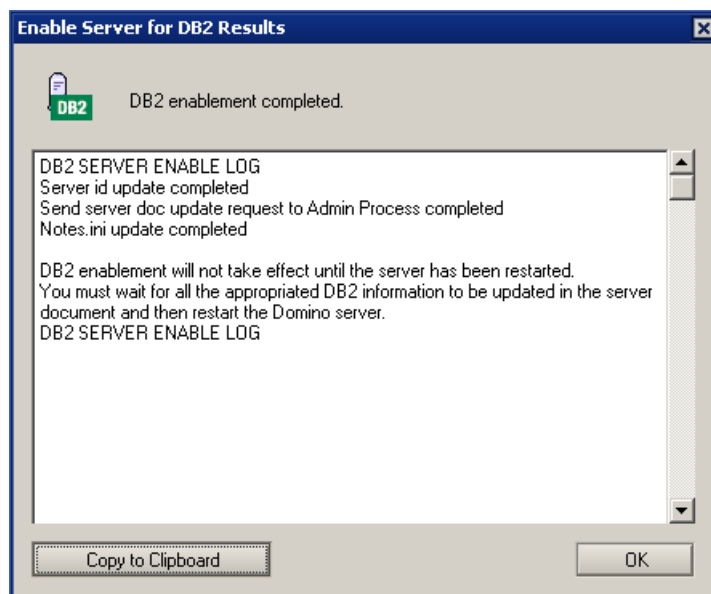


Figure 9-41 DB2 Enablement complete pop-up box

The pop-up box provides information regarding the tasks that have been completed by the enablement process and explains that the AdminP request to update the DB2 tab in the server document must be completed before you can restart the Domino server and verify the connectivity from Domino to DB2.

As you can see in Figure 9-42, the AdminP request has been generated. A snapshot of the Requests → All Requests by Action view in the Administration Requests database in the lower portion of Figure 9-42 shows the completed AdminP request.

ADMINISTRATION PROCESS - Request											
*Action:	Store DB2 Information in Server Record										
*Server(s) to perform the action:	Administration Server for the Domino Directory										
*Action requested by:	LONDON/ITSO										
*Name of process to perform action:	Adminp										
Default DB2 datastore:	NSF										
Restart server automatically:	No										
Host Name for Remote DB2 Database Server:	db2.cam.itso.ibm.com										
Port Number/Service Name for Remote DB2 Instance:	db2c_DB2										
DB2 instance:	DB2										
DB2 database:	DOMINO										
DB2 schema:	DOMINO										
<div> <div>▼ Store DB2 Information in Server Record</div> <table border="1"> <tr> <td>✓</td> <td>▼ Administration Server for the Domino Directory</td> <td>LONDON/ITSO</td> <td>LONDON/ITSO</td> </tr> <tr> <td>✓</td> <td colspan="3">LA/ITSO performed action on: 06/06 02:17 PM</td> </tr> </table> </div>				✓	▼ Administration Server for the Domino Directory	LONDON/ITSO	LONDON/ITSO	✓	LA/ITSO performed action on: 06/06 02:17 PM		
✓	▼ Administration Server for the Domino Directory	LONDON/ITSO	LONDON/ITSO								
✓	LA/ITSO performed action on: 06/06 02:17 PM										

Figure 9-42 Administration process request to update DB2 tab in the Domino server document

### ***For remote installations, catalog the DOMINO DB2 database***

Given that we have a remote configuration with Domino and DB2 running on two separate servers, we need to manually catalog the DOMINO DB2 database so that the Domino server can utilize it. The full instructions to complete this step are provided in the Lotus Domino Administrator 8 help documentation.

**Tip:** In order for the Domino server to communicate with the remote DB2 server, update your services configuration file with the service name and port/protocol for the DB2 server. In our example environment, we run DB2 on a Windows 2003 server and use the default service name and port/protocol of db2c\_DB2 and 50000/tcp, respectively. We add the following line to the C:\Windows\system32\drivers\etc\services configuration file on the London/ITSO Domino server:

```
db2c_DB2 50000/tcp
```

We are now ready to restart Domino to verify connectivity with DB2.

After restarting Domino, the server console shows the connection status from Domino to DB2, as shown in Figure 9-43. Domino first attaches to the DB2 instance with the db2user ID (the ID we specified as the OS account to be used by Domino in the DB2 enablement configuration in Figure 9-41 on page 296). Next, the DOMINO database is created in DB2. Next, there are a few messages related to the DB2 integration and, finally, we see the Server started console message indicating that Domino has been started successfully.

Miscellaneous Events:	
06/08/2007 11:55:04 AM	Attaching to DB2 Instance 'DB2' with username 'db2user'...
06/08/2007 11:55:04 AM	Creating DB2 database 'DOMINO' in DB2 Instance 'DB2' with username 'db2user'...
06/08/2007 11:55:24 AM	DB2 database DOMINO successfully created with codepage/territory (UTF-8/US).
06/08/2007 11:55:25 AM	Warning: Modifying DB2 database manager configuration parameters for optimization...
06/08/2007 11:55:25 AM	Updating DB2 database configuration parameters for optimization...
06/08/2007 11:56:14 AM	The map for DB2 errors was successfully created.
06/08/2007 11:56:28 AM	Lotus Domino (r) Server started, running Build V80_M5_05202007
06/08/2007 11:56:28 AM	Server started on physical node LONDON

*Figure 9-43 Confirmation of DOMINO DB2 database creation*

## **9.11.3 Installing and configuring DB2 Access Server**

Domino and DB2 are now successfully connecting and it is time to assess whether you need to install a DB2 Access Server.

A DB2 Access Server is required for SQL access to DB2-enabled Notes data, including access to query views and Notes SQL data from outside of the Notes client. In other words, if you want to access DB2-enabled Notes application data from outside of Notes, for example, the DB2 Connect™ client or an SQL graphing tool, you will need a DB2 Access Server.

The DB2 Access Server enforces Domino database security, such as ACLs and reader lists for DB2-enabled data. If the DB2 Access Server is not installed properly, the Query view and DAV view Designer functions will not be available and you will not be able to access DB2 data.

**Important:** If you only host NSF databases in DB2, you do not need to install the DB2 Access Server. If you only host NSF data in DB2, this means that the Notes application is DB2-enabled, per the Database Information tab in the Database properties, but there is no DAV view created or in use.

Also, Query views of non-Domino data, also known as federated data, do *not* require the DB2 Access server.

For more information about how to set up federation of SQL data from the Notes client, review the *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120:

<http://www.redbooks.ibm.com/abstracts/redp4102.html?Open>

To take full advantage of the Domino and DB2 feature, you need to install and configure a DB2 Access Server, which is what we have done in our ITSO environment.

## Creating the server ID for the DB2 Access Server

The DB2 Access Server requires the use of a Domino server ID, which we create by clicking the **Registration** → **Server** option from the Configuration tab in the Domino Administrator client. Figure 9-44 shows the options we selected for the DB2 Access Server.

The screenshot shows the 'Register New Server(s)' dialog box with the 'Advanced' tab selected. The following fields are filled out:

- Registration Server: LA/ITSO
- Certifier: /ITSO
- Server name: DB2ACCESS
- Server title: DB2 Access Server for London to DB2
- Domino domain name: ITSO
- Server administrator name: Frank Nostrame/USA/ITSO
- ID file password: (empty)
- Location for storing server ID: ☒ In file: Set ID File... D:\...servers\db2access.id

Buttons visible include 'Password Options...', 'New Server', 'Register All', 'Register', 'Remove', and 'Done'.

Figure 9-44 Registration of DB2 Access Server



After entering all of the standard information for registering a new Domino server, click the **Advanced** tab and select the **This server is a DB2 Access server only** option, as shown in Figure 9-45. The name of our DB2 Access Server is DB2ACCESS.

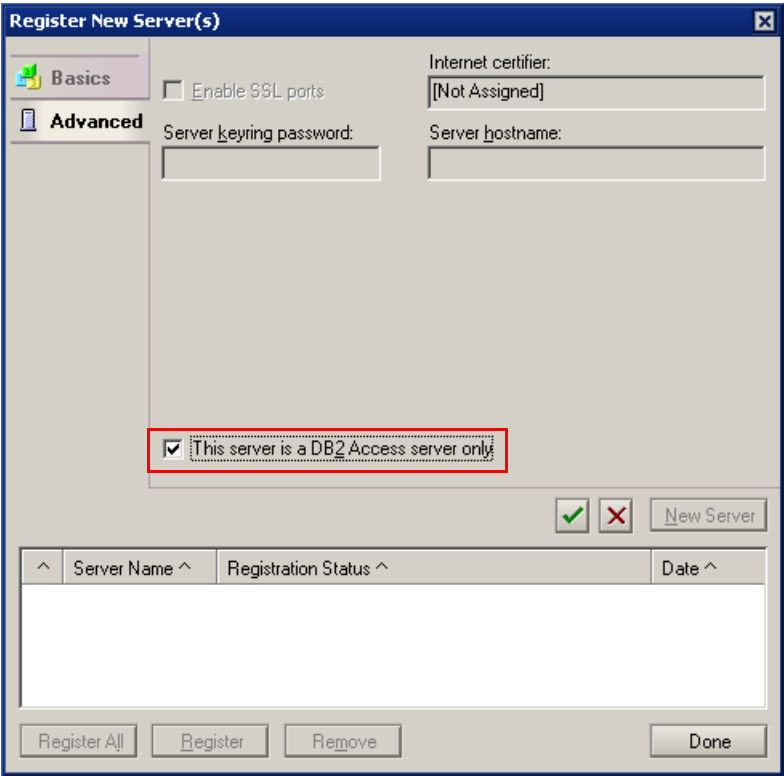


Figure 9-45 Option to create Domino server as a DB2 Access Server

After adding the server to the registration queue, highlight the DB2 Access Server in the list and click **Register** to register the server and create the server ID.

As shown in Figure 9-46, the DB2 Access Server creates a server document, but the contents of the document are limited to the server name and description.

ITSO				
AUSTIN/ITSO	Domino 6.5 Server at Austin	austin.itso.com	Release 6.5.6FP1	
BOSTON/ITSO	Domino 8 Server at Boston	boston.itso.com	Build V80_M5_0520	
DB2ACCESS/ITSO	DB2 Access Server for London to DB2			
DELHI/ITSO			Build V80_M5_0520	
LA/ITSO			Build V80_M5_0520	
LONDON/ITSO			Build V80_M5_0520	
RICHMOND/ITSO			Release 7.0.2	
SAMETIME/ITSO			Release 7.0.2	

DB2 Access Server: DB2ACCESS/ITSO

Basics

Server name: DB2ACCESS/ITSO

Server title: DB2 Access Server for London to DB2

Figure 9-46 All Servers view in the ITSO Domino directory and the DB2ACCESS server document

**Tip:** At this point, you do not need to maintain the DB2ACCESS server document in the Domino directory for the DB2 Access Server. You can delete the server document, but keep a copy of the server ID because you will need it for the DB2 Access Server installation.

## Installing the DB2 Access Server

The DB2 Access Server needs to be installed on the DB2 server that is hosting the Lotus Notes data. In a local installation, this is also the Domino server.

First, copy the DB2ACCESS server ID onto the DB2 server. Next, run the DB2 Access Server install executable and click through the installation windows as appropriate. The main installation panel is shown in Figure 9-47.

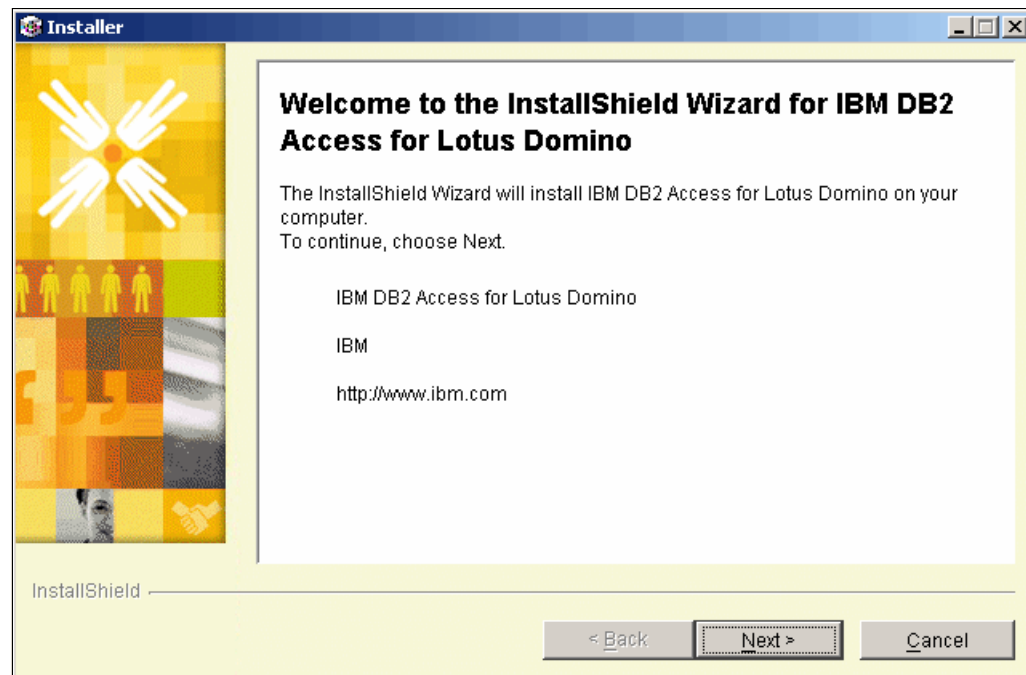


Figure 9-47 DB2 Access Server installation

## Enable and test the DB2 Access Server connection

Now that we have the DB2 Access Server installed we are ready to enable DB2 access for the London/ITSO server, which we do by clicking the **Enable DB2 Access** button in the DB2 Server section on the Configuration tab in the Domino Administrator, as shown in Figure 9-48.

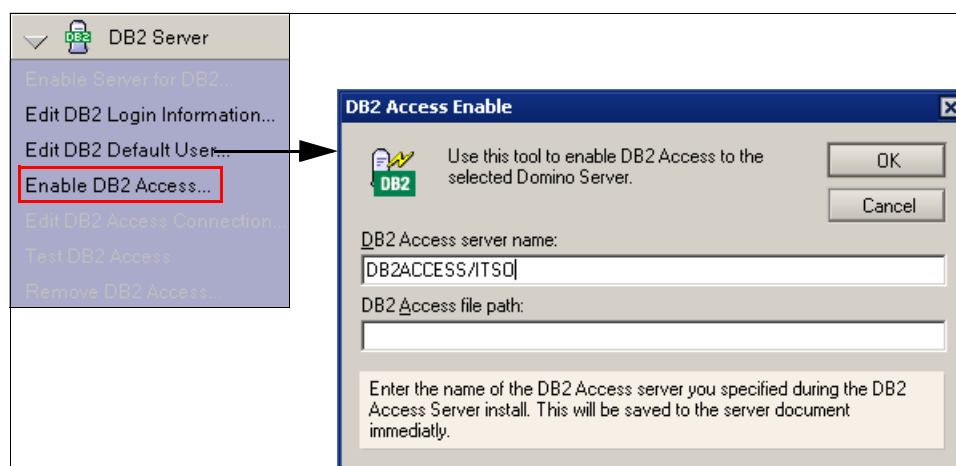


Figure 9-48 Enable DB2 Access option in Domino Administrator

After clicking Enable DB2 Access you are prompted with a pop-up box where you specify the name of the DB2 Access Server, which in our case is DB2ACCESS/ITSO. The DB2 Access path, which should specify the complete path that DB2 uses to load the DB2 Access server DLL, is not required if the DB2 Access Server is installed on a Windows server. The default path for AIX or Linux is /opt/IBM/DALD.

The server name is saved to the server document, as shown in Figure 9-49.

Server: LONDON/ITSO london.itso.com	
Basics   Security   Ports...   Server Tasks...   Internet Protocols...   MTAs...   Miscellaneous   Transactional Logging   Shared Mail   DB2   Administration	
DB2	
Host name:	db2
Port number:	db2c_DB2
Instance:	DB2
Database:	DOMINO
Directory:	
DB default creation:	NSF
DB2 Access server:	DB2ACCESS/ITSO
DB2 Access path:	
Max # of NSF's in group:	10
Default user for query views:	<input checked="" type="checkbox"/> Yes
Query View row limit:	500
DB2 password expiration warnings:	15 days prior

Figure 9-49 DB2 tab from the London DB2-enabled server document

We are now ready to verify that the DB2 Access server is installed and configured properly. To do this we click the **Test DB2 Access** button in the DB2 Server section on the Configuration tab in the Domino Administrator client, which is now highlighted. When we test the connection, the DB2 Access test tool provides a pop-up box with the status of various checks that are performed to make the DB2 Access Server connection. Figure 9-50 provides an example of a successful connection from the DB2ACCESS server to the London server.

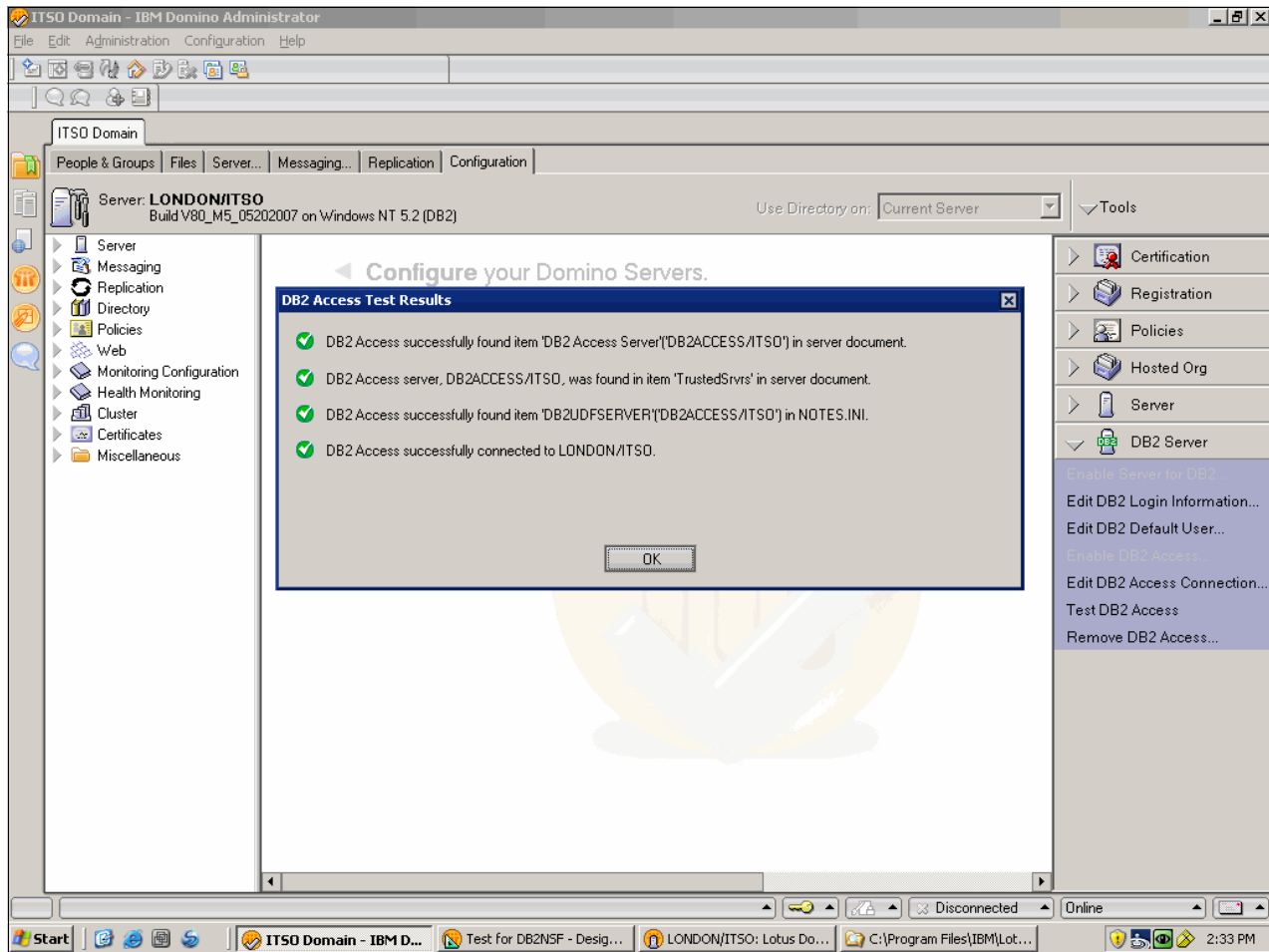


Figure 9-50 DB2 Access test results

The DB2 Access Test tool tests all DB2 Access Server field parameters from the server document and all DB2 Access Server settings from the notes.ini file. If all fields and settings are correct, it tests the connection between the DB2 Access Server and the selected Domino server, verifies whether the DB2 functions and properties exist, determines whether the DB2 Access server connection document is valid, and attempts to open the Domino directory on the DB2 Access Server. If the DB2 Access Test tool locates any problems, the information is returned to the Domino server console or to the Domino Administrator client.

#### 9.11.4 Testing the end-to-end Domino and DB2 connectivity

To verify the successful end-to-end configuration of Domino and DB2, you can create a test DB-enabled Notes database with a DB2 Access View (DAV) and a Query view. Populate the test database with example data to ensure that it is stored in DB2.

For the purposes of testing the Domino and DB2 connectivity, we create a sample database using the familiar document library template. For more detailed information regarding Notes application development using the Domino and DB2 feature, reference the IBM Redbooks Lotus Domino 7 Application Development publication at the following URL:

<http://www.redbooks.ibm.com/abstracts/redp4102.html?Open>

First, create a new Notes database from Lotus Notes 8, as you would for a regular NSF-based Notes application. The database will be DB2-enabled if the DB2 default creation setting in the DB2 tab in the server document is set to DB2.

**Tip:** If the DB2 default creation setting is set to NSF, run a **compact -p** on the database to convert it from NSF to DB2-based.

Next, open the new test application in the Domino Designer client and verify that the DAV view is exposed in the Shared Resources section, as highlighted in Figure 9-51.

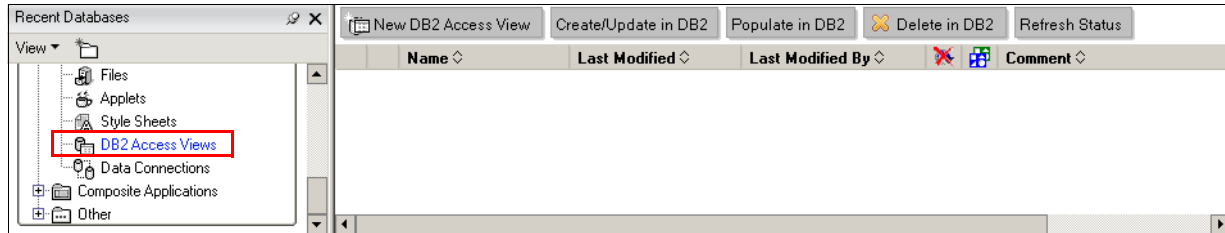


Figure 9-51 DB2 Access Views in Domino Designer

Click **New DB2 Access View** and add the fields that you want to store in DB2. For the purposes of creating a simple test application, we use the default document form and DB2-enable the Categories and Subject fields. Figure 9-52 shows the selection of the Document form and the Subject field.

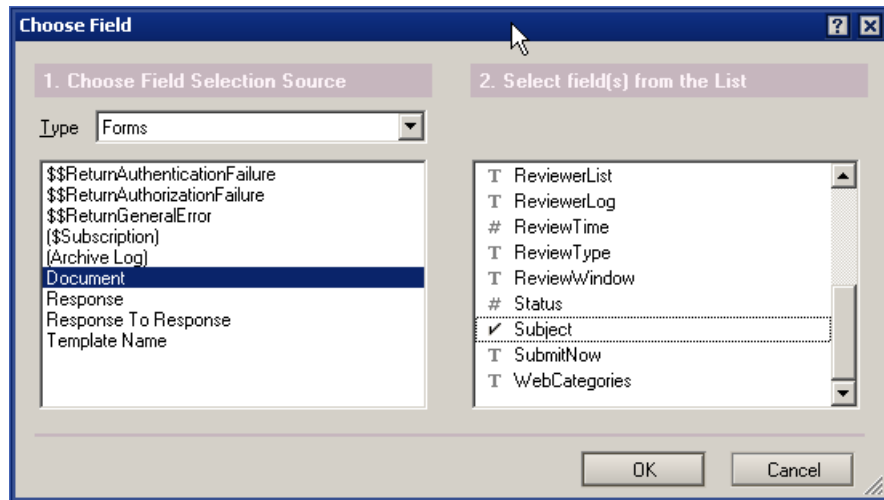


Figure 9-52 Add Subject field from the Document form into the test Domino Access view

After adding the Notes document fields to the test DAV, which we named TESTDAV, the DAV displays the fields in a single column, as shown in Figure 9-53.

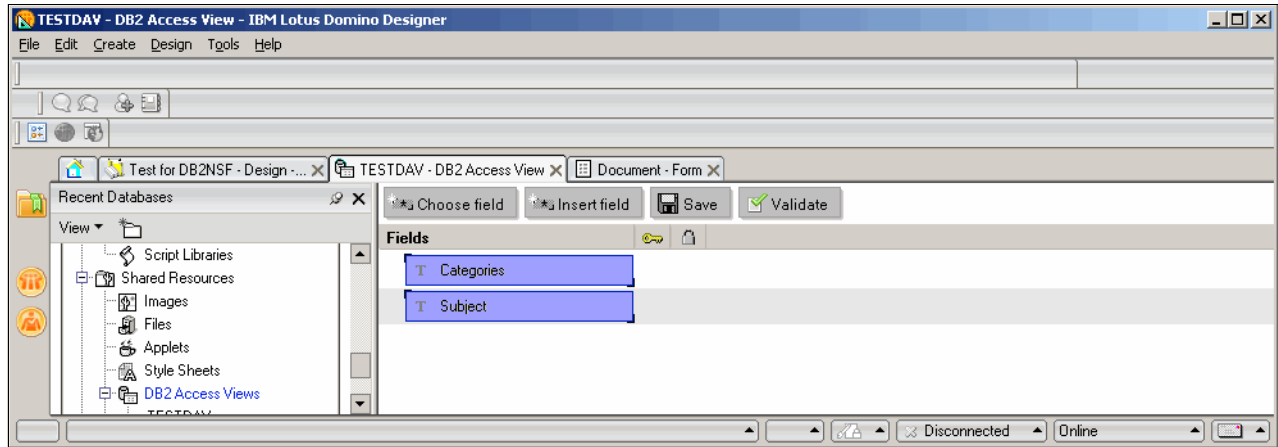


Figure 9-53 TESTDAV Domino Access view

After saving and closing the DAV view, you will see it listed as the only DAV in the view. We are now ready to create and, if there is data to be updated into DB2, populate the DAV in DB2 by clicking the **Create/Update in DB2** and **Populate in DB2** buttons, respectively. Once created and populated in DB2, the TESTDAV will be listed in DB2 Access views with a green check mark, as shown in Figure 9-54.

**Important:** This test application does not have any Notes document data to be populated into DB2 initially, so we did not need to select the Populate in DB2 button once we created the DAV in DB2. Only when there is Notes data to be populated into DB2 will you need to select the Populate in DB2 button.

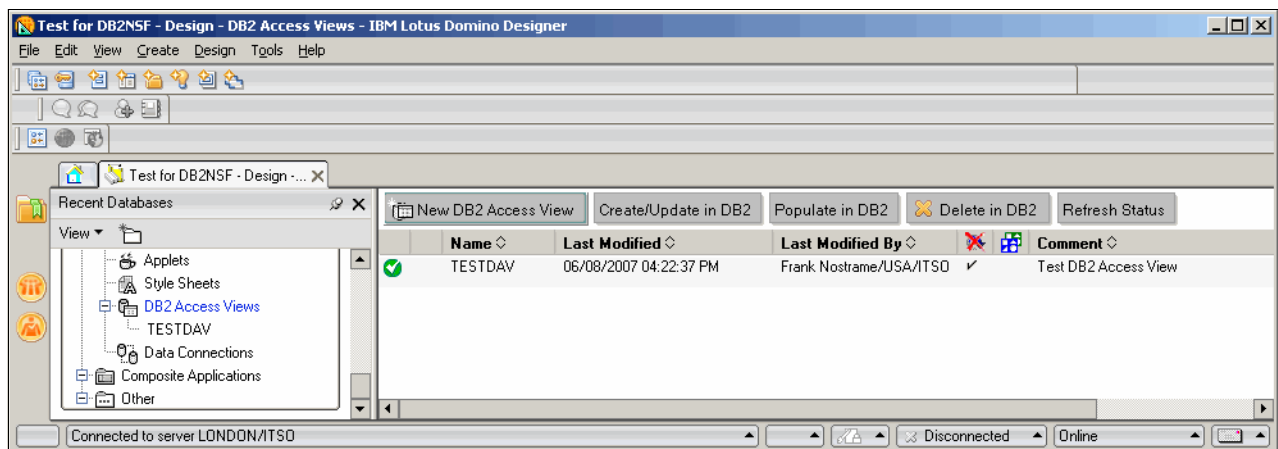


Figure 9-54 TESTDAV created and populated in DB2

We are now ready to create a Query view. We perform a simple check to ensure that the option to create a view based on an SQL query is available. Click **New View** from the Views section in the Domino Designer. In the Select conditions section in the bottom left of the pop-up box, select **By SQL Query** and enter an SQL query to select all of the data from the TESTDAV, as shown in Figure 9-55.

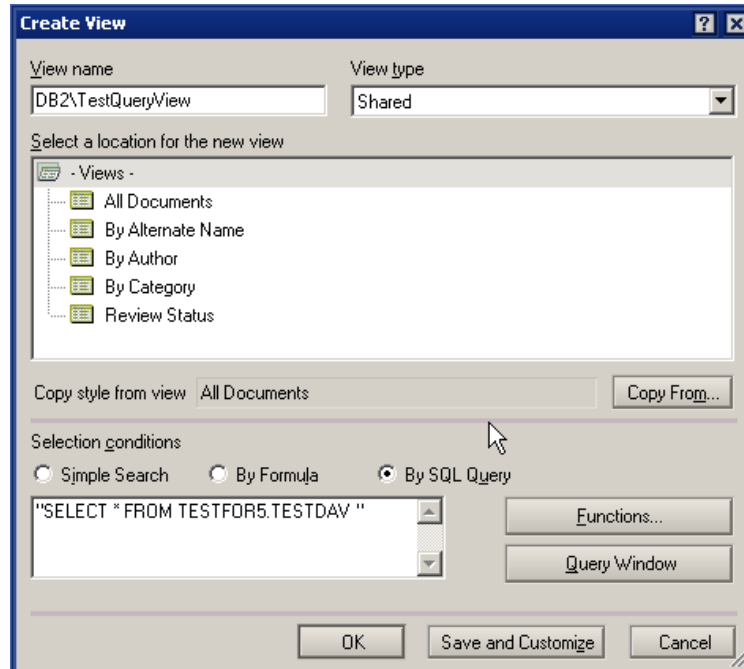


Figure 9-55 DB2\TestQueryView Query View creation based on SQL select statement

**Note:** In a production application, selecting all data with an asterisk (\*) is not a best practice, given the negative impact on server performance. Since we are only creating a test database, selecting all data does not present a significant increase in resource utilization on our Domino and DB2 servers.

Verify that the Query view is displayed in the test Notes database. The default icon used for Query views contains a database icon, as highlighted in Figure 9-56.

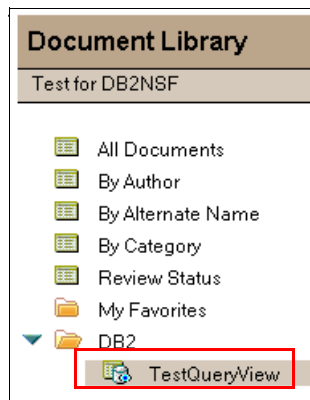


Figure 9-56 DB2\TestQueryView query view navigation

Now that we have both the DAV and Query views created, we create a test Notes document, populating the Categories and Subject fields, as highlighted in Figure 9-57.

Doc Library

Main Topic

Frank Nostrame/USA/ITSO

Today 11:39 AM

Subject: Test for ND8 Deployment Guide

Category: Domino and DB2

Originator

Frank Nostrame/USA/ITSO

Reviewers

Review Options

Type of review: One reviewer at a time

Time Limit: No time limit for each review

Options:

Notify originator: final reviewer after:

Figure 9-57 Test Document Library Notes document

Saving the document saves the Subject and Categories field data into DB2, and the document is displayed in the test Query view, appearing as a standard NSF-based document, as shown in Figure 9-58.

Document Library

New Document

New Response

New Response to Response

Test for DB2NSF

Date ^

Topic

07/11/2007

Test for ND8 Deployment Guide (Frank Nostrame)

All Documents

By Author

By Alternate Name

By Category

Review Status

My Favorites

DB2

TestQueryView

on LONDON/ITSO

Preview ▲

Figure 9-58 Test document in Query view

**Note:** Query views can be accessed from the Notes client or a Web browser.

**Important:** Query views hosted by a Domino 8 server are supported by Notes 7 clients. However, the Domino Designer 7.x and Domino Administrator 7.x clients are not supported for the design or administration of Domino 8 DB2-enabled data.

We recommend performing all Domino and DB2 deployment and administration work with the latest release of the full Notes 8 client.



To verify the creation of the DB2 table, utilize the DB2 Control Center and navigate to the DB2 instance, DOMINO database, and to the TESTDAV view, as shown in Figure 9-59.

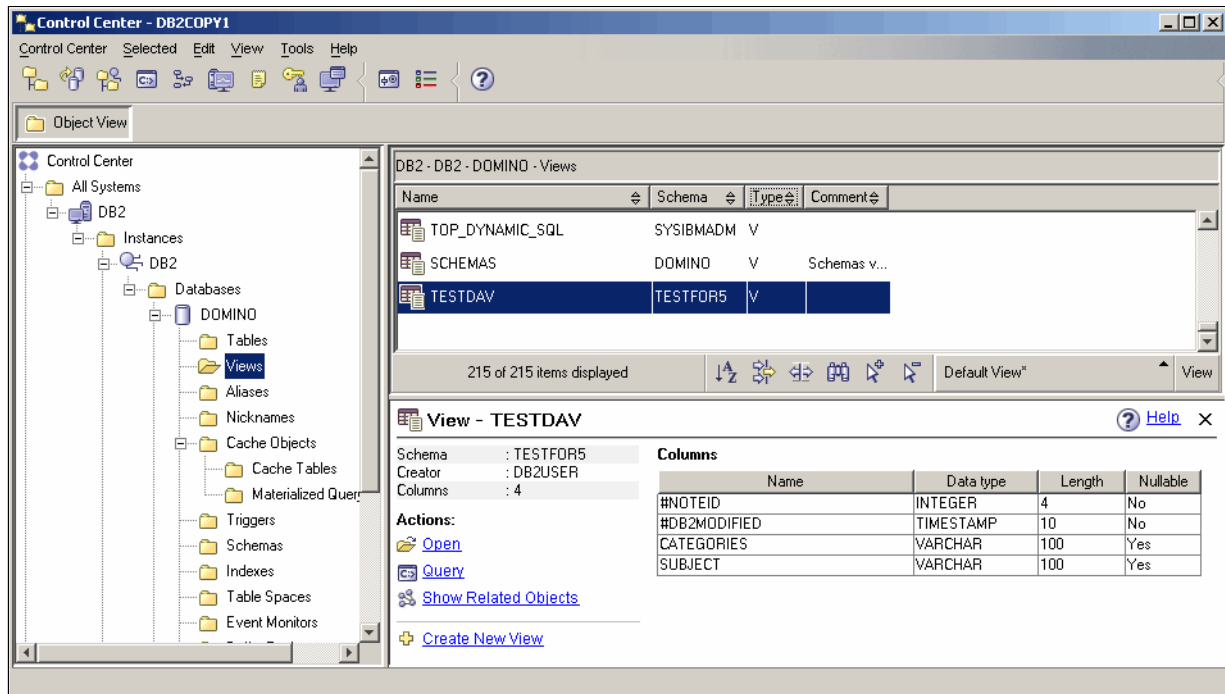


Figure 9-59 TESTDAV view in the DB2 Control Center

The TESTDAV view is not the DB2 table itself, but a virtual table that references the raw data, which exists in the TESTDAV\_T table, as shown in Figure 9-60.

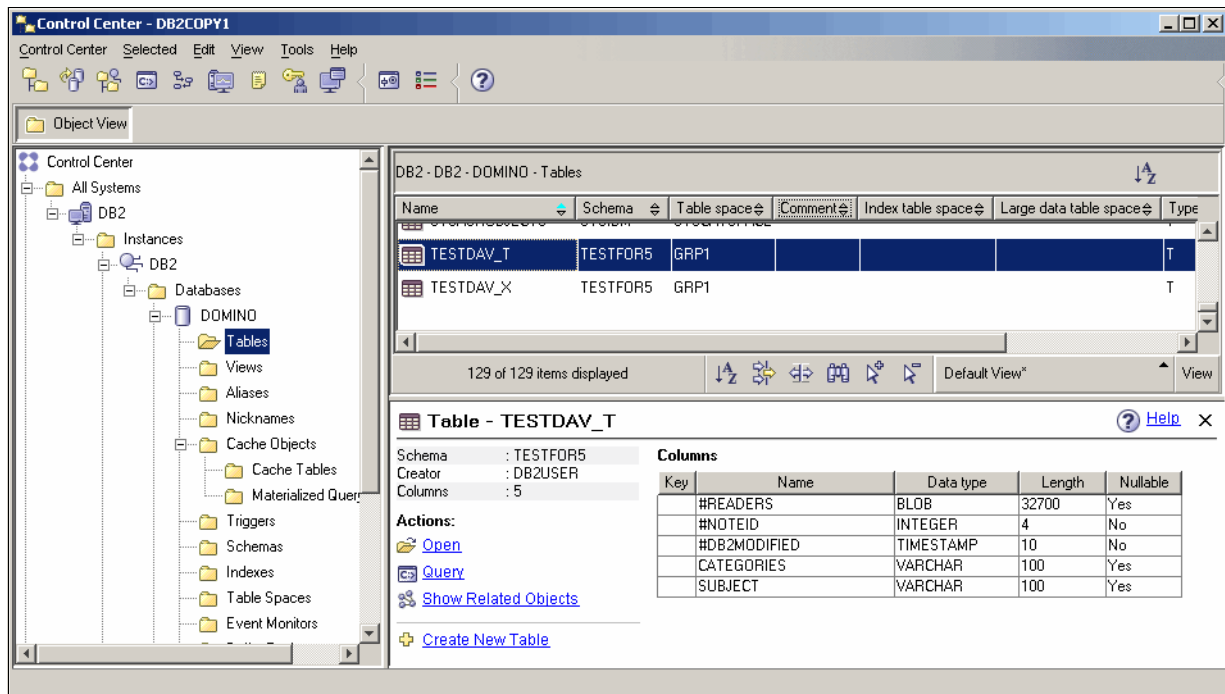


Figure 9-60 TESTDAV\_T table in the DB2 Control Center

In the Action section in the table details pane, select **Open** to open the TESTDAV\_T table and verify the Subject and Categories fields were stored in DB2, as shown in Figure 9-61.

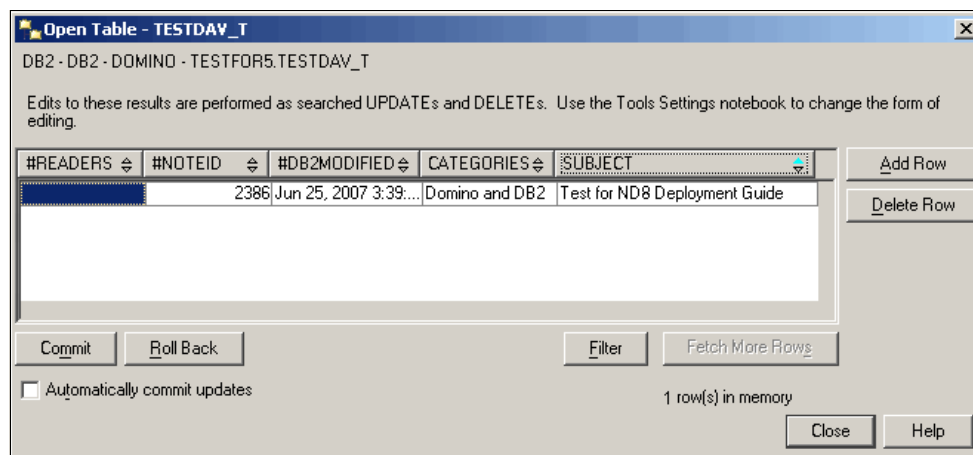


Figure 9-61 TESTDAV\_T table opened in the DB2 Control Center

**Important:** When using Query views or accessing DB2-enabled Notes data from other SQL applications, you should always use the DB2 view associated with your DB2 Access View design element, the tables that are appended with \_T or \_X. Accessing the tables appended with \_T and \_X bypasses Domino security and the ability to roll-back bulk operations, respectively.

With this final verification of the Domino and DB2 integration, we conclude the overview of the Domino and DB2 feature deployment.

Given that the overall goal of this book is as a deployment guide, this section focused on a typical Domino and DB2 installation and configuration, based on our deployment of the feature in our example ITSO Domino domain.

### 9.11.5 Additional Domino and DB2 resources

As a Domino and DB2 administrator, there are other resources available to assist with both deployment and day-to-day administration and required maintenance of your Domino and DB2 environment, including DB2 group management, Notes and DB2 user management, DB2-enabled Notes application maintenance, backup, and performance.

Available Domino and DB2 feature resources are:

- ▶ Lotus Domino 8 Administrator Help and Release Notes
- ▶ IBM Lotus Domino and DB2 feature for Domino 7 program Forum  
<http://www-10.lotus.com/1dd/d7db2.nsf/DateAllThreadedWeb?OpenView>
- ▶ FAQ on DB2 and Domino 8 on Domino Blog Web site  
<http://www.dominoblog.com/dominoblog/dblog.nsf/dx/faq-on-db2-integration>
- ▶ Course: Developing Applications With IBM Lotus Domino 8 Enabled for IBM DB2  
<https://education.lotus.com/rw/lewwschd.nsf/594045664318da9e80256cae00361321/e6a2aba6aeb99ca2852572e50053e98e?OpenDocument>

- ▶ Course: Configuring IBM Lotus Domino 8 with IBM DB2  
<https://education.lotus.com/rw/1ewwschd.nsf/594045664318da9e80256cae00361321/af557a1b0c4dbf7852572e4006d6d21?OpenDocument>
- ▶ Improving Domino and DB2 Performance, Version 1  
[http://www-12.lotus.com/1dd/doc/uafiles.nsf/docs/domino70/\\$File/db2perf.pdf](http://www-12.lotus.com/1dd/doc/uafiles.nsf/docs/domino70/$File/db2perf.pdf)
- ▶ Exploiting IBM DB2 in your Lotus Domino 7 application article  
<http://www.ibm.com/developerworks/lotus/library/domino7-db2/>
- ▶ IBM Lotus Domino with IBM DB2 storage for Lotus Notes mail users  
<http://www.ibm.com/developerworks/lotus/library/domino-mail-db2/>

## 9.12 Other administrative enhancements

In this section we take a brief look at some of the other administrative enhancements in Domino 8. Rather than try to list every new administrative feature in Domino 8 (there are many) we have chosen some of our favorites to highlight.

For a full list of the new administrative features and further information about each one, refer to these sources:

- ▶ What's New in IBM Lotus Domino 8 topic in Lotus Domino 8 Administrator Help
- ▶ IBM Lotus and Domino 8 Reviewers Guide:  
[ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8\\_Reviewers\\_Guide.pdf](ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8_Reviewers_Guide.pdf)

### 9.12.1 Deferred sort index creation

Domino 8 provides the ability to configure view and folder columns for deferred sort index creation. This means that for sortable columns, an index is not built unless a user chooses to sort by that column.

Indexing of views and folders is a server task, so the deferred sort index creation feature has the potential to reduce the indexing load on the server. In addition, since each index is stored within the database, a database with many unused sortable columns will be comparably smaller if the sortable columns have deferred sort index creation enabled.

Deferred sort index creation is an optional design setting for columns that is available to developers for databases on any Domino 8 server. No particular configuration changes need to be made by the Domino Administrator to allow the function to work on Domino 8 servers. Application developers can activate the function in the design properties for each individual view or folder column. For information about how to enable this function in column properties, refer to “Deferred sort index creation” on page 404.

**Note:** With this setting enabled, after an index is created it obeys the values set for index refresh and discard (set at the view or folder level). For example, if the refresh setting is “Auto after first use” and the discard setting is “If inactive for 10 days,” the index would continue to be maintained by the refresh setting unless there is a 10-day period in which no users sort by that column. After the 10 days of inactivity, the index would be discarded, and index creation is again deferred until a user sorts by that column.

**Tip:** Indices for columns that have deferred sort index creation set can be discarded immediately by typing the following command at the Domino server console:

```
load updll dbfilename -r -g
```

## 9.12.2 Prevent simple search

Simple search is the type of processing used when a user searches a non-full text indexed database. The simple search algorithm can significantly impact performance on a Domino server. For some databases, the ability to search documents may not really be necessary, yet the default functionality still allows users to do this.

In Domino 8, Simple search can be disabled for each individual database by administrators to prevent users from searching non-full text indexed databases. The setting is enabled by selecting the option **Don't allow simple search** on the Advanced tab of the Database Properties dialogue, as shown in Figure 9-62.

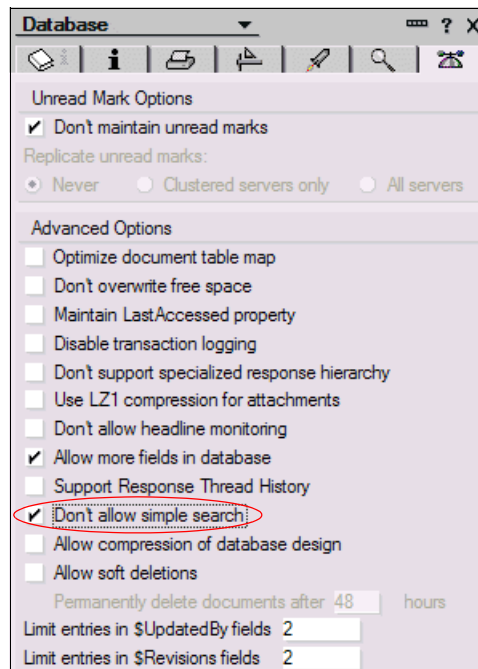


Figure 9-62 Don't allow simple search setting

With this option enabled, users see the dialogue shown in Figure 9-63 when they attempt to search the database.

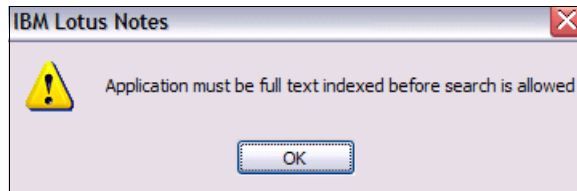


Figure 9-63 Dialogue returned when simple search is disabled

**Important:** The Do not allow simple search database property does not replicate for existing database replicas. This allows administrators to decide selectively whether each replica should have the setting enabled, to allow users to perform simple searches on some servers' replicas while preventing it on others.

The setting is carried over to new database replicas and copies.

### Open databases and live console when the Domino Administrator starts

The Domino Administrator client has two new startup settings:

- ▶ Automatically open one or more databases.
- ▶ Automatically run in live console mode.

Figure 9-64 highlights where these settings reside in the Basics → Domino Administrator Startup Settings section in the Administration Preferences panel.

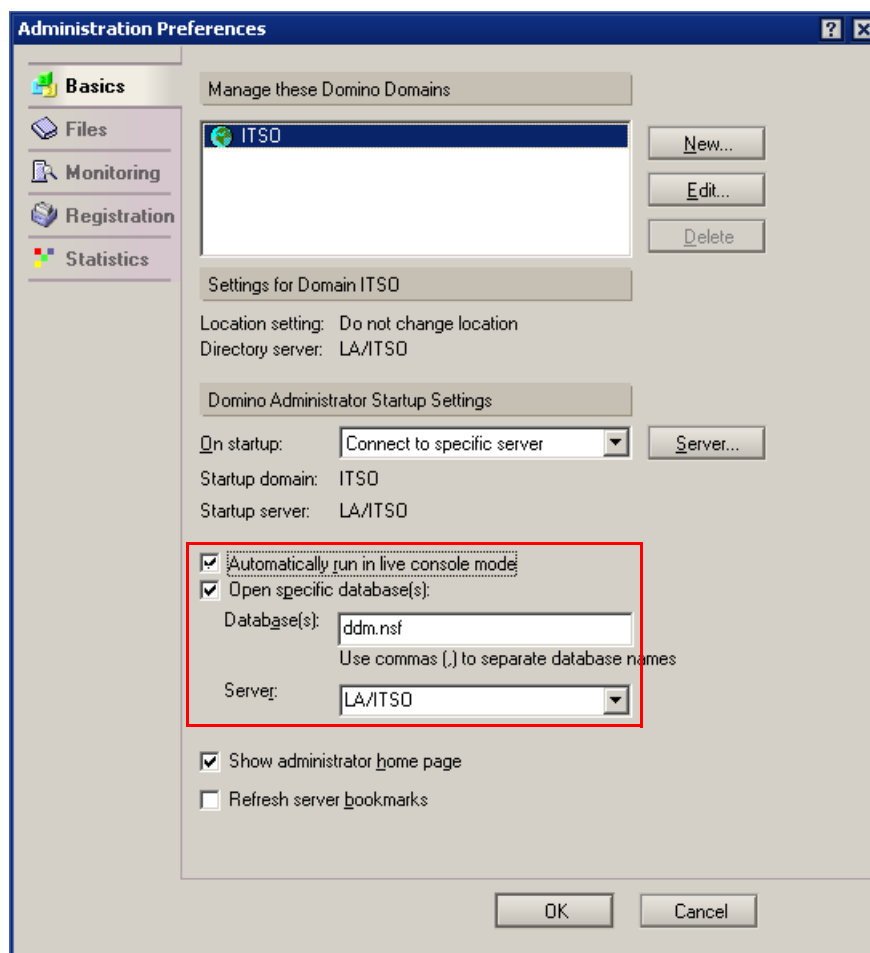


Figure 9-64 New administration preference to open a database when Domino Administrator client opens

If the **Automatically run in live console mode** setting is checked, the Domino Administrator client automatically navigates to the Server → Status → Server Console tab and displays the live console for whatever server is specified in the On startup setting, which can either be Connect to last used or Connect to specific server.

The Open Specific Database(s) setting allows you to specify a database, or multiple databases, to open each time the Domino Administrator client is started. While this is not specifically a Domino domain monitoring feature, the default setting for this preference is to open the DDM.nsf database.



## **New concepts in administration: Eclipse, composite applications, and provisioning**

The Notes 8 client is built on the Eclipse Rich Client platform, which provides opportunities to exploit the open-source, extensible capability of the platform to provide enhanced client capabilities such as composite applications and plug-ins, along with the ability to automatically provision updates to the client.

This chapter presents a primer for Domino Administrators and architects to explain some new and important concepts in Notes and Domino 8 in the context of deploying and managing a Lotus Notes and Domino 8 environment.

## 10.1 Introduction to the new administration concepts in Notes and Domino 8

In Lotus Notes and Domino 8, there are several new concepts to understand, particularly in relation to the architecture and features of the Lotus Notes 8 client. Concepts such as provisioning, composite applications, plug-ins, components, and Eclipse are all important within the context of Lotus Notes and Domino 8.

For example, provisioning as a concept is new to Lotus Notes and Domino 8, although it has roots in some earlier tools used to help manage updates to client workstations, such as Smart Upgrade. Outside of Notes and Domino, provisioning has been used by other tools and frameworks such as Eclipse and Lotus Expeditor, as a way to automatically manage and provision software updates to users. In Notes and Domino 8, provisioning encompasses a number of different interrelated concepts and functions.

It is worthwhile for Domino administrators and architects in particular to take the time to understand the components that comprise the Lotus Notes 8 client itself, and the components that comprise provisioning, composite applications, and other features of Lotus Notes and Domino 8.

## 10.2 Definitions

As a first step to understanding the new features and concepts of Notes and Domino 8, this section presents a short, clear, and concise definition of each of the major new concepts and elements of the software.

### 10.2.1 Components

*Component* as a generic term describes one part of a larger integrated entity. In terms of the Lotus Notes 8 client, a component usually means one part of a composite application. This may be a part of a Notes database such as a view, an Eclipse feature, or plug-in, or part of another non-Notes source such as a Web page. Components can be wired together to form a composite application.

The term component may also be used to describe a plug-in that forms part of the Notes user interface, such as the Sametime plug-in in the side bar of the Notes 8 client.

### 10.2.2 Composite applications

Composite applications consist of separate but interconnected components assembled together to appear to the user as a single integrated application.

In terms of Notes and Domino 8, composite application functionality can be provided by adding composite application design elements to any NSF database. There is also a new composite application standard template, which is used to create new NSF-based composite applications. The separate but interconnected components may be from Notes databases, or they may be non-Notes components such as Web pages, Java applications, or Eclipse components.

The components are usually created by application developers, then wired together by the developers or business managers to create the single application entity known as the



composite application. To the Notes 8 user, an NSF-based composite application looks no different from a regular Notes application (database), but behind the scenes, the composite application wiring is pulling together data and views from several separate components to display a single view on the user's window.

Below are definitions of each of the important composite application concepts:

► Page

A page is the interface that displays to the user in a composite application. Pages consist of component definitions (where to locate the components and how to display them) and wiring definitions (how the components interact together).

► Component

In the context of a composite application, a component is a small self-contained design element that is wired together to interact with other components on a single page within a composite application.

► Wiring

Wiring is the linkage between multiple components that makes them interact with each other, so that when an user makes a selection in one component, the other components on the page are updated to reflect the selection.

► Domino composite application template

The Domino composite applications template is a new Domino 8 standard template used to create NSF-based composite applications. Domino databases created from this template store the layout and communication logic that defines how the components display and interact when the composite application database is used. This database may also contain the components themselves, or may refer to components that are stored elsewhere.

**Note:** NSF-based composite applications store their own application code for layout and communication logic. This is conceptually the same as any other Domino database, which also stores its own code and logic. This is important to understand because it means that the Notes 8 client can interpret and display both local and server-based composite applications in the same way as it does for other Notes databases. No additional requirement such as a composite application server or provider is needed.

The major difference between NSF-based composite applications and other Domino databases is that composite applications use Eclipse-based coding constructs.

In practical terms, this means that composite applications can be made available to Notes 8 clients using the standard Domino composite application template, with nothing more than a Notes 8 client environment in place. However, it also means that the Notes 8 client is a requirement for NSF-based composite applications. These applications cannot be displayed in the Notes 8 basic configuration client, older pre-8 Notes clients, or from a browser.

For browser access to composite applications, the environment can be extended to include a composite application server such as WebSphere Portal 6.x, which has the ability to display composite applications to browser clients.

### 10.2.3 Composite application editor

The composite application editor is an optional install item provided with the Lotus Notes 8 client. The editor is used to add and edit the pages and wiring for composite applications. It is the tool that Domino developers and business managers use if they want to manage composite application wiring within the Notes client.

The composite application editor can be invoked from within the Notes client in two ways:

- ▶ To manage component wiring in an existing database, open the database and select **Action → Edit Application**.
- ▶ To create component wiring for a new composite application, create a database from the blank composite application template, then select **Actions → Edit Application** from within the blank database.

### 10.2.4 Composite application server

**Note:** A composite application server is a server that understands the logic and structure of composite applications and can interpret these to display the composite application to the user.

The Domino 8 server is a composite application server in the sense that it has the capability to provide composite applications to Lotus Notes 8 clients. In practical terms, this means that composite applications can be made available to Notes 8 clients using the standard composite application system template, with nothing more than a Notes and Domino 8 environment in place.

For browser access to composite applications, the environment can be extended to include a composite application server such as WebSphere Portal 6.x, which has the ability to display composite applications to browser clients.

### 10.2.5 Eclipse

Eclipse is an open-source, platform-independent software framework. This means that it is based on open standards rather than proprietary coding, and it can be used on many client operating systems. It provides the basic underlying framework upon which components, sometimes known as plug-ins or features, can be deployed to users.

**Important:** In terms of provisioning and Lotus Notes 8, it is important to have a conceptual understanding of Eclipse because the Notes 8 client is built on the Eclipse framework, which means that it is a rich client platform where components (plug-ins) can be easily provisioned to users.

Two of the main benefits of the Eclipse approach are:

- ▶ It reduces deployment overhead, because new functions and updates to existing functions can be automatically delivered (provisioned) in small packages to users.
- ▶ It provides a rich client platform, which means that it offers greater functionality than a thin client (such as a browser), but still with similar ability to deliver small packaged functionality updates, a function for which thin clients are traditionally known.

**Important:** Eclipse is one of the parts that comprise the Lotus Notes 8 client. It is not a separate installation option and it requires no configuration. It is installed automatically when you install the Notes 8 client. For more information about the architecture of the Notes 8 client, refer to 10.3, “The Lotus Notes client architecture” on page 320.

## 10.2.6 Lotus Expeditor Client for Desktop

The Lotus Expeditor Client for Desktop is delivered as part of the Notes 8 client. It is the Notes client subsystem that provides the ability to wire components together within Notes and provision them to users.

**Important:** Like Eclipse, Lotus Expeditor Client for Desktop is one of the parts that comprise the Lotus Notes 8 client. It is not a separate installation option and it requires no configuration. It is installed automatically when you install the Notes 8 client. For more information about the architecture of the Notes 8 client, refer to 10.3, “The Lotus Notes client architecture” on page 320.

## 10.2.7 Provisioning

In general terms, provisioning describes both the function and act of automatically sending client software updates to users. In terms of the Lotus Notes 8 client, provisioning encompasses two main features:

- ▶ Traditional Notes client provisioning, for example, Smart Upgrade  
Smart Upgrade has been available since Notes and Domino 6.0, and provides the ability to send (provision) updates to the Notes client software itself out to Notes users. It uses the Smart Upgrade database to manage updates. Other client packaging tools may also be used for this purpose.
- ▶ Plug-in and non-Notes component provisioning, for example, the Domino update site  
This type of provisioning is new to Notes and Domino 8. The Domino update site database provides the ability to send (provision) plug-in components and non-Notes composite applications to Notes users, and to update them when required. Other (non-Domino) Eclipse update sites may also be used for this purpose.

**Note:** For upgrading to Notes 8.0 from an earlier client, the update site is not an option (because earlier clients do not have the Update Manager — the client part of this tool — in place).

In the future, it may be possible to upgrade the Notes 8.x client to newer releases using an update site. This capability is not currently available for the Notes 8.x client. Until this capability becomes available, you can still use the Smart Upgrade database (or another provisioning method) to roll out newer Notes client releases for Notes 8.x clients.

## 10.2.8 Update Manager (Eclipse Update Manager)

The Eclipse Update Manager is the subsystem in Eclipse Rich Client applications (such as Lotus Notes 8 client) responsible for feature version detection, and download of new or updated features and plug-ins.

**Important:** The Eclipse Update Manager is part of the Eclipse platform that is installed as part of the Lotus Notes 8 client.

The Eclipse Update Manager subsystem has the information required to allow it to communicate with the update site to manage the update requirements of the client. Normally the communication is via HTTP protocol, but the Update Manager in the Notes client has a special protocol handler built in to allow communication over NRPC as well. This is useful if you are using your Domino server as the update site for your Notes clients, especially if you do not want to enable HTTP on the Domino server.

## 10.2.9 Update site (and discovery site)

An update site contains features and plug-ins that can be provisioned to Eclipse Rich Client applications (such as the Lotus Notes 8 client). The update site publishes a set of files in the structure and form expected by the Eclipse Update Manager (which is installed as part of the Notes 8 client).

The update site can be used by the Notes 8 client in several ways:

1. The Update Manager process on the Notes 8 client can automatically check for updates to any installed features that have an update site URL or discovery site URL in them.

**Note:** This process will try to connect to the URL included in each feature to search for an updated version to that feature. Features that do not have URLs included are not updated in this way. In Notes 8.0 the Notes client itself cannot be updated in this way. The ability to update the Notes client in this way may be added in a future release.

2. If the user opens a composite application that includes a component that is a feature that requires provisioning, that feature will be pulled down by the client.
3. The user may manually invoke a search for new features to install updates to currently installed features, if they are allowed to perform manual searches.

Feature developers can optionally include an update site URL within a feature, so that after it is installed, the feature will search for updates at the included URL. (A Domino Administrator can update these URLs for features stored in a Domino update site database. For further information refer to “Updating Site URLs” on page 335.)

**Note:** Developers also have the option of including a discovery site URL in a feature (note that this is called *Discovery URL* in the feature document interface). In real-world implementations, the discovery site URL is usually set to the same value as the update site URL, but in terms of Eclipse standard definitions, these two are subtly different.

In the Eclipse standard, the update site URL is used to update existing installed features, while a discovery site URL allows you to install new features. Since both of these site types use the standard Eclipse update site structure and both therefore provide the same functionality, it is unusual to see them set to different values.

In “Updating Site URLs” on page 335 you will see that it is possible for an administrator to set either one or both of the Update and discovery site URLs.

For the purpose of gaining a conceptual understanding, the function of an update site and a discovery site are essentially the same.

The simplest type of update site is a server that is accessible via HTTP protocol, and contains the specific set of files in the format the Update Manager expects.

**Important:** There are two important things that you need to know to understand update sites in relation to Notes and Domino 8:

- ▶ A Domino 8 server can act as an update site for Notes 8 clients and for other Eclipse Rich Client applications (such as Sametime 7.5) by using the updatesite.ntf template. Note that the update site database can also be replicated to Domino 6.5.x and 7.x servers for use via HTTP. NRPC provisioning is only available on Domino 8 servers.
- ▶ Notes clients can receive updates from any type of update site server, that is, either a Domino 8 server acting as an update site server, or a non-Domino update site server (via HTTP).

The specific set of files required on an update site comprises:

- ▶ site.xml

A single XML file in the root of the update site, listing all of the features and plug-ins contained within the site. This can be manually maintained or can be dynamically computed by the server.

- ▶ Features

Features are files that describe collections of plug-ins (which logically go together). They are located under the \features subdirectory of the update site. Each feature consists of a packaged JAR file that contains information about the plug-ins that comprise the feature and a manifest XML file that contains metadata about the feature. An update site URL (and discovery site URL) may also be included to tell the feature where to search for updates.

- ▶ Plug-ins

Plug-ins are the basic building blocks in any Eclipse-based application and contain the actual code. They are located under the \plugins subdirectory of the update site. Each plug-in consists, at a minimum, of a packaged JAR file containing code and a manifest file containing metadata about the plug-in.

The Domino Site Update database (based on the updatesite.ntf template) takes care of the structural requirements by computing the site.xml on-the-fly when it is required by an Eclipse-based client (such as the Notes 8 client).

Figure 10-1 shows the file and directory structure of a basic update site.

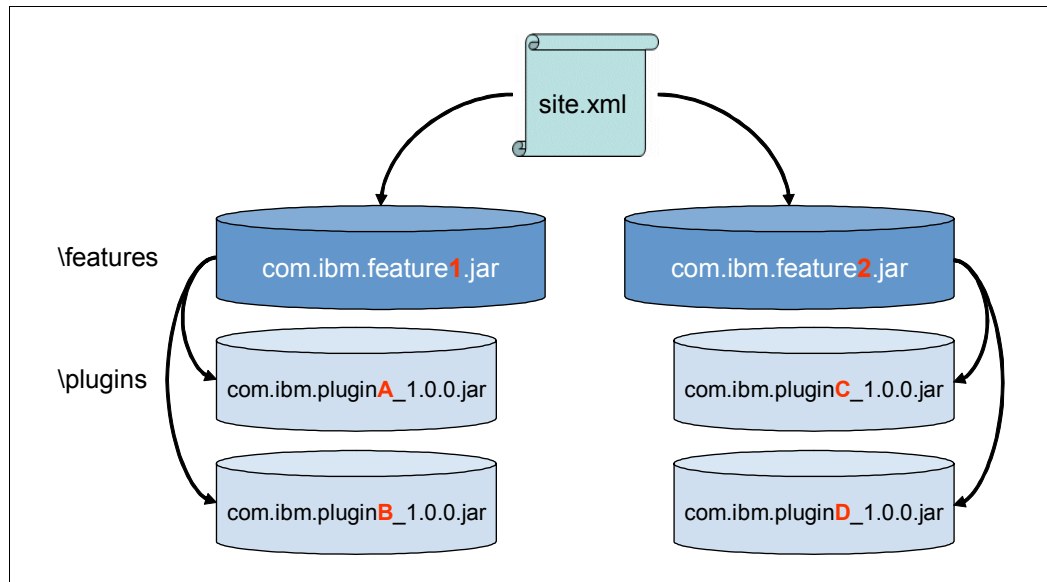


Figure 10-1 Basic update site file and directory structure

## 10.3 The Lotus Notes client architecture

The Lotus Notes 8 client consists of three basic architectural layers, as shown in Figure 10-2.

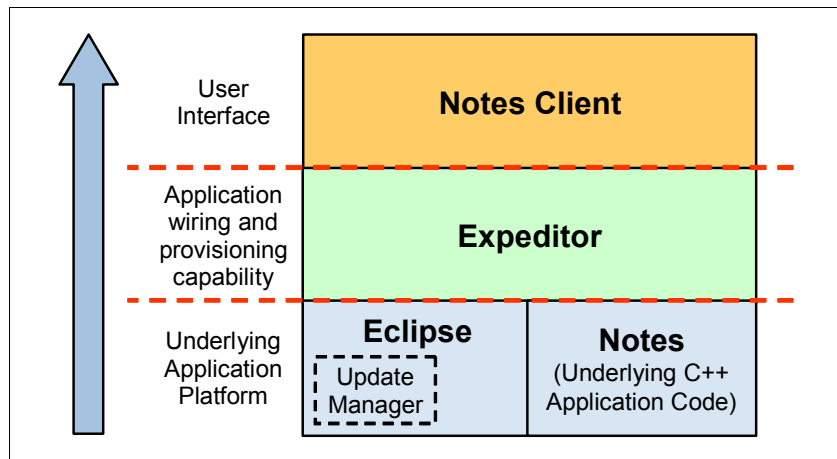


Figure 10-2 Notes client architectural layers

The basic architectural layers of the Lotus Notes client shown in Figure 10-2 are:

- ▶ **Notes client**  
The overall Notes client application and user interface
- ▶ **Expeditor**  
The technology that provides the ability to wire components together within Notes, provision them, and display them in an organized way to users
- ▶ **Eclipse framework and Notes underlying C++ code**  
The underlying basic application platform code

Past versions of the Lotus Notes client consisted only of two parts of the Lotus Notes 8 architectural model: the Notes underlying C++ code and the Notes client itself (the user interface).

**Important:** Understanding this architectural model explains why the Lotus Notes 8 client provides both full backward compatibility through the underlying C++ code, and the new user interface and capabilities that come with the Eclipse Platform technology.

## 10.4 Composite applications from administrator’s perspective

As discussed in 10.2.2, “Composite applications” on page 314 definition on page 314, a composite application is an assembly definition for interconnected application components. More specifically, an NSF-based composite application is just a Domino database with design elements in it to specify the details of the components and how they are wired together for display to the user.

**Tip:** The components themselves may or may not be stored in the composite application database. The component definitions may refer either to components that are stored in the same database (such as a Notes View) or to components that are stored elsewhere (in another Notes database, or outside of the Notes environment in the case of non-Notes components).

The easiest way to gain a practical understanding of composite applications is to look at a simple example. The Notes 8 mail template is a composite application, as is the Notes 8 Contacts template.

Using the example of the Notes 8 mail template, there are three composite application pages in this template, each with three components, as shown in Table 10-1.

*Table 10-1 Composite application pages in the Notes 8 mail template*

Composite application page	Components on the page	What is it?
Mail	Notes Mail Navigator Notes Mail Mini View Notes Mail View	This page is an assembly of three mail elements that interact together to display the user’s mail.
Calendar	Notes Calendar Navigator Notes Calendar Mini View Notes Calendar View	This page is an assembly of three calendar elements that interact to display the calendar.
To Do	Notes ToDo Navigator Notes ToDo View	This page contains the To Do navigator and view, to display To Do documents.

Considering the Mail Composite Application Page listed in Table 10-1 on page 321 above, the components of this page are shown in Figure 10-3. Notice that each of the three components on the Mail Composite Application page are actually regular Notes design elements from the Notes 8 mail template itself.

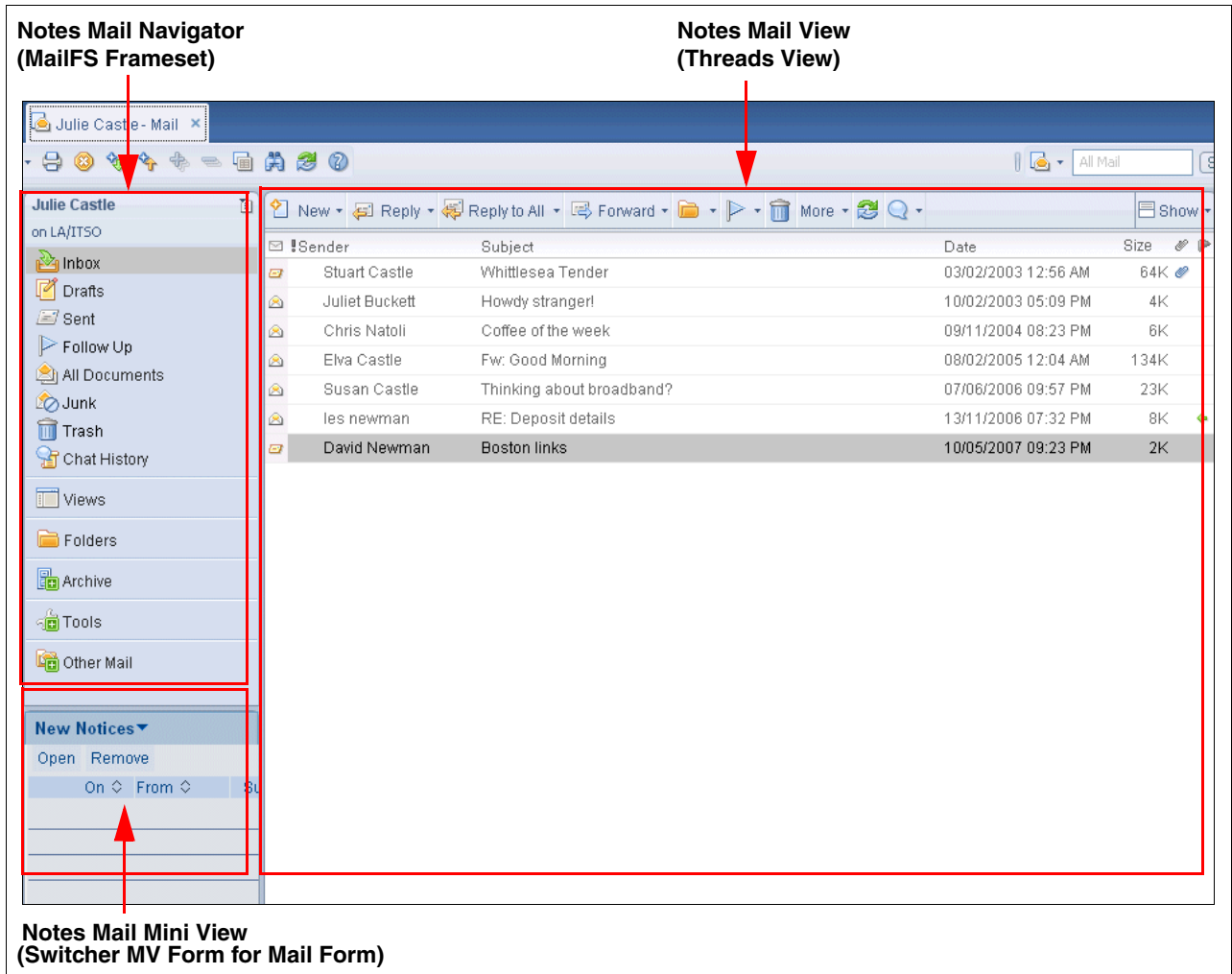


Figure 10-3 Example of a Composite Application page: The Mail page from a standard Notes 8 mail template

Figure 10-4 shows the same Mail Composite Application page in the composite application editor navigator.

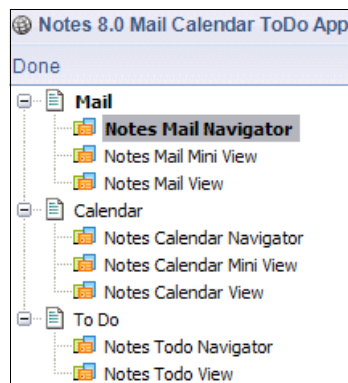


Figure 10-4 Mail page in composite application editor



### 10.4.1 How to determine whether an application is a composite application

Remembering that a composite application is really just a Domino database with additional design elements in it, there are two simple methods that you can use to determine whether any given database is a composite application:

- ▶ Open the database in the Notes 8 client and select **Actions** from the menu. If there is an Edit Application option on the Actions menu, then this database is a composite application. (Note: You must have the composite application editor installed for the Edit Application option to show.)
- ▶ Open the database in the Domino Designer client and expand the **Composite Applications** section in the left navigator. Open each of the Composite Applications subsections: **Wiring Properties** and **Applications**. If there are design documents showing in these two subsections (in the main design pane on the right), this is a composite application. If there are no design documents showing in these subsections, then it is not a composite application.

**Note:** This section has explained composite applications from an administrator's perspective. If you would like to learn more about developing composite applications, refer to 12.6, "Composite applications" on page 418.

## 10.5 Using the Domino server as an update site

As discussed in 10.2.9, "Update site (and discovery site)" on page 318 definition on page 318, a Domino server can act as an update site server for the purpose of manual and automatic provisioning of features and plug-ins to the Notes 8 client (as well as other Eclipse Rich Client applications).

The update site template (updatesite.ntf) is a new advanced template that is installed with the Domino 8 server and Notes 8 client. It provides storage for features and plug-ins (and all their associated files) as well as tools to inspect and manage content inside Eclipse update sites. Using Domino as an update site server has specific benefits for Domino Administrators because it provides the update site functionality in a familiar Notes database interface, with the additional security and functionality benefits that Domino databases provide.

The specific benefits of using a Domino 8 server as an update site server include:

- ▶ Robust Domino-based security  
ACLs and reader fields can be used to control access to the plug-ins and features stored in the database.
- ▶ Replication  
Easy distribution of features and plug-ins across wide geographies. Particularly important for NRPC-based provisioning in enterprises.
- ▶ Notes metadata and doclinks  
Understanding the update site structure is easy because all plug-ins used by a feature are categorized and linked, and all metadata is displayed in the documents using familiar Notes doclinking and Notes navigation.

In addition to these specific benefits of being a Domino database, the Domino update site provides additional functionality over a basic file system based update site. In particular, the Domino update site provides:

- ▶ Built-in tools for:
  - Importing and merging from other update sites
  - Globally changing embedded URLs inside JAR files, and so on
- ▶ Automatic collation and dynamic computing of the site.xml file (the single root level file that lists all the features and plug-ins on the site)
- ▶ The ability to have more than one update site hosted on the Domino server

The remainder of this section describes the update site database and how to implement it.

## 10.5.1 Exploring the update site database

The update site database stores each feature and each plug-in in a separate Notes document. An example of the update site database is shown in Figure 10-5.

Category	Feature	ID	Version
IBM			
Broadcast Suite			
	Broadcast Communication Suite	com.ibm.collaboration.realtime.broadcast.feature	2.0.9
Location-based plugin			
	Concierge	com.ibm.collaboration.realtime.concierge.feature	2.0.3
Lotus Connections			
	Activities Sametime Feature	com.ibm.socnet.client.uim.activities.feature	1.0.0.2007
	Activities Sametime Feature	com.ibm.socnet.client.uim.activities.feature	1.0.0.2007
	Activities ST Feature	com.ibm.socnet.client.uim.activities.feature	1.0.0.2007
	Activities ST Feature	com.ibm.socnet.client.uim.activities.feature	1.0.0.2007
Other			
	Sametime Primary Buddies Feature	com.ibm.collaboration.realtime.primarybuddies.fe	7.5.1.2007
Sametime Web Access			
	Webkit Feature	com.ibm.collaboration.realtime.webkit.feature	1.1.0

Figure 10-5 Example of a Domino update site database

The structure and logic of the update site is managed automatically by the database, and the site.xml file, which stores this structure, is dynamically computed and generated on-the-fly.

**Tip:** The site.xml is not displayed in any view in the database, but you can preview it. To preview the site.xml:

1. In a Notes 8 client, hold down the Ctrl and Shift keys, and open the Site Update database (this displays hidden views in the database).
2. Click **Debug site.xml** in the left navigator. This dynamically computes the site.xml and displays the result.

## Actions in the update site database

There are four action buttons available on the toolbar within the update site database, to allow you to manage the plug-ins and features stored in the database. These are described in Table 10-2.

Table 10-2 Action buttons in the update site database

Action buttons	Usage
<ul style="list-style-type: none"><li>▶ Import Local update site</li><li>▶ Import Features</li><li>▶ Import Database</li></ul>	Use these actions to import features and plug-ins. For further information refer to 10.5.3, “How to populate the update site database with features and plug-ins” on page 329.
<ul style="list-style-type: none"><li>▶ Update URL References</li></ul>	This action updates existing URL references stored in the features documents and attached .jar files in the database. For further information refer to “Updating Site URLs” on page 335.

## Feature documents

As discussed in 10.2.9, “Update site (and discovery site)” on page 318, features are files that describe collections of plug-ins (that logically go together).

Feature documents in the Domino update site database contain all of the information required by the client Update Manager process to install the feature, organized in a familiar Notes document format with additional metadata and doclinks.

An example of a feature document is shown in Figure 10-6. This example is for a feature called QuickResponse, which is used by ITSO Corp to provide a list of common phrases that can be selected to be used within a Sametime chat panel.


**Feature QuickResponse 1.1.0**

Basics

Plugins

License

Manifest

Attachment(s)

Label:	QuickResponse
ID:	com.ibm.collaboration.realtime.quickresponse.feature
Version:	1.1.0
Provider:	IBM
Category:	<a href="#">Samples</a> ( <a href="#">Samples: Instant Messaging</a> )
Image:	
Description:	Send quick responses...
Description URL:	
Update Site:	ITSO Corp Update Site
Update Site URL:	<a href="http://la.cam.itso.ibm.com/updatesite.nsf">http://la.cam.itso.ibm.com/updatesite.nsf</a>
Discovery Site:	
Discovery Type:	
Discovery URL:	
Type:	
Is this a patch:	false
For OS:	

Figure 10-6 Example of a Domino update site feature document

The information contained in the feature document is organized into tabs. The fields on the document are populated during the import process, using the information from the original feature file (that is, whatever information was added into the feature by the feature developer).

Table 10-3 describes the content and usage of the feature document by tab.

**Note:** Administrators should never make manual edits to feature or plug-in documents.

Rather than making changes within the feature and plug-in documents, the feature developer would usually provide a new version of the feature or plug-in, which would be imported into the update site database as a new document with an updated version number.

Although some fields are currently editable in the Domino 8.0 release of the update site template, the ability to edit fields will be removed in a future version.

*Table 10-3 Information contained in the Domino update site feature document*

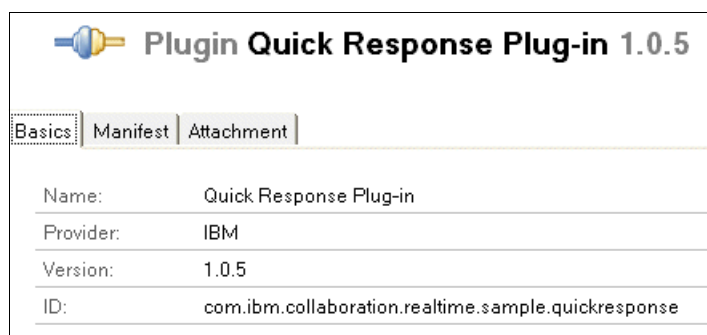
Tab	Contents and usage
Basics	Contains metadata describing the feature, such as version, update information, and language. Provides easy access to information about each feature
Plug-ins	Contains a list of plug-ins bundled (used) by this feature, along with a Notes Doclink to each plug-in document. Provides a readily available reference list of plug-ins used by the feature, along with the ability to access each one via the included Doclink.
License	Displays features license information (license information can be added by the feature developer). Provides easy access to feature copyright and license information.
Manifest	Displays the content of the manifest file (feature.xml).
Attachment(s)	Contains the original features .jar files as attachments.

## Plug-in documents

Plug-ins are the basic building blocks in any Eclipse-based application and contain the actual code.

Plug-in documents in the Domino update site database contain all the information required by the client Update Manager process to install the plug-in, organized in a familiar Notes document format with additional metadata describing the plug-in.

An example of a plug-in document is shown in Figure 10-7.



**Plugin Quick Response Plug-in 1.0.5**

Basics | Manifest | Attachment

Name:	Quick Response Plug-in
Provider:	IBM
Version:	1.0.5
ID:	com.ibm.collaboration.realtime.sample.quickresponse

Figure 10-7 Example of a Domino update site plug-in document

The information contained in the plug-in document is organized into tabs. The fields in the document are populated during the import process, using the information from the original plug-in file (that is, whatever information was added into the plug-in by the plug-in developer). Some fields in the plug-in document are editable, but most fields are not.

Table 10-4 describes the content and usage of the plug-in document by tab, including information about which fields are editable.

Table 10-4 Information contained in the Domino update site plug-in document

Tab	Contents and usage
Basics	Contains basic information about the plug-in: name, provider, version, and ID. Provides easy access for administrators to find information about each plug-in.
Manifest	Displays the content of the manifest files (manifest.mf and plug-in.xml), each on its own sub-tab.
Attachment(s)	Contains the original plug-in code files as attachments.

## 10.5.2 How to create the update site database

The update site database is based on the Eclipse update site template. This is a new advanced template that is installed with the Domino 8 server and Notes 8 client.

To create a new update site database from the template:

1. In the Notes 8 client, select **File** → **Application** → **New**.

2. Select the server and template details, and fill in the database title and file name, as shown in Figure 10-8.

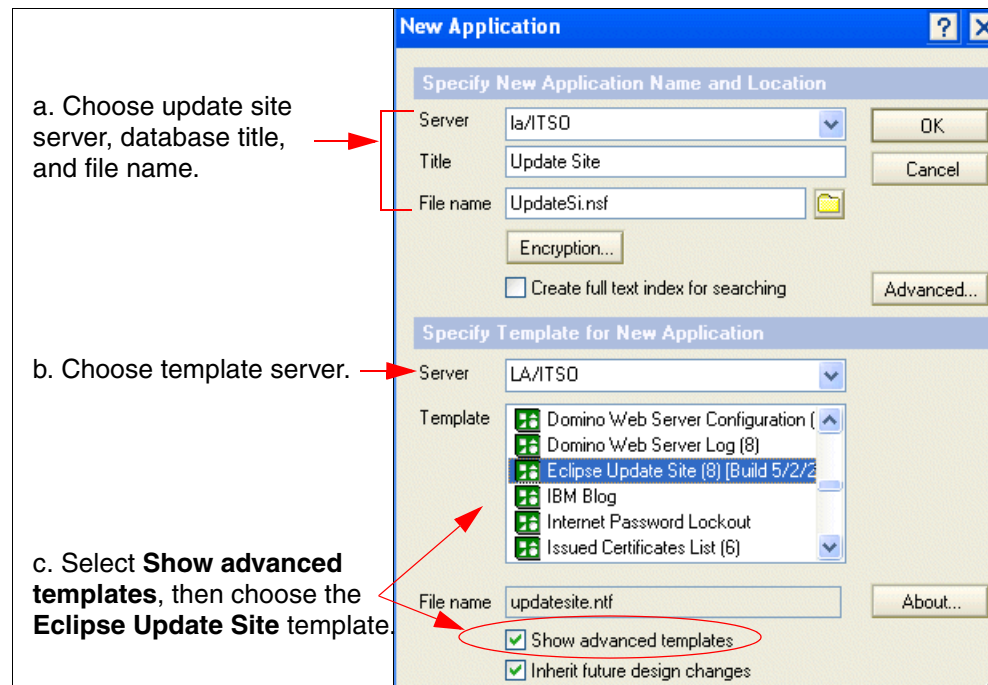


Figure 10-8 Creating a new update site database

3. Select **OK** to create the database.
4. Add the required users and groups to the ACL of the database using **File** → **Application** → **Access Control** to provide user access to the new update site database.

### 10.5.3 How to populate the update site database with features and plug-ins

Once the Domino update site database has been created, there are several ways to populate the database with the features and plug-ins files. The different import methods and their usage are listed in Table 10-5.

Table 10-5 Domino update site import methods and their usage

Import method for update site database	Usage
Import a local update site.	This allows you to import the entire Eclipse update site based on the standard Eclipse update site structure (that is, site.xml file in the root directory, with \features and \plug-ins subdirectories containing these files). Review Figure 10-1 on page 320 for the standard Eclipse update site Structure.

Import method for update site database	Usage
Import features.	This allows you to import one or more features files if they have been packaged as deployable features by the feature developer. <b>Note:</b> Do not use this method to import a feature unless it has been packaged as a deployable feature. Plug-ins will not be imported with features that have not been packaged as deployable features. Use the Import a local update site method to import features that have not been packaged.
Import a database.	This allows you to import the contents of another Domino update site database, effectively merging or consolidating the two databases into one.

## Importing a local update site

To import a local update site, you must be able to access the site files from your Notes client workstation. In other words, you need to be able to access the standard Eclipse set of files that make up an Eclipse update site (that is, a site.xml file with \features and \plugins subdirectories below it, each containing the features and plug-ins files).

**Tip:** An Eclipse update site is not usually something a Domino Administrator would create. Most often, these files would be provided to you by a Java or Eclipse developer. Using an Eclipse-based development environment allows a developer both to create the features and plug-ins and to create the site.xml and associated site structure.

If you would like to test the process of importing a local update site, there is a sample site available for download on the Lotus Sandbox Web site:

<http://www-10.lotus.com/ldd/sandbox.nsf/ByDate/53833531887a864d852572f10068e6a6?OpenDocument>

Inside the zipped download file is another called Updatesite.zip. This zip file contains a sample update site.

Once you have access to an update site, import it into the Domino update site database as follows:

1. In the Domino 8 Administrator client or Notes 8 client, open the Domino update site database.



2. Click the **Import Local Update Site** action button to display the Import Local Update Site dialogue, as shown in Figure 10-9.

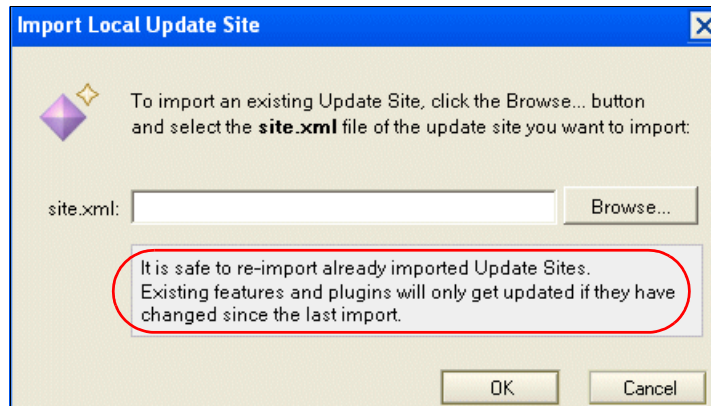


Figure 10-9 Import Local Update Site dialogue

**Tip:** Note the statement highlighted in Figure 10-9, which states that it is safe to re-import already imported update sites. Existing features and plug-ins only get updated if they have changes since the last import.

3. In the Import dialogue, click the **Browse** button.
4. In the Select File dialogue, navigate to the site.xml file and highlight it, as shown in Figure 10-10.

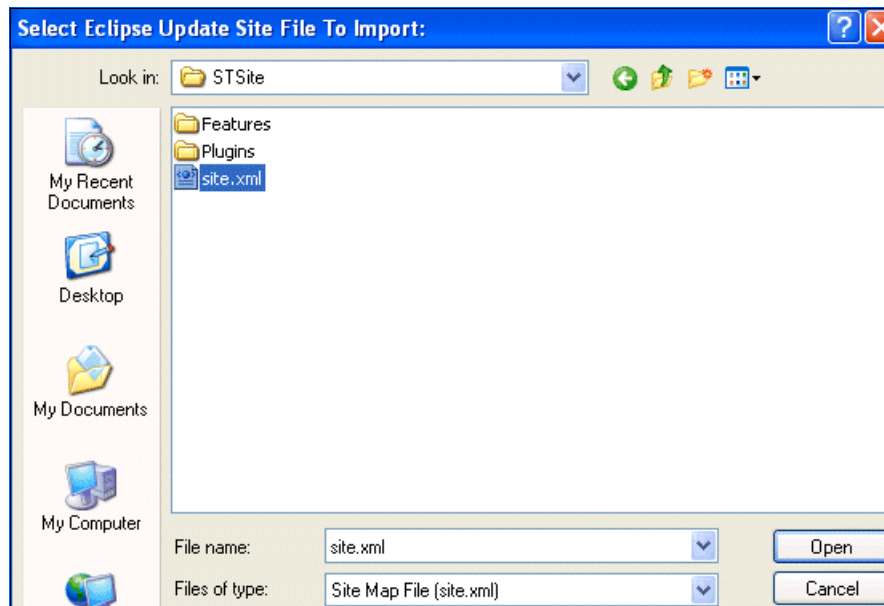


Figure 10-10 Importing an update site - selecting a site.xml file

**Tip:** Notice the \features and \plugins subdirectories showing in Figure 10-10. This indicates that the Eclipse update site structure is correct. These directories should always display in the location where you select to import the site.xml file from.

5. Click **Open**, then **OK** to begin the import.

**Important:** The site.xml within the Domino Site Update database is computed dynamically, so it immediately reflects the new update site that you import.

However, if a user has already manually searched for plug-ins during his current Notes session (using the menu option File → Application → Install), he needs to restart the Notes client for the new plug-ins to display in the Install dialogue. This is because the Update Manager caches the last check.

Note that it is important to understand this caching behavior, especially during client provisioning testing. This behavior also occurs with other Eclipse applications such as Sametime 7.5.

## Importing features

Individual features can be imported into the Domino update site database. This allows the features to be updated when they change, and for new features to be added.

**Attention:** When you import an individual feature, any associated plug-ins need to be available to allow the import process to import associated plug-ins as well. This requires that either:

- ▶ The feature and associated plug-ins are available in the Eclipse site directory structure (that is, the feature is located in the /features directory with associated plug-ins in the /plugins directory).
- ▶ The feature has been packaged as a deployable feature by the feature developer. As an administrator, if you need to import an individual feature, you may need to confirm with the Feature developer that she has packaged it as a deployable feature.

If there are many features to import and you have access to the entire Eclipse site structure (that is, site.xml, /features directory, /plugins directory), it may be easier to import the entire site using the method described in “Importing a local update site” on page 330.

**Tip for the feature developer:** When exporting the feature as a deployable feature in Eclipse, select **Package as individual JAR archives (required for JNLP and update sites)** on the Options tab.

To import individual features:

1. In the Domino 8 Administrator client or Notes 8 client, open the Domino update site database.

2. Click the **Import Features** action button to display the Import Features dialogue, as shown in Figure 10-11.

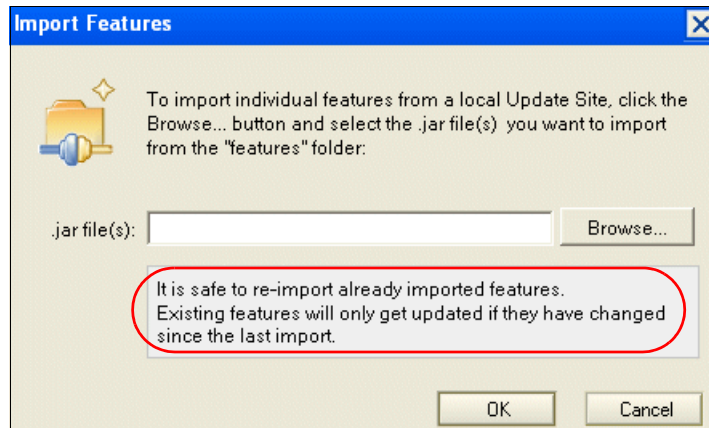


Figure 10-11 Import Features dialogue

**Tip:** Note the statement highlighted in Figure 10-11, which states that it is safe to re-import already imported features. Existing features only get updated if they have changes since the last import.

3. In the Import dialogue, click the **Browse** button.
4. In the Select File dialogue, navigate to the features files and highlight one or more feature .jar files for import, as shown in Figure 10-12.

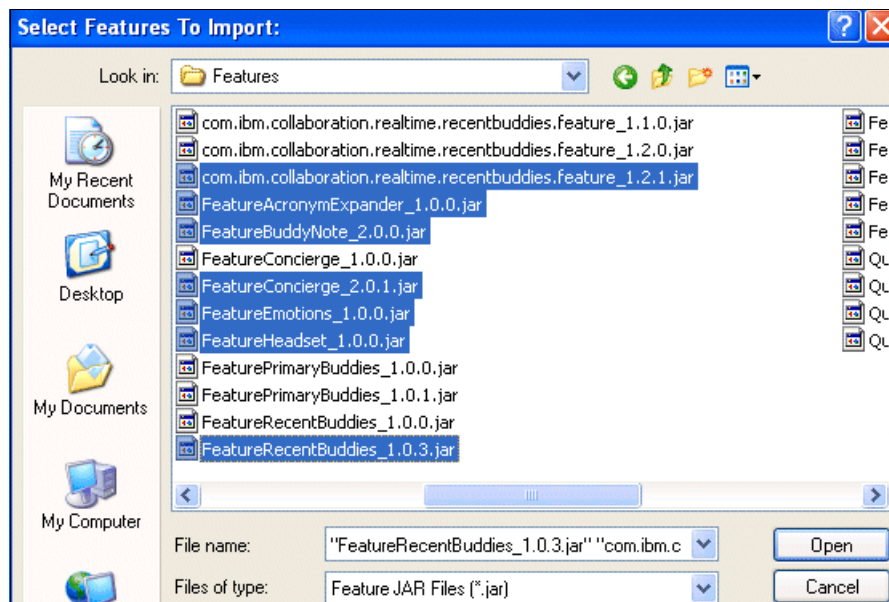


Figure 10-12 Importing individual features - selecting the feature .jar files

5. Click **Open**, then **OK** to begin the import.

The site.xml within the Domino Site Update database is computed dynamically, so it immediately reflects the new update site that you import. (As stated previously, users may need to restart their Notes client to see any new features.)

## Importing a database

You can import the contents of a Domino update site into another Domino update site. This is useful if you have been using multiple sites for different purposes (or perhaps in different Domino domains) and now need to combine them.

To import one Domino update site database into another:

1. In the Domino 8 Administrator client or Notes 8 client, open the Domino update site database.
2. Click the **Import Database** action button.
3. In the Import dialogue, click the **Browse** button.
4. Select the server and database names for the database that you want to import content from, as shown in Figure 10-13.

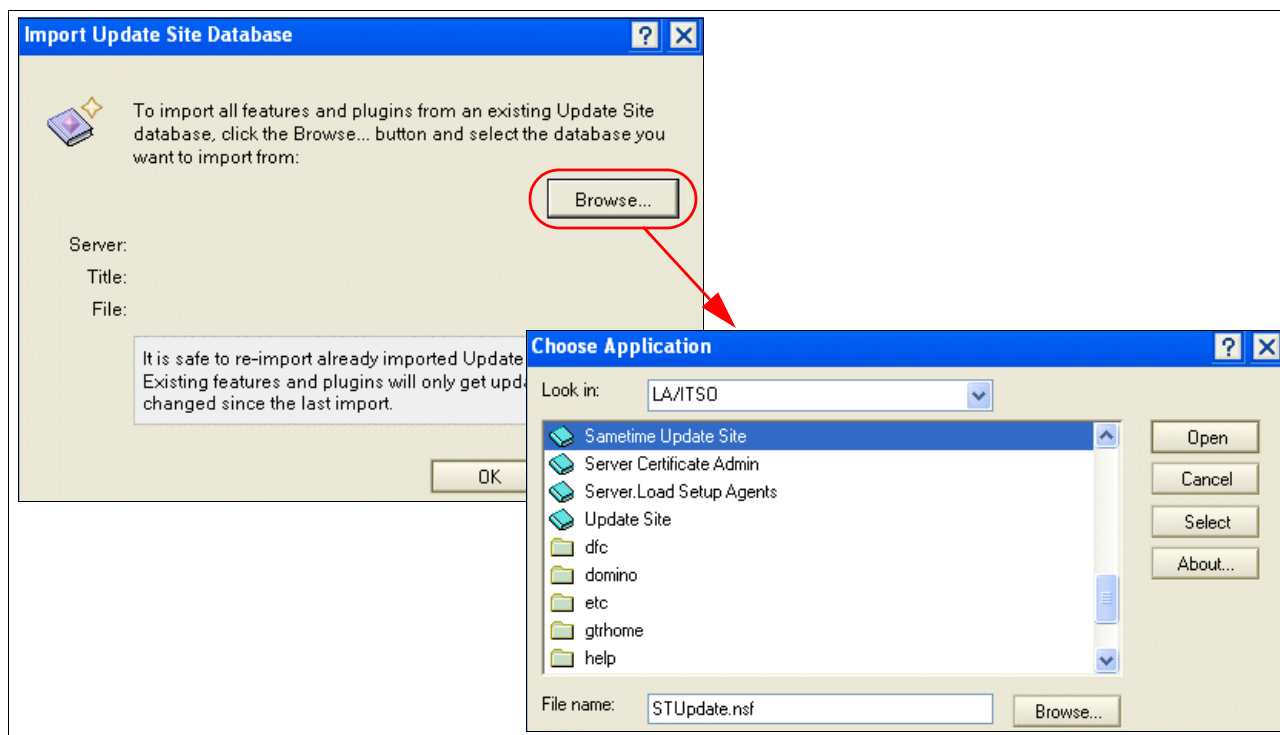


Figure 10-13 Importing a Database dialogue

**Tip:** Note the statement highlighted in Figure 10-13, which states that it is safe to re-import already imported update site databases. Existing features and plug-ins are only updated if they have changes since the last import.

5. Click **Open**, then **OK** to begin the import.

The site.xml within the Domino Site Update database is computed dynamically, so it immediately reflects the new update site that you import. (Users may need to restart their Notes client to see any new features.)

## Updating Site URLs

There is one additional action button that can be used to manage features in the Domino update site database: the Update URL References action. This action updates the update site URLs and discovery site URLs within features in the database.

**Attention:** Updating the update site or discovery site URLs for signed features breaks the existing signatures in the feature .JAR files. It does not break the actual functionality of the feature, only the signature.

There is currently no tool to re-sign feature .JAR files inside an NSF-based update site. This tool may be added in a future release of Notes and Domino.

As discussed in 10.2.9, “Update site (and discovery site)” on page 318, a feature can optionally contain an update site URL or a discovery site URL that can be used to manually or automatically update the feature when new versions become available on the update site server.

The Update URL References action allows you to populate all Update and discovery site URLs within the Domino update site documents with a single site URL of your choosing. The action updates URLs in the feature documents themselves and in the attached .JAR files.

**Why this is important:** Features that have been imported into the Domino update site database are likely to contain site URLs pointing to another Eclipse update site, as this is a parameter that the feature developer can add when he creates the feature.

The Update URL References action is useful because it allows you to update all site URLs in the feature documents to point to the Domino update site (or another site of your choosing) so that whenever a manual or automatic feature search is performed, it will search using the URL you provided.

To update site URLs in features:

1. In the Domino 8 Administrator client or Notes 8 client, open the Domino update site database.
2. Click the **Import URL References** action button.

3. In the Update URL References dialogue, fill in the new site label and new site URL, as shown in the example in Figure 10-14.

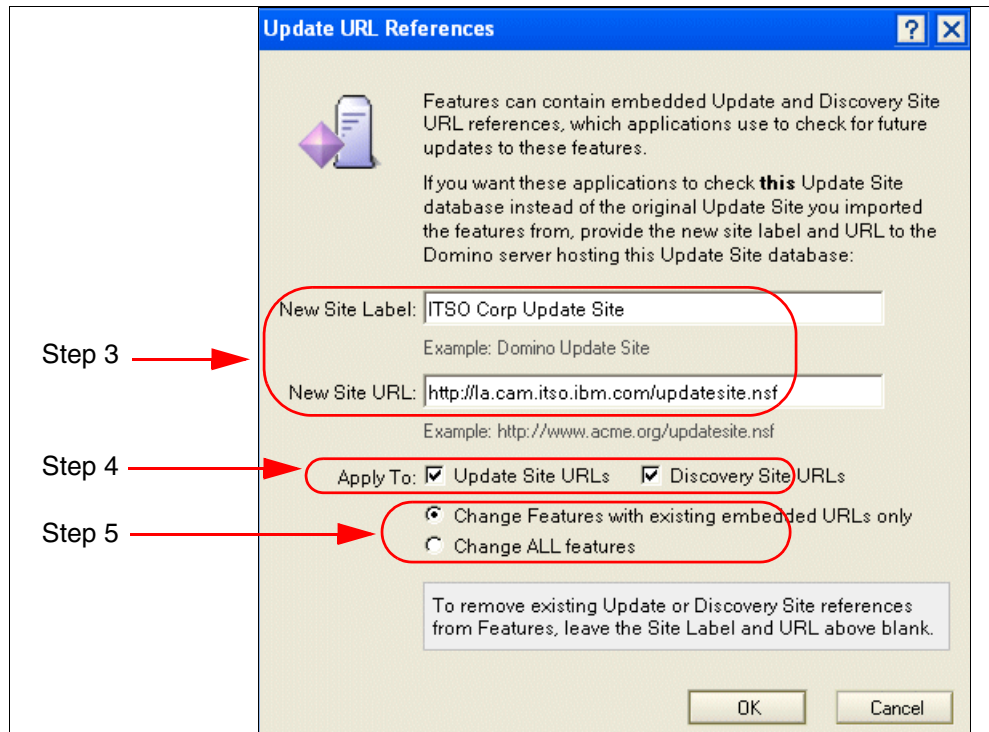
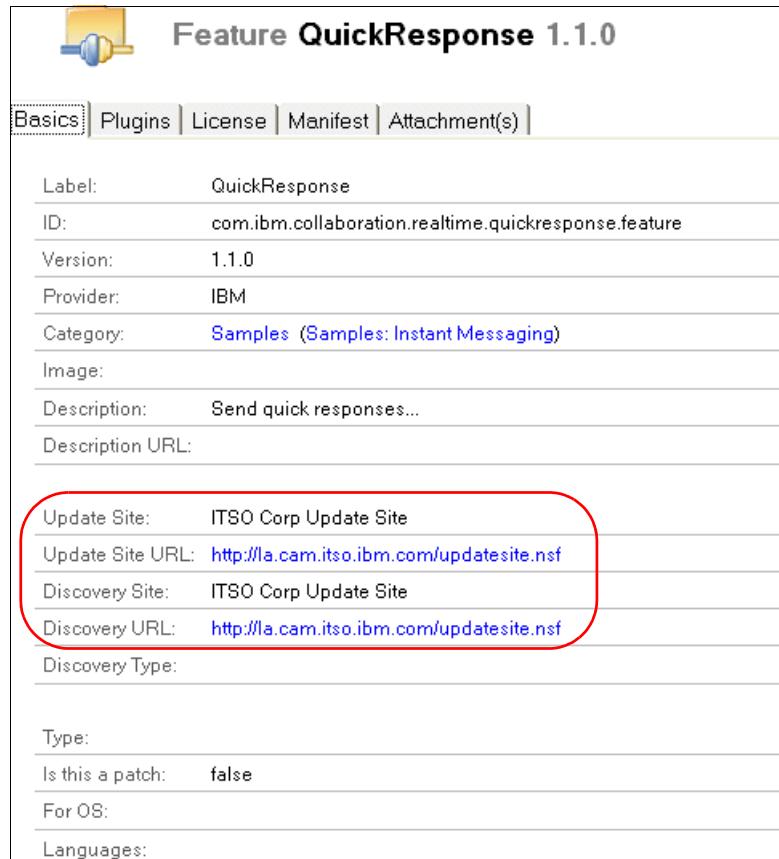


Figure 10-14 Update URL References dialogue

4. (Optional) Select or deselect each of the **Apply To** check boxes for update site URLs and discovery site URLs (one or both may be selected).
5. Select an update option, either:
  - Change Features with existing embedded URLs only.
  - Change ALL features.
6. Click **OK**.

Figure 10-15 shows an example of a feature document with the updated Site and Discovery URL fields.



Feature QuickResponse 1.1.0	
Basics   Plugins   License   Manifest   Attachment(s)	
Label:	QuickResponse
ID:	com.ibm.collaboration.realtime.quickresponse.feature
Version:	1.1.0
Provider:	IBM
Category:	<a href="#">Samples (Samples: Instant Messaging)</a>
Image:	
Description:	Send quick responses...
Description URL:	
Update Site:	ITSO Corp Update Site
Update Site URL:	<a href="http://la.cam.itso.ibm.com/updatesite.nsf">http://la.cam.itso.ibm.com/updatesite.nsf</a>
Discovery Site:	ITSO Corp Update Site
Discovery URL:	<a href="http://la.cam.itso.ibm.com/updatesite.nsf">http://la.cam.itso.ibm.com/updatesite.nsf</a>
Discovery Type:	
Type:	
Is this a patch:	false
For OS:	
Languages:	

Figure 10-15 Updated URL fields in a feature document

**Tip:** The Update URL References action can also be used to remove all update site and discovery site URLs. This is useful if you want to install features for your Notes client but you do not want them to automatically search for updates in future.

To remove all existing URLs in feature documents, use the procedure above, skipping step 3 (that is, leave the New Site label and New Site URL fields blank).

#### 10.5.4 How to enable feature installation (provisioning) for Notes users

The update manager process (which is installed as part of the Notes 8 client) is responsible for managing the update process for installed features.

The update manager process on the Notes 8 client can automatically check for updates to any installed features that have an update site URL or discovery site URL in them. Features can also be provisioned to users automatically via the component palette in the composite application editor, or due the user opening a composite application that includes a component that is a feature that requires provisioning.

**Note:** In the future, it may be possible to upgrade the Notes 8.x client to newer releases using the update site. This capability is not currently available for the Notes 8.x client. At present, the Update Manager only downloads updates to additional features and plug-ins that have been installed on top of the client, using the URL reference listed in the feature.

You can also allow Notes users to manually invoke updates to existing features and installation of new features. With this function enabled, users see two additional menu items on the Notes client File menu:

- ▶ **File → Application → Install** - to search for and install new plug-ins
- ▶ **File → Application → Application Management** - to manage installed plug-ins

To allow users to manually invoke updates:

1. Create a desktop policy settings document (or edit an existing one).
2. On the Basics tab, towards the bottom, set the Allow user initiated updates field to Enable, as shown in Figure 10-16.



Figure 10-16 Enabling user-initiated feature updates

3. Save and close the desktop policy settings document.
4. Apply the settings to the required users via a policy document.

**Tip:** If you are new to policies, refer to the Policies section in the Lotus Domino Administrator 8 Help database for information about how to plan and implement policies.

If your organization does not use policies, or you prefer not to enable user-initiated updates through a policy, it can instead be enabled directly on the client machine, as follows:

1. Locate the plug-in\_customization.ini file in the following location:  
`<NotesProgramDir>\framework\rcp\plug-in_customization.ini`
2. Edit this file by adding the following line to the file:  
`com.ibm.notes.branding/enable.update.ui=true`
3. Save and close the file.
4. Restart the Notes client.

**Note:** The setting in the Allow user initiated updates field of the desktop policy settings document overrides the setting in the plug-in\_customization.ini file. The setting in this file is only used if a policy setting is not available.

## 10.5.5 Providing a list of update site URLs to include in searches

It is possible to pre-fill the list of update site URLs available when a user manually searches for new and updated plug-ins (using the File → Application → Install menu option). This provides users with the ability to search for new and updated plug-ins without needing to know how to fill in the update site server details in the interface.



## How to pre-populate the update site URL list for users

The update site server details are stored in the bookmarks.xml file on the Notes workstation, in the following location:

`NotesDataDir\workspace\.config\org.eclipse.update\bookmarks.xml`

This file could be pre-populated for users and then added to the correct location on each user's workstation during or after the Notes 8 client installation.

The easiest way to pre-populate the bookmarks.xml file is by adding the sites to the manual update interface of a Notes client, then using the resulting bookmarks.xml file as the file that gets deployed to the user workstations. An example of the New Update Site dialogue that displays when you add a new site in the manual update interface is shown in Figure 10-17.

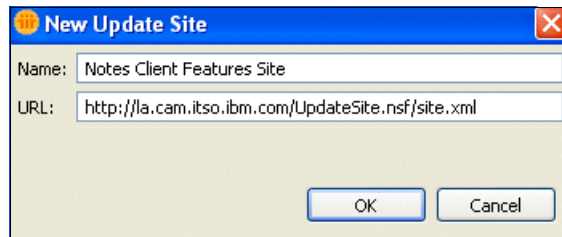


Figure 10-17 New Update Site dialogue in manual update interface of the Notes client

It is also possible to create the bookmarks.xml file manually, but you need to ensure that the syntax is completely correct, so we do not recommend this option.

Use the procedure described in “Initiating manual feature installation on the Notes 8 client” on page 341 to add the update sites to the bookmarks.xml file.

Figure 10-18 shows an NRPC update site and an HTTP update site as they are added in the Notes client manual update interface, with their corresponding entries in the bookmarks.xml file.

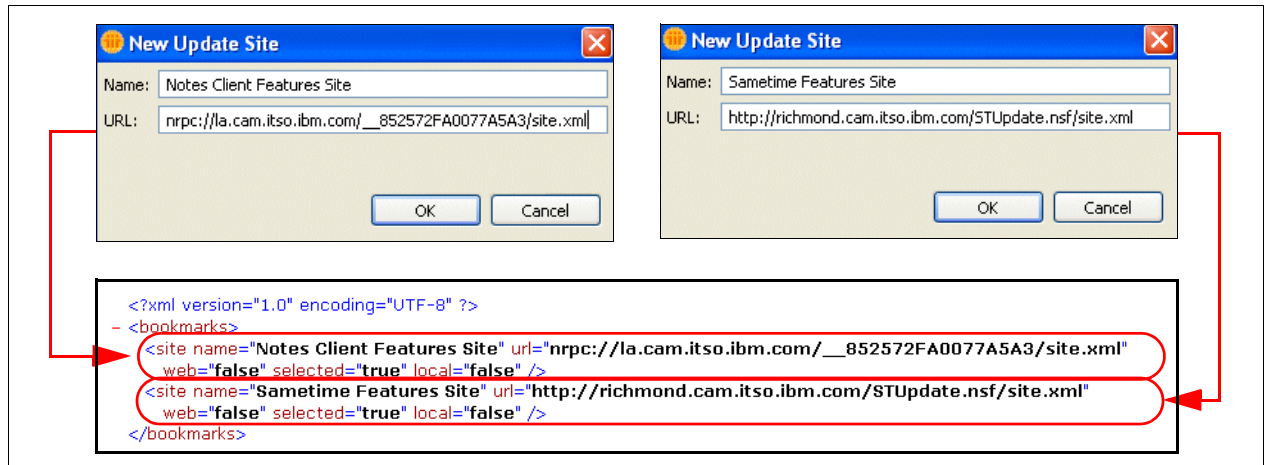


Figure 10-18 Update site syntax shown in Notes client interface and bookmarks.xml file

## Update site URL syntax

The update site URL can be added to the manual update interface in the client, as shown in Figure 10-18. The syntax of the URL that is added needs to be correct, or the Update search fails to locate the update site server.

The syntax is described below.

### **Syntax for HTTP site URLs**

The correct syntax for a site URL for an HTTP update site is:

`http://UpdateSiteFQHN/Filename.nsf/site.xml`

For example:

`http://richmond.itso.com/updatesite.nsf/site.xml`

### **Syntax for NRPC URL references**

The correct syntax for a site URL for an NRPC update site is:

`nrpc://UpdateSiteFQHN/___ReplicaID/site.xml`

For example:

`nrpc://richmond.itso.com/___852572FA0077A5A3/site.xml`

**Note:** The Notes protocol site URL begins with `nrpc://`. This is different from normal Notes-style URLs (which typically begin with `notes://`).

Note the double underscore followed by the replica ID of the update site database. To obtain this information from the update site database:

1. In a Notes Domino Administrator client or Notes client, select or open the update site database that you want to use via NRPC.
2. From the menu, select **File** → **Application** → **Properties**.
3. Click the **Info** tab (the second tab) and write down or take an image of the dialogue box with the replica ID displayed, as shown in Figure 10-19.

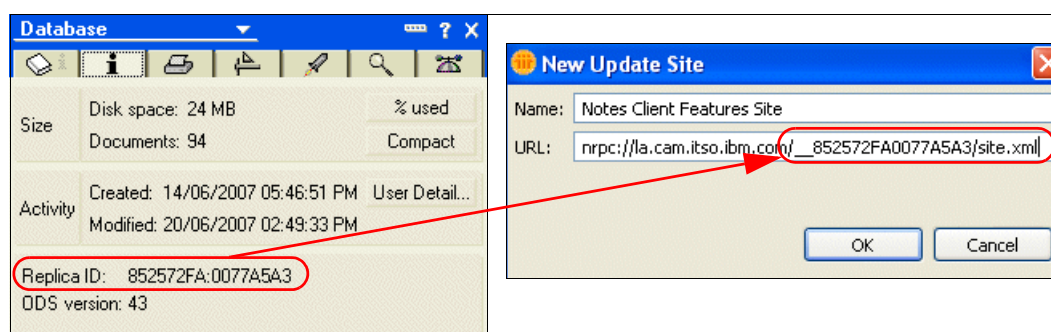


Figure 10-19 Update site database properties, showing the replica ID

4. Using the procedure for adding a new update site to the Notes client (described in “Initiating manual feature installation on the Notes 8 client” on page 341), add the replica ID of the update site database to the New Update Site dialogue. Remember to add the two underscores at the beginning and remove the colon (:) in the middle, as shown in the example in Figure 10-19.

## 10.5.6 How plug-in (feature) provisioning works on the Notes 8 client

As discussed in 10.2.8, “Update Manager (Eclipse Update Manager)” on page 317, the update manager task is installed as part of the Notes 8 client, and this process takes care of Eclipse feature and plug-in provisioning on the client.

The concepts and usage of the update manager are discussed in this section.

### Important files

There are two update manager files that are particularly important for the Domino Administrator to be aware of. These are described in Table 10-6.

Table 10-6 Important update manager files

Update manager file	What it is for
<NotesProgramDir>\framework\rcp \plug-in_customization.ini	This is used by the update manager client process to determine whether to display the menu options for user-initiated plug-in updates. Refer to 10.5.4, “How to enable feature installation (provisioning) for Notes users” on page 337 for further information.
<NotesDataDir>\workspace\.config \org.eclipse.update\bookmarks.xml	This stores the list of update site URLs to display when a user manually searches for plug-ins (using File → Application → Install). Refer to 10.5.5, “Providing a list of update site URLs to include in searches” on page 338 for further information.

### Initiating manual feature installation on the Notes 8 client

If manual feature installation is enabled, users will be able to manually search for and install features from within the Notes client. Users can also optionally add new update sites to the list of sites to search.

**Tip:** Adding new update sites in the Notes client interface updates the bookmarks.xml file on the workstation. This file stores the list of update sites that display in the manual feature installation dialogue. For more information about the bookmarks.xml file and how to populate it for users, refer to 10.5.5, “Providing a list of update site URLs to include in searches” on page 338.

Manually initiating a search in the Notes client provides the ability for users to search for updates to currently installed features, and for new features to install. Refer to 10.5.4, “How to enable feature installation (provisioning) for Notes users” on page 337, for more information about enabling this feature for users.

### Updating currently installed features

To initiate an update of currently installed Eclipse features:

1. In the Notes client, select the menu option **File → Application → Install**.

2. In the Install/Update dialogue, select **Search for updates of the currently installed features**, as shown in Figure 10-20.

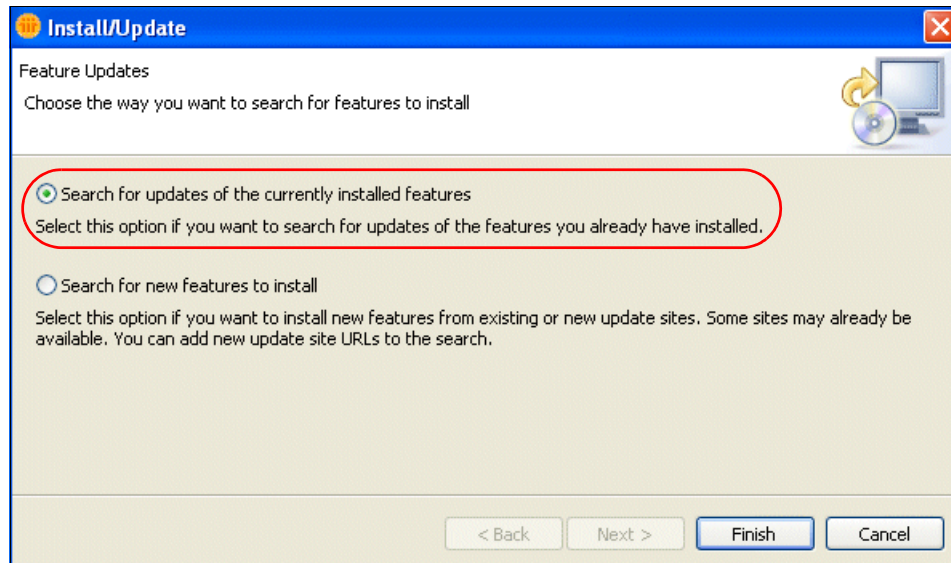


Figure 10-20 Install/Update dialogue - Searching for updates to installed features

3. Click **Finish** to complete the process. Newer versions of currently installed features will install on the client.

### ***Searching for new features to install***

To initiate a search for new Eclipse features for installation:

1. In the Notes client, select the menu option **File** → **Application** → **Install**.
2. Select **Search for new features to install**, as shown in Figure 10-21, then click **Next**.

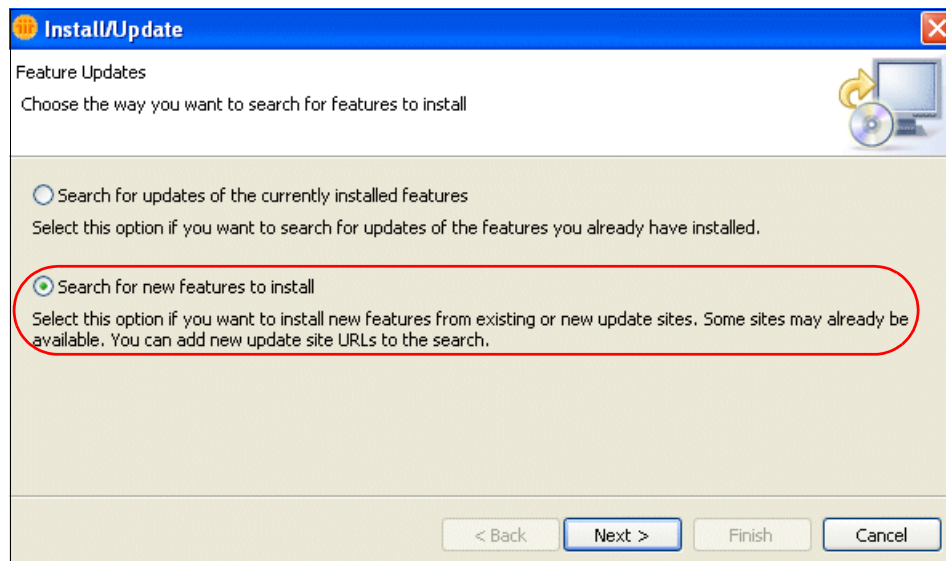


Figure 10-21 Install/Update dialogue - searching for new features to install

3. (Optional) To add a new location to search:
  - a. In the Install dialogue, click the button that represents the type of location to search for features, for example, click **Add remote site** to add a new Domino update site database.
  - b. In the New Update Site dialogue, type in a descriptive name for the site and the HTTP or NRPC URL reference, as shown in the examples in Figure 10-22.

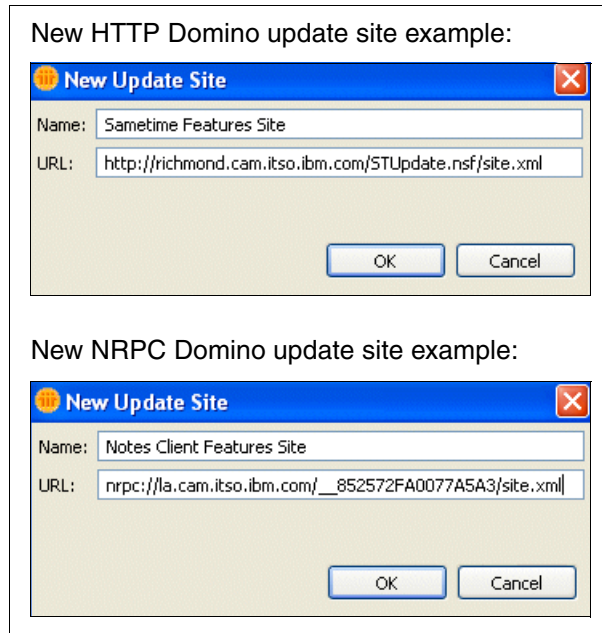


Figure 10-22 Examples of adding a new update site

**Tip:** Note the use of the double underscore followed by the replica ID in the NRPC URL. Refer to “Update site URL syntax” on page 339 for further information.

- c. Click **OK** to close the New Update Site dialogue.

4. In the Install dialogue select or deselect the check box for each location to include in the features search, as shown in the example in Figure 10-23.

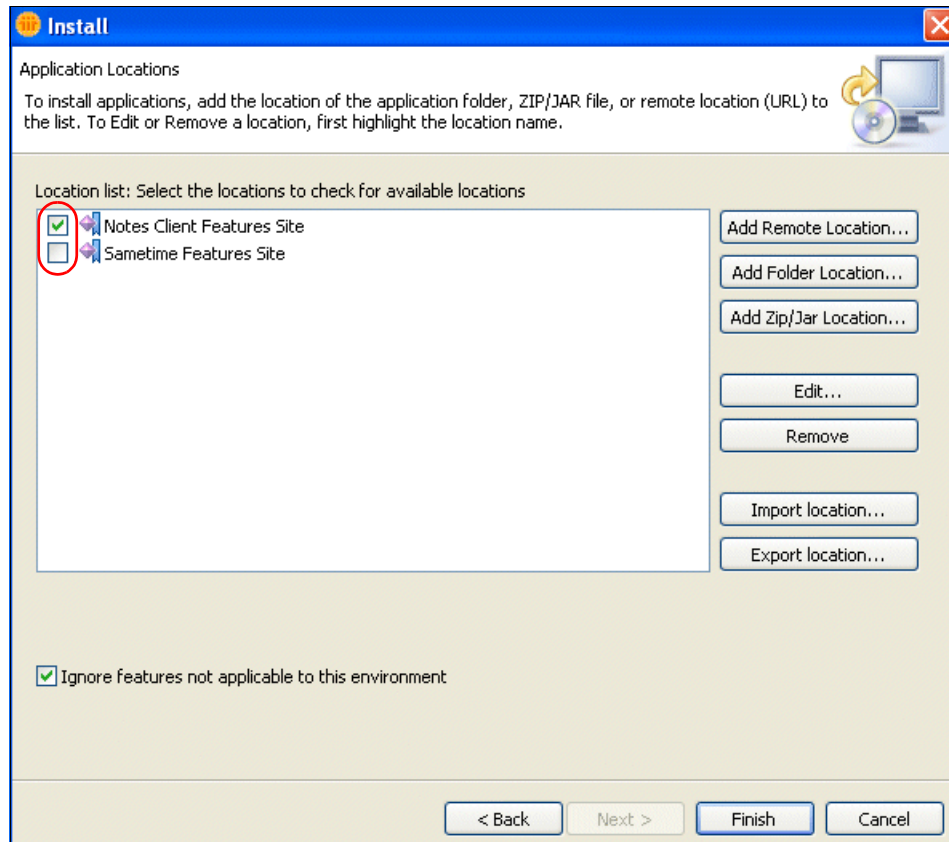


Figure 10-23 Check boxes to select update site locations to search

5. Click **Finish** to begin the location search.

6. In the Updates dialogue, select the check boxes for the features to install, as shown in the example in Figure 10-24.

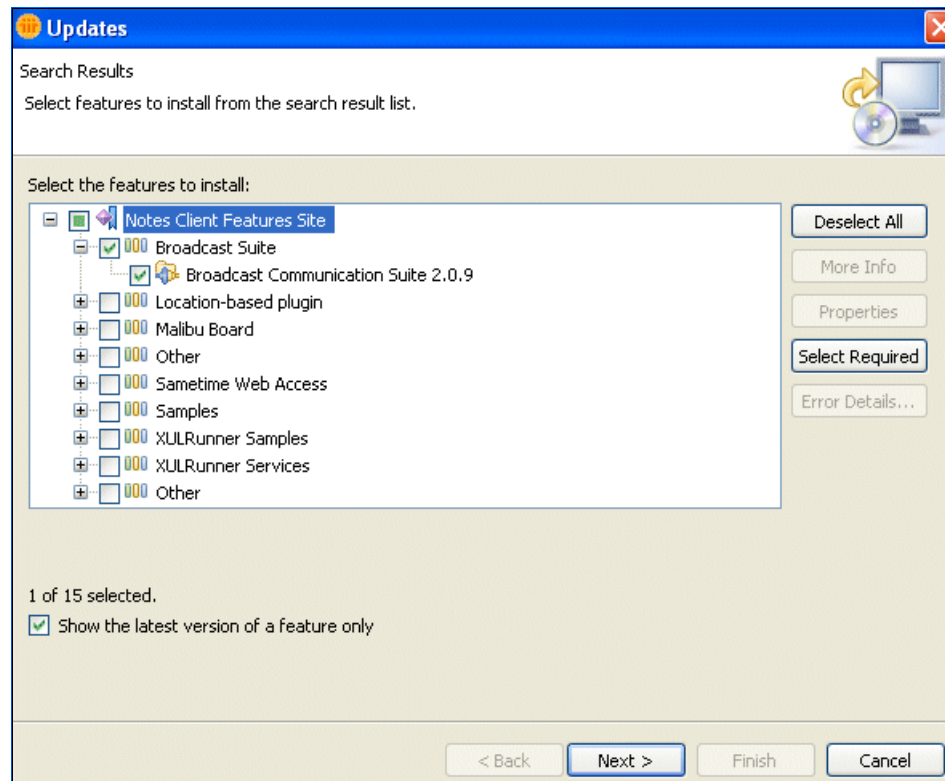


Figure 10-24 Selecting features to install

7. Select **Next**.
8. In the License dialogue, select **I accept the terms in the license agreements**.
9. Click **Next** then **Finish** to begin the installation process.



10. If the plug-ins in the feature being installed have not been signed by a trusted source, the dialogue in Figure 10-25 will display, prompting the user to choose whether to continue with the installation. Select **Do not install this plug-in** or **Install this plug-in**, then click **OK** to continue.



Figure 10-25 Unsigned plug-in prompt

**Tip:** Developers can sign plug-ins using a trusted signer within their plug-in development environment. If you do not want users to receive the unsigned plug-in prompt, ask the plug-in developer to sign the plug-ins, then reimport them into the update site.

### 10.5.7 Accessing the update site from a browser

The content of a Domino update site database can also be viewed via a Web browser. The browser view provides a list of the features available on the update site, along with the actual URL to use for provisioning them.

To access the update site via a browser, use the database URL in the form:

`http://serverFQHN/updatesite.nsf`



Figure 10-26 shows an example of the Web browser view of a Domino update site.

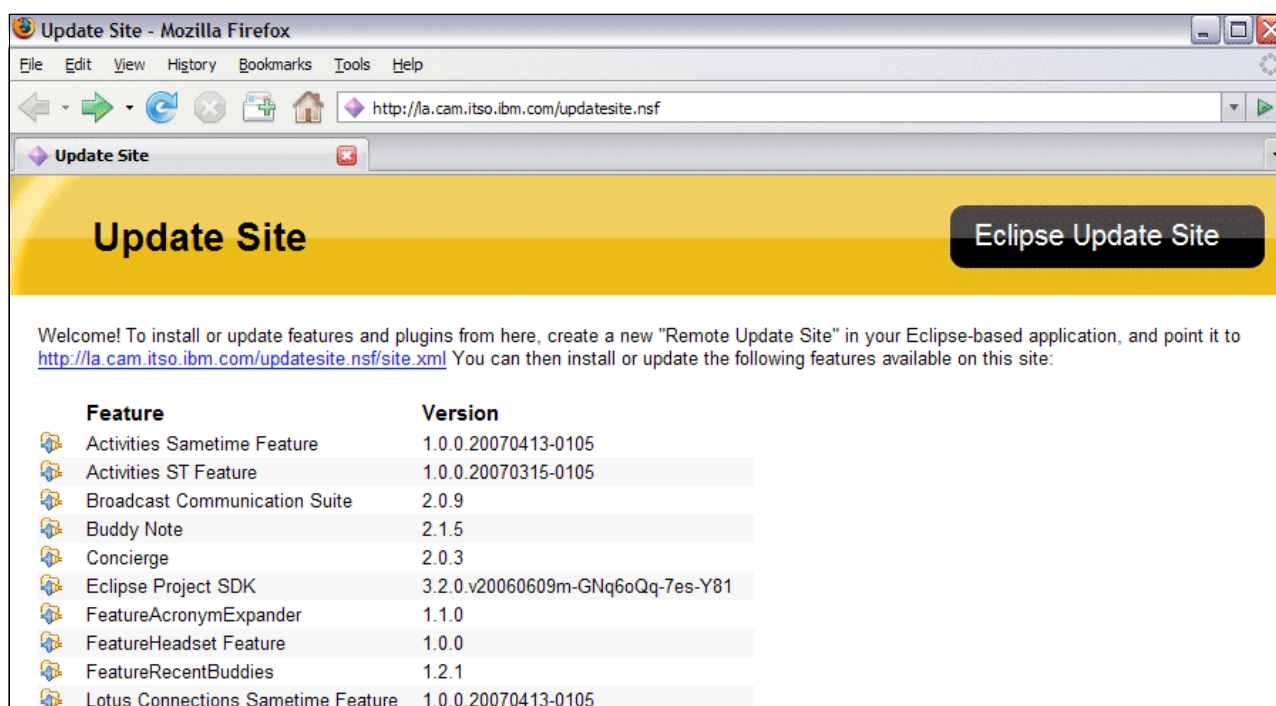


Figure 10-26 Web browser view of a Domino update site

### 10.5.8 Server configuration options for the Domino update site

In a future Domino 8.x point release, it is expected that there will be a new option to configure Domino update site server settings within the server configuration document.

The new options will be available on the Client Upgrade → Provisioning tab of the server configuration document, and will allow you to set the following options for user-initiated updates:

- ▶ List of update site URLs to include in searches.
- ▶ Restrict clients to only update from that list of allowed update site URLs.

In the meantime, you can provide a pre-populated list of update site URLs using the procedure described in 10.5.5, "Providing a list of update site URLs to include in searches" on page 338.





# IBM WebSphere Portal integration

This chapter provides an insight into the new enhancements in Notes and Domino 8 with respect to IBM WebSphere Portal. The focus of this chapter is on how WebSphere Portal features can be leveraged along with Lotus Notes and Domino 8.

This chapter helps Domino 8 and WebSphere Portal administrator's understand and configure these enhancements.

In this chapter, the following topics are discussed:

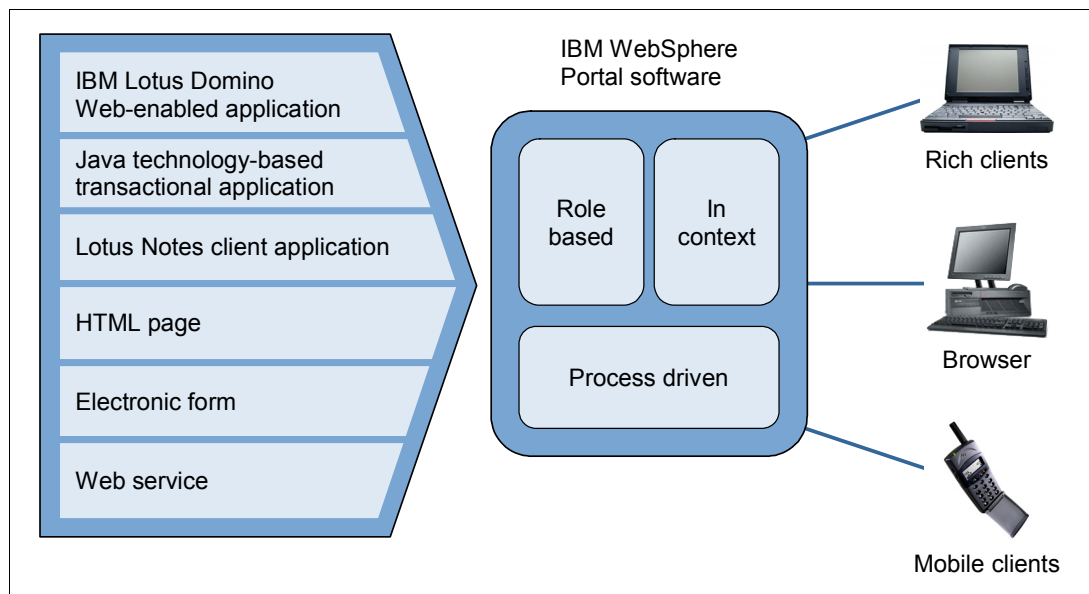
- ▶ Domino Portal Integration wizard
- ▶ Domino Portal Federated Administration
- ▶ Domino 8 Administrator - Web administration server bookmarks
- ▶ Composite applications - installation of SCI and home portal account

This chapter focuses on integrating WebSphere Portal into your Lotus Notes and Domino 8 deployment.

## 11.1 Introduction to WebSphere Portal

IBM WebSphere Portal software delivers quantifiable business value by improving employee productivity and customer service through role-based solutions. In addition, WebSphere Portal software delivers business flexibility by allowing for the quick creation and deployment of composite applications built on a service-oriented architecture (SOA), all from a trusted provider of market-leading portal technology.

WebSphere Portal provides a personalized single point of integrated access to experts, information, and business applications. Portals unify applications into one relevant and homogeneous environment. To deliver a unified user experience, WebSphere Portal brings together a range of leading-edge technologies designed to give you a flexible, open, extensible framework to build successful business-to-employee (B2E), business-to-business (B2B), and business-to-consumer (B2C) portals. By providing industry-leading portal solutions for your on demand business, IBM helps you improve employee productivity, cut costs, and strengthen relationships with your customers and trading partner.



*Figure 11-1 IBM WebSphere Portal software provides role-based delivery of applications and information, in the context of business processes, to users in the form of portlets*

Key benefits of WebSphere Portal are that it:

- ▶ Helps improve operational efficiency and productivity by linking the correct people, process, and information so that transactions are executed quickly and accurately
- ▶ Accelerates application and content deployment through new tools and the innovative use of SOA
- ▶ Helps to lower the overall costs of portal deployment with faster performance and easier administration
- ▶ Continues the delivery of responsiveness and reliability from a leader in the enterprise portal market

### 11.1.1 Business value of integrating WebSphere Portal and Lotus Domino

Collaboration represents the simple act of working together to accomplish a common goal. WebSphere Portal helps companies extend their investments in Lotus Notes and Domino to more people. WebSphere Portal simplifies and integrates access to Lotus Domino applications, along with other information, applications, and business processes. Lotus Domino customers can easily get the dynamic information they need and can quickly execute business processes across critical applications. They can collaborate with WebSphere Portal users inside and outside the business.

Some other business value benefits include:

- ▶ Weave collaboration and human interaction by combining WebSphere Portal software with the Lotus Notes and Lotus Domino platform into key applications and processes that span your value chain of employees, suppliers, partners, and customers. This allows everyone involved to work together more easily than before.
- ▶ Larger reach for Domino applications - IBM WebSphere Portal software enables you to deploy existing applications more widely than you could before, including applications that are only available within the Lotus Notes client. You can allow users to launch Lotus Notes applications from within the portal, without having to invest resources to Web enable them.
- ▶ Contextual collaboration - A portal user can see whether other users are online directly from the portlet or a page, thereby providing contextual awareness and collaboration capabilities.
- ▶ Leverage single sign-on. Lotus Domino integration with WebSphere Portals allows the leverage of the single sign-on capability for access to the portal, as well as for access to the supporting Lotus software collaborative products. Users must only sign in once, resulting in fewer passwords to administer and a better user experience.
- ▶ Deploy composite applications quickly and easily. Composite applications integrate components, or data and information, from multiple applications. These component parts can be mixed and matched. For instance, a composite application can include a mix of transactional applications, such as Siebel®, Oracle®, and SAP® enterprise software, and document-based collaborative applications built on Lotus Domino software. By assembling different application components, you can provide employees with the tools they need in the context of a business process, as well as content based on their job functions.

In addition to these benefits, for easy integration with Lotus Notes and Domino mail and applications, several Lotus Domino software-specific portlets and portlet packages are available to WebSphere Portal software licensees at no additional charge. The following portlets provide easy access to Lotus Notes and Domino features:

- ▶ The IBM Lotus Domino Application Portlet allows a Lotus Domino Web application to be surfaced in a portlet while maintaining full function of the application and without changing the application design.
- ▶ Common Personal Information Management (PIM) Portlets allow portal access to several back-end mail systems and protocols, including Lotus Domino mail and calendars and Microsoft Exchange software.
- ▶ IBM Lotus Notes/Domino and Extended Products Portlets deliver a set of prebuilt portlets and sample pages for integration with Lotus Notes and Domino applications, as well as Lotus Domino extended products such as IBM Lotus Sametime, IBM Lotus QuickPlace®, and IBM Lotus Domino Document Manager software.

**Important:** This chapter assumes that you already have WebSphere Portal Version 6.0.1 installed and running in your environment, so it does not include information about installing and configuring WebSphere Portal.

For details about how to install and configure WebSphere Portal, refer to the product documentation that accompanies WebSphere Portal (or the following Information Center link).

An excellent source of information for WebSphere Portal is the online information center. The WebSphere Portal Version 6 Information Center is available at:

<http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>

Information centers are available for every version of these products, and they contain a wealth of installation, configuration, troubleshooting, and upgrade documentation.

Whether you are new to these products or are already familiar with them, we highly recommend that you bookmark this site and refer to it frequently before carrying out any of the configuration or upgrades described in this chapter.

## 11.2 Domino Portal Integration wizard

Integration of WebSphere Portal in a Notes and Domino 8 environment has been simplified by the introduction of the Domino Portal Integration (DPI) wizard. The integration wizard is designed to speed the integration of Lotus Domino and Sametime software within a WebSphere Portal environment.

The DPI wizard streamlines the configuration process by reducing the burden required to enable Lotus Domino and WebSphere Portal Integration. The wizard also automates the setup of the Common Personal Information Management (PIM) Portlets (CPP), along with the Lotus Domino Extended Products Portlets (DEPP).

### 11.2.1 Domino Portal Integration wizard prerequisites

Domino Portal Integration wizard requires the following:

- ▶ WebSphere Portal Server prerequisites
  - WebSphere Portal Server should be Version 6.0.1.
  - In case you wish to install or upgrade an existing WebSphere Portal Server version, refer to the Portal InfoCenter at:  
<http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>
  - WebSphere Portal Server must not be configured with clusters.
  - WebSphere Portal Server should not have support for IBM Tivoli Access Manager or Computer Associates eTrust SiteMinder.
- ▶ Lotus Domino prerequisites
  - Lotus Domino servers should be Version 8.0.
  - Lotus Domino servers should have the LDAP service configured and running.
  - Lotus Domino servers should have HTTP/HTTPS service configured and running.
  - Lotus Domino servers should have DWA configured and running.

- All Lotus Domino servers must be behind the same Internet security firewall and in the same Internet domain.
- Lotus Domino servers must be in the same Domino domain.
- ▶ Lotus Domino and WebSphere Portal prerequisites
  - WebSphere Portal Server must be configured with LDAP using Lotus Domino directory using the config wizard.
  - WebSphere Portal Server must also be security enabled using the config wizard.

For more details, refer to the WebSphere Portal Infocenter at:

<http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>

- ▶ Lotus Sametime prerequisites
  - Lotus Sametime is optional in case you do not have Lotus Sametime in your deployment.
  - Lotus Sametime Server should be Version 7.5 or later.
  - Lotus Sametime Server must be configured for using Lotus Domino server as LDAP and not Domino directory.
  - Copy the file DPICFG.NSF from the Lotus Domino 8 Server to the following directory path on the Lotus Sametime Server, which would be integrated with the WebSphere Portal Server:

<PortalServerHome>/config/wizard/dpicfg.nsf to D:\Lotus\Domino\Data

**Note:** Refer to the Notes and Domino 8 Release notes for more details on considerations for existing SSO environments:

<http://www.ibm.com/developerworks/lotus/documentation/releasenotes>

The same information is also contained in the WebSphere Portal InfoCenter at:

<http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>

## 11.2.2 Running the Domino Portal Integration wizard

**Important:** Read 11.2.1, “Domino Portal Integration wizard prerequisites” on page 352, before attempting to run the DPI Wizard.

The Domino Portal Integration wizard accomplishes the following tasks:

- ▶ Single Sign-On (SSO)
  - Export LTPA token.
  - Create Web Single Sign-On Document on Lotus Domino.
- ▶ Lotus Sametime
  - Single Sign-On, enable awareness for Lotus Domino Web Access.
  - Set up trusted servers in stcenter.nsf.
- ▶ Lotus Domino directory
  - Single Sign-On, DIIOP.
  - Configure collaborative services to bind to Lotus Domino LDAP.
- ▶ Lotus Domino mail servers (for each mail server)
  - Single Sign-On, DIIOP, NOTES.INI settings for HTTP, enable XML services.

**Important:** For platforms supported by the DPI wizard, refer to the product release notes:

<http://www.ibm.com/developerworks/lotus/documentation/releasenotes>

For the smooth execution of the wizard the following data should be collected before running the DPI wizard. Table 11-1 summarizes the data to be collected and also provides the value being used in the ITSO Corporation example.

*Table 11-1 Data required for Domino Portal Integration wizard*

Data required	Person responsible	Example
WebSphere Portal Server installation path	WebSphere Portal administrator.	D:\IBM\WebSphere\PortalServer\
WebSphere Portal, Lotus Domino, and Sametime Server host names or IP address	Network/Lotus Domino/WebSphere Portal administrator.	la.itso.com (Domino server), portal.itso.com (Portal server), sametime.itso.com (Sametime Server)
WebSphere Application Server administrator ID and password (in LDAP format)	WebSphere Portal or Application Server or network administrator.	WAS Admin id - cn=wpsadmin,o=itso WAS Admin passwd = password
WebSphere Portal Server administrator ID and password (in LDAP format)	WebSphere Portal or network administrator.	Portal Admin id - cn=wpsadmin,o=itso Portal Admin passwd = password
Lightweight Third Party Authentication (LTPA) password	Input required by the DPI wizard at run-time. To be provided at Wizard runtime. Previous value does not exist.	LTPA password = password
Lotus Domino LDAP port number	Lotus Domino or network administrator.	389
Lotus Domino HTTP Port (in case running HTTPS then HTTPS port number also required)	Lotus Domino or network administrator.	80
Lotus Domino administrator ID and password	Lotus Domino or network administrator.	Administrator ID = Domino Admin/ITSO Administrator password = password
Lotus Sametime administrator ID and password	Lotus Domino or network administrator.	Administrator ID = Domino Admin/ITSO Administrator password = password
Lotus Sametime Server fully qualified host name	Lotus Domino or network administrator.	sametime.itso.com
Lotus Sametime Server HTTP port number (in case running HTTPS then HTTPS port number also required)	Lotus Domino or network administrator.	80



The Domino Portal Integration wizard executes the following steps to achieve the integration:

1. Execute the wizard from the WebSphere Portal Server, as shown in the Figure 11-2.

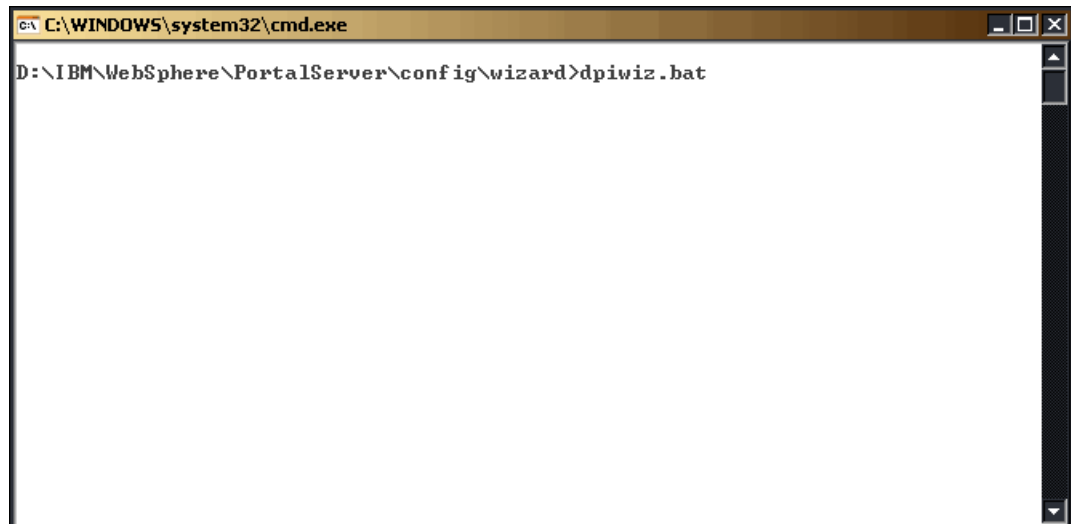


Figure 11-2 Executing the DPI wizard

2. This launches the DPI wizard welcome window, as shown in Figure 11-3. Click **Next** to continue.

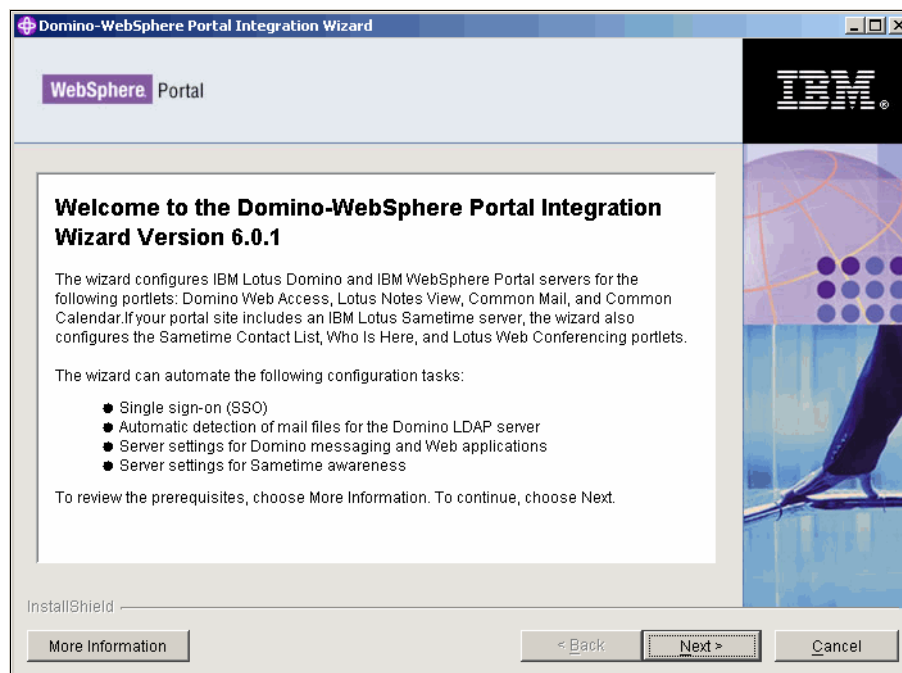


Figure 11-3 DPI wizard welcome page

3. The wizard asks you to provide the WebSphere Portal administrator ID and password, as shown in Figure 11-4. Click **Next** to continue.

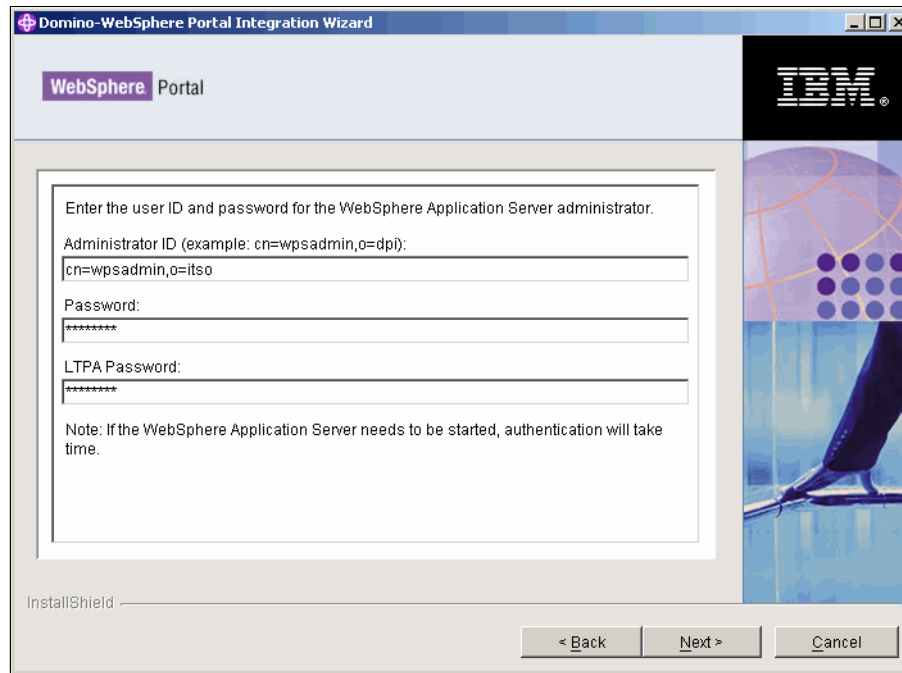


Figure 11-4 Providing the WebSphere Portal administrator user details

4. The wizard then asks you whether you wish to configure the Sametime Server to support awareness, as shown as in Figure 11-5. Select **Yes** and click **Next** to continue.

**Attention:** This step can be skipped for deployments that do not have Lotus Sametime installed or do not intend to integrate Lotus Sametime with WebSphere Portal Server.

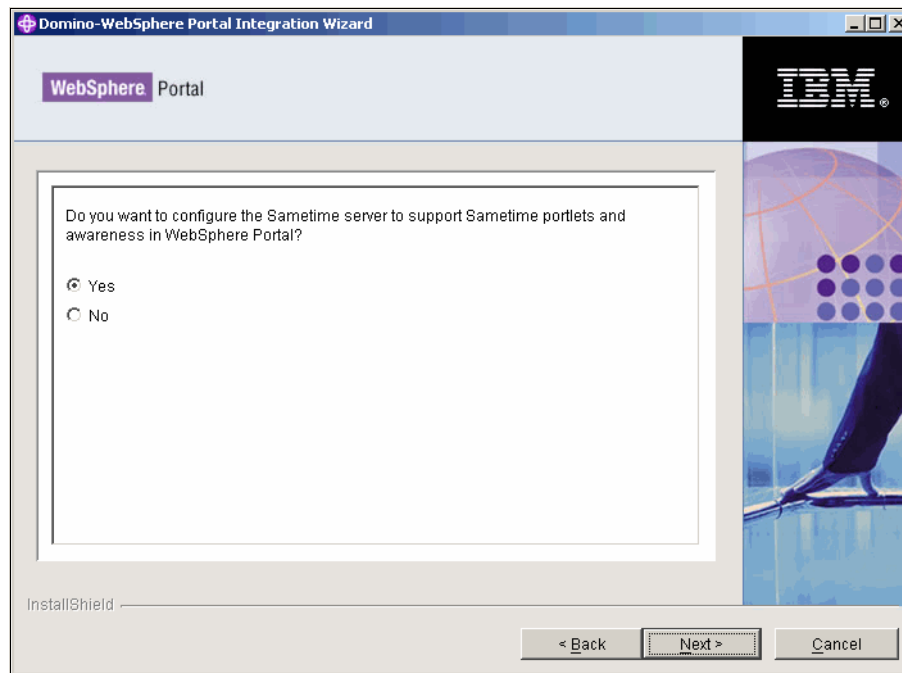


Figure 11-5 Sametime Portlets to be enabled or not

5. Select the Lotus Domino server running the Domino LDAP service that will be used for automatic detection of mail files, as shown in Figure 11-6. Click **Next** to continue.

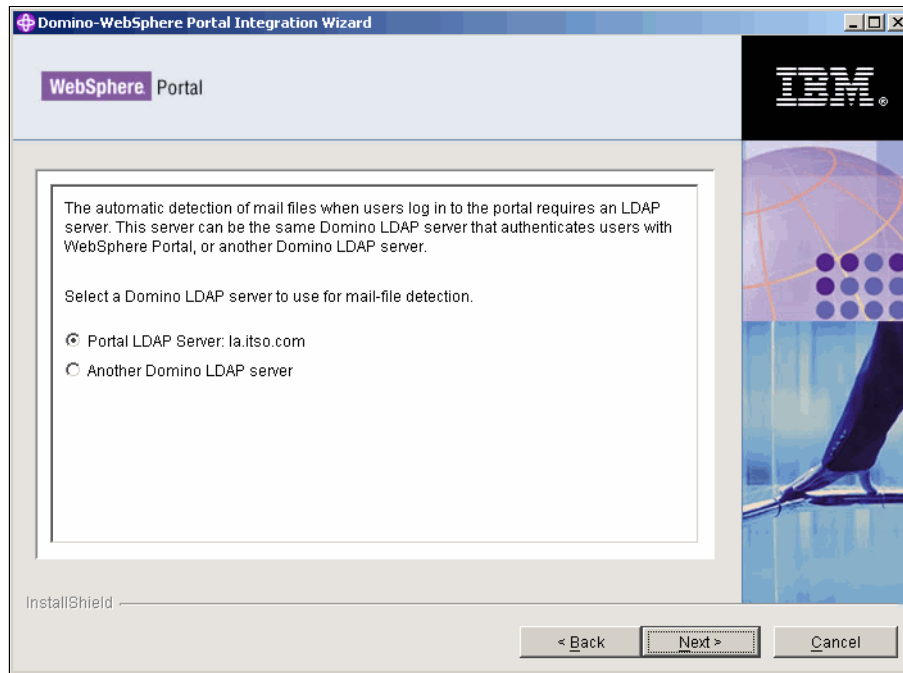


Figure 11-6 LDAP Server to be selected for the DPI wizard

6. You will be asked for the port numbers on which LDAP, HTTP, and HTTPS are running on the Lotus Domino server, as shown in Figure 11-7. Click **Next** to continue.

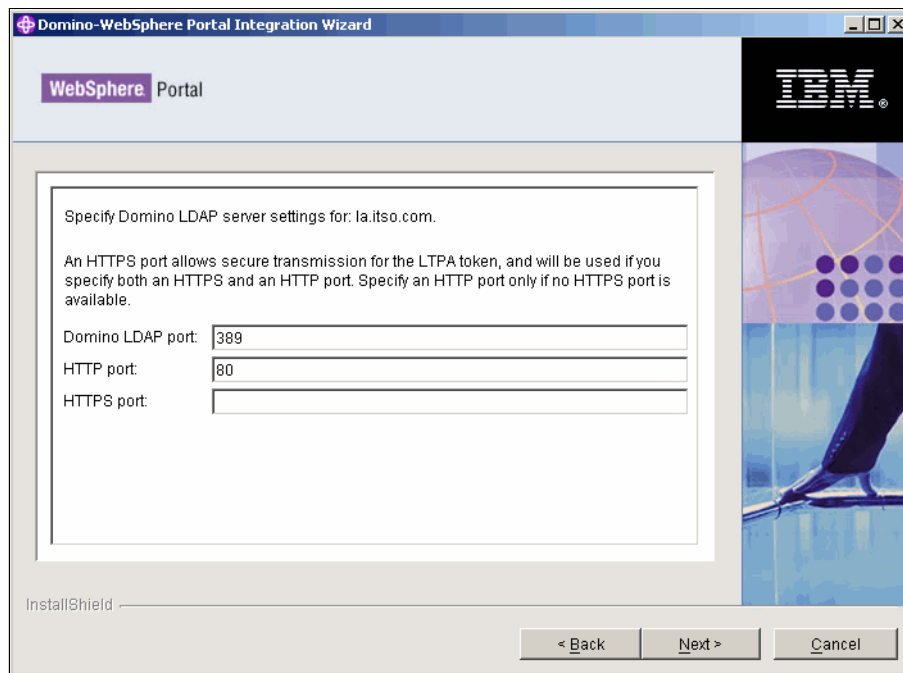
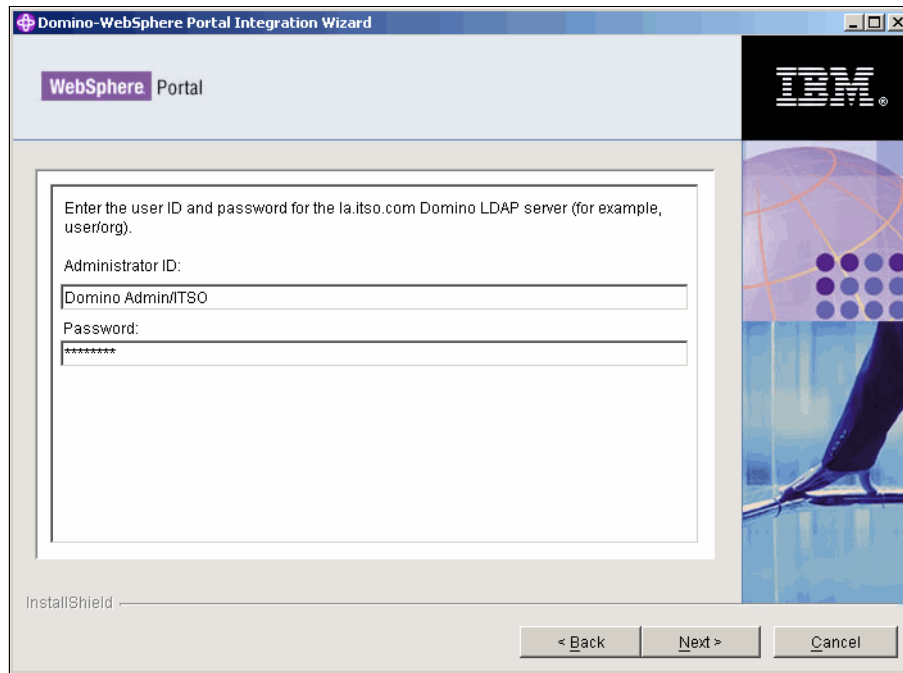


Figure 11-7 Ports running HTTP and LDAP on Domino server (la.itso.com)

7. You will be asked to provide the Domino Administrator's ID and password. Note that this ID should be listed as an administrator in the server document. This ID should also have

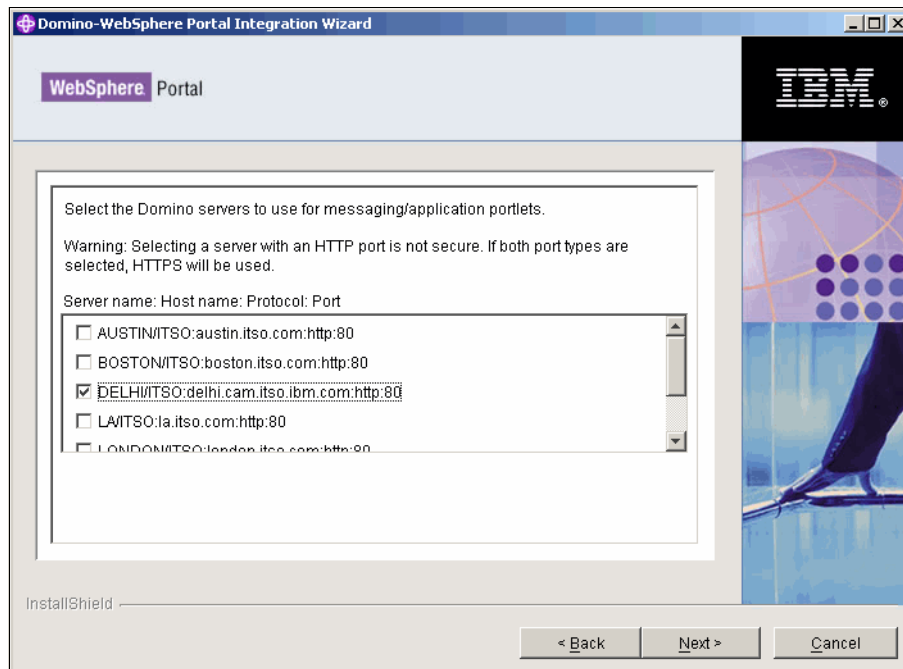
manager access to the Domino directory (NAMES.NSF). Provide details as shown in Figure 11-8. Click **Next** to continue.



The screenshot shows the 'Domino-WebSphere Portal Integration Wizard' window. The title bar includes the IBM logo and the text 'Domino-WebSphere Portal Integration Wizard'. The window has a header with 'WebSphere Portal' and the IBM logo. The main content area contains the following text: 'Enter the user ID and password for the la.itso.com Domino LDAP server (for example, user/forg).'. Below this, there are two input fields: 'Administrator ID:' with the value 'Domino Admin/ITSO' and 'Password:' with masked characters '\*\*\*\*\*'. At the bottom, there is an 'InstallShield' progress bar and three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 11-8 Domino Administrator details to be provided

8. You now need to select the Lotus Domino server's that would use the messaging/application portlets. Select the relevant servers, as shown in Figure 11-9. Click **Next** to continue.



The screenshot shows the 'Domino-WebSphere Portal Integration Wizard' window. The title bar includes the IBM logo and the text 'Domino-WebSphere Portal Integration Wizard'. The window has a header with 'WebSphere Portal' and the IBM logo. The main content area contains the following text: 'Select the Domino servers to use for messaging/application portlets.' and a warning: 'Warning: Selecting a server with an HTTP port is not secure. If both port types are selected, HTTPS will be used.' Below this, there is a table with columns 'Server name', 'Host name', 'Protocol', and 'Port'. The table lists five servers: 'AUSTIN/ITSO:austin.itso.com:http:80', 'BOSTON/ITSO:boston.itso.com:http:80', 'DELHI/ITSO:delhi.cam.itso.ibm.com:http:80', 'LA/ITSO:la.itso.com:http:80', and 'LONDON/ITSO:london.itso.cam.ibm.com:http:80'. The 'DELHI/ITSO' server is selected with a checkmark. At the bottom, there is an 'InstallShield' progress bar and three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 11-9 Select Domino servers that require mail or application access via the WebSphere Portal

9. You need to specify the Lotus Sametime Server details, as shown in Figure 11-10. Click **Next** to continue.

The screenshot shows a window titled "Domino-WebSphere Portal Integration Wizard" with a "WebSphere Portal" tab. The main content area has a heading "Specify the Sametime server." followed by explanatory text: "An HTTPS port allows secure transmission for the LTPA token, and will be used if you specify both an HTTPS and an HTTP port. Specify an HTTP port only if no HTTPS port is available." Below this, there is a label "Fully qualified host name (for example, host.domain.com):" and a text input field containing "sametime.itso.com". Underneath are two more input fields: "HTTP port:" with the value "80" and "HTTPS port:" which is empty. At the bottom left is the "InstallShield" logo, and at the bottom right are three buttons: "< Back", "Next >", and "Cancel". The right side of the window features an IBM logo and a decorative graphic of a globe and a bird.

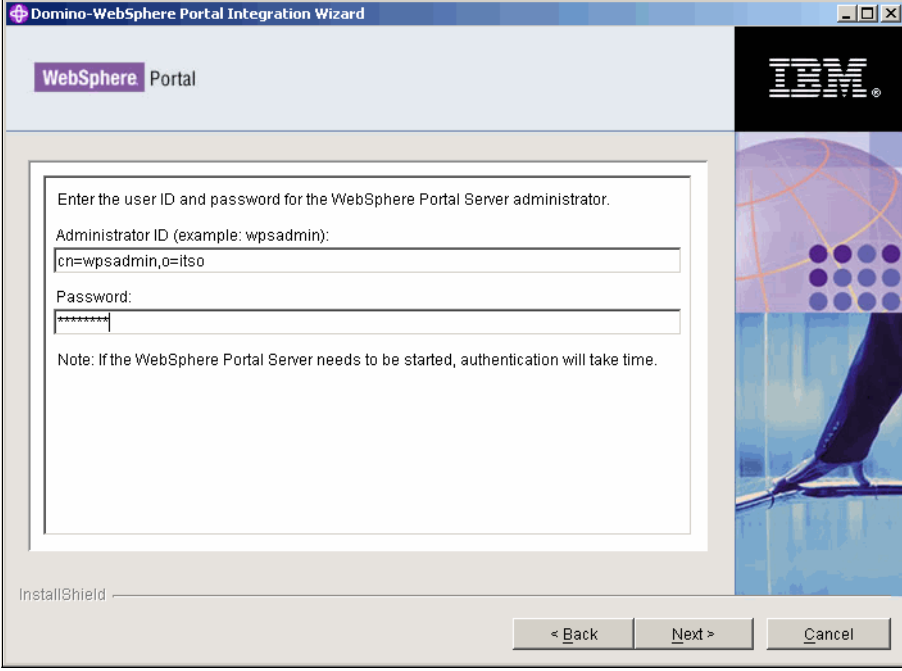
Figure 11-10 Sametime server - details to be provided

10. Specify the Lotus Sametime server's administrator ID and password, as shown in Figure 11-11. Click **Next** to continue.

The screenshot shows the same "Domino-WebSphere Portal Integration Wizard" window, now at a step titled "Specify the Sametime server administrator." The text instructs the user to "Enter the user ID and password for the Sametime server administrator (for example, user/forg)." Below this, there are two input fields: "Administrator ID:" containing "Domino Admin/ITSO" and "Password:" which is masked with asterisks. The bottom of the window includes the "InstallShield" logo and the "< Back", "Next >", and "Cancel" buttons. The IBM logo and decorative graphic are also present on the right.

Figure 11-11 Sametime Administrator - details to be provided

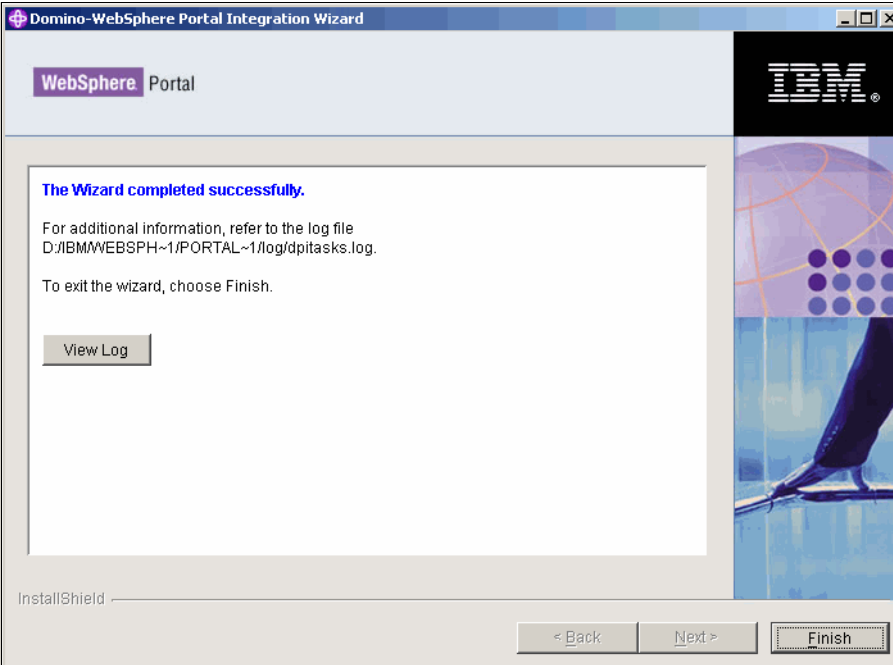
11. The wizard asks you for the WebSphere Portal administrator ID and password, as shown in Figure 11-12. Click **Next** to continue.



The screenshot shows the 'Domino-WebSphere Portal Integration Wizard' window. The title bar includes the IBM logo. The main content area has a light blue header with 'WebSphere Portal' and a large IBM logo on the right. The central text area contains the following: 'Enter the user ID and password for the WebSphere Portal Server administrator.', 'Administrator ID (example: wpsadmin):' followed by a text box containing 'cn=wpsadmin,o=its0', 'Password:' followed by a masked text box with '\*\*\*\*\*', and a note: 'Note: If the WebSphere Portal Server needs to be started, authentication will take time.' At the bottom, there is an 'InstallShield' progress bar and three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 11-12 Portal administrator ID and password to be provided - final step

12. The system processes the data and gives you a successful window, as shown in Figure 11-13. Click **Finish** to exit the wizard.



The screenshot shows the 'Domino-WebSphere Portal Integration Wizard' window at the success stage. The title bar and header are the same as in Figure 11-12. The central text area contains: 'The Wizard completed successfully.' in blue, 'For additional information, refer to the log file D:\IBM\WEBSPH~1\PORTAL~1\log\dpitasks.log.', and 'To exit the wizard, choose Finish.' Below this is a 'View Log' button. At the bottom, there is an 'InstallShield' progress bar and three buttons: '< Back', 'Next >', and 'Finish'.

Figure 11-13 DPI wizard success page

**Note:** Logs for the operation of the wizard are located in the portal\_server\_root/log directory. The dpitasks.log contains all information about tasks run by the wizard.

WebSphere Portal has been integrated with Lotus Domino and Sametime servers.

You can observe the outcome of that integration for our ITSO Corporation example in Figure 11-14, which shows Domino Web Access with Sametime enabled as displayed through our WebSphere Portal Server with automatic discovery of Lotus Domino mail file and SSO enabled.

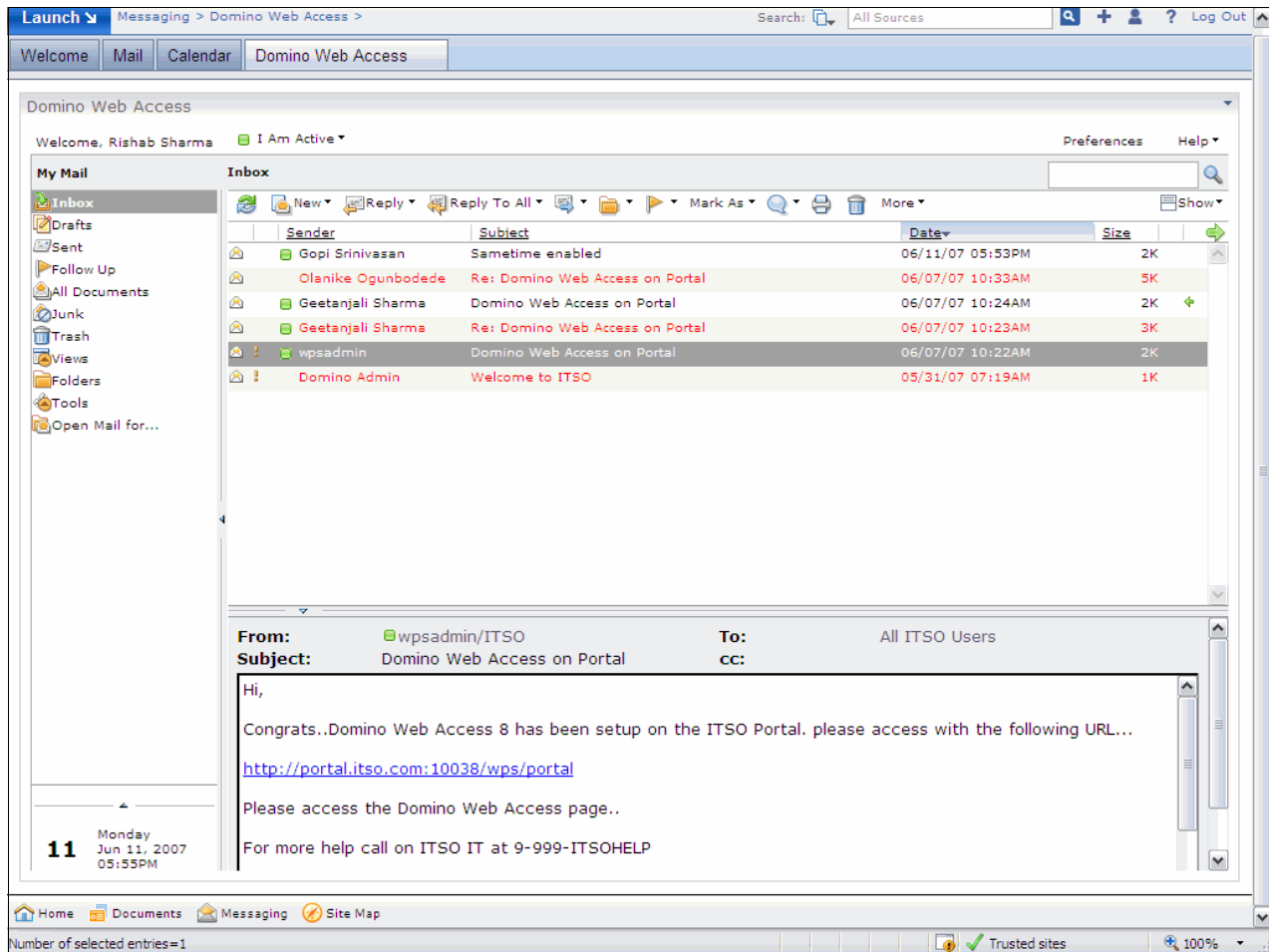


Figure 11-14 WebSphere Portal with Lotus Domino 8 and Sametime integrated via the DPI wizard

## 11.3 Domino Portal Federated Administration

Now you can administer the Domino 8 Server from within the WebSphere Portal administration user interface. This feature will be of interest to all Domino Administrator's who also manage WebSphere Portal installations.

In this configuration, the Domino Web Administration (WEBADMIN.NSF) user interface is embedded within the WebSphere Portal Administration user interface. In our ITSO Corporation example, we integrate the Lotus Domino server (LA) with the WebSphere Portal Server (PORTAL) to demonstrate the steps involved in such an integration.



**Note:** The prerequisites and instructions provided use the Domino M5 Public Beta Build released on May 23, 2007.

### 11.3.1 Domino Portal Federated Administration prerequisites

Note that the following are required in order to enable Lotus Domino and WebSphere Portal Server federated administration:

- ▶ A successful SSO configuration between Domino 8 Server and WebSphere Portal Server 6.0 /6.0.0.1/6.0.1 should exist.
- ▶ In case SSO does not exist, run the DPI wizard, as discussed in 11.2, “Domino Portal Integration wizard” on page 352.

### 11.3.2 Configuration of Domino Portal Federated Administration

Domino Portal Federated Administration needs to accomplish the following tasks:

1. Download and install the Portal Update Installer (PUI) tool. (You need to perform this step for WebSphere Portal 6.0/6.0.0.1 server setup only.)
2. Download and install federation fix (iFix.zip) on WebSphere Portal Server. (You need to perform this step for WebSphere Portal 6.0/6.0.0.1 server setup only.)
3. Configure the federation fix on WebSphere Portal Server.
4. Download the addfederation.xml file from the Domino 8 Server.
5. Edit the addfederation.xml file. (You need to perform this step for WebSphere Portal 6.0/6.0.0.1 server setup only.)
6. Execute the xmlaccess script to apply addfederation.xml to the WebSphere Portal Server.
7. Configure WebSphere Portal Server.

#### Download and install the Portal Update Installer (PUI) tool

**Important:** Perform this step only for WebSphere Portal Server 6.0/6.0.0.1 installations.

To do this:

1. The WebSphere Portal 6 Update Installer (PUI) tool must be downloaded before this step. You can download the PUI from:  
<http://www.ibm.com/software/genservers/portal/support>

The PUI tool needs to be extracted as shown in Figure 11-15.

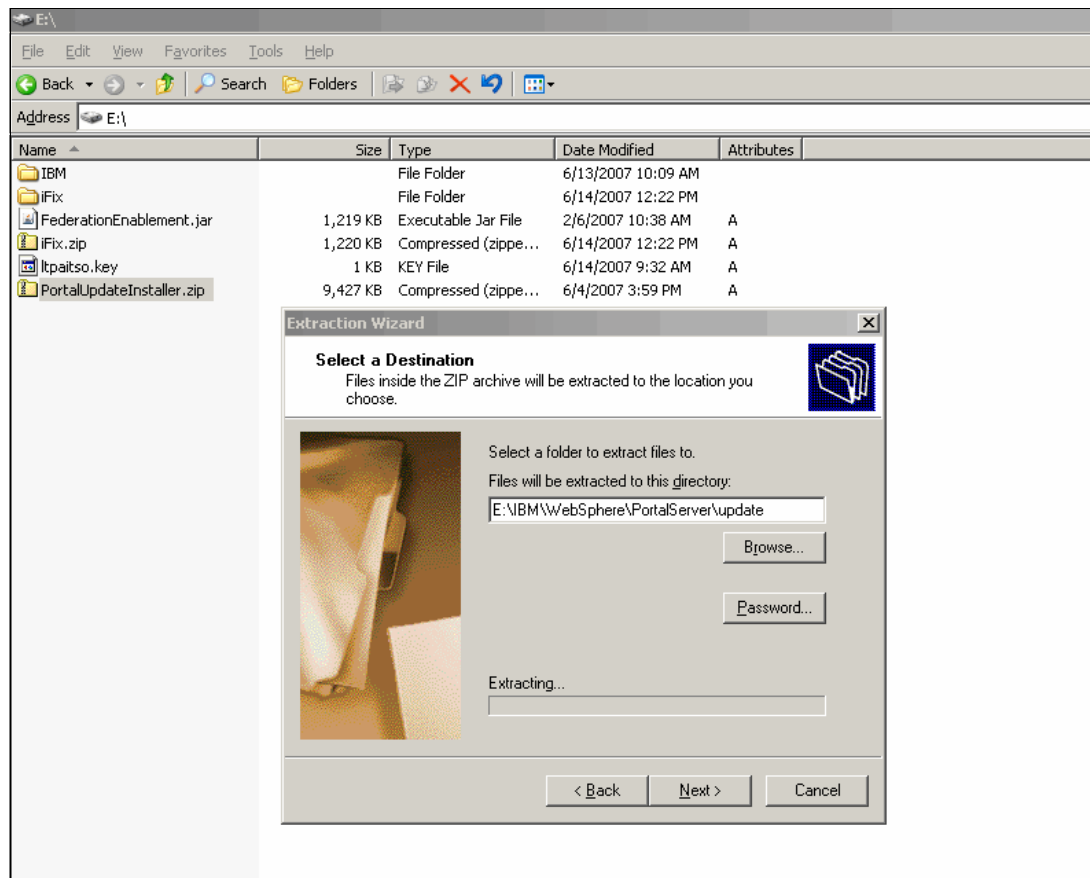


Figure 11-15 Extracting the Portal Update Installer tool

## Download and install federation fix (iFix.zip) on WebSphere Portal Server

**Important:** Perform this step only for WebSphere Portal Server 6.0/6.0.0.1 installations.

To do this:

1. Download the file iFix.zip, which contains the federation fix for WebSphere Portal from any Domino 8 Server running HTTP by pointing to this URL:

`http://<dominoserver>/webadmin.nsf/iFix.zip`

This triggers the download of the iFix.zip file, as shown in Figure 11-16. Make sure to extract and copy the file locally on the WebSphere Portal Server.

**Note:** iFix.zip is available only on Lotus Domino 8 servers. It can be accessed only through the URL:

`http://<dominoserver>/webadmin.nsf/iFix.zip`

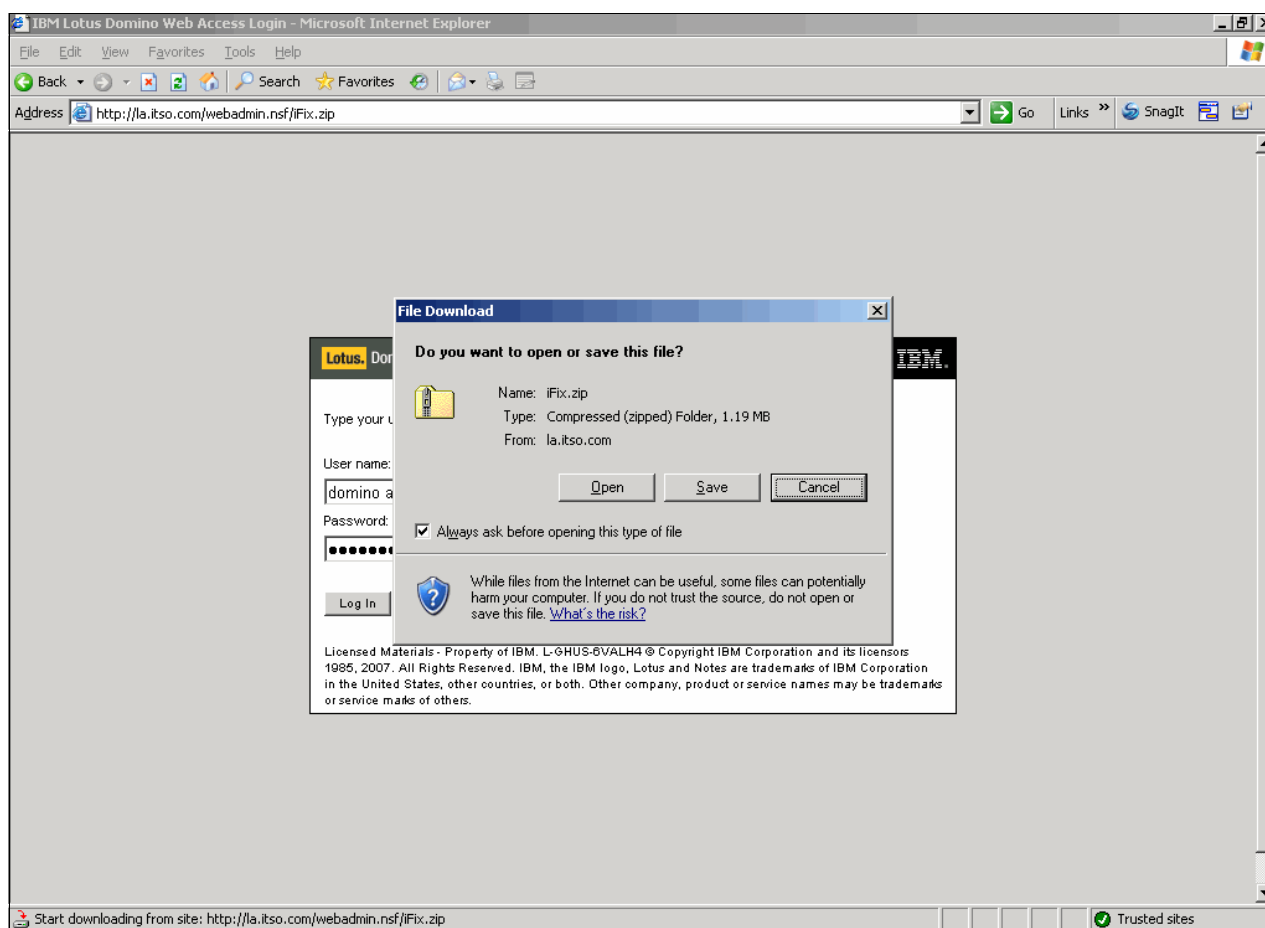


Figure 11-16 Downloading the iFix.zip from the Lotus Domino 8 server

2. Execute setupCMDline.bat from the WebSphere/AppServer/bin directory, as shown in Figure 11-17.

Figure 11-17 Executing setupCMDline.bat before running the Portal Update wizard

3. You are now ready to execute the Portal Update Installer (PUI) tool from the update directory. (You already downloaded and installed the PUI tool in “Download and install the Portal Update Installer (PUI) tool” on page 363), as shown Figure 11-18.

Figure 11-18 Executing the Portal Update Installer wizard tool

4. This shows you the PUI wizard welcome window, as shown in Figure 11-19. Click **Next** to continue.

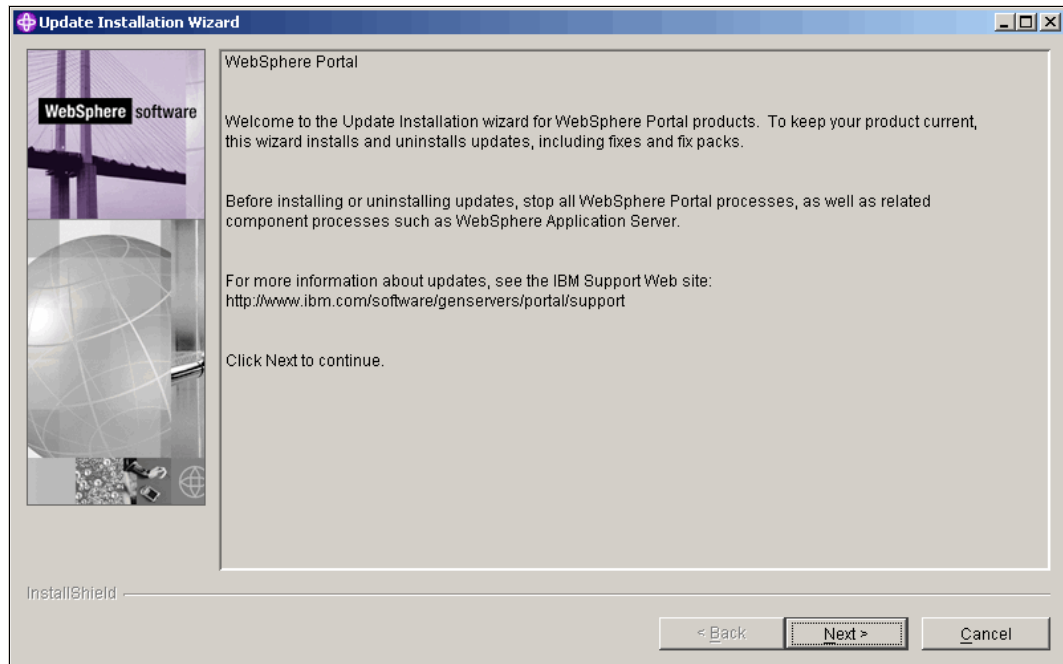


Figure 11-19 Portal Update Installer wizard - welcome page

5. The wizard searches and shows you the applicable WebSphere Portal installation, as in Figure 11-20. Click **Next** to continue.

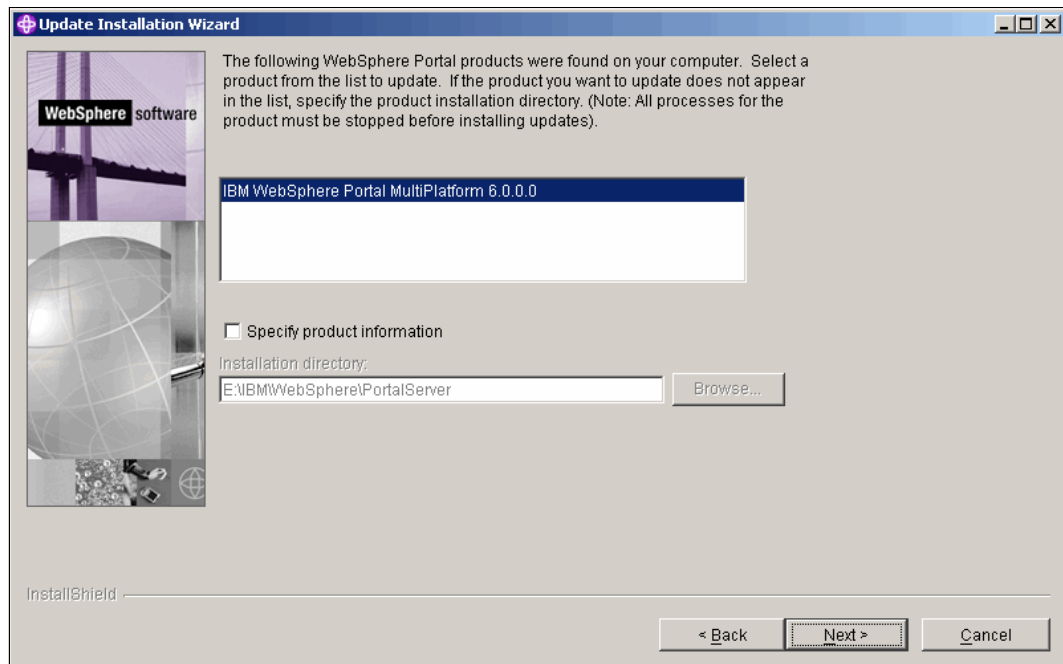


Figure 11-20 Portal Update Installer detects applicable portal installation

6. You are now prompted to install either fix packs or fixes. Note that we install a fix, as shown in Figure 11-21. Click **Next** to continue.

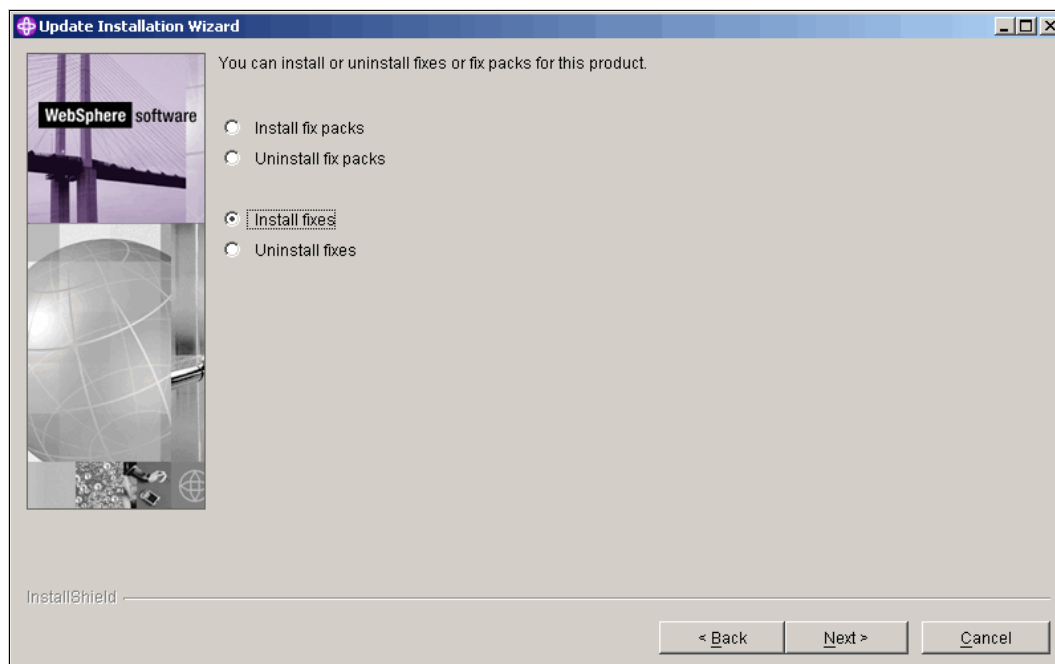


Figure 11-21 Select fixes to install the iFix

7. Select the directory where the fixes are located. Select the directory where you have extracted the iFix.zip contents, as shown in Figure 11-22. Click **Next** to continue.

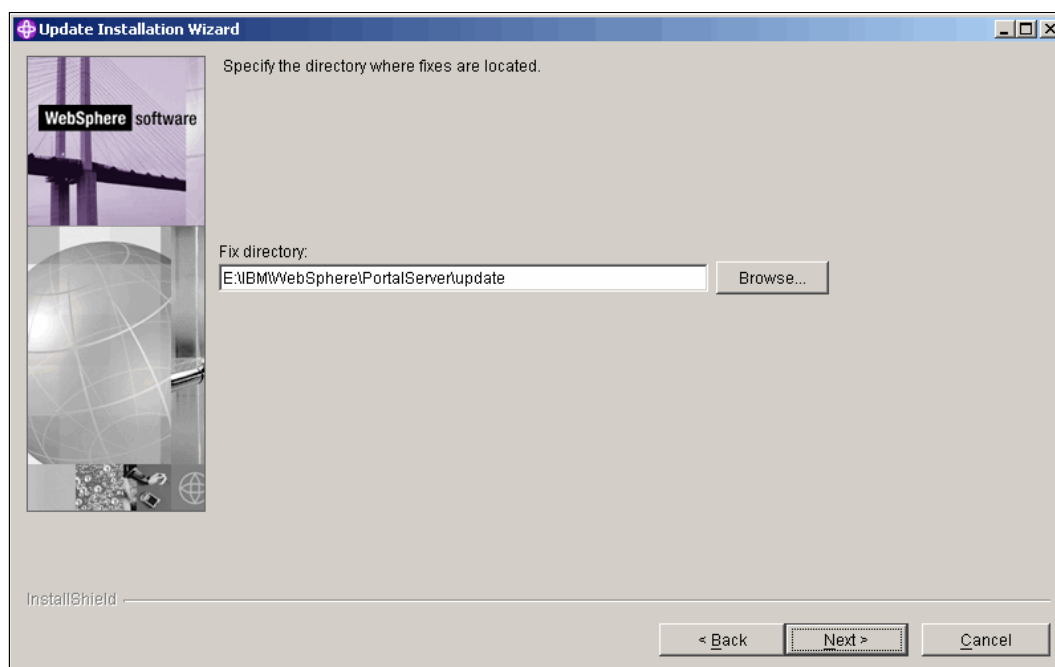


Figure 11-22 Selecting the directory where WebSphere Portal fixes reside

8. The wizard now scans the directory for fixes to install. Select the fix, as shown in Figure 11-23. Click **Next** to continue.

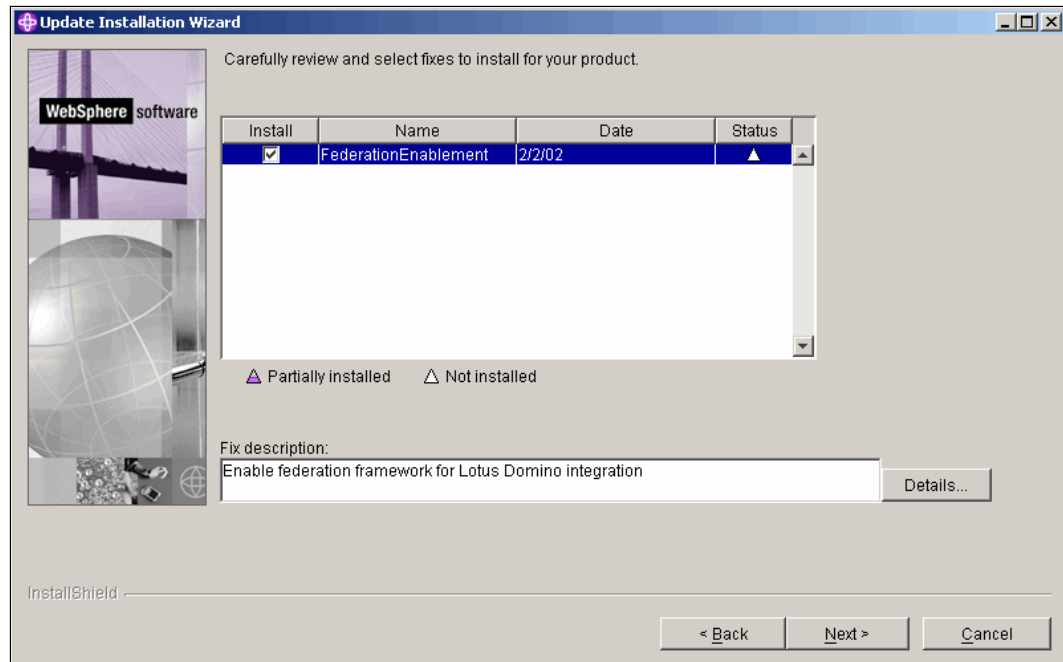


Figure 11-23 Select the iFix to install

9. The wizard confirms the fix about to be installed, as shown in Figure 11-24. Click **Next** to continue.

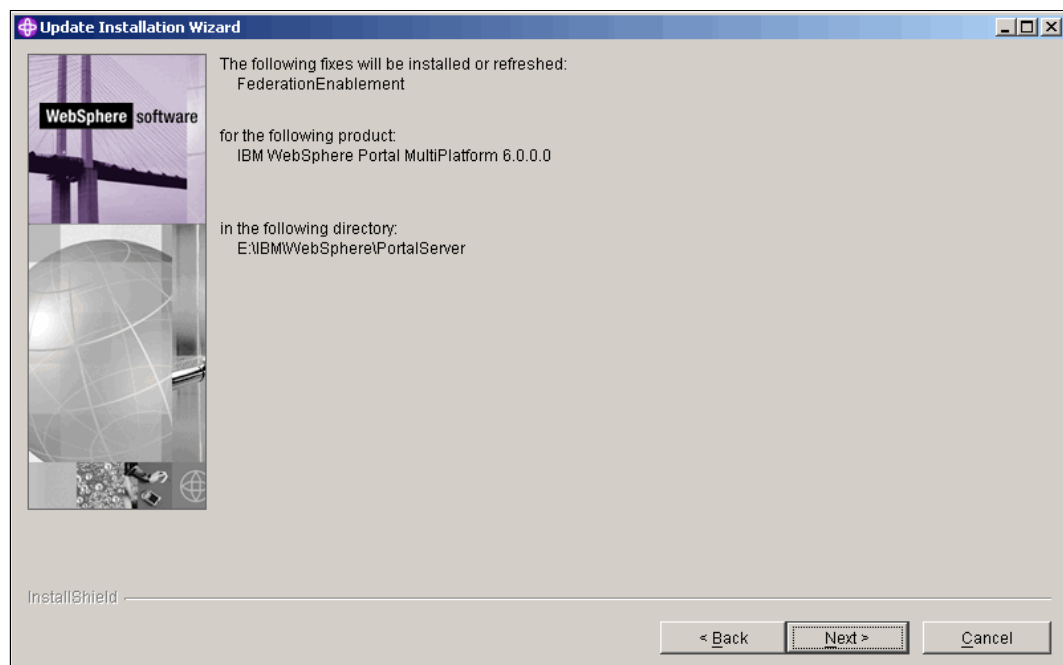


Figure 11-24 Confirmation of the fix to be installed

10. The federation fix is installed successfully, as shown in Figure 11-25. Click **Finish** to continue.

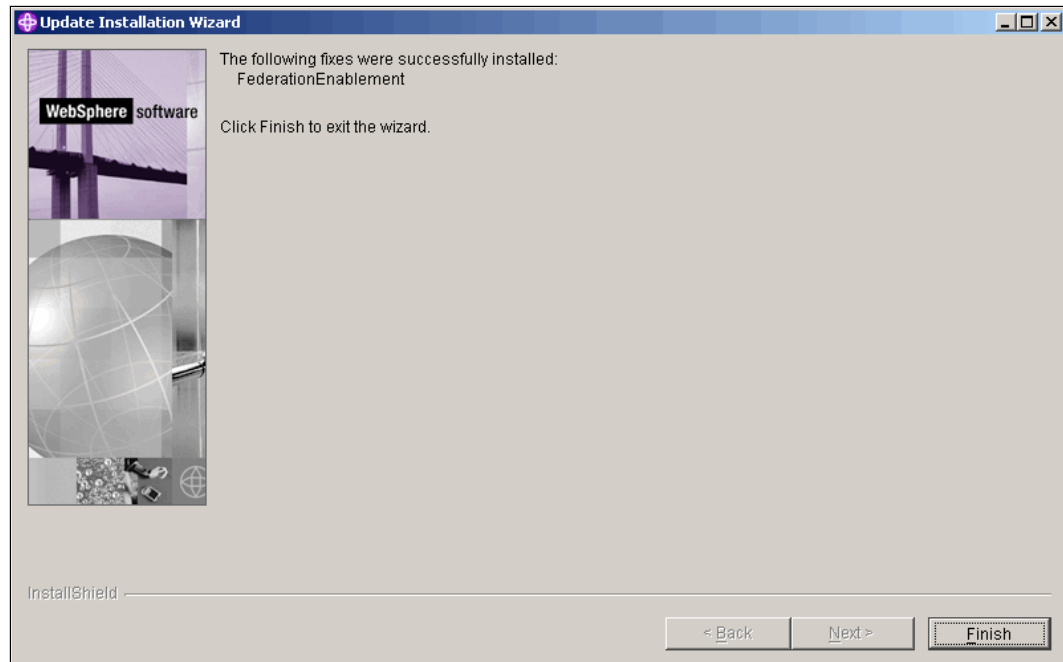


Figure 11-25 Federation fix has been applied to the WebSphere Portal successfully

## Configure the federation fix on WebSphere Portal Server

**Important:** Perform this step for WebSphere Portal Server 6.0/6.0.0.1/6.0.1 installations.

Make sure that WebSphere Portal Server is running for this step.

Access the directory <PortalServerRootDirectory>\bin subdirectory, and then run this command:

```
WPSconfig.bat init deploy-transformation-federation -DPortalAdminId=<wpsadminid> -DPortalAdminPwd=<wpsadminpwd>g
```

This command configures the federation fix we just installed on the WebSphere Portal Server.



The command is shown in Figure 11-26 for your reference.

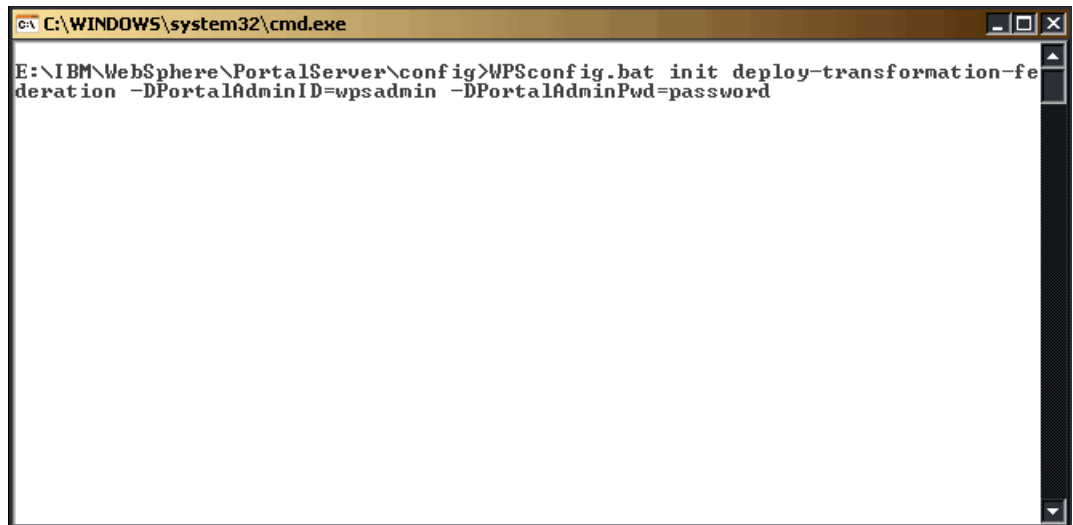


Figure 11-26 Configuring the WebSphere Portal Server for federation

The base steps required to prepare the WebSphere Portal Server for Lotus Domino administration have concluded.

### Download the addfederation.xml file from the Domino 8 Server

**Important:** Perform this step for the WebSphere Portal Server 6.0/6.0.0.1/6.0.1 installations.

Download the addFederation.xml from this URL on the WebSphere Portal Server:

<http://<dominoserver>/webadmin.nsf/addfederation.xml>

In the ITSO Corporation example, we download the addFederation.xml file, as shown in Figure 11-27. The file needs to be saved locally on the WebSphere Portal Server.

**Note:** addFederation.xml is available on the Lotus Domino 8 Servers only. It can be accessed only through the following URL:

<http://<dominoserver>/webadmin.nsf/addfederation.xml>

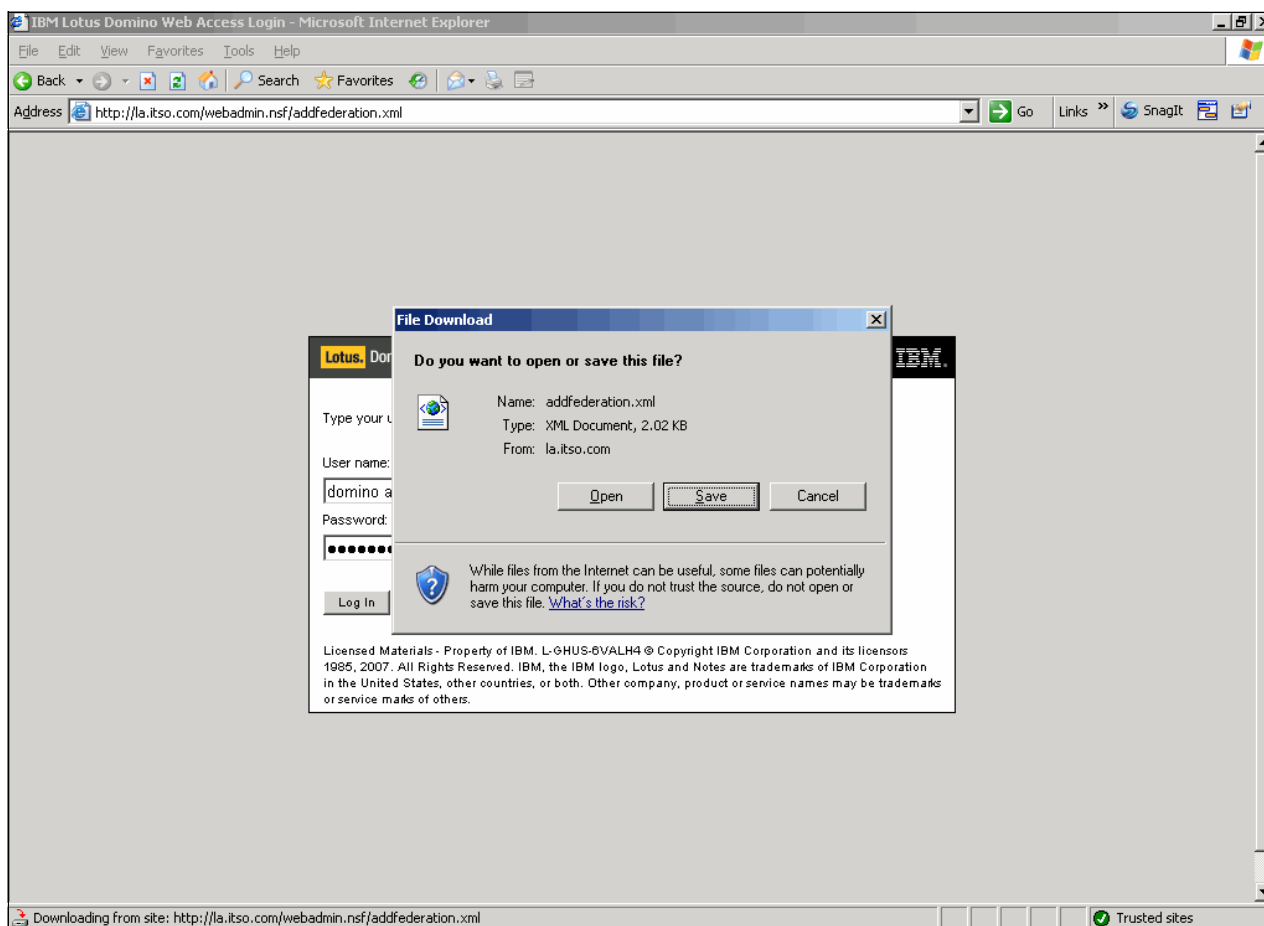


Figure 11-27 Downloading the addfederation.xml from the Domino server

## Edit the addfederation.xml file

**Important:** Perform this step only for WebSphere Portal Server 6.0/6.0.0.1 installations.

Edit the addfederation.xml file. This is required because WebSphere Portal 6.0 supports 1.4.1.xsd and not 6.0.1.xsd. The changes made to the xml file are shown in Figure 11-28 and Figure 11-29 on page 374.

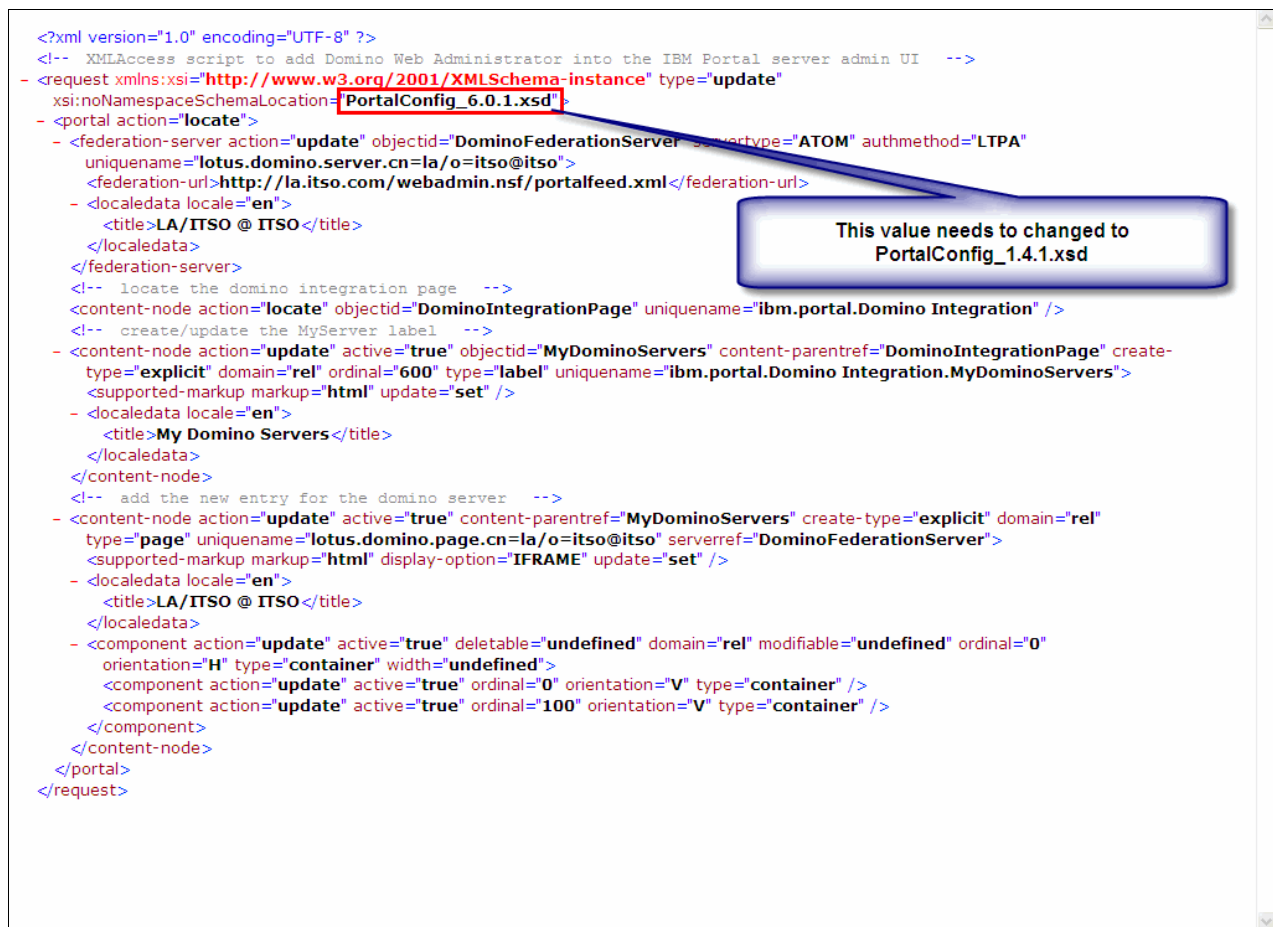


Figure 11-28 These changes need to be made to addfederation.xml

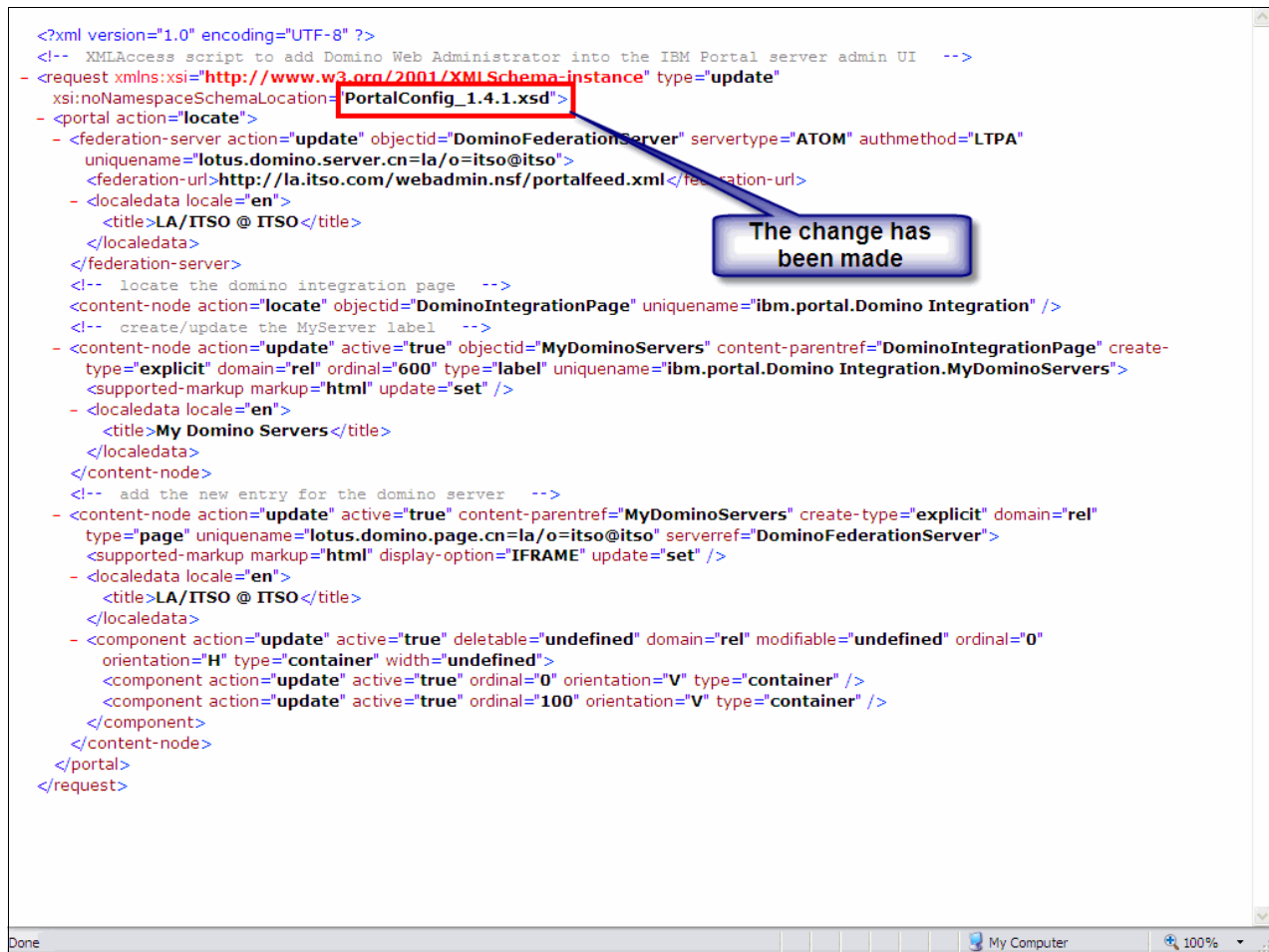


Figure 11-29 Changed value in addfederation.xml


## Execute the xmlaccess script to apply addfederation.xml to the WebSphere Portal Server

**Important:** Perform this step for WebSphere Portal Server 6.0/6.0.0.1/6.0.1 installations.

Execute the XML access command, as shown in Figure 11-30, to add the Domino server to the WebSphere Portal Administration UI.

```
xmlaccess.bat -in c:\addfederation.xml -user <wpsadminid> -password  
<wpsadminpwd> -url localhost:10038/wps/config
```

**Note:** The XML configuration command-line client is also called XMLAccess, which provides all the XML configuration interface functions in WebSphere Portal.

A screenshot of a Windows command prompt window. The title bar reads "C:\WINDOWS\system32\cmd.exe". The command prompt shows the following command being executed: "E:\IBM\WebSphere\PortalServer\bin>xmlaccess.bat -in e:\addfederation.xml -user wpsadmin -password password -url localhost:10038/wps/config". The command is entered on a single line. The window has standard Windows window controls (minimize, maximize, close) in the top right corner.

```
C:\WINDOWS\system32\cmd.exe  
E:\IBM\WebSphere\PortalServer\bin>xmlaccess.bat -in e:\addfederation.xml -user wpsadmin -password password -url localhost:10038/wps/config
```

Figure 11-30 Executing the `xmlaccess` script to add Domino to Portal Administration interface

## Configure WebSphere Portal Server

**Important:** Perform this step for WebSphere Portal Server 6.0/6.0.0.1/6.0.1 installations.

WebSphere Portal Server also will be prepared in order to enable federated administration.

1. Launch the WebSphere Portal Admin Console, then select **Resources** → **Resource Environment Providers**. Select **WP ConfigServer**, as shown in Figure 11-31.

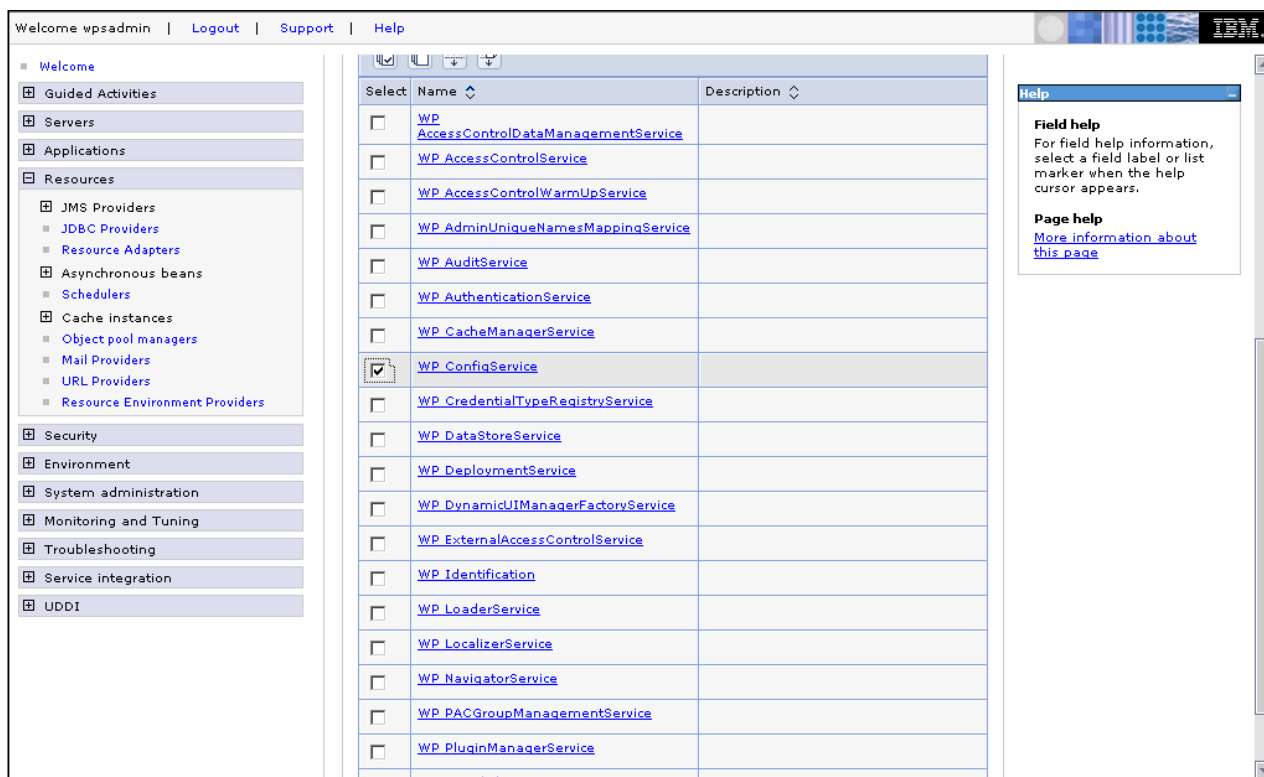


Figure 11-31 Select WP ConfigServer from list of available providers in WebSphere Administration Console

**Note:** By default, for accessing the WebSphere Portal Server 6 Administration console, you can use the following URL:

`http://hostname:10027/admin`

For Windows, you can also use **Start** → **Programs** → **IBM WebSphere** → **Application Server** → **wp\_profile** → **Administration Console**.

2. Once WP ConfigServer has been selected. Click **Custom Properties**, as shown in Figure 11-32.

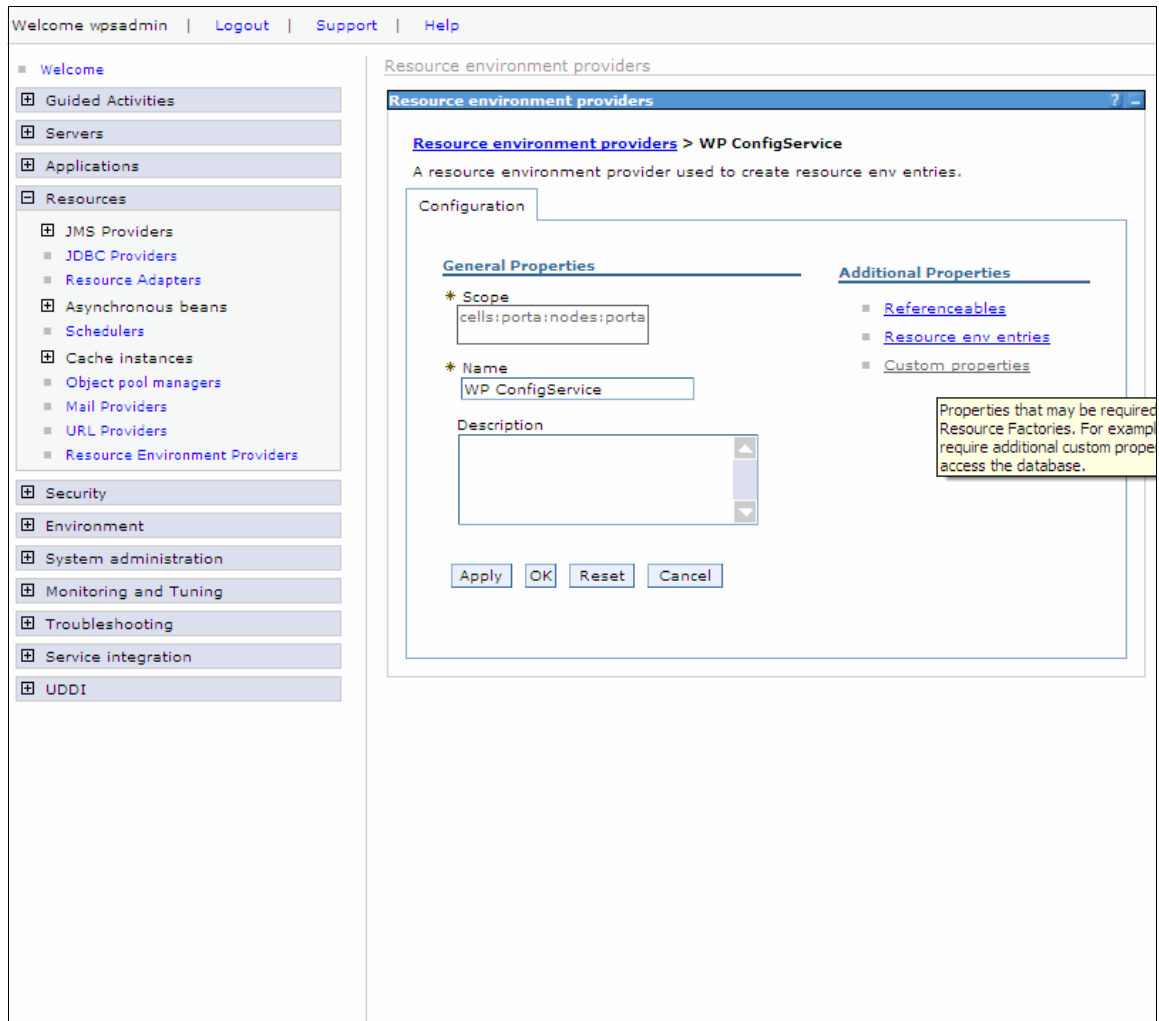


Figure 11-32 Selecting custom properties

3. Click **New** to add two new custom properties, as shown in Figure 11-33.

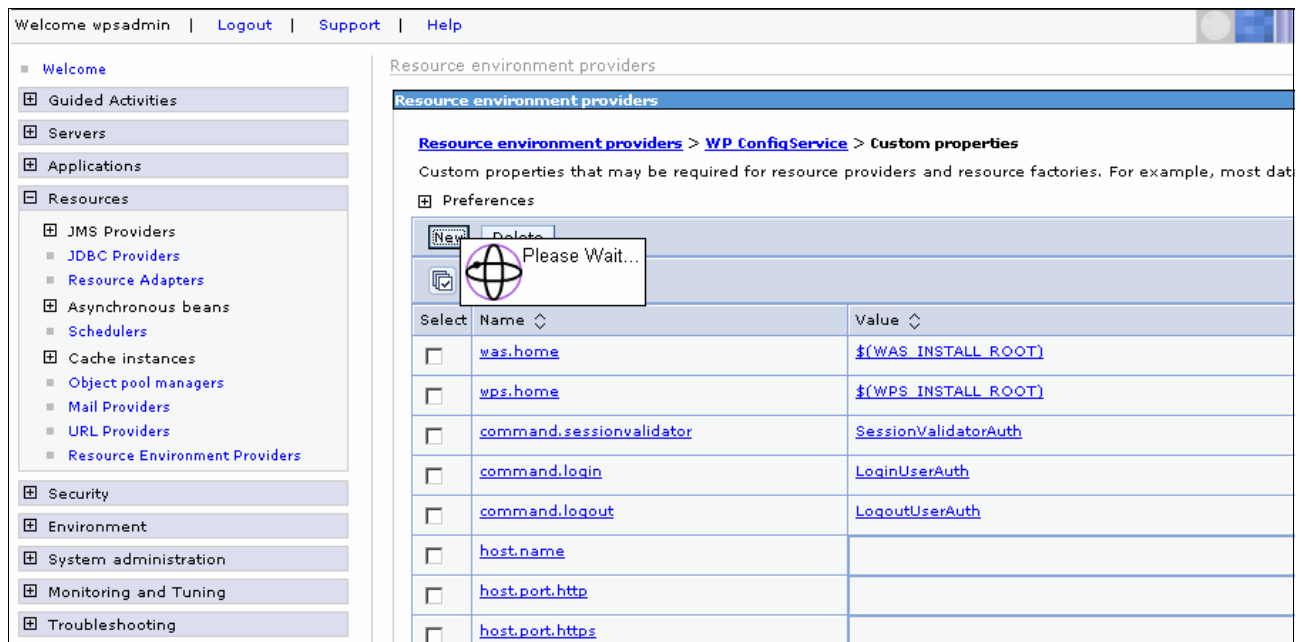


Figure 11-33 Creating new custom properties



4. The first custom property to be added is called *federation enabled*. In the Name field enter `federation enabled` and in the Value field enter `true`, as shown in Figure 11-34. Click **Apply** and then **Save**.

The screenshot shows the IBM WebSphere Portal configuration console. On the left is a navigation tree with categories like Welcome, Guided Activities, Servers, Applications, Resources, Security, Environment, System administration, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. The 'Resources' category is expanded, showing sub-items like JMS Providers, JDBC Providers, Resource Adapters, Asynchronous beans, Schedulers, Cache instances, Object pool managers, Mail Providers, URL Providers, and Resource Environment Providers. The main panel is titled 'Resource environment providers' and shows a breadcrumb path: 'Resource environment providers > WP ConfigService > Custom properties > federation enabled'. Below the breadcrumb is a message box stating: 'Changes have been made to your local configuration. Click Save to apply changes to the master configuration. The server may need to be restarted for these changes to take effect.' The 'federation enabled' property is being configured in the 'General Properties' tab. The 'Scope' is 'cells:porta:nodes:porta', 'Required' is unchecked, 'Name' is 'federation enabled', 'Value' is 'true', and 'Type' is 'java.lang.String'. At the bottom are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'.

Welcome wpsadmin | [Logout](#) | [Support](#) | [Help](#)

■ **Welcome**

- ▣ Guided Activities
- ▣ Servers
- ▣ Applications
- ▣ Resources
  - ▣ JMS Providers
    - JDBC Providers
    - Resource Adapters
  - ▣ Asynchronous beans
    - Schedulers
  - ▣ Cache instances
    - Object pool managers
    - Mail Providers
    - URL Providers
    - Resource Environment Providers
- ▣ Security
- ▣ Environment
- ▣ System administration
- ▣ Monitoring and Tuning
- ▣ Troubleshooting
- ▣ Service integration
- ▣ UDDI

Resource environment providers

**Resource environment providers** ?

▣ Messages

⚠ Changes have been made to your local configuration. Click [Save](#) to apply changes to the master configuration.

ℹ The server may need to be restarted for these changes to take effect.

[Resource environment providers](#) > [WP ConfigService](#) > [Custom properties](#) > **federation enabled**

Custom properties that may be required for resource providers and resource factories. For example, most database vendors require additional custom properties for data sources that access the database.

Configuration

**General Properties**

\* Scope  
cells:porta:nodes:porta

☐ Required

\* Name  
federation enabled

Value  
true

Description

Type  
java.lang.String

[Apply](#) [OK](#) [Reset](#) [Cancel](#)

Figure 11-34 Creating federation-enabled property

5. Click **New** again to create the second custom property `federation.useAbsoluteURLs`. In the Name field enter `federation.useAbsoluteURLs` and in the Value field enter `true`, as shown in Figure 11-35. Click **Apply** and then **Save**.

Welcome wpsadmin | [Logout](#) | [Support](#) | [Help](#)

- Welcome
- Guided Activities
- Servers
- Applications
- Resources
  - JMS Providers
    - JDBC Providers
    - Resource Adapters
  - Asynchronous beans
    - Schedulers
  - Cache instances
    - Object pool managers
  - Mail Providers
  - URL Providers
  - Resource Environment Providers
- Security
- Environment
- System administration
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

### Resource environment providers

[Resource environment providers](#) > [WP ConfigService](#) > [Custom properties](#) > [New](#)

Custom properties that may be required for resource providers and resource factories. For example, most database vendors require additional custom properties for data sources that access the database.

Configuration

#### General Properties

\* Scope  
cells:porta:nodes:porta

☐ Required

\* Name This value indicates if the property is required or not.  
federation.useAbsoluteURLs

Value  
true

Description

Type  
java.lang.String

[Apply](#) [OK](#) [Reset](#) [Cancel](#)

Figure 11-35 Creating `federation.useAbsoluteURLs` property

6. Both of the custom properties that you just created are shown in Figure 11-36.

The screenshot shows the IBM WebSphere Portal Administration console. The left sidebar contains a navigation tree with categories like Welcome, Guided Activities, Servers, Applications, Resources, Security, Environment, System administration, Monitoring and Tuning, Troubleshooting, Service integration, and UDDI. The main content area is titled 'Resource environment providers > WP ConfigService > Custom properties'. It displays a table of custom properties with columns for 'Select', 'Name', and 'Value'. Two properties, 'federation.enabled' and 'federation.useAbsoluteURLs', are checked and highlighted with a red box. The table also includes properties like 'was.home', 'wps.home', 'command.sessionvalidator', 'command.login', 'command.logout', 'host.name', 'host.port.http', 'host.port.https', 'uri.context.path', 'processintegration.myTasksPageUniqueName', 'processintegration.htmJndiName', 'processintegration.htmVersion', 'processintegration.pendingtasks.lifetime', 'uri.home.public', 'uri.home.protected', and 'uri.context.path.facade'.

Select	Name	Value
<input type="checkbox"/>	was.home	\$({WAS_INSTALL_ROOT})
<input type="checkbox"/>	wps.home	\$({WPS_INSTALL_ROOT})
<input type="checkbox"/>	command.sessionvalidator	SessionValidatorAuth
<input type="checkbox"/>	command.login	LoginUserAuth
<input type="checkbox"/>	command.logout	LogoutUserAuth
<input type="checkbox"/>	host.name	
<input type="checkbox"/>	host.port.http	
<input type="checkbox"/>	host.port.https	
<input type="checkbox"/>	uri.context.path	wps
<input type="checkbox"/>	processintegration.myTasksPageUniqueName	ibm.portal.MyTasks
<input type="checkbox"/>	processintegration.htmJndiName	corbaname:iiop:localhost:10031#co
<input type="checkbox"/>	processintegration.htmVersion	WPS6
<input type="checkbox"/>	processintegration.pendingtasks.lifetime	30
<input type="checkbox"/>	uri.home.public	portal
<input type="checkbox"/>	uri.home.protected	myportal
<input type="checkbox"/>	uri.context.path.facade	wsrp
<input checked="" type="checkbox"/>	federation.enabled	true
<input checked="" type="checkbox"/>	federation.useAbsoluteURLs	true

Total 18

Figure 11-36 Custom properties that were created recently

- Restart the WebSphere Portal Server. Once the WebSphere Portal Server has restarted, you can now log in to the Portal and go the Domino Integration page. You can view the Domino Web Administration UI that has been federated to the WebSphere Portal Administration UI, as shown in Figure 11-37.

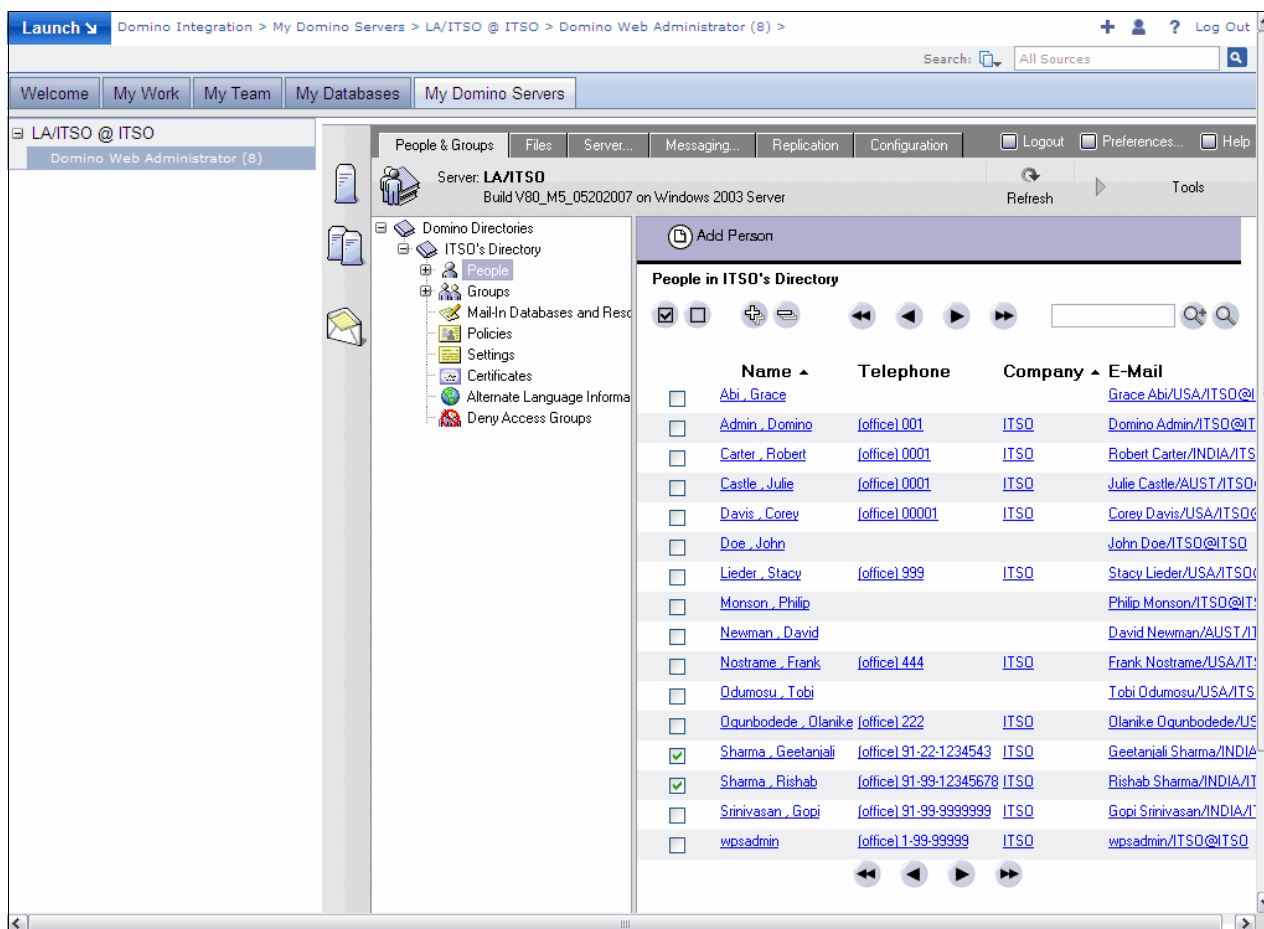


Figure 11-37 WebSphere Portal and Domino federated administration

## 11.4 Domino 8 Administrator - Web administration server bookmarks

The Lotus Domino 8 administrator client contains a feature called Web administration server bookmarks. This allows the Lotus Domino 8 administrator client to connect to any remote administration console from a single administration interface to administer servers like WebSphere Portal, WebSphere Application Server, Sametime, Quickr™, or third-party software.

### 11.4.1 Web administration server bookmarks configuration

Using our ITSO Corporation example, we plan to integrate the WebSphere Portal Administration Console with the Lotus Domino 8 administration client. The following steps are required:

1. Launch the Domino 8 administration client. Click **Administration** → **Add Server to** → **Web Administration Bookmarks**. This is shown in Figure 11-38.

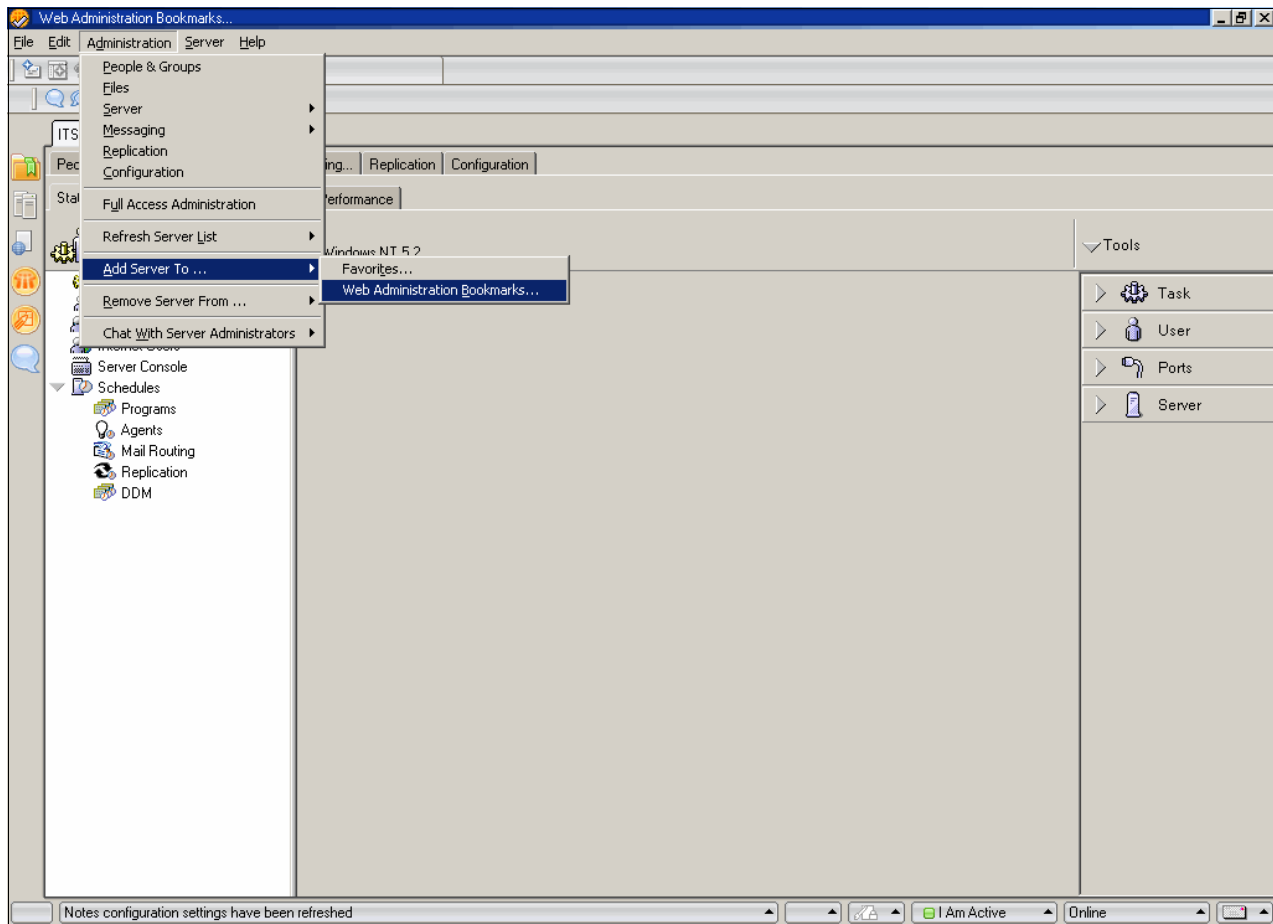


Figure 11-38 Launching Web administration bookmarks

2. ITSO Corporation's WebSphere Portal Server (portal.itso.com) will be added to the Web administration bookmarks, as shown in Figure 11-39. The following values are provided:

- Server name: ITSO Portal
- Administration URL: <http://portal.itso.com:10001/admin> or  
<http://portal.itso.com:10001/ibm/console>
- Type of administration: WebSphere Portal

**Note:** By default, for accessing the WebSphere Portal Server 6 administration console, you can use one of the following URL:

<http://hostname:10027/admin>

<http://hostname:10001/ibm/console>

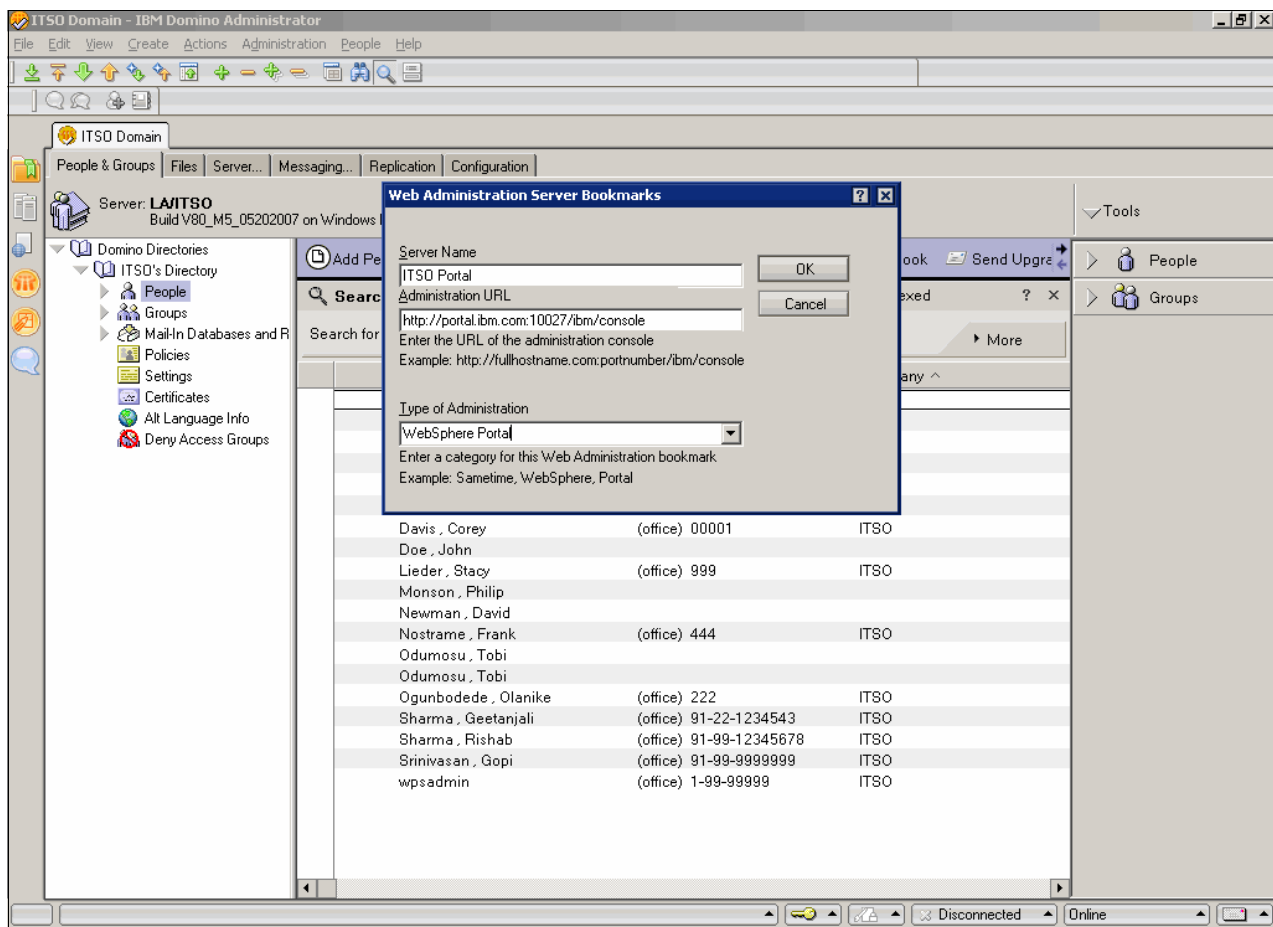


Figure 11-39 Adding Portal Server to Web administration bookmarks

3. You can now view the remote administration console of the WebSphere Portal Server through the Lotus Domino Administrator client, as shown in Figure 11-40.

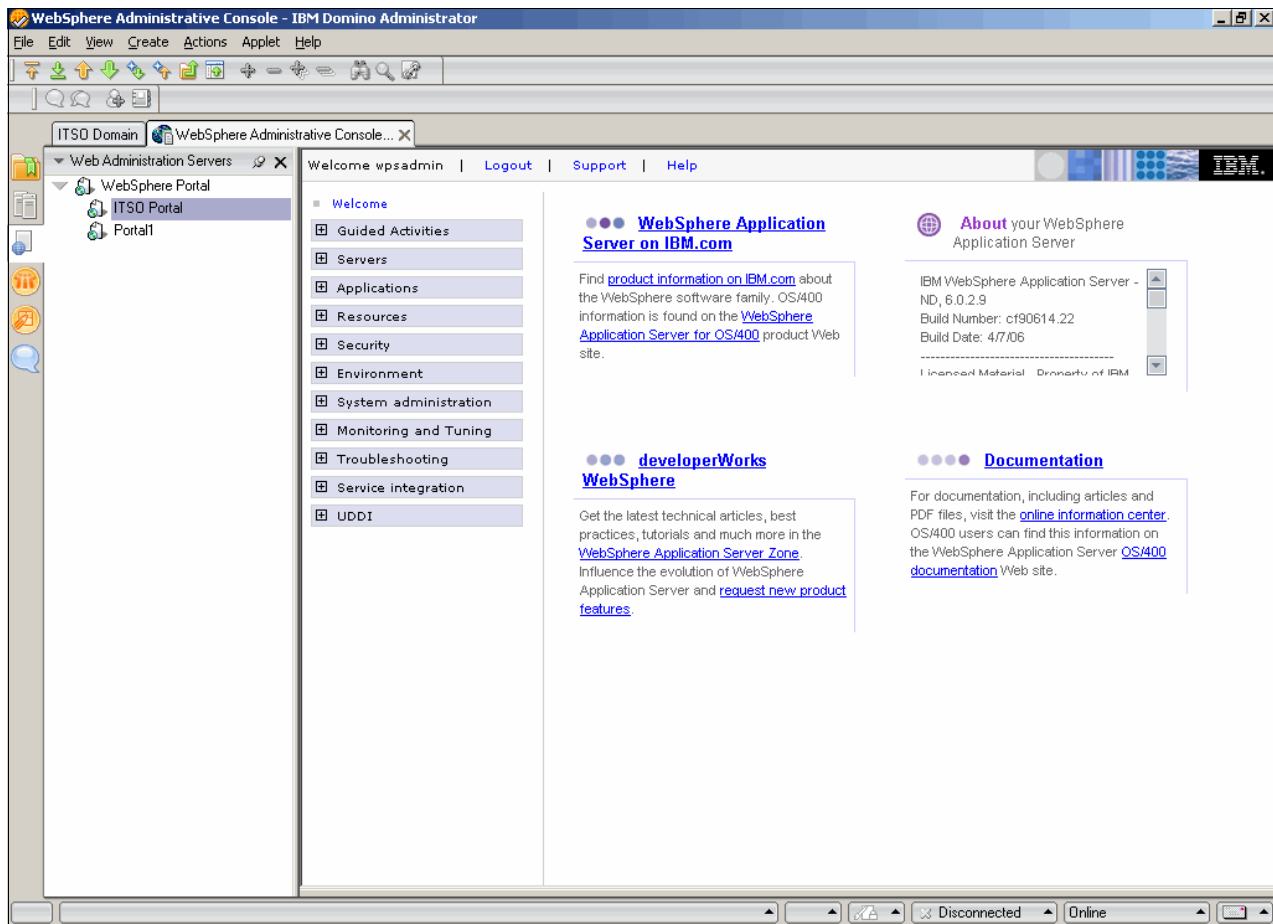


Figure 11-40 WebSphere Portal administration console inside Domino Administrator using Web administration bookmarks

## 11.5 Composite applications - installation of SCI and home portal account

Notes 8 provides support for composite applications, a key element of IBM service-oriented architecture and contextual collaboration strategy. Composite applications combine components from multiple applications into a single, role-based work environment. Composite applications are a loose coupling of Eclipse components, Lotus Component Designer components, and Notes applications (known within composite applications as NSF components) encompassed within a single panel to create a unified view of disparate data.

Composite applications can potentially help increase return on investment by leveraging your existing technology, such as IBM WebSphere Portal and Lotus Domino infrastructures. NSF, Eclipse, and Lotus Component Designer Components, along with WebSphere Portal, can be brought together in context to deliver a single user experience by developing composite applications. You can also reuse previously developed Eclipse technology-based components within the composite applications hosted on Lotus Domino 8 software, helping to increase return on investment in application development tools and skills.

**Note:** Refer to 12.6, “Composite applications” on page 418, for more information.

For more details on composite applications you can also refer to *Building Composite Applications*, SG24-7367.

Composite applications can be hosted from Lotus Domino servers or WebSphere Portal or as a local NSF. The composite application editor (CAE), provided as a feature in the Notes 8 client, can be used to define or edit local NSF or Portal-based composite applications.

If you use WebSphere Portal as your hosting platform, you can create composite applications that can be accessed using a Web browser as well as a Lotus Notes 8 client. You can define your composite applications using either the CAE of Lotus Notes 8 or the application template editor provided with WebSphere Portal.

If you use Lotus Domino as your hosting platform, you can define your composite applications using the composite application editor of the Lotus Notes 8 client.

Configuration of the following components is required in order to use the composite application editor with Lotus Notes 8 and IBM WebSphere Portal Server:

- ▶ Home portal account - allows the CAE to access, edit, or use the templates and applications that reside on the WebSphere Portal to develop composite applications.
- ▶ Notes server client installer (SCI) - is used in conjunction with the home portal account when you wish to access the template and applications or install portlets created using NSF or Eclipse components on IBM WebSphere Portal.

### 11.5.1 Home portal account

The home portal account is a unique account that allows the Notes 8 client to connect to composite applications that require a WebSphere Portal Server. The Domino Administrator can set up a home portal account for users. However, Lotus Notes 8 users can create and edit some elements of the account using the following procedure.

**Tip:** You can also use the security settings document to specify the home portal account preferences. Refer to the Domino 8 Administration Help topic Creating a Security Settings document.



## Configuring the home portal account

To set up a home portal account:

1. Click **File** → **Preferences** and click **Home Portal Account**, as shown in Figure 11-41.

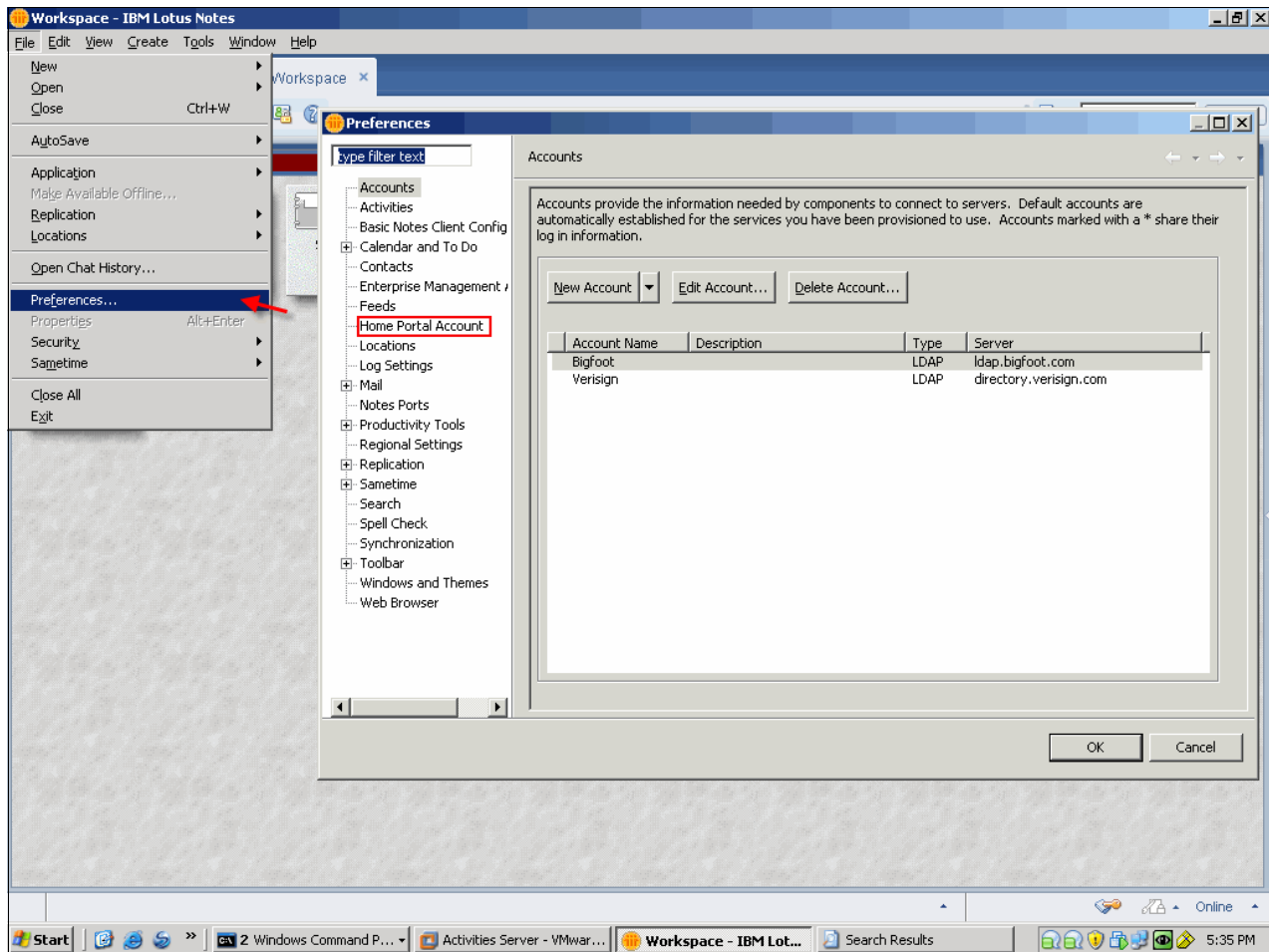


Figure 11-41 Accessing the home portal account in File → Preferences

2. Provide the details for the WebSphere Portal as shown in Figure 11-42. You would provide details as given in Table 11-2.

Table 11-2 Home portal account details

Value	Explanation
Server	WebSphere Portal Server home URL. You can get this from your WebSphere Portal administrator.
Name	WebSphere Portal administrator ID.
Password	WebSphere Portal administrator password.

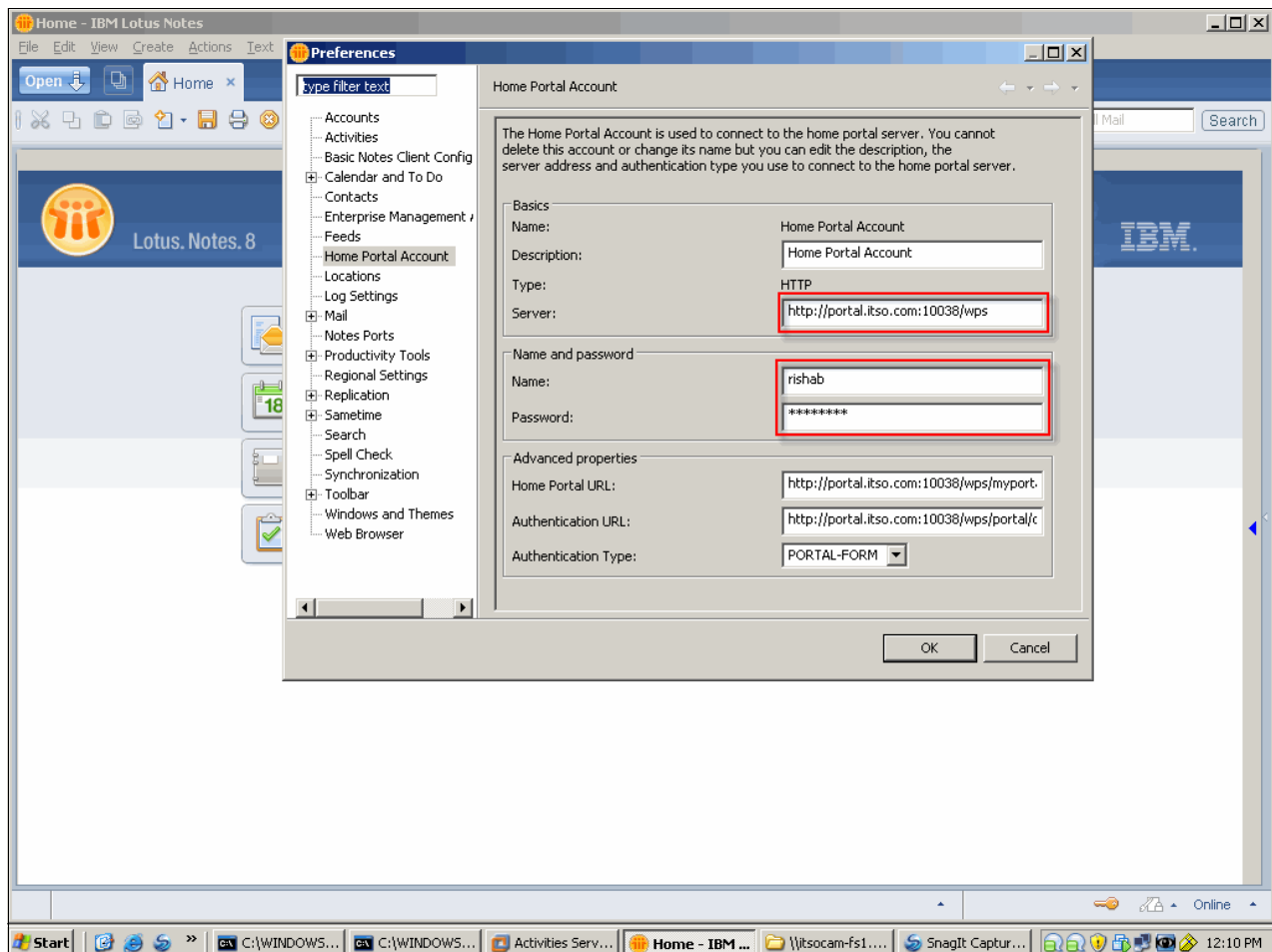


Figure 11-42 Providing home portal account details

**Tip:** The URL for the WebSphere Portal Server should be:

`http://portal.itso.com:10038/wps`

**Not:**

`http://portal.itso.com:10038/`

In case you are using a different port number for WebSphere Portal, use the appropriate port number.

## 11.5.2 Notes server client installer

The Lotus server client installer installs portlets onto the WebSphere Portal Server and enables client communication between the WebSphere Portal Server and the Notes 8 client. The Notes server client installer program installs the .war files that are required by the CAE when working with the WebSphere Portal Server.

The Notes SCI is required if you plan to allow Notes 8 client's CAE to be able access and edit a composite application using components from your WebSphere Portal Server.

This section discusses the prerequisites for SCI installation, and walks you through the SCI installation steps.

### Prerequisites for Notes server client installer

You must have a WebSphere Portal 6.0, 6.0.0.x, or 6.0.x installed and configured for this feature to work.

If your Web server or WebSphere Portal Server uses SSL you must perform additional steps before running the Notes server client installer to provide SSL communication between all the components. Refer to the readme file or Release Notes for more information:

<http://www.ibm.com/developerworks/lotus/documentation/releasenotes>

**Important:** The administrator also needs a home portal account to utilize this feature. Refer to 11.5.1, "Home portal account" on page 386, for more information.

## SCI installation

The following steps are involved in the SCI installation:

1. Launch setupwin32.exe, as shown in Figure 11-43, from the directory where the installation package resides. Make sure that you are running this setup on the machine that has WebSphere Portal installed and configured.

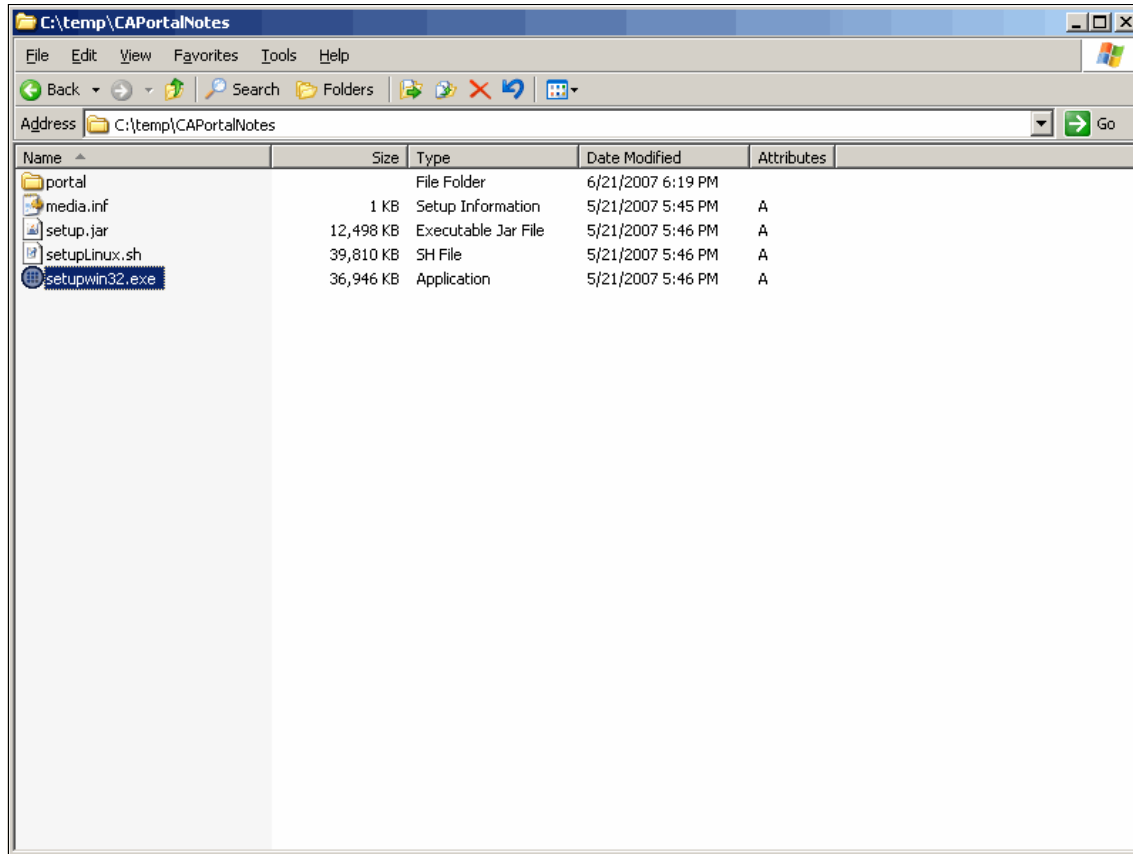


Figure 11-43 Launching the installer

2. This launches the installer and gives you the welcome window, as shown in Figure 11-44. Click **Next** to continue.

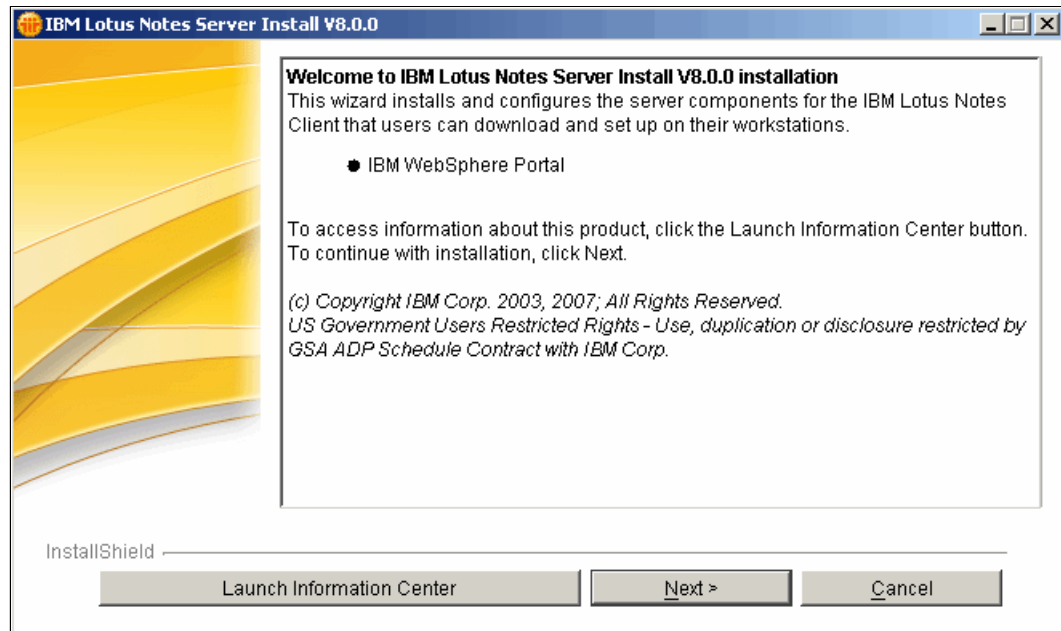


Figure 11-44 Welcome page

3. Click **Yes** to accept the license terms and conditions, as shown in Figure 11-45. Click **Next** to continue.

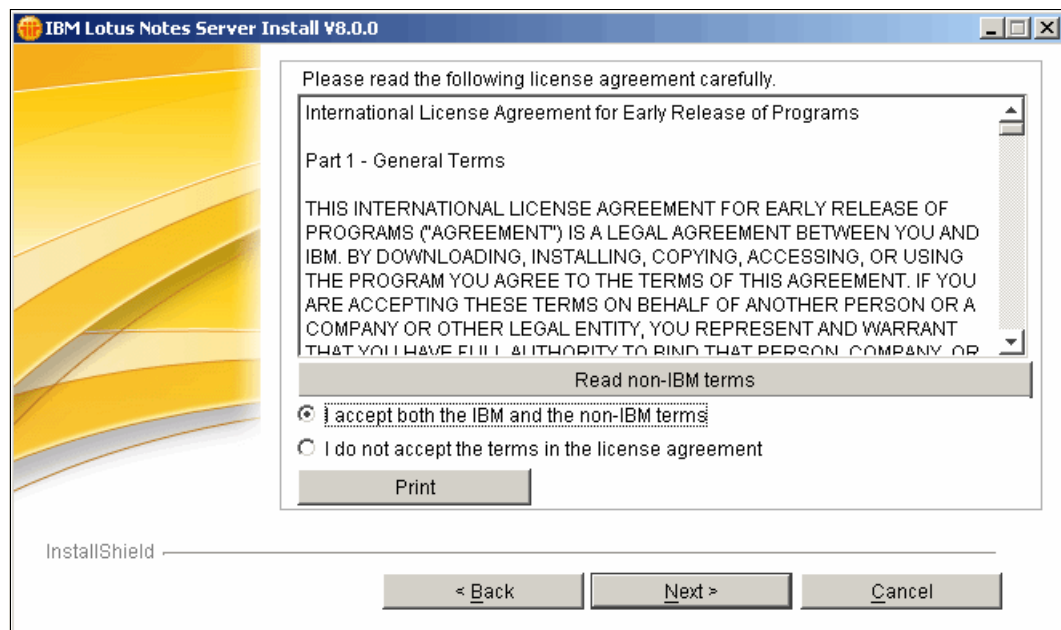


Figure 11-45 License agreement page

- Specify the path where you wish to install the package, as shown in Figure 11-46. Click **Next** to continue.

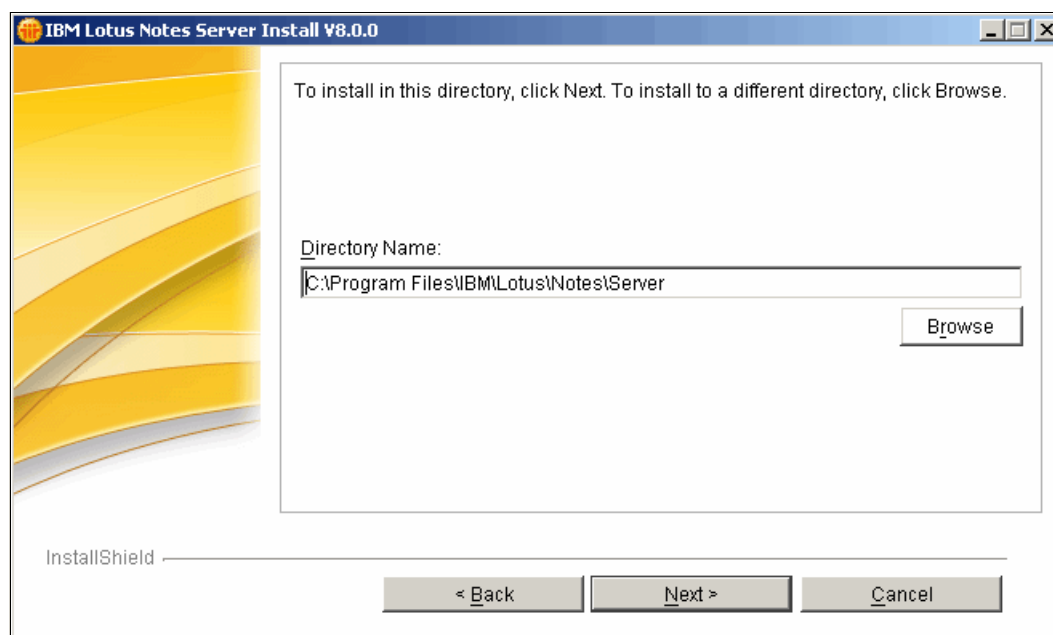


Figure 11-46 Path where the package needs to be installed

- You are now prompted to provide details about the WebSphere Portal Server installation, as shown in Figure 11-47. Click **Next** to continue.

**Tip:** Make sure that the WebSphere Portal Server is running.

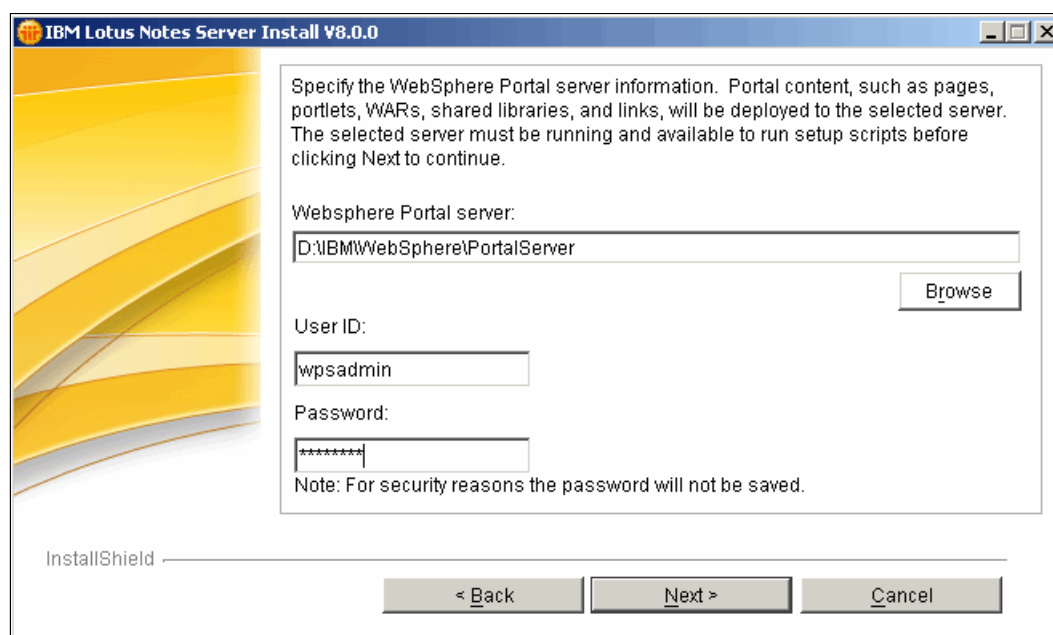


Figure 11-47 WebSphere Portal installation details

6. The installer verifies the connectivity to WebSphere Portal. The installer is now ready to install the package, as shown in Figure 11-48. Click **Install** to continue.

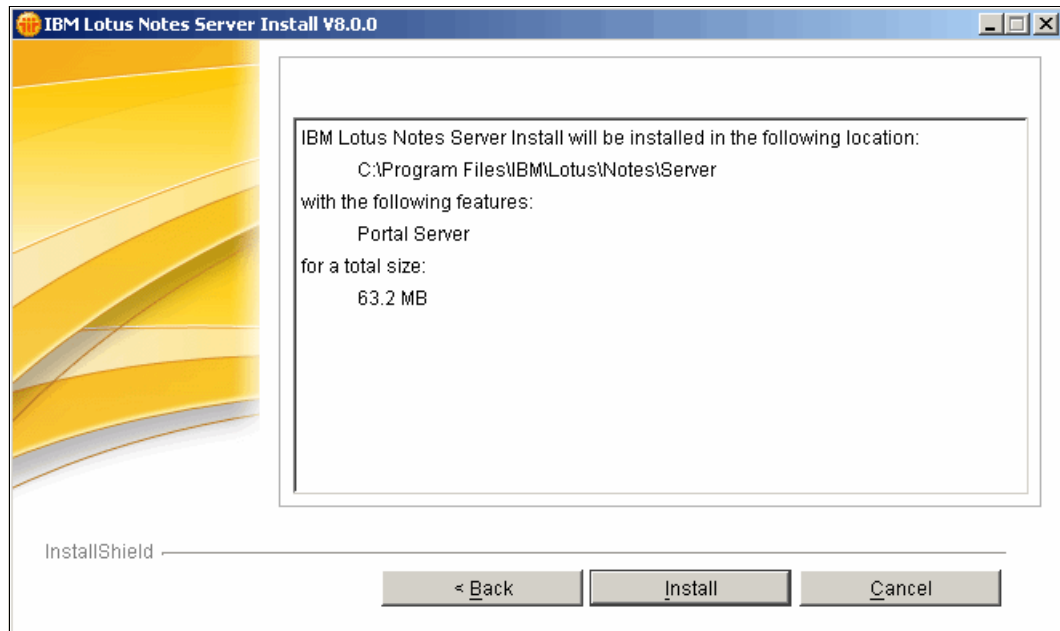


Figure 11-48 Package is ready to be installed

7. On successful installation of the package you will be prompted to restart your WebSphere Portal Server, as shown in Figure 11-49. Click **OK** to continue.

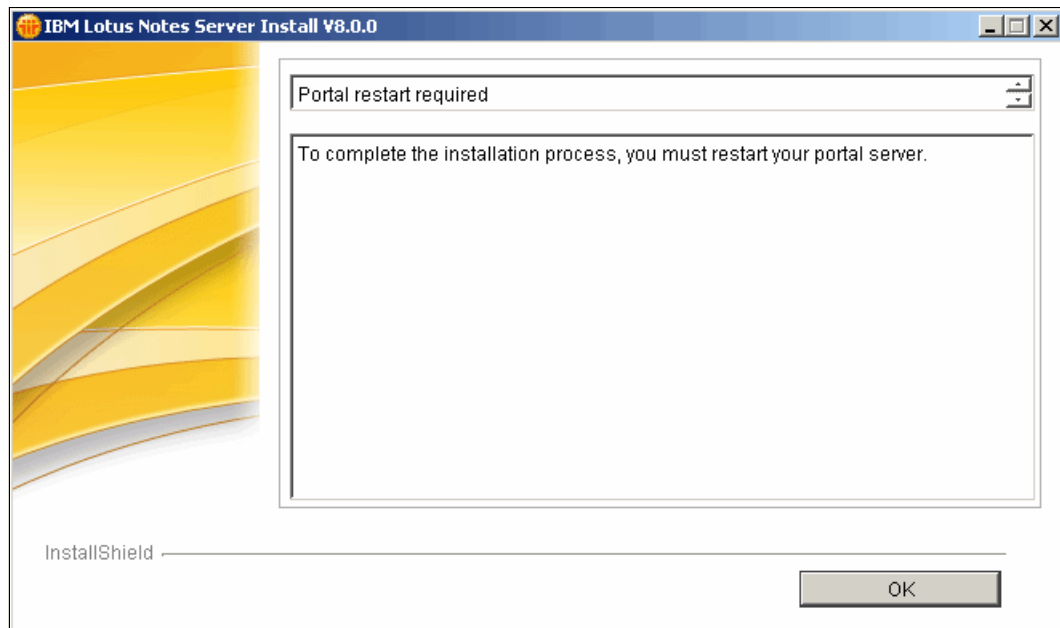


Figure 11-49 WebSphere Portal restart is required

8. Stop your WebSphere Portal Server as shown in Figure 11-50.

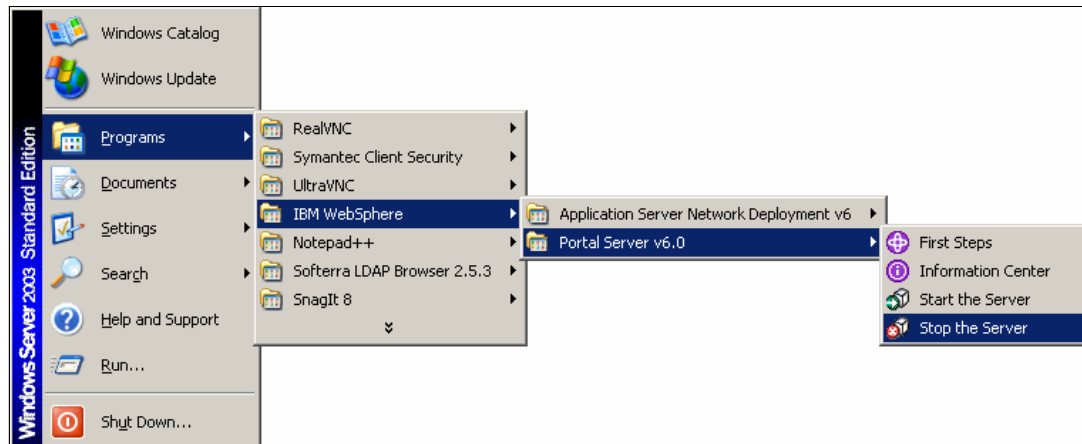


Figure 11-50 Stop WebSphere Portal Server

9. After the WebSphere Portal Server has stopped, restart your WebSphere Portal Server as shown Figure 11-51.

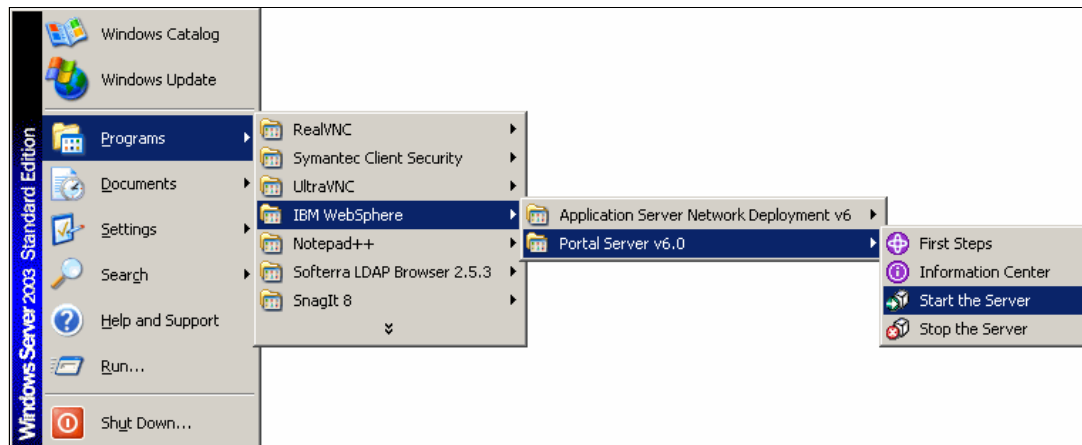
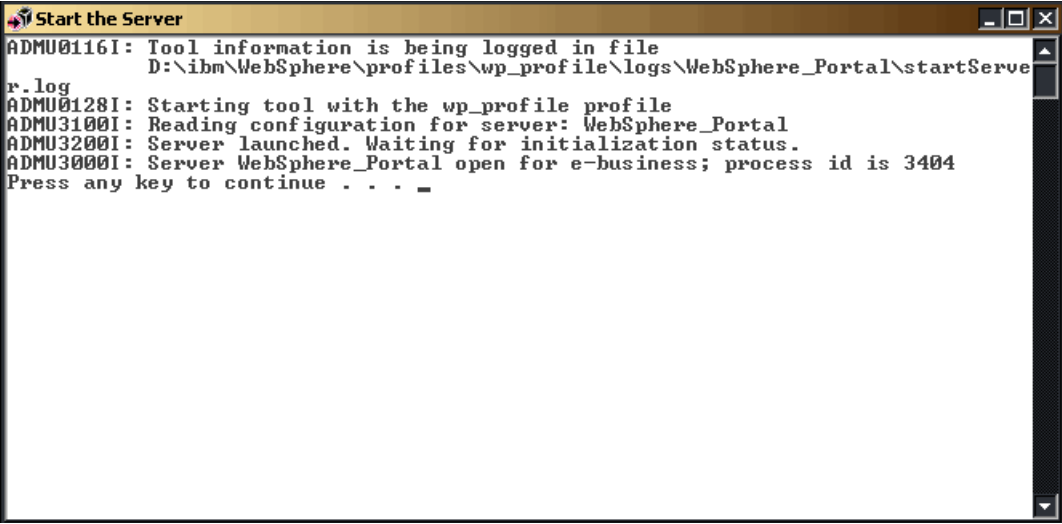


Figure 11-51 Start WebSphere Portal Server



Figure 11-52 shows that the WebSphere Portal Server has been successfully started.



```
Start the Server
ADMU0116I: Tool information is being logged in file
          D:\ibm\WebSphere\profiles\wp_profile\logs\WebSphere_Portal\startServe
r.log
ADMU0128I: Starting tool with the wp_profile profile
ADMU3100I: Reading configuration for server: WebSphere_Portal
ADMU3200I: Server launched. Waiting for initialization status.
ADMU3000I: Server WebSphere_Portal open for e-business; process id is 3404
Press any key to continue . . .
```

Figure 11-52 WebSphere Portal Server successfully started

Congratulations. Your SCI package on WebSphere Portal, which enables Notes 8 CAE to access applications and templates, has been successfully deployed.

You can launch the Notes client and click **Start** → **Portal Applications** (as shown in Figure 11-53) to view the list of WebSphere Portal Applications (as shown in Figure 11-54) that can be used for composite applications.

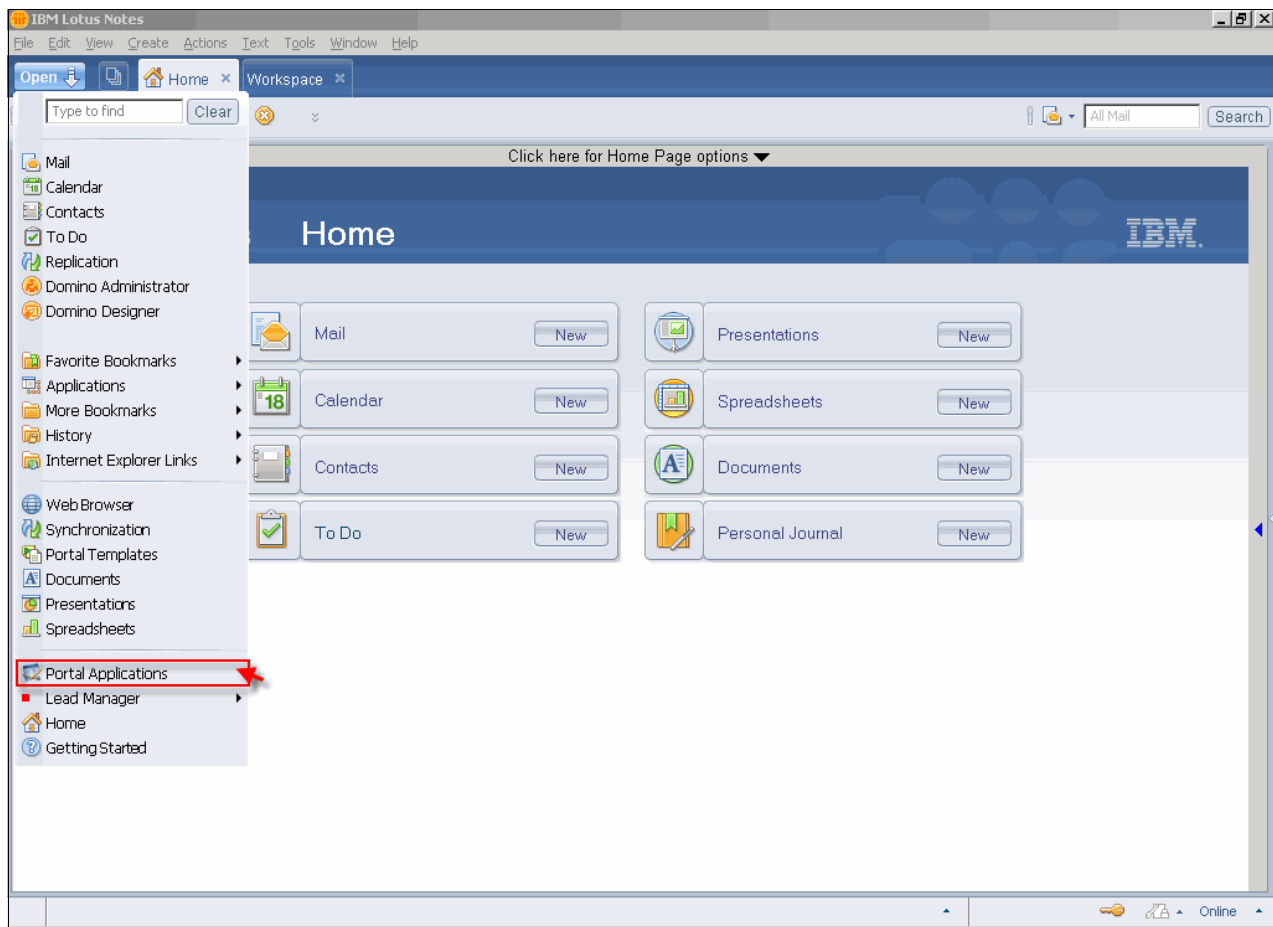


Figure 11-53 Launching the Notes client to test Portal applications

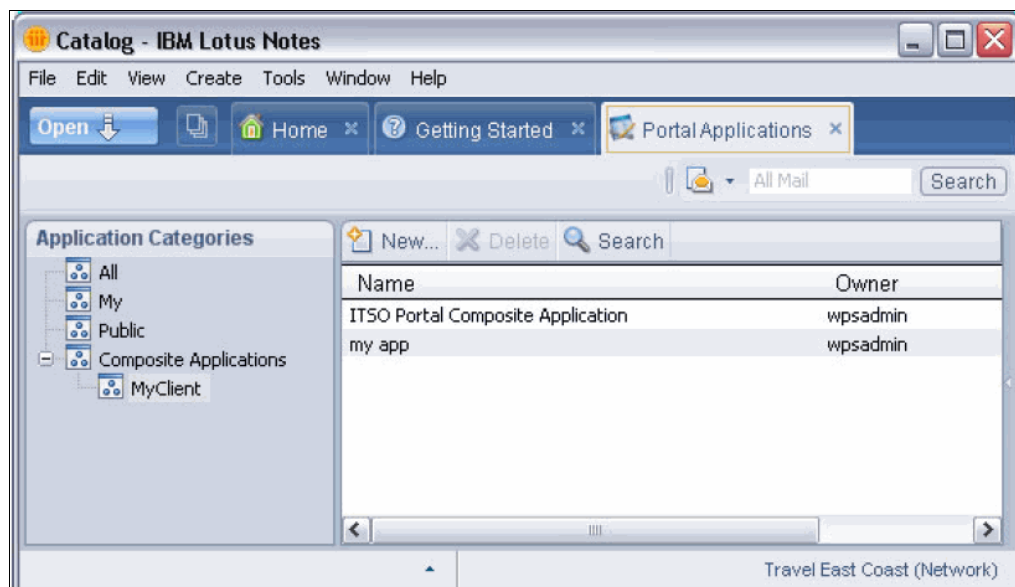


Figure 11-54 Portal applications shown in the Notes client for CAE

Click **Start** → **Portal Templates** (as shown in Figure 11-55), which shows you the available portal templates (shown in Figure 11-56) for use in CAE.

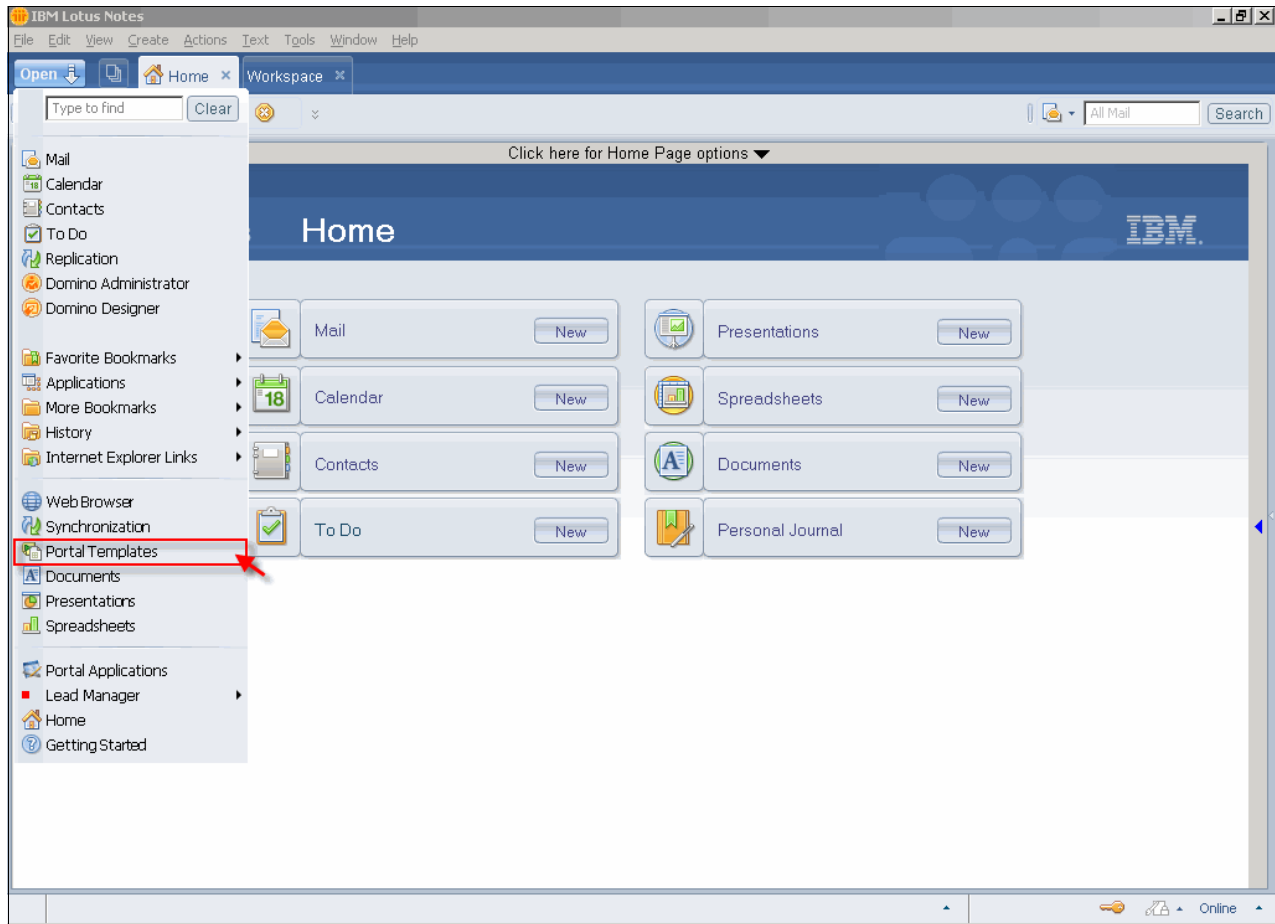


Figure 11-55 Launching the Notes client to test portal templates

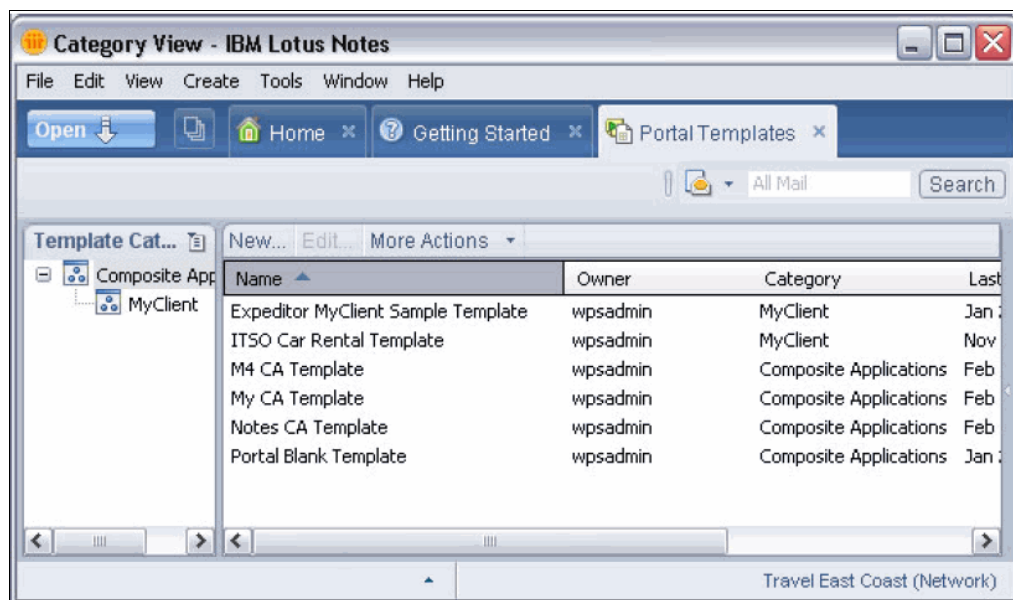


Figure 11-56 WebSphere portal templates shown in the Notes client for CAE use

**Important:** Additional application development steps would be required to achieve the functionality shown in Figure 11-54 on page 396 and Figure 11-56 on page 397. Refer to *Building Composite Applications*, SG24-7367, for more information.

## 11.6 Summary

WebSphere Portal and Lotus Notes 8 integration like the Domino Portal Integration wizard help the administrator to reduce the time taken to do configuration tasks or set up the infrastructure.

Federation and Web administration bookmark features allow for ubiquity between WebSphere Portal and Domino Administrator with both supporting federation to each other's native interface. This allows for ease of use and better UI for the administrator.

Using the Notes server client installer, you can reuse and deploy composite applications using WebSphere Portal, NSF, Eclipse, and Lotus Component Designer Components using the composite application editor in the Notes 8 client.



## New application development features

Notes and Domino 8 provide some exciting new abilities for the application developer, from new design elements, formula language commands, and LotusScript commands, to the new worlds of composite applications and DB2 integration. In this chapter we discuss the new and enhanced features available to developers.

This chapter describes the following:

- ▶ Design elements
- ▶ Formula language
- ▶ LotusScript
- ▶ Java
- ▶ Web applications and services
- ▶ Composite applications
- ▶ DB2 integration

## 12.1 Design elements

Notes and Domino 8 provide significant improvements to Notes database design elements. Most of the enhancements have been made to views, giving the developer increased flexibility in how she chooses to display data and actions. There have also been a few important enhancements made to assist the developer in creating applications with less server overhead.

### 12.1.1 Views

Notes and Domino 8 provide the developer with several additions and enhancements to views. Many allow the developer to make her application more visually appealing and enhance the users' overall usability experience, while one addition can aid in providing increased server performance.

#### Right-mouse menu

In Notes 7, application developers were given the ability to extend the functionality of the right-mouse menu to add view actions. These view actions would appear alongside the default right-mouse menu items such as cut, copy, paste, and so on. For example, ITSO Corp maintains an in-house developed help desk application. The application allows field support to modify tickets with a status of assigned, pending, and closed. Notes 7 allowed ITSO Corp to add these actions to the right-mouse menu, as shown Figure 12-1, providing quicker access to frequently used view actions.

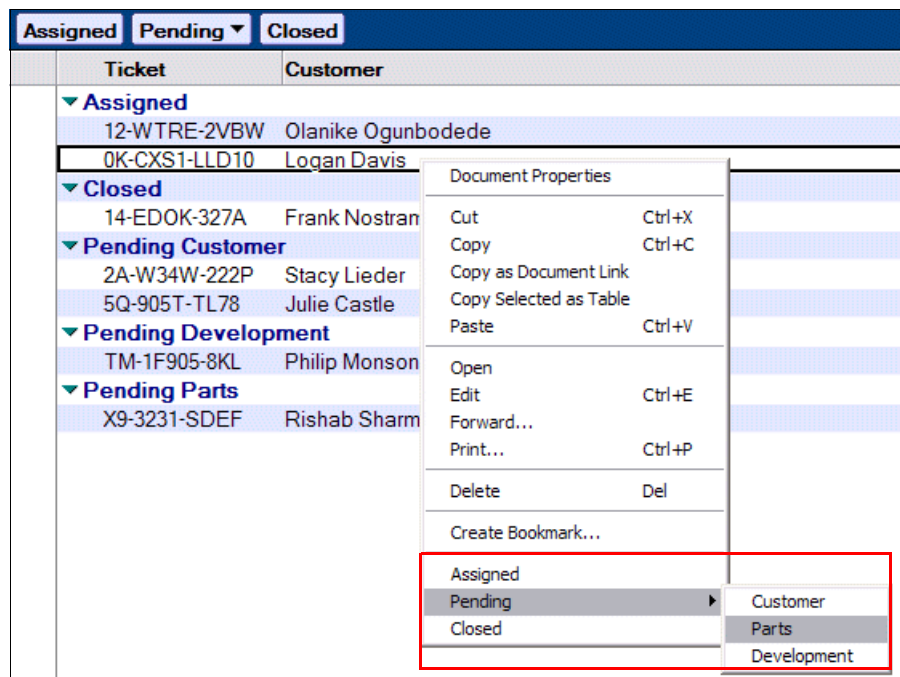


Figure 12-1 Right-mouse menu with default items

With Notes 8 you can now remove the default menu items. When coupled with the ability to add customized view actions this can help focus your users on the specific actions that you have made available. ITSO Corp has added this feature to its help desk application because many of the default menu items were not applicable to the application's use. Now field support only sees the assigned, pending, and closed actions, making the application's right-mouse menu less cluttered and easier to navigate, as shown in Figure 12-2.

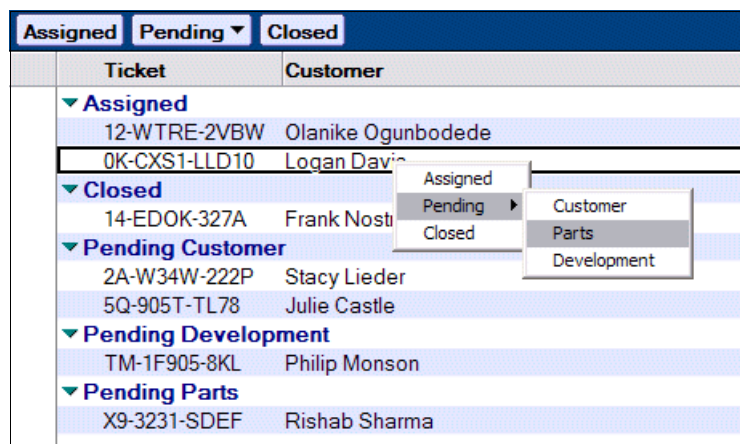


Figure 12-2 Right-mouse menu without default items

To remove default menu items from the right-click menu:

1. Open the view in the Domino Designer and bring up the action bar properties.
2. Uncheck the field labeled Show Default Items in the right-mouse menu, as shown in Figure 12-3.
3. Save and close the view.
4. Refresh the design of the application.

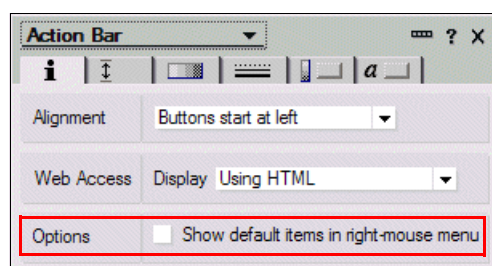


Figure 12-3 Action bar properties

If the view contains actions that have the Include in Right Mouse Button Menu item checked, then only those items display in the right-mouse menu. Otherwise, no right-mouse menu displays. Because this option is set at the view level, each view in your database can display different right-mouse menus as appropriate.

**Attention:** Note that in Figure 12-2 the activities menu items are visible. This is because configuring a view to suppress the standard right-click menu items does not affect the display of items related to installed plug-ins, such as activities.

## Bytes column format

Prior to Notes 8, if you wanted to display numbers in a column as kilobytes (1024 bytes), megabytes (1024 kilobytes), gigabytes (1024 megabytes), or terabytes (1024 gigabytes), you

had to write a formula for your column to handle the conversion from decimal number to a byte. Notes 8 does away with the need to create that customized formula by adding a new bytes format-type for number columns. This format displays values in kilobytes, megabytes, gigabytes, or terabytes where the number is followed by a K, M, G, or T, respectively.

In order to modify an existing number column or create a new one with this feature, open the column properties in the Domino Designer client and select the **Advanced Format** tab. The style must be set to **Number** and the number format must be set to **Bytes (K/M/G)**, as displayed in Figure 12-4.

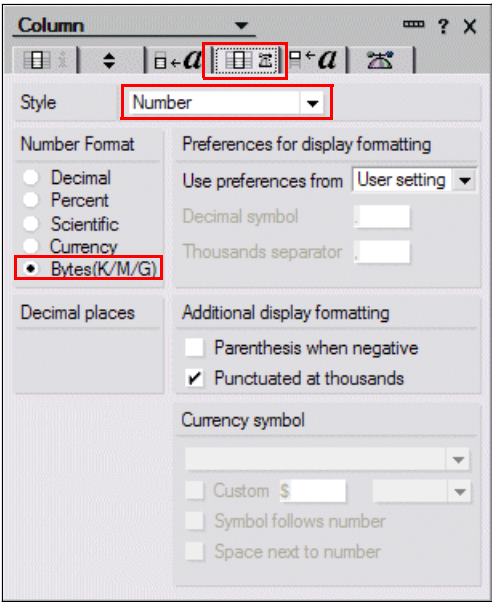


Figure 12-4 Byte number format column property

Decimal numbers are automatically converted to the most appropriate byte type of kilobyte, megabyte, gigabyte, or terabyte, depending on the size of the number being converted. For instance, you will not be able to choose to display all numbers as megabytes.

Numbers displayed in a bytes formatted column are rounded up or down as appropriate. For example, 0.01 rounds up to 1K. See Table 12-1 for examples of how numbers are displayed when the bytes number format is selected for a column.

Table 12-1 Examples of how numbers are displayed in a bytes-formatted column

Actual number	Number as displayed in column
0.00	0K
0.01	1K
1535.00	1K
1536.00	2K
1048576.00	1M
6828709128.336	6.4G
16762054765445.1	15.2T



**Tip:** Be aware that kilobytes display a bit differently from megabytes, gigabytes, and terabytes in a bytes-formatted number column. Kilobytes display as whole numbers and always round to the nearest whole number. For example, you might expect the number 1535 to display as 1.4K. However, it actually rounds down to the nearest whole number and displays as 1K. Likewise, the number 1536 rounds up to 2K.

Megabytes, gigabytes, and terabytes round to the nearest tenth.

### Extend to use available window width

In previous releases of ND you were able to configure the view properties to extend the last column to fill the entire remaining width of the window. With Notes and Domino 8 you can now control which column extends to fill the window width, as shown with the Ticket column in Figure 12-5.

Assigned Pending Closed	
Ticket	Customer
▼ Assigned	
12-WTRE-2VBW	Olanike Ogunbode
0K-CXS1-LLD10	Corey Davis
▼ Closed	
14-EDOK-327A	Frank Nostrame
▼ Pending Customer	
2A-W34W-222P	Stacy Lieder
5Q-905T-TL78	Julie Castle
▼ Pending Development	
TM-1F905-8KL	Philip Monson
▼ Pending Parts	
X9-3231-SDEF	Rishab Sharma

Figure 12-5 Ticket column extended to use width of window

To accomplish this, open the column properties of the column that you would like to extend. From the Advanced tab check the box labeled **Extend to Use Available Window Width**, as shown in Figure 12-6.

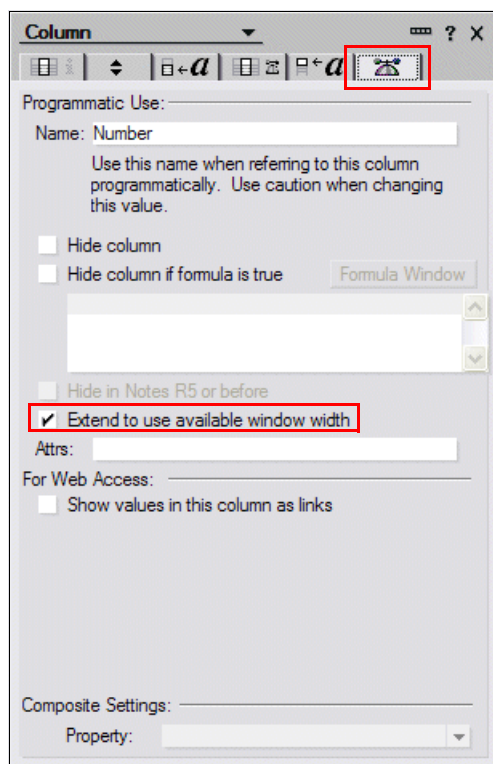


Figure 12-6 Extend to use available window width column properties

**Important:** The Extend Last Column to Window Width setting in the view properties overrides the extend setting in the column properties. Therefore, if a column in a view is set to extend to window width and the view is set to extend the last column, the last column is extended.

### Deferred sort index creation

User-sorted columns in views and folders can increase server load during the view indexing process. To lessen this strain on the server, Notes and Domino 8 allow you to defer the creation of the view index for user-sortable columns. As soon as a user chooses to sort the view by one of these user-sortable columns, the view index is updated on-the-fly. Because you may have some columns that are sorted infrequently, you can choose to enable index deferment only for those specific columns, thus allowing the frequently used sortable columns

to be indexed by the server as normal. This avoids causing a performance lag for frequently used user-sortable columns, while at the same time decreasing server overhead by deferring the index of user-sortable columns that are rarely used. The deferment option is available in the column properties Sorting tab only when the **Click on Column Header to Sort** option is enabled, as shown in Figure 12-7.

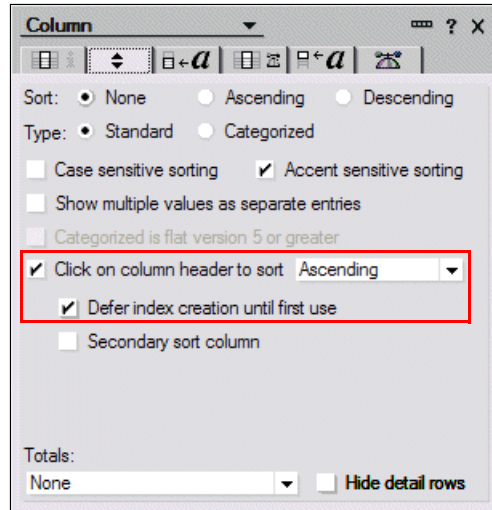


Figure 12-7 *Defer index creation until first use*

**Tip:** Indices created by deferred sort obey the index discard rules as set in the view properties. The default is to discard inactive indices after 45 days.

To manually discard the indices for deferred sort columns only, the following command can be issued at the Domino console:

```
load updall <dbname> -r -g
```

## 12.1.2 Forms

In Notes and Domino 8 there is a new form design element that allows thumbnails to be added to rich text lite fields.

## Thumbnails

With Notes and Domino 8 you can now include thumbnails of photo attachments in your documents. A great example of this new feature is found in the contact form of the Notes 8 contacts application, as shown in Figure 12-8.



**Betty Zechman**  
Renovations — Marketing Administrative Assistance  
BettyZechman@renovations.com  
1-301-555-1117

**E-mail**  
Business: BettyZechman@renovations.com

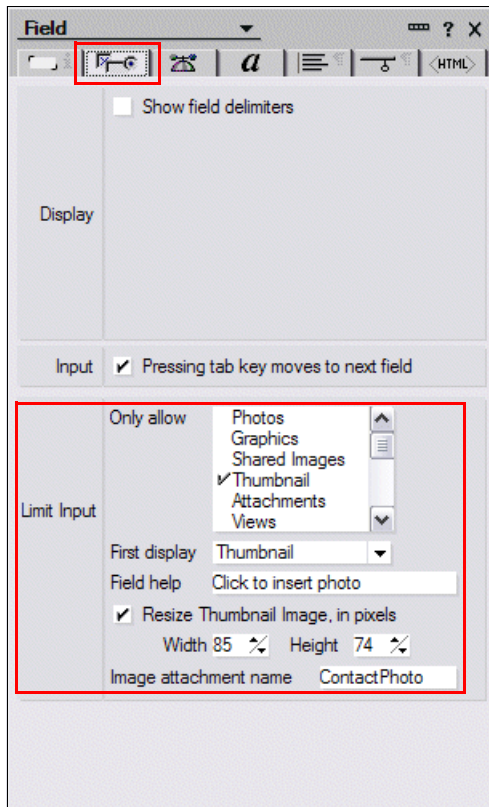
**Phone Numbers**  
Business: 1-301-555-1117  
Fax: 1-301-555-9466

**Other Information**  
Messaging ID: Betty Zechman/Renovations  
Department: Marketing & Merchandising Worldwide

Figure 12-8 Thumbnail photo from contact form in the Notes 8 contacts application

The thumbnail photo of Betty is displayed in a thumbnail rich text lite field. To add this to your own application you will need to create a rich text lite field in the desired form:

1. In the field properties Control tab, select the **Thumbnail** option in the limit input's Only Allow field. Figure 12-9 shows the photo field properties from the contact form that was displayed in Figure 12-8.



Field

Display

Input ☒ Pressing tab key moves to next field

Limit Input

Only allow: Photos, Graphics, Shared Images, ☒ Thumbnail, Attachments, Views

First display: Thumbnail

Field help: Click to insert photo

☒ Resize Thumbnail Image, in pixels  
Width 85 Height 74

Image attachment name: ContactPhoto

Figure 12-9 Photo field properties showing the Thumbnail option

2. (Optional) By checking the **Resize Thumbnail Image in Pixels** check box you can control the size of the thumbnail when it is first imported into the document. If not checked, the image is imported at its full size.

**Note:** By applying a consistent size to user-supplied graphics and photos you can enhance your application's user interface.

3. The Image Attachment Name field is used to assign the imported image a file name. Even though the imported image already has a file name outside of Notes, inside Notes the imported image is saved as an attachment in a \$FILE field. Because of this, the Rich Text Lite thumbnail field needs to know the attachment name in order to reference it. This is done by renaming the imported photos with a file name that you supply in the Image Attachment Name field. In the contact application's contact form, the imported images are renamed to ContactPhoto, as shown in Figure 12-9 on page 406. You can use any file name that you wish.

**Important:** A thumbnail Rich Text Lite field may only contain thumbnails. Checking the Thumbnail option automatically unchecks all other options.

### 12.1.3 Agents

In Domino 8, agents can be set to run at Domino server startup.

#### When server starts runtime trigger

With the new runtime trigger *when server starts*, agents can now be configured to run only when the server starts. This is significant in that it does not allow agents with this trigger to run at any other time, including times when Agent manager is restarted. To configure an agent to only run at server start, you must set the agent properties Runtime Trigger to On Event and then select **When Server Starts** from the drop-down menu, as shown in Figure 12-10.

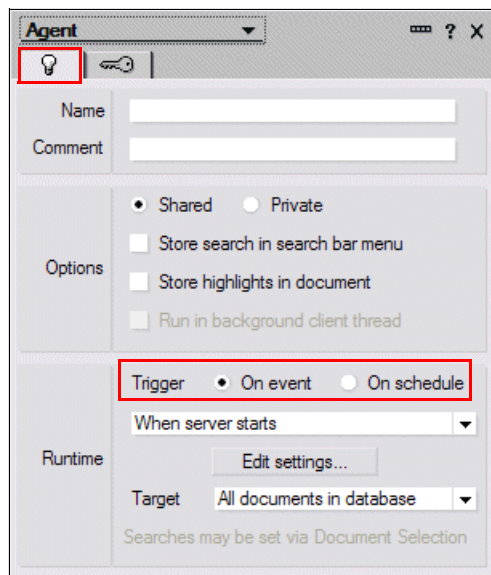


Figure 12-10 When server starts agent runtime trigger

## 12.2 Formula language

Over the past several releases of Notes and Domino, the formula language has made great strides in becoming a more robust language. Notes and Domino 8 is no exception, with several additions made to the formula language. For a more complete and detailed description of how to use these improvements refer to the Domino Designer 8 Help.

### **@URLQueryString**

This function has been enhanced to now compose dynamic DB2 query views.

### **@GetViewInfo([IsViewFiltered])**

This new attribute to the @GetViewInfo function can be used to determine whether @SetViewInfo has been used to filter documents from a view.

### **@Command([CopySelectedAsTable])**

This is a new function that can be used to copy selected entries as a table.

### **@Command([OpenInNewWindow])**

This is a new function that can be used to open a document into a new window.

### **@Command([CalendarFormat])**

This function has been modified to provide two work week and one work month formats.

## 12.3 LotusScript

The powerful programming language that is at the heart of Notes and Domino applications, LotusScript, has seen a number of enhancements and significant additions in Notes and Domino 8.

### 12.3.1 Statements

The modified statements to LotusScript in Notes and Domino 8 are listed below. For a more complete and detailed description of how to use these statements refer to the Domino Designer 8 Help.

#### **Date**

While this statement is not new, note that it is not valid on systems using the UNIX or Macintosh OS X operating system.

#### **Time**

Just as with the date statement, the time statement is not valid on systems using the UNIX or Macintosh OS X operating system.

#### **Write**

The write statement no longer has a limit to its line length. Previously this limit was 255 characters.

## 12.3.2 Classes, methods, properties, and events

The new and modified classes, methods, properties, and events to LotusScript are listed below. For a more complete and detailed description of how to use these refer to the Domino Designer 8 Help.

### **NotesAdministrationProcess class**

#### ***AddInternetCertificateToUser method***

This new method can be used to add a request into the administration requests database to add an Internet certificate to a user ID.

### **NotesDatabase class**

#### ***GetAllReadDocuments method***

This new method can be used to create a NoteCollection of all read documents in a database. You can specify whether to get all read documents of the current ID in use or a specified user name.

#### ***GetAllUnreadDocuments method***

This new method can be used to create a NoteCollection of all unread documents in a database. The developer can specify whether to get all unread documents of the current ID in use or a specified user name.

#### ***GetProfileDocCollection method***

This method has been modified so that now the name of the profile document is optional. By not supplying a profile document name, all profile documents are returned in a DocumentCollection.

#### ***UnprocessedDocuments property***

This property has been modified so that it can now run before new mail arrives and after new mail arrives.

### **NotesDirectory class**

This is a new class used to represent directories on a Domino server or local computer. The directories are associated with NotesDirectoryNavigators. For a list of all properties and methods associated with this class refer to the Domino Designer 8 Help.

### **NotesDirectoryNavigator class**

This is a new class used to perform lookups associated with a NotesDirectory. For a list of all properties and methods associated with this class refer to the Domino Designer 8 Help.

### **NotesDocument class**

#### ***MarkRead method***

This new method marks the document as read by the current ID in use or a specific user name.

#### ***MarkUnread method***

This new method marks the document as unread by the current ID in use or a specific user name.

## **NotesDocumentCollection**

### ***Clone method***

This new method returns a copy of the document collection in a NotesDocumentCollection object.

### ***Contains method***

This new method indicates whether the document collection contains a NotesDocument or all of the documents in a NotesDocumentCollection passed to it.

### ***Intersect method***

This new method removes any documents in the collection that are not contained in a secondary collection.

### ***MarkAllRead method***

This new method marks all the documents in the collection as read by the current ID in use or a specific user name.

### ***MarkAllUnread method***

This new method marks all the documents in the collection as unread by the current ID in use or a specific user name.

### ***Merge method***

This new method adds to the collection those documents that are not contained in the collection but that are contained by a secondary collection.

### ***Subtract method***

This new method removes documents from the collection that are also contained by a secondary collection.

## **NotesDXLExporter class**

### ***AttachmentOmittedText property***

This new property can be used to insert text were an <attachmentref> has been omitted.

### ***MIMEOption property***

This new property can be used to specify whether MIME items are exported as a <mime> element or <rawitemdata> element contained within an <item> element.

### ***OLEObjectOmittedText property***

This new property can be used to insert text were an <objectref> has been omitted.

### ***OmitItemNames property***

This new property can be used to specify a list of item names to be omitted from the DXL export.

### ***OmitMiscFileObject property***

This new property can be used to omit miscellaneous file objects that are found in documents.

### ***OmitOLEObjects property***

This new property can be used to omit OLE objects that are found in documents.



***OmitRichTextAttachments property***

This new property can be used to omit richtext attachments that are found in documents.

***OmitRichTextPictures property***

This new property can be used to omit richtext graphics that are found in documents.

***PictureOmittedText property***

This new property can be used to insert text where a <picture> has been omitted.

***RestrictToItemNames property***

This new property can be used to specify which item names from a document should be included in the exported DXL.

***RichTextOption property***

This new property can be used to specify whether richtext items are exported as a <richtext> element or <rawitemdata> element.

***UncompressAttachments property***

This new property can be used to specify whether to uncompress Huffman or LZ1 compressed attachments that occur within the exported DXL.

**NotesDXLImporter class*****CompileLotusScript property***

This new property can be used to specify whether to compile any LotusScript code that is contained within the imported DXL.

**NotesProperty class**

This new class is used to represent a single property from a composite application. For a list of all properties and methods associated with this class refer to the Domino Designer 8 Help.

**NotesPropertyBroker class**

This new class is used to handle communications between composite application components. For a list of all properties and methods associated with this class refer to the Domino Designer 8 Help.

**NotesSession class*****GetDirectory method***

This new method is used to create a NotesDirectory object.

***GetPropertyBroker method***

This new method is used to populate the NotesPropertyBroker object with the session's property broker.

**NotesUIScheduler class*****DisplayCheckboxes property***

This new property can be used to determine whether the scheduler display includes checkboxes to toggle participants inclusion.

## **NotesUIView class**

### ***Onselect event***

This new event occurs in a view when a document is highlighted, selected, or deselected.

## **NotesUIWorkspace class**

### ***OutlineReload method***

This new method can be used to reload the outline.

## **NotesView class**

### ***CreateViewNavFromAllRead method***

This new method can be used to create a view navigator based on all read documents in a view. Read documents can be determined for the current ID in use or a specific user name.

### ***CreateViewNavFromAllUnread method***

This new method can be used to create a view navigator based on all unread documents in a view. Unread documents can be determined for the current ID in use or a specific user name.

### ***GetAllReadEntries method***

This new method can be used to populate a NotesViewEntryCollection with all read documents in a view. Read documents can be determined for the current ID in use or for a specific user name.

### ***GetAllUnreadEntries method***

This new method can be used to populate a NotesViewEntryCollection with all unread documents in a view. Unread documents can be determined for the current ID in use or for a specific user name.

### ***MarkAllRead method***

This new method can be used to mark all documents in the view as read by the current ID in use or a by specific user name.

### ***MarkAllUnread method***

This new method can be used to mark all documents in the view as unread by the current ID in use or a by specific user name.

## **NotesViewEntryCollection**

### ***Clone method***

This new method returns a copy of the NotesViewEntryCollection in a new NotesViewEntryCollection object.

### ***Contains method***

This new method indicates whether a NotesViewEntryCollection contains the NotesDocument or all of the documents in a NotesViewEntryCollection passed to it.

### ***Intersect method***

This new method removes any documents in the collection that are not contained in a secondary collection.

### ***MarkAllRead method***

This new method marks all the documents in the collection as read by the current ID in use or by a specific user name.

***MarkAllUnread method***

This new method marks all the documents in the collection as unread by the current ID in use or a by specific user name.

***Merge method***

This new method adds to the collection those documents that are not contained in the collection but that are contained by a secondary collection.

***Subtract method***

This new method removes documents from the collection that are also contained by a secondary collection.

**NotesViewNavigator class*****MarkAllRead method***

This new method can be used to mark all documents in a view navigator as read.

***MarkAllUnread method***

This new method can be used to mark all documents in a view navigator as unread.

### 12.3.3 DXL

Domino eXtensible Markup Language (XML), or DXL, is a powerful method used to represent Domino data in XML format. DXL can be used to move data outside of the Domino framework in order to allow non-Domino applications to access and possibly manipulate the data, thus leveraging your Domino infrastructure and databases in a whole new way.

Since its introduction in Domino 6, several new enhancements have been made to DXL, and they can all be found in 12.3.2, “Classes, methods, properties, and events” on page 409, and 12.4.2, “Java/CORBA” on page 414.

## 12.4 Java

As with LotusScript, Notes and Domino 8 provide improvements to Java such as support for Java 5 and enhancements to the Java/CORBA API.

### 12.4.1 Java 5 support

Notes and Domino 8 bring with it the new IBM Java SE technology. The benefits of this new technology include:

- ▶ Use of Java 5 syntax
- ▶ Improved garbage collector
- ▶ Increased reliability
- ▶ Just-In-Time (JIT) compiler

**Note:** For more information about Java 5 support, refer to the Domino Design 8 Help.

## 12.4.2 Java/CORBA

The new and modified classes, methods, properties, and events to Java/CORBA are listed below. For a more complete and detailed description of how to use these refer to the Domino Designer 8 Help.

### **AdministrationProcess class**

#### ***addInternetCertificateToUser method***

This new method can be used to add a request to the Administration Requests database to add an Internet certificate to a user ID.

### **AgentContext class**

#### ***UnprocessedDocuments property***

This property has been modified so that it can now run before new mail arrives and after new mail arrives.

### **Database class**

#### ***getAllReadDocuments method***

This new method can be used to create a document collection of all read documents in a database. The developer can specify whether to get all read documents of the current ID in use or a specified user name.

#### ***getAllUnreadDocuments method***

This new method can be used to create a document collection of all unread documents in a database. The developer can specify whether to get all unread documents of the current ID in use or a specified user name.

### **Document class**

#### ***markRead method***

This new method marks the document as read by the current ID in use or a by specific user name.

#### ***markUnread method***

This new method marks the document as unread by the current ID in use or a by specific user name.

### **DocumentCollection class**

#### ***markAllRead method***

This new method marks all documents in a collection as read by the current ID in use or by a specific user name.

#### ***markAllUnread method***

This new method marks all documents in a collection as unread by the current ID in use or by a specific user name.

### **DXLExporter class**

#### ***attachmentOmittedText property***

This new property can be used to insert text where an <attachmentref> has been omitted.

***MIMEOption property***

This new property can be used to specify whether MIME items are exported as a <mime> element or <rawitemdata> element contained within an <item> element.

***OLEObjectOmittedText property***

This new property can be used to insert text where an <objectref> has been omitted.

***omitItemNames property***

This new property can be used to specify a list of item names to be omitted from the DXL export.

***omitMiscFileObjects property***

This new property can be used to omit miscellaneous file objects that are found in documents.

***omitOLEObjects property***

This new property can be used to omit OLE objects that are found in documents.

***omitRichTextAttachments property***

This new property can be used to omit richtext attachments that are found in documents.

***omitRichTextPictures property***

This new property can be used to omit richtext graphics that are found in documents.

***pictureOmittedText property***

This new property can be used to insert text where a <picture> has been omitted.

***restrictToItemNames property***

This new property can be used to specify which item names from a document should be included in the exported DXL.

***richTextOption property***

This new property can be used to specify whether richtext items are exported as a <richtext> element or a <rawitemdata> element.

***DXLImporter class******compileLotusScript property***

This new property can be used to specify whether to compile any LotusScript code that is contained within the imported DXL.

***View class******createViewNavFromAllRead method***

This new method can be used to create a view navigator based on all read documents in a view. Read documents can be determined for the current ID in use or for a specific user name.

***createViewNavFromAllUnread method***

This new method can be used to create a view navigator based on all unread documents in a view. Unread documents can be determined for the current ID in use or a specific user name.

***getAllReadEntries method***

This new method can be used to populate a view entry collection with all read documents in a view. Read documents can be determined for the current ID in use or for a specific user name.

***getAllUnreadEntries method***

This new method can be used to populate a view entry collection with all unread documents in a view. Unread documents can be determined for the current ID in use or for a specific user name.

***markAllRead method***

This new method can be used to mark all documents in the view as read by the current ID in use or by a specific user name.

***markAllUnread method***

This new method can be used to mark all documents in the view as unread by the current ID in use or by a specific user name.

**ViewEntryCollection*****markAllRead method***

This new method marks all the documents in the collection as read by the current ID in use or by a specific user name.

***markAllUnread method***

This new method marks all the documents in the collection as unread by the current ID in use or by a specific user name.

**ViewNavigator*****markAllRead method***

This new method can be used to mark all documents in a view navigator as read.

***markAllUnread method***

This new method can be used to mark all documents in a view navigator as unread.

## 12.5 Web applications and services

The realm of Web applications and Web services has seen a number of useful enhancements in Notes and Domino 8.

### 12.5.1 Web applications

The main enhancements to Web applications in Notes and Domino 8 revolve around the URL, which is the entryptoint into all Web applications. The Universal Resource Locator or Uniform Resource Locator, most commonly referred to as the URL, has seen improvements in the ReadViewEntries command and the Request\_Connect\_### CGI variable.

**ReadViewEntries**

The ReadViewEntries command is used in the URL to access data from the view in XML format. This data is returned without appearance attributes such as fonts or HTML. ReadViewEntries has been given the following new optional arguments.

**Endview=1**

When this argument is added to ReadViewEntries, the last document returned will be the last document in the view. For example:

```
http://la.itso.com/names.nsf/DDC087A8ACE170F8852562F30070226400000196?ReadViewEntries&Endview=1
```

**Keytype=text|time|number**

The Keytype argument, which is used to specify the type of StartKey, could previously be set to text or time, but now in Notes and Domino 8 it can be set to number, allowing the StartKey to be treated as a numerical value. For example:

```
http://la.itso.com/names.nsf/DDC087A8ACE170F8852562F30070226400000196?ReadViewEntries&StartKey=312&Keytype=number
```

**NavigateReverse=1**

This new argument allows you to navigate the rows of the view in reverse order. For example:

```
http://la.itso.com/names.nsf/DDC087A8ACE170F8852562F30070226400000196?ReadViewEntries&NavigateReverse=1
```

**Outputformat=JSON**

The view being read will be displayed in JavaScript Object Notation (JSON) format. For example:

```
http://la.itso.com/names.nsf/DDC087A8ACE170F8852562F30070226400000196?ReadViewEntries&Outputformat=JSON
```

**CGI variables**

One new CGI variable, Request\_Content\_*nnn*, has been added. This new variable is used when the HTTP Post request exceeds 64 K. The first 64 K will be sent in Request\_Content\_000, the second 64 K in Request\_Content\_001, and so forth, until all data has been sent.

## 12.5.2 Web services

A Web service is a standard form of communication between software applications, even if those applications are running on different computing platforms. Web services are part of an overall approach to building systems and applications based on the concept of a repeatable business task or *service*, also known as a service-oriented architecture (SOA). This type of architecture allows applications to share data via the invocation of each other's services. Web services are not new to Domino 8. In fact, Domino 7 introduced this form of software communication by including the ability to host Web services natively. Notes and Domino 8 take Web services to the next logical step by providing the ability to consume Web services.

Providing Web service consumer support in Notes and Domino 8 allows developers the option to use, or *consume*, Web service components rather than re-writing code that may already exist to preform the function they need. For instance, using the ITSO Help Desk application from above as an example, the developer may want to provide the contact information of the caller with the ticket details. If a non-Notes application contains the contact information and is hosting a Web service that allows contact data to be queried, the developer of the ITSO Help Desk would only need to call this Web service to retrieve the contact data, rather than writing all new code to interface with the non-Notes data.

Unlike Web server hosting, Web service consumability does not require a Web service design element. Instead, a script library is created, either using LotusScript or Java, to call the Web service.

When creating this script library you will need:

- ▶ Access to the Web services Description Language, WSDL) file that is associated with the Web service. The WSDL file, which contains the various attributes and method of the Web service in XML format, should be easily obtained, as it is the interface into the Web service.
- ▶ To create individual script libraries for each Web service to be consumed.
- ▶ To use the script libraries in your application to call the Web services.

**Note:** Refer to “Creating Web Service Consumers” in the Domino Designer 8 Help for more details.

## 12.6 Composite applications

Composite applications are a loose coupling of Eclipse components, Lotus Component Designer components, and Notes applications (known within composite applications as NSF components) encompassed within a single panel to create a unified view of disparate data. Utilizing this powerful approach to displaying data can yield interconnections that may have previously been difficult to uncover when the components were disconnected and displayed within their own independent panels.

Not unlike Web services, composite applications are an extension of a service-oriented architecture. A composite application is a set of related and integrated services that support a business processes built on an SOA.

A composite application can be thought of as a window in your home that is divided into multiple panes of glass. Each pane can possibly stand on its own and show you a portion of your yard, but when put together with other panes of glass within the framework of the window you are able to see the entire yard. A composite application is simply the framework. Each pane of glass represents a *component* in the composite application.

Each component in the composite application can be, and usually is, a fully functional stand-alone application. When acting as composite application components, they are loosely coupled together with other stand-alone applications through a process known as *wiring*. The wiring of one component to another is the process that transforms individual components into a composite application. Via the wiring process, when the state of one component is changed, any other component that is wired to it will also change, if appropriate, to display data that is related. Composite applications only contain the wiring and display information that tie the component together. The components themselves remain as independent entities that can still be used alone or in other composite applications.

As a Notes developer trying to grasp the concept of composite applications, it may help to compare it to something you already know: framesets. In Notes, a frameset allows you to split a Notes application window into multiple frames, where each frame displays a different element of the application. Frames are, in essence, wired together so that a change in state in one frame causes an appropriate change in state in an associated frame. Framesets are commonly used for navigational purposes where the frameset is divided into two frames. There is usually a navigational frame on the left that displays the view navigation or outline, and a view frame on the right that displays the currently selected view. Selecting a different



view in the navigation frame changes the view displayed in the view frame. That said, composite applications give you greater flexibility and functionality than framesets, such as the ability to wire an NSF component to an Eclipse component. Furthermore, framesets are tightly coupled together, whereas composite applications are not. And if you think you have never used a composite application before, think again. If you have the Notes 8 client installed with the Notes 8 mail template, that is not a frameset you are looking at, it is a composite application. Figure 12-11 shows a Notes 8 mail database in the composite application editor.

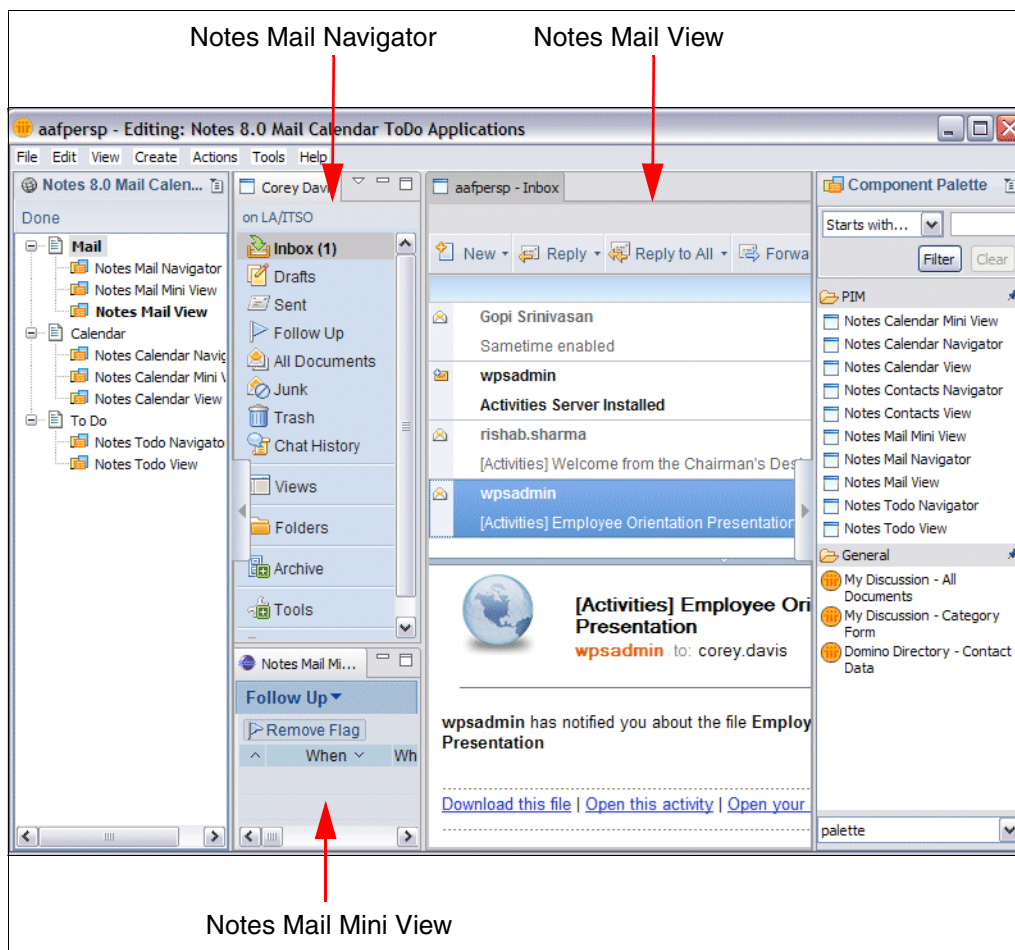


Figure 12-11 Notes 8 mail application in the composite application editor

Composite applications can contain any combination of NSF and Eclipse components, including those created in the Lotus Component Designer. For instance, a composite application does not need to contain an NSF component wired to an Eclipse component, but rather could be two or more NSF components wired, even if those components are from the same Notes application. Furthermore, composite applications can be hosted on a Domino server or a WebSphere server, or can even be hosted locally.

To create a composite application on a Domino server you need rights sufficient to create databases on the server.

**Tip:** Composite applications have no server requirements to function. Neither a WebSphere Portal Server nor a Domino server is necessary. Composite applications can be created, saved, and opened locally.

**Important:** Composite applications require the Lotus Expeditor framework and therefore cannot be opened in the Notes 8 Basic client or any pre-Notes 8 client.

Composite applications provide you with the ability to tap into previously unreachable resources within your IT infrastructure to begin creating business applications. Coupled with Notes and Domino's strength in collaboration, you can begin to leverage your entire infrastructure in a more dynamic and compelling manner.

## 12.6.1 Component communication

Communication is powered by the wiring of components. Without communication, components remain stagnant. With communication, components are lively and responsive to the changes occurring within other components. So just how do components have these important chats with each other? To begin with, components can both talk and listen. Components that talk are known as publishers, while components that listen are known as consumers. A component can be both a publisher and a consumer. Because components are intended to be reusable, communication between them is relatively simplistic.

Figure 12-12 depicts the wiring between three Notes databases, each with its own component:

- ▶ Database 1 contains a component that is a publisher. When it publishes data, the property broker ensures that database 2, which has a consumer component wired to database 1, receives the data.
- ▶ The consumer component in database 2 takes action on the data by publishing new data. The property broker ensures that the consumer component in database 3, which is wired to the publisher component in database 2, receives the data.
- ▶ Database 3 contains a consumer component that takes action on the data received from database 2.

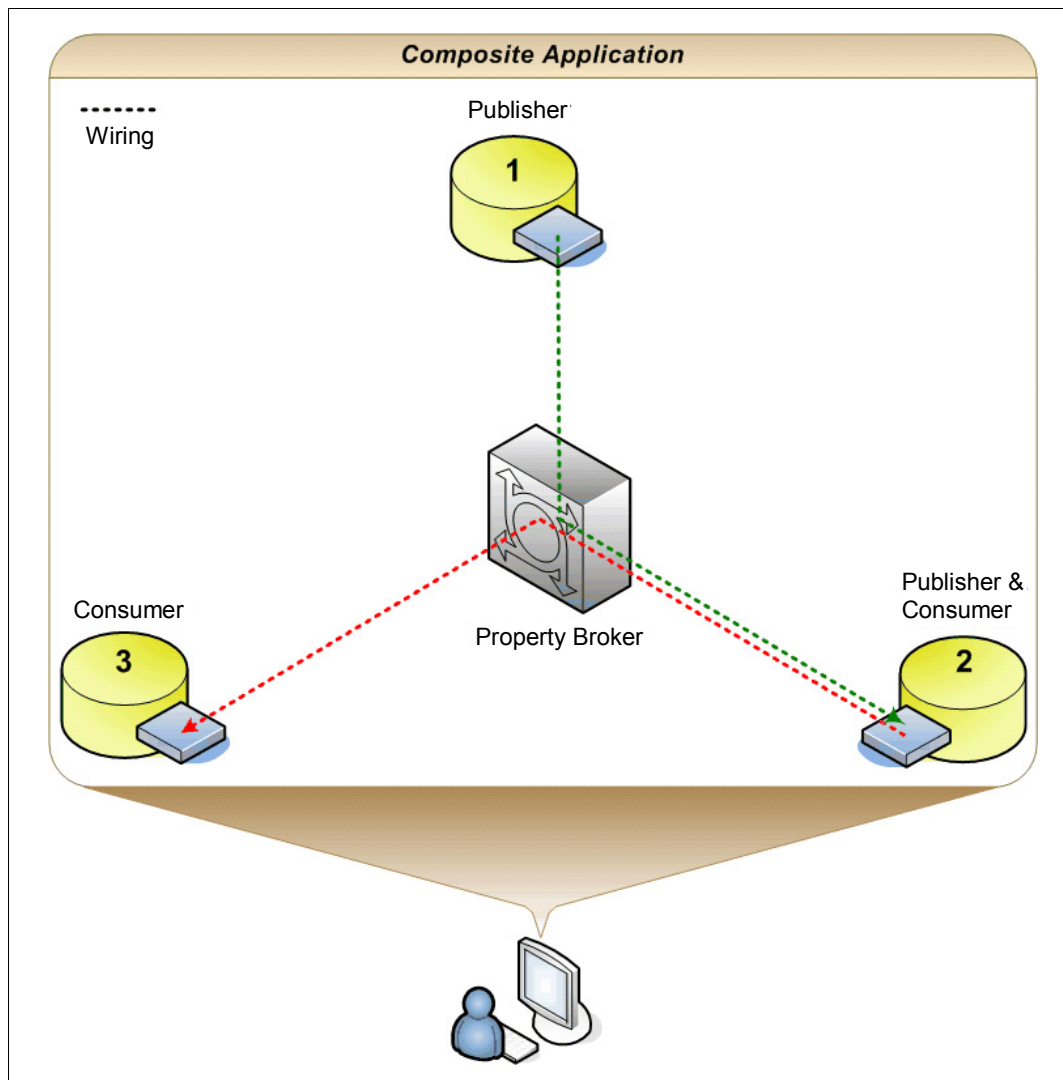


Figure 12-12 Component communication

The creation of components can be done in total isolation, meaning that knowledge of what the consuming components will do with the data is irrelevant to the creation of a component that publishes data. You could be asked to turn certain views of your application into a publishing component without ever knowing, or needing to know, who will be consuming that published data or what they will be doing with it.

For example, the ITSO Corp Help Desk application was architected to intentionally exclude the caller's contact data. All ITSO employee contact data is contained within the Domino directory. Therefore, it was considered that adding it to the help desk application would be a duplication of data and effort. However, this design has led to the field support engineers spending more time everyday looking up contact data than they really should. Typically, an engineer will open the help desk application, find his assigned tickets, note down the caller's name, and then switch to the Domino directory to find the caller's contact data. With composite applications you can make this process easier and faster for them by creating a composite application that links the trouble tickets to the caller's contact information in the Domino directory.

Retrofitting existing applications to make use of composite applications is really rather simple. The steps to accomplish this are outlined in 12.6.2, "Creating a composite application" on page 423, but for now let us look at the task at a higher level. First, the help desk application developer creates a component that publishes a trouble ticket's user name when a trouble ticket is selected in the Tickets by Status view. Next, the Domino directory is modified to listen for a user's name and return that user's contact information.

The composite application developer may or may not have been involved with creating these components, but this is irrelevant, as his only concern is that these components exist. At this point, his task is actually quite simple. Simple enough, in fact, that a user with sufficient knowledge and rights can create the composite application herself.

The following is a high-level overview of the steps to bring these two components together into a single, unified application:

1. Start by creating a new composite application using the blank composite application template.
2. Utilizing the composite application editor, bring the two components into the composite application.
3. Wire the components together thus creating a communication path between the components.

The wiring process loosely couples the publishing component to the consuming component. Therefore, when the help desk application component publishes a user name, the Domino directory component consumes it and displays the user's contact information in its specified area of the window.

Components speak in their own language based on *properties*, *actions*, and *datatypes* that are defined in a Web Services Description Language (WSDL) file. When a component publishes data, it is the IBM Lotus Notes/Expeditor property broker that ensures that the appropriate components consume the data so that action can be taken. The property broker does not intervene, it simply ensures that communication is taking place. When the publishing component publishes data, the property broker takes this data and hands it off to the wired consumer component. The consumer component is then responsible for acting on the data. These are three separate, loosely coupled, and distinct processes.

The WSDL files used with composite applications are different from the ones used for Web services. These WSDL files are used to declare and define the properties, actions, and datatypes used by components to communicate. The property broker editor feature of the Domino Designer 8 client provides developers with an interface for defining properties, actions, and datatypes without requiring WSDL knowledge.

The component publishing and consuming process is created with standard Domino programming languages, which minimize the learning requirements for developers who are already familiar with Domino programming. For example, NSF components can be

programmed in LotusScript or Java utilizing the new NotesProperty and NotesPropertyBroker classes.

## 12.6.2 Creating a composite application

In this section, we use the ITSO Corp environment to describe how existing applications can be used within a composite application.

The two applications that we modify are the ITSO help desk application and the Domino directory. Both are standard NSF databases that utilize forms, views, LotusScript, formula language, and all the other usual design elements that make up a Notes application. Users can still open and use each database exactly as they did prior to the modifications we make. We simply add an additional layer of functionality for these existing applications to use when displaying data. The underlying structure, code, or functionality of the application itself does not change.

Our goal is to provide a quick, easy method for ITSO field support engineers to find the contact information associated with their trouble tickets. The end result will match Figure 12-13.

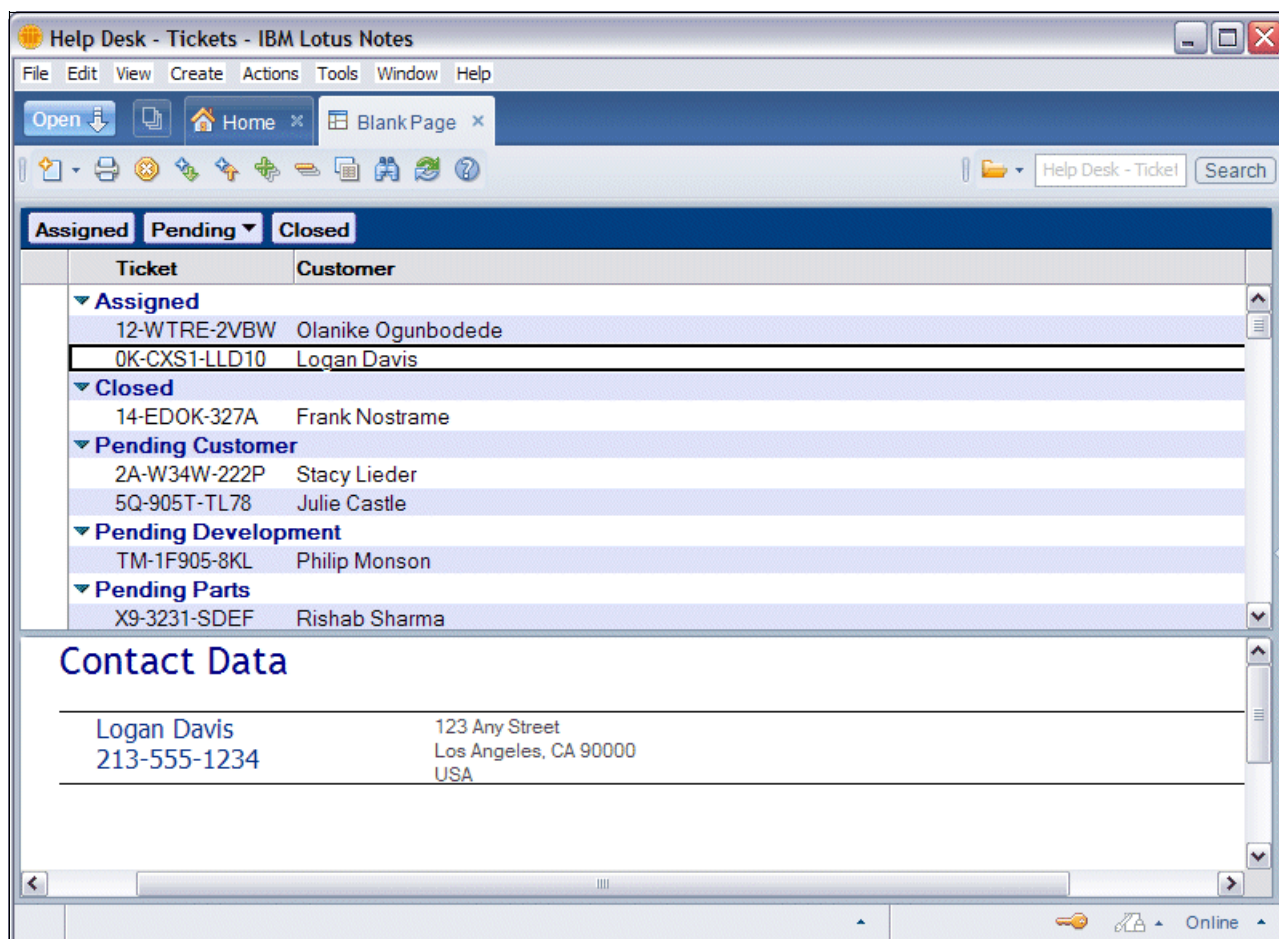


Figure 12-13 ITSO field support help desk composite application

**Note:** The following example is intended to provide an understanding of the component creation process. Other considerations such as window real estate, Eclipse components, or more advanced techniques are not discussed. For a full understanding of composite applications, refer to *Building Composite Applications*, SG24-7367:

<http://www.redbooks.ibm.com/redpieces/abstracts/sg247367.html>

## Creating a publisher component

Our first step is to create the component that publishes data. A consensus of how ITSO Corp field engineers perform their daily functions revealed that most engineers look in the Tickets by Status view on a regular basis. Using this knowledge it has been decided that we will use this view to make our publisher component. The goal is to create a component that publishes the user name associated with the selected trouble ticket. The published name will be used later in “Creating a consumer component” on page 431.

### Create a new WSDL file

We begin the process by creating the wiring properties. This process automatically creates the WSDL file for the publisher component of the help desk application.

1. We start by opening the help desk application in the Domino Designer 8 client.
2. We select the **Composite Applications** → **Wiring Properties** view, as shown in Figure 12-14.

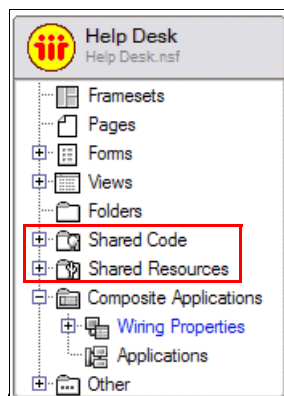


Figure 12-14 Wiring properties view

3. We click the **New Wiring Properties** button, as shown in Figure 12-15.

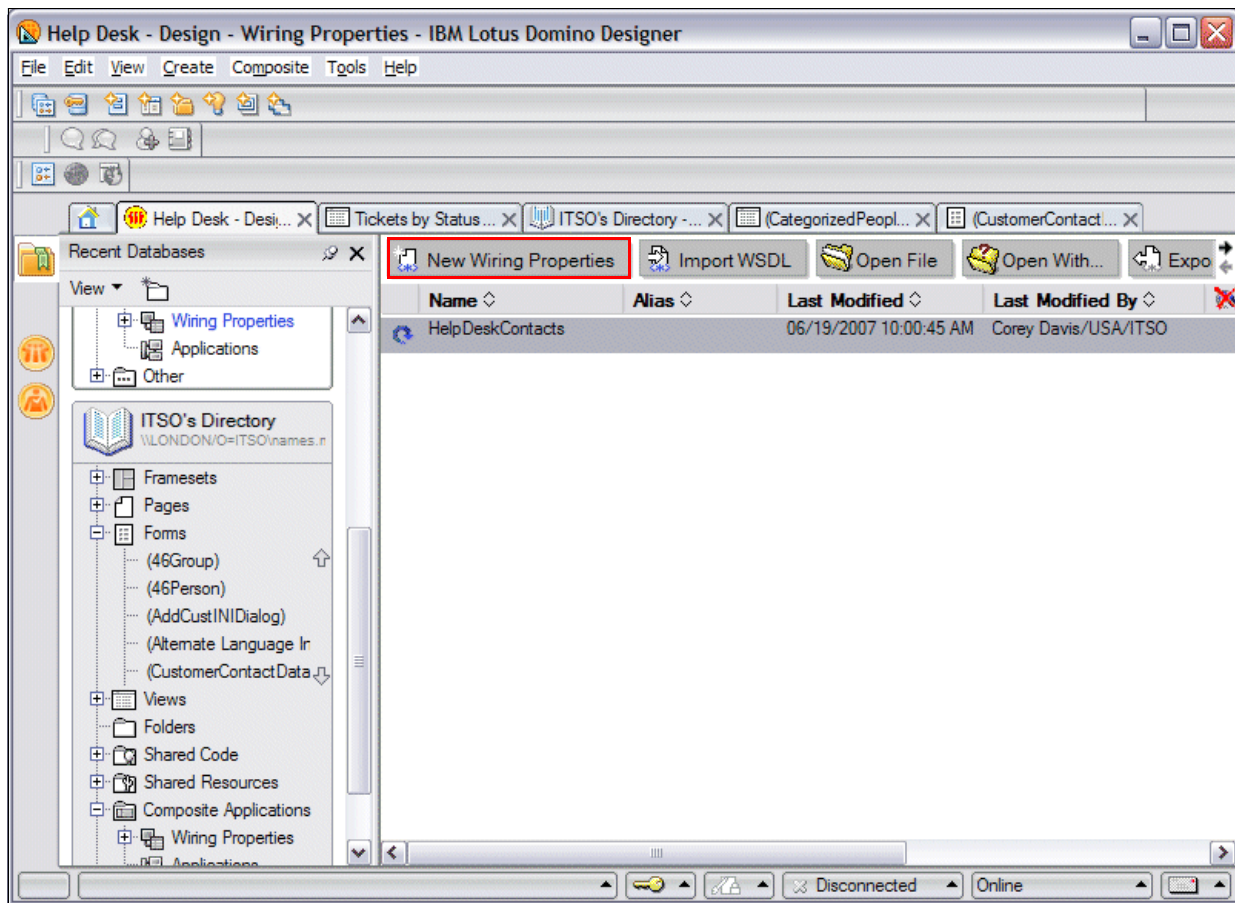


Figure 12-15 New Wiring Properties button

4. In the dialog we give the property the name HelpDeskContacts, as shown in Figure 12-16, and click **OK**.

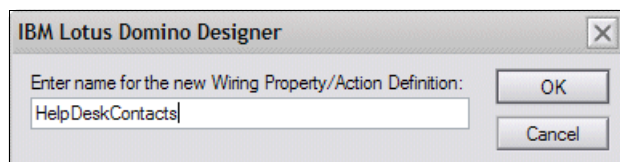


Figure 12-16 Naming the wiring property

The WSDL file has now been created and is embedded in the HelpDeskContacts wiring properties design element.

**Important:** Because the WSDL file is embedded in the database itself, NSF-based composite applications do not require provisioning in order to become available to the user, but rather are accessible just as any other Notes database.



### Create the property

Now that the WSDL file has been created, we must assign some properties and actions to it. Without properties and actions, the WSDL file has no functionality.

1. We now select the new wiring property created in “Create a new WSDL file” on page 424 and click the **Open File** button, as shown in Figure 12-17. This launches the property broker editor (PBE).

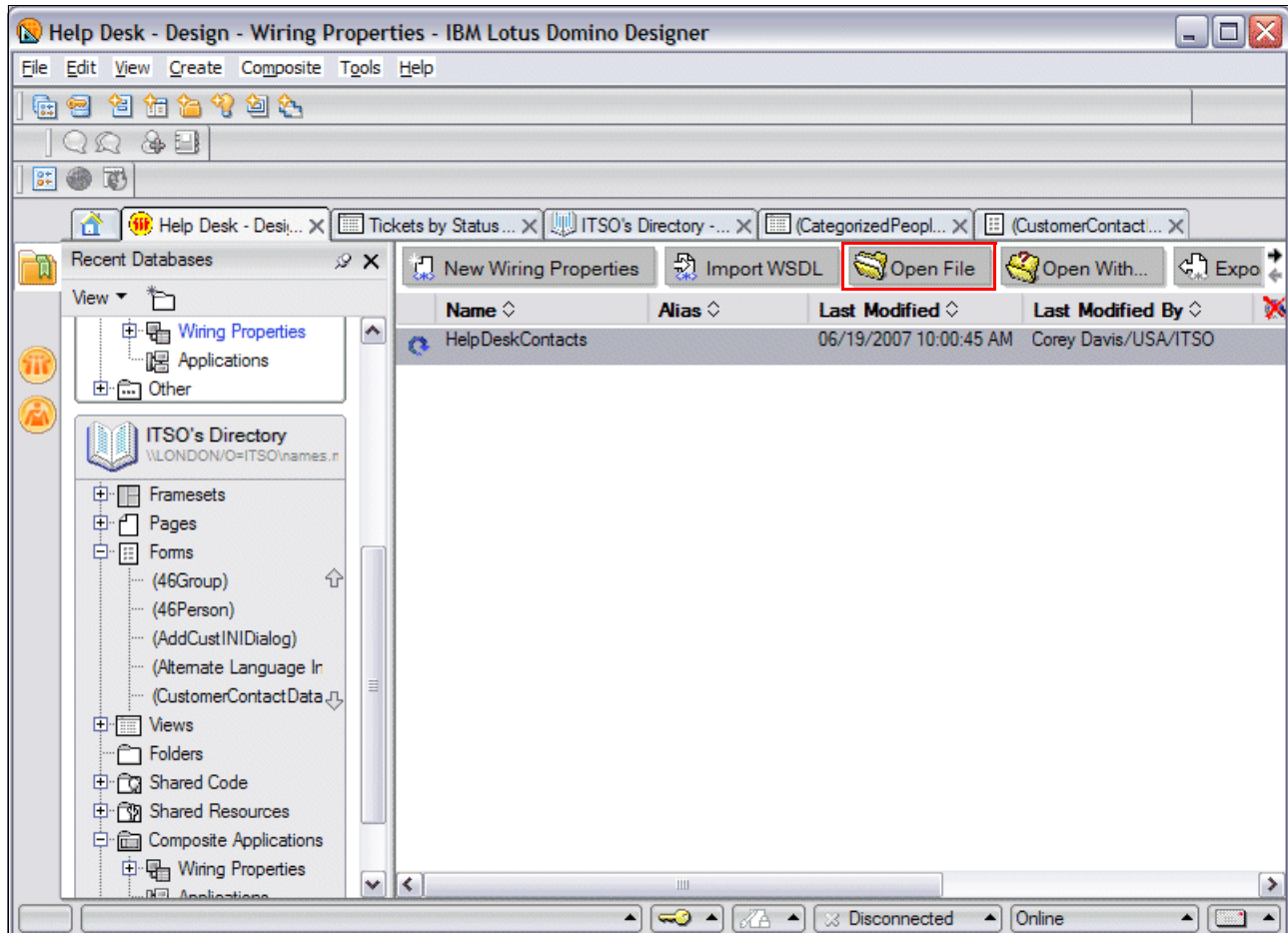


Figure 12-17 Open the wiring properties WSDL file



2. Our WSDL file is now opened in the PBE. Our first task is to create a new property from within the Property tab. As you can see in Figure 12-18, our property has been named HelpDeskContacts and its type is string. We also gave it a title and description.

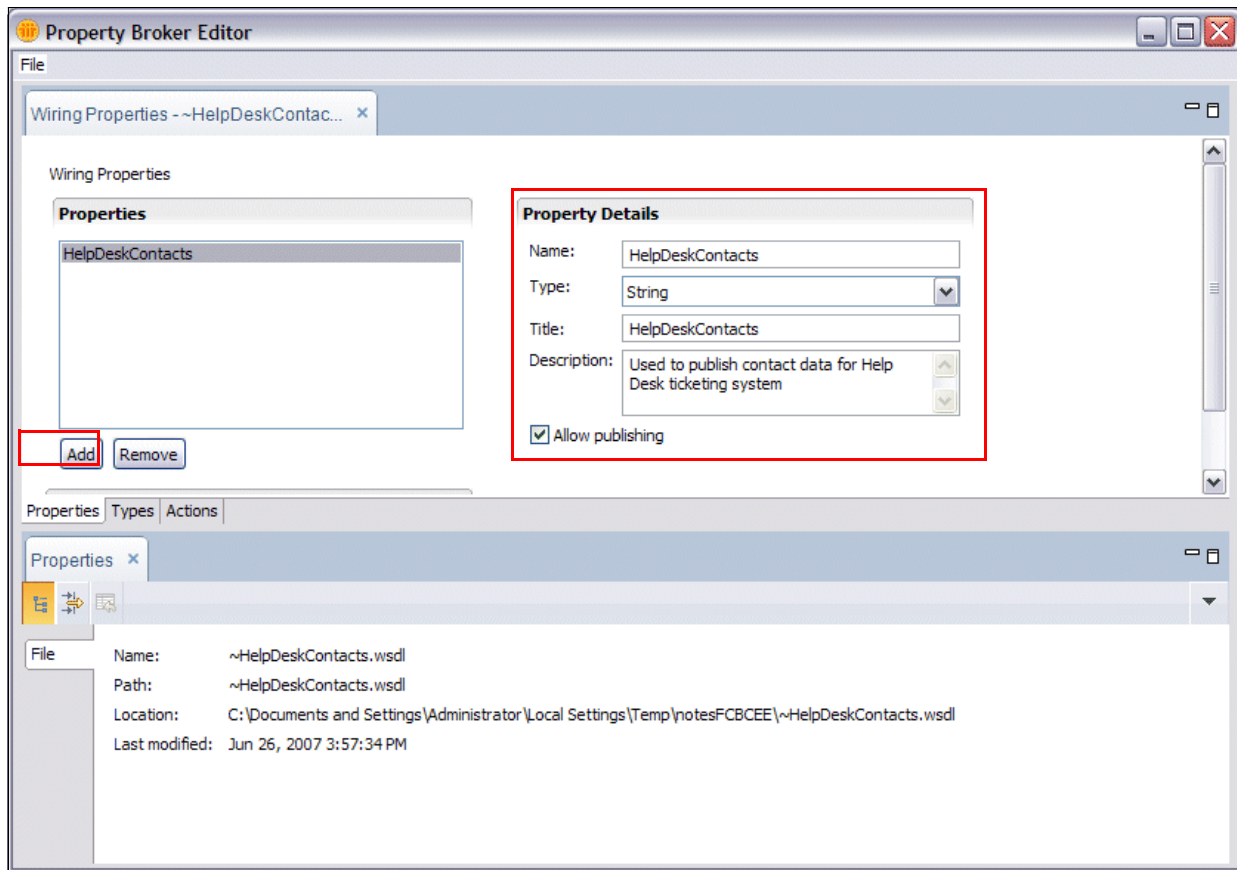


Figure 12-18 Property broker editor: new property

3. We now create an action that will make use of our new property. This is handled in the Actions tab, as shown in Figure 12-19. We name our action PublishContactsAction with an action input parameter based on our HelpDeskContacts property that was created in step 2 on page 427.

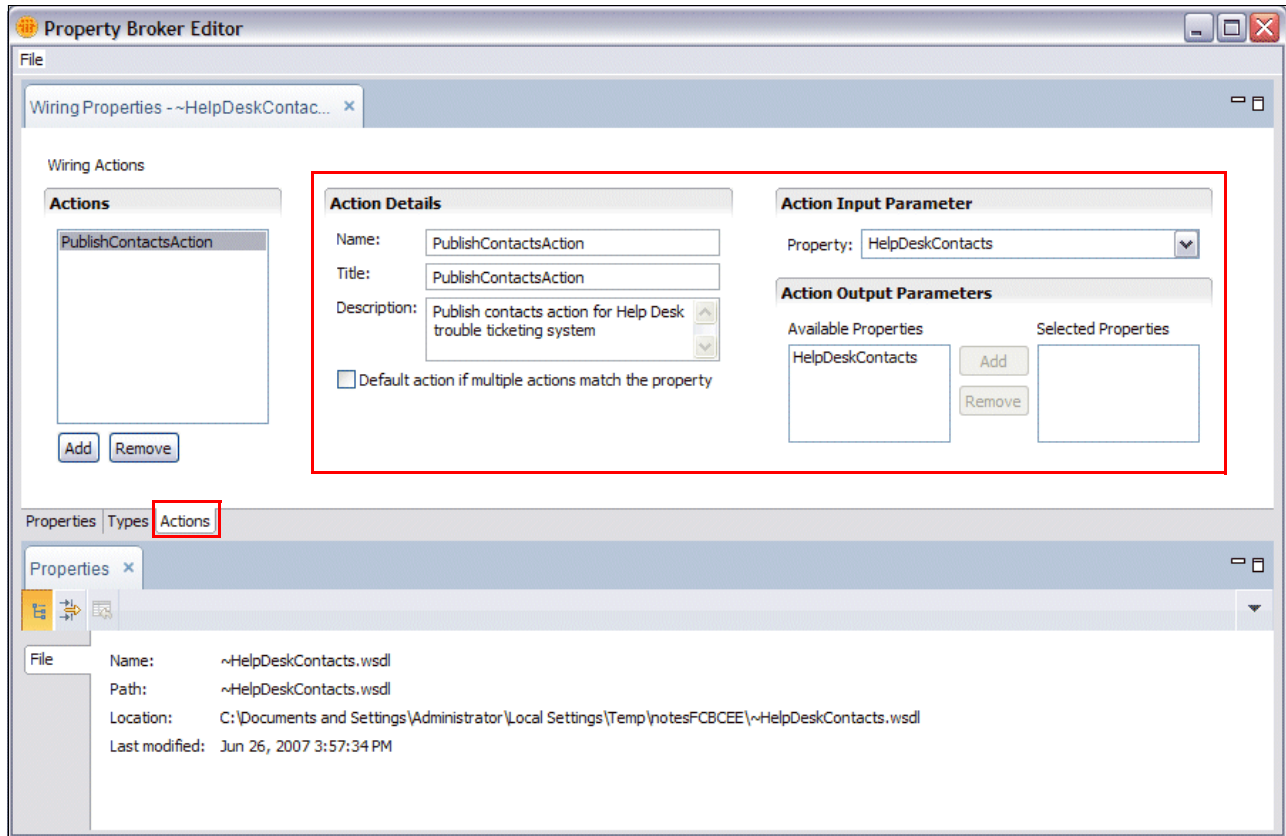


Figure 12-19 Property broker editor: new action

4. After saving our changes and exiting the PBE, we now have a WSDL file that we can use to create an NSF component.

**Note:** The action name, title, and description entered into the property broker editor also display in the composite application editor.

## Modifying the Notes database

You will notice that in Figure 12-19 on page 428 at the bottom of the window there is a Location field with a lengthy file path. At the end of the file path there is mention of the file ~HelpDeskContacts.wsdl. When we launched the PBE in step 1 on page 426, our embedded WSDL file, HelpDeskContacts.wsdl, was detached from the wiring properties design element and placed in a temporary location on our local hard drive. It is this file that we were working within the PBE. We must now refresh the embedded file in the wiring properties design element with the modified WSDL file located on our hard drive.

**Attention:** Do not forget to refresh your wiring properties after modifying and saving the WSDL file in the property broker editor, otherwise the changes will not be available to your component.

1. With modifications to the WSDL file complete (refer to “Create the property” on page 426), we go back to the **Composite Applications** → **Wiring Properties** view in the Domino Designer 8 client so that we can refresh the embedded WSDL file with the modified file located on our hard drive.
2. We select our **HelpDeskContact** wiring property and click the **Refresh** button, as shown in Figure 12-20.

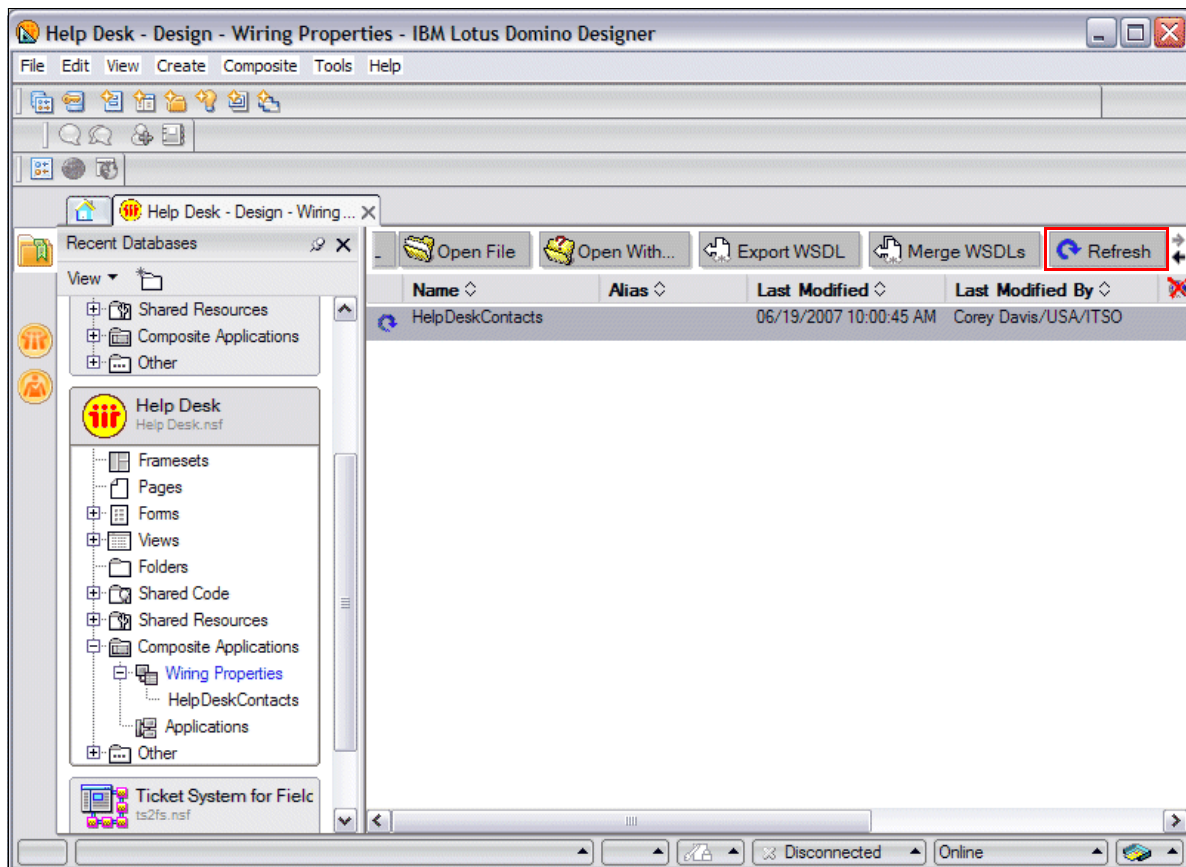


Figure 12-20 Refresh WSDL file in the wiring properties design element

**Tip:** Notice that in Figure 12-20 the wiring properties is aware that the detached WSDL file has been opened through the property broker editor and indicates that a refresh may be necessary by the display of the blue, rounded refresh arrow to the left of the wiring properties design element name.

3. Clicking **Refresh** causes the Open dialogue box to display, as shown in Figure 12-21. Within the dialogue box we navigate to our WSDL file and click the **Select** button. With the embedded WSDL file in our wiring properties design element now updated, we are ready to modify our application to begin publishing data.

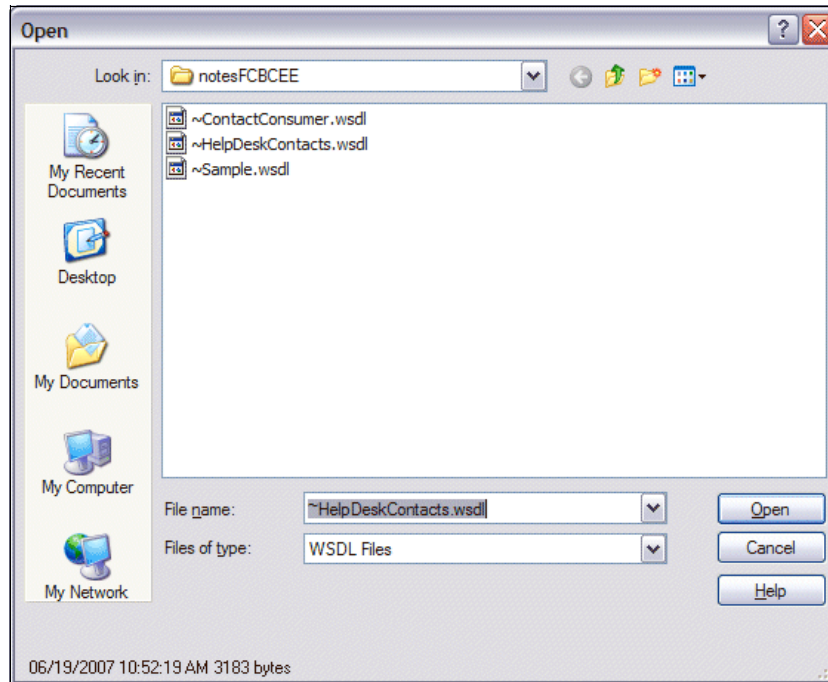


Figure 12-21 Refresh WSDL open dialogue box

4. We have decided that we want the Ticket By Status view to publish the customer name. Within the designer client, we open the Tickets By Status view.

5. This view already contains a Customer column, but it displays the customer's common name for better readability by the user. We know that in large environments, using the common name is not the best choice for programmatic usage due to the high possibility of ambiguous names. Therefore, we decide to add a hidden column to display the customer name in an abbreviated hierarchical format. You can see this new column in Figure 12-22.

**Note:** Using a fully canonical name as opposed to abbreviated canonical name would work just as well.

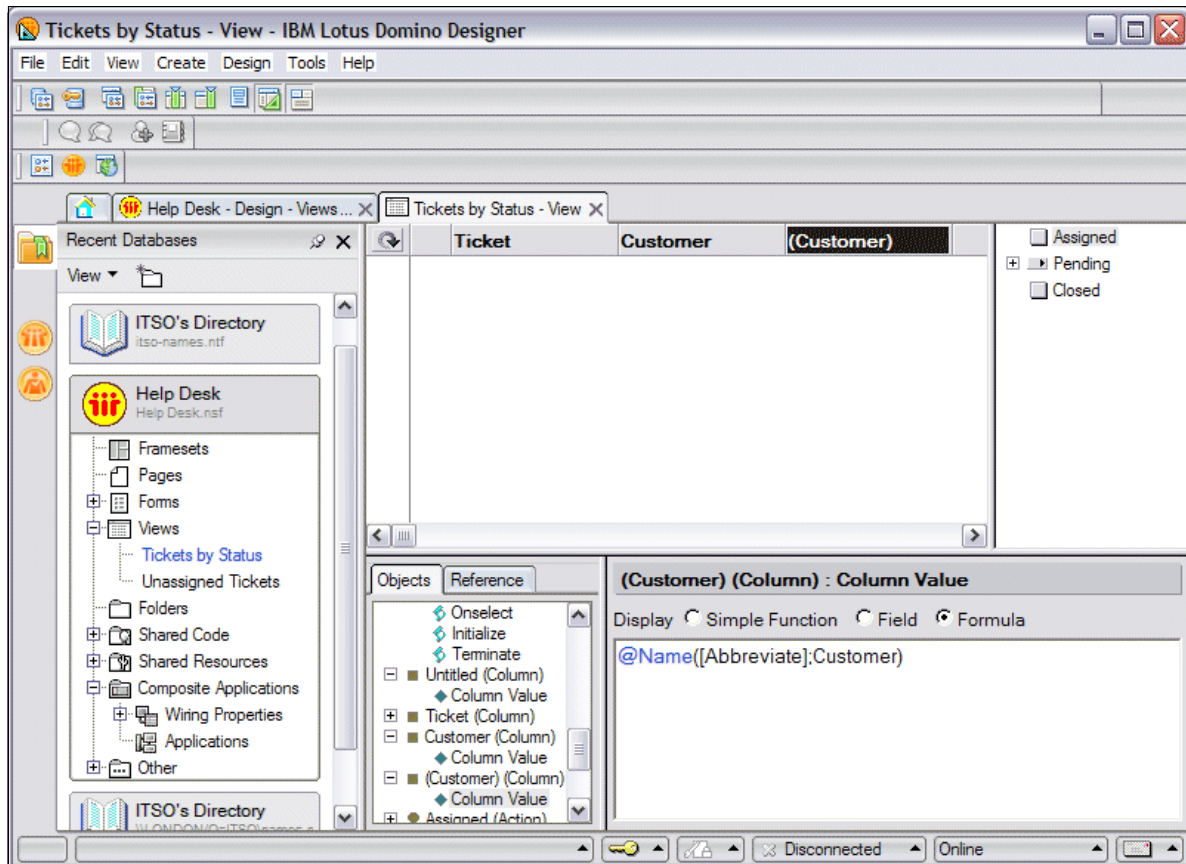


Figure 12-22 Tickets by Status view with new hidden Customer column

With our WSDL file created and embedded in the database, and a column in place that will publish data that we have decided to be of value, we are now ready to create a consumer component to take advantage of this newly available data source.

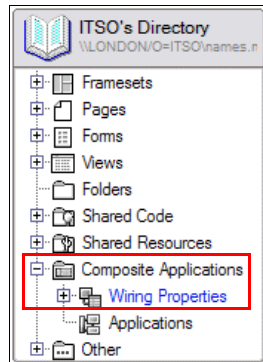
### Creating a consumer component

In "Creating a publisher component" on page 424 we created a component that publishes data. We now create a component that consumes that data and does something useful with it.

### ***Importing the WSDL file***

The first step to creating a consumer component is the creation of a WSDL file, just as it is the first step to creating a publisher component. In our example, we simply import the publisher component's WSDL file rather than create a new one. This brings along with it the publisher component's properties and actions.

1. We open the database that acts as the consuming component in the Domino Designer 8 client. In our example, we modify the Domino directory to become the consumer because it contains the contact data for all of our domain's users.
2. We start by selecting the Domino directory's **Composite Applications** → **Wiring Properties** view, as shown in Figure 12-23.



*Figure 12-23 Wiring Properties view in the ITSO Directory*



3. Click the **Import WSDL** button, as shown in Figure 12-24.

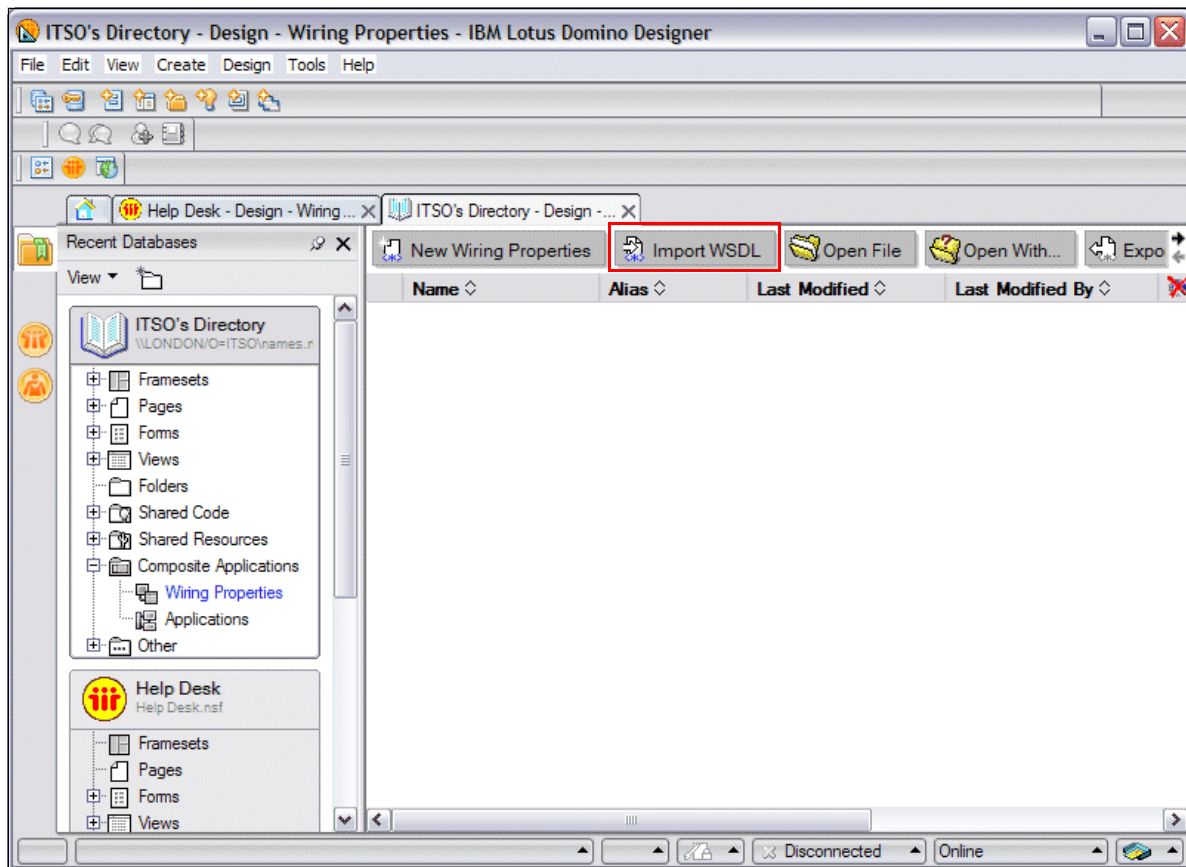


Figure 12-24 Import WSDL button

4. Within the Open dialogue box, we navigate to the HelpDeskContact.wsdl file, as shown in Figure 12-21 on page 430, and click the **Open** button.

With the WSDL file embedded in the Domino directory, we are now ready to begin creating our consumer component.

**Tip:** If you ever update the WSDL file by adding more properties, datatypes, or actions, be sure to refresh the wiring properties design element across all database templates that include this WSDL file and refresh the design of your application with the modified template. Keep in mind that this WSDL file is distributed and that your templates will not automatically refresh just because the WSDL file has been modified. This means that a frequently modified WSDL file can quickly become out of date, especially if it is distributed amongst a large number of applications.

## Creating the component's front end

We now need to create a user interface for this component. It will consist of a view to display the contact data for each person document as well as a form with this new view embedded within it. These two elements will make up this component's front end.

**Note:** In this section we discuss only those concepts that are new to ND for the purpose of building composite applications. If you are new to Domino development, refer to the Domino Designer 8 Help for more information.

1. We begin by creating a new view. This view will display person documents categorized by the first entry of the FullName field. The categorized column will be hidden.
2. We create a column named Contact Data with a simple formula column value that will display the contact data for each document. The column value is shown in Example 12-1.

### Example 12-1 Contact Data column value

```
CityStateZip := OfficeCity + ", " + OfficeState + " " + OfficeZip;
```

```
OfficeStreetAddress:
```

```
CityStateZip:
```

```
OfficeCountry
```

3. We also modify the visible column properties to display larger fonts for a more pleasing display within the component. The view is named "(CategorizedPeople)", as shown in Figure 12-25.

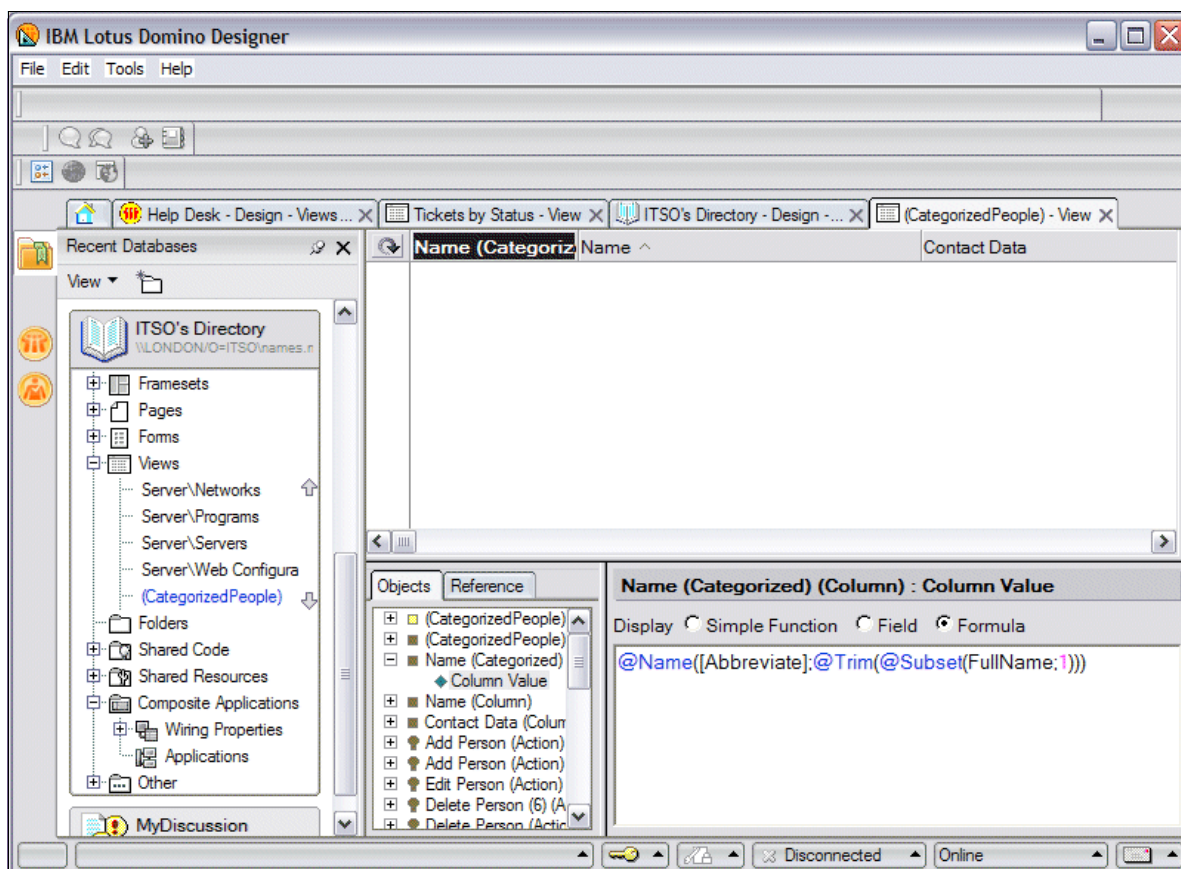


Figure 12-25 CategorizedPeople view



4. We create a form named “(CustomerContactData)”.
5. In the form, we create a field named “Customer”. This is a hidden field.
6. An embedded view element is created to display the “(CategorizedPeople)” view created in step 1 on page 434. We populate the show single category object of the embedded view element with an entry of Category. Therefore, whenever the Category field of the form is populated, it will force the embedded view to display only those documents with a category that matches the entry in the Category field. This form is shown in Figure 12-26.

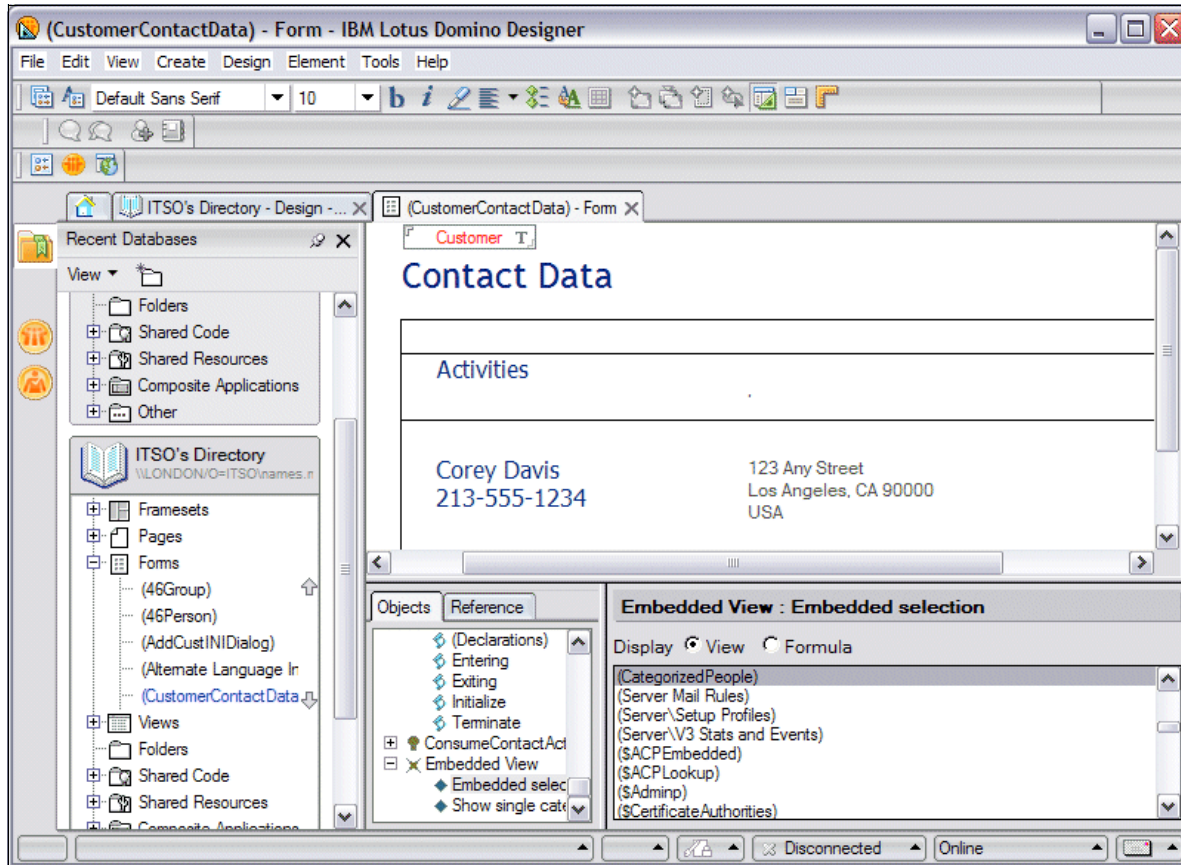


Figure 12-26 CustomerContactData form

**Note:** Refer to the Domino Designer 8 Help for more information about how to create embedded view elements.

At this point, we now have a form containing an embedded view. By modifying this form's Category field, we can force the embedded view to display only the documents in the view that have a matching category. Because the view is categorized by the first entry of the FullName field, essentially we should have one category for every person, with each category containing a single person document for that user. For example, if we populate the Category field with Joe Admin, the embedded view should only display Joe Admin's person document.

Of course, we do not want to manually populate the Category field, so we now need to create an automated process to populate this field with the data that is being published from the help desk application.

## Creating the consumer actions

In the (CustomerContactData) form that we created in “Creating the component’s front end” on page 434, we embedded a view that will only display one person document at a time. The person document to be displayed is controlled by the population of a hidden field named Category. We now need to create an action that consumes published data and populates the Category field. We accomplish this task with a form action.

1. In the (CustomerContactData) form, we create an action named “ConsumeContactAction”.
2. We tie this consumer action to the publisher action via the Advanced tab of the action’s properties window, as shown in Figure 12-27. In the Composite Settings section we select **PublishContactsAction** from the drop-down. This is the action that we created in “Create the property” on page 426.

**Important:** If the composite application action name is not available, or if the drop-down is greyed out, then you most likely did not create the wiring property as outlined in “Importing the WSDL file” on page 432, or the WSDL has been modified and you have not refreshed it with the most recent WSDL file.

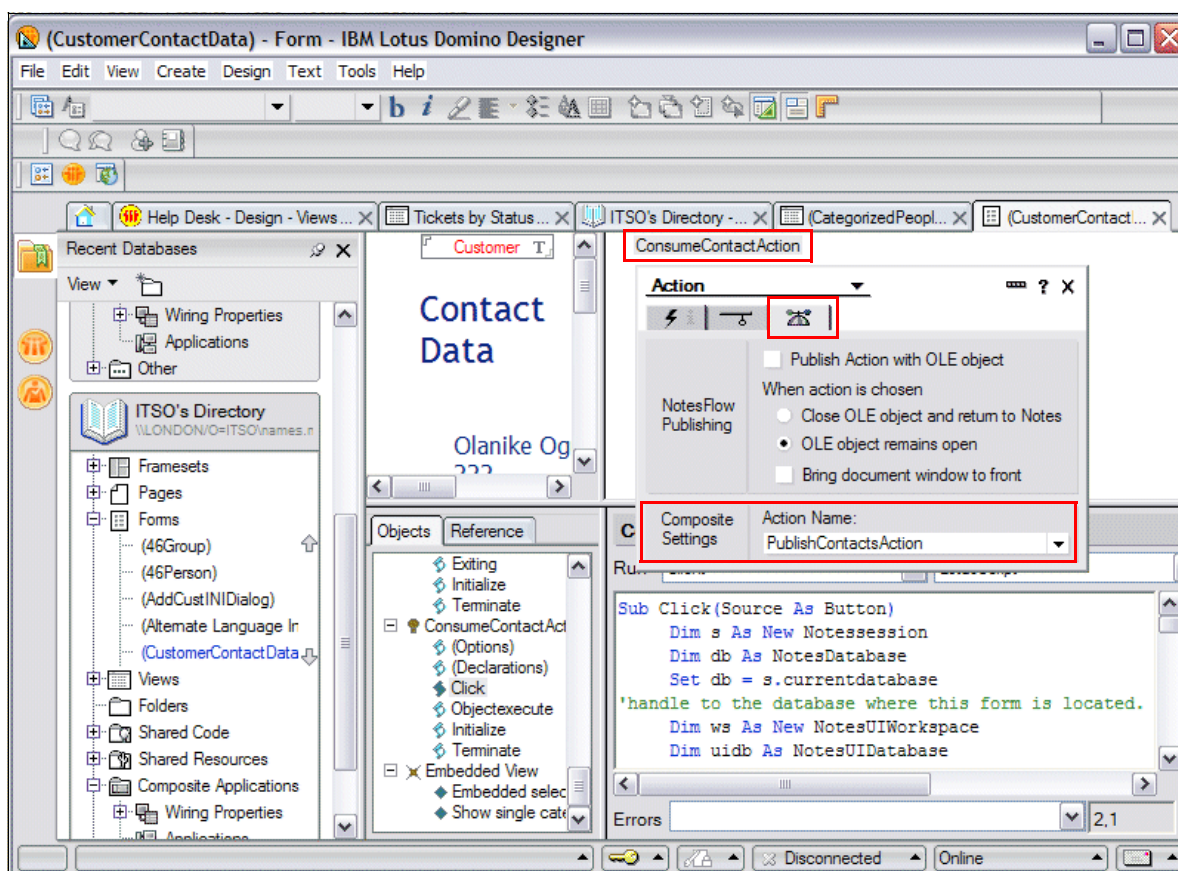


Figure 12-27 CustomerContactData form

3. We also need to add some code to this action in order for it to obtain the published data, and place it in the Customer field so that our embedded view displays the appropriate user's contact data. We do this by adding the code, as shown in Example 12-2, to the Click subroutine of the action.

*Example 12-2 ConsumeContactAction LotusScript code*

---

```
Sub Click(Source As Button)
    Dim s As New NotesSession
    Dim db As NotesDatabase
    Set db = s.currentdatabase
    'handle to the database where this form is located.
    Dim ws As New NotesUIWorkspace
    Dim uidb As NotesUIDatabase
    Dim uidoc As NotesUIDocument
    'handle error 4719, returned when the script is run without a property broker
    context
    On Error 4719 Goto err4719
    'new property broker code
    Dim pb As NotesPropertyBroker
    Set pb = s.getPropertyBroker()
    'create 'new NotesPropertyBroker object
    Dim pbInputProperty As NotesProperty
    Dim pbcontext As Variant
    pbContext = pb.InputPropertyContext 'array of NotesProperty objects
    Set pbInputProperty = pbContext(0) 'handle to first 'NotesProperty object
    Dim InputPropertyName As String
    Dim Namespace As String
    InputPropertyName = pbInputProperty.Name
    'name of the 'NotesProperty object
    NameSpace = pbInputProperty.NameSpace
    'namespace of the
    'NotesProperty object
    Print "InputPropertyName = " & InputPropertyName '&" NameSpace = " &
    NameSpace
    Dim pbvalue As Variant
    pbValue = pb.GetPropertyvalue(InputPropertyName) 'array of values of
    NotesProperty
    cName$ = pbValue(0) 'first value from array of values of NotesProperty
    object
    SkipPropertyBroker:
    If cName$ = "" Then
        Exit Sub
    End If
    ' MessageBox cName$
    Set UIdoc = ws.CurrentDocument
    Call uidoc.FieldSetText("Customer",cName$)
    Call uidoc.Refresh
    Exit Sub
err4719:
    Print "Error" & Str(Err) & ": " & Error$
    MessageBox "error"
    Resume skipPropertyBroker
End Sub
```

---

We now have a consumer component that is ready to receive data, populate the Category field, and thus display the appropriate person document.

## Putting it all together

At this point we have a publisher and consumer that are ready to be coupled together. As you can see, both still work as stand-alone Notes applications, and the component aspect has not affected the application in any significant way. In the Notes client we can now create a new composite application and bring all of our components together to work in harmony.

1. From within the Notes client, we created a new application based on the blank composite application template. The blank composite application is shown in Figure 12-28.

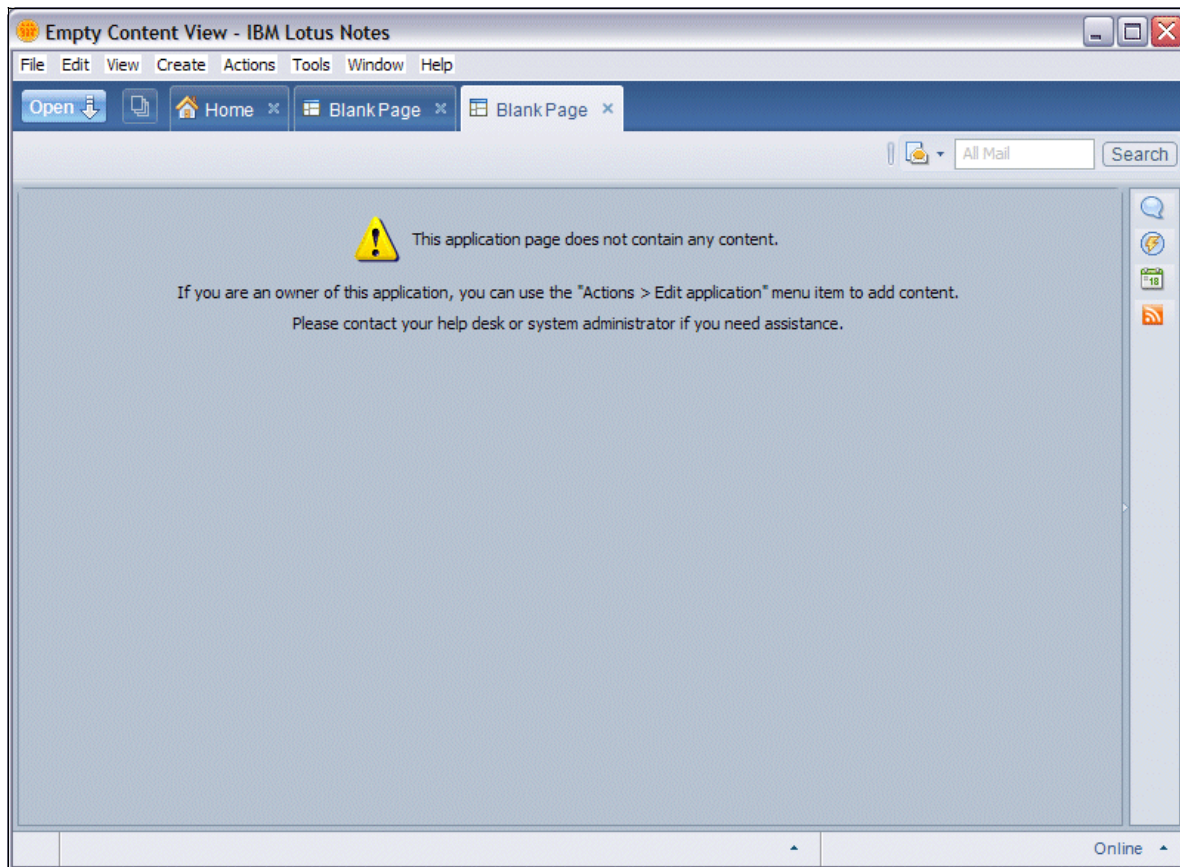


Figure 12-28 Blank composite application

2. We edit the application by selecting the **Action** → **Edit Application** menu. This launches the composite application editor.



3. We begin by opening the component palette by selecting **Tools** → **Component Palette** → **Open**. See Figure 12-29.

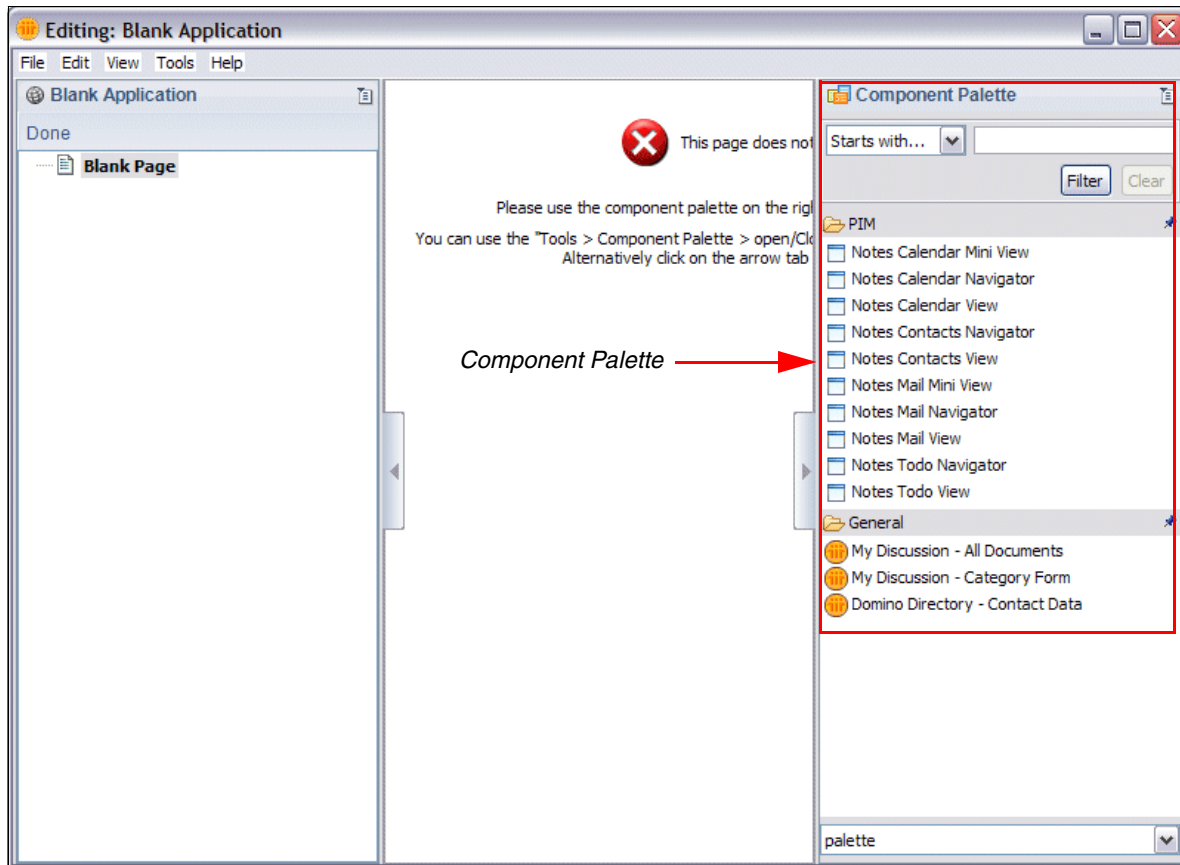


Figure 12-29 Component palette

4. We add our NSF components to the palette. This is done by selecting **Tools** → **Component Palette** → **Add Components** → **Add NSF Component** menu.
5. In the New NSF Component dialogue, we enter a name for our first component in the Component Name field, and a description in the Component Description field, as shown in Figure 12-30.

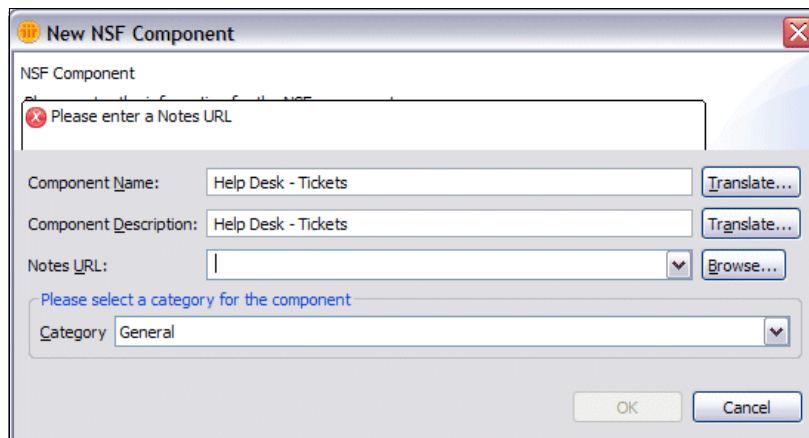


Figure 12-30 New NSF Component dialog

6. We add our view by selecting the **Browse** button next to the Notes URL field.
7. The browse button displays the Locate Object dialogue box, which we then use to find the Ticket By Status view as follows:
  - a. In the Application field we use the drop-down menu to find the help desk application.
  - b. We select **View** in the Kind of Object field.
  - c. We select **Tickets by Status** in the View field, as shown in Figure 12-31.

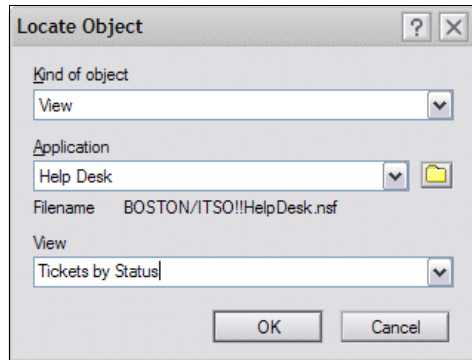


Figure 12-31 Locate Object dialogue

8. Because the help desk application has two views, but only one is designated as a component, we want restrict users to the Tickets By Status. To do this, we need to append `&HideNavigator` to the end of the Notes URL, as shown in Figure 12-32.

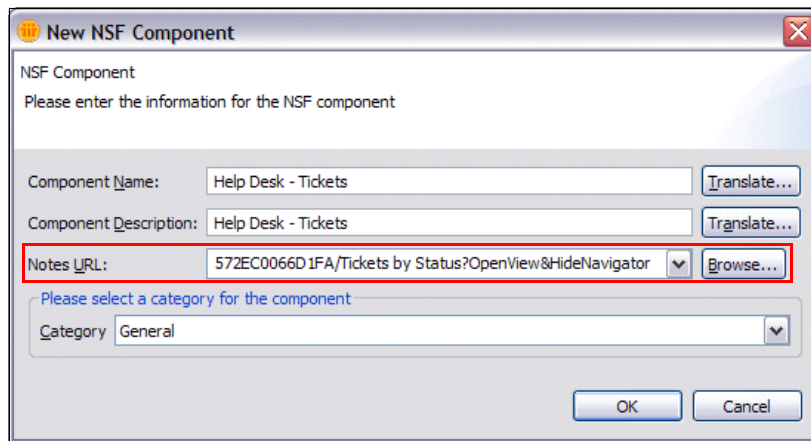


Figure 12-32 Adding `&HideNavigator` to the Notes URL

9. With the Tickets by Status component complete, we now need to add the ContactData component from the Domino directory. To do this, we repeat steps 4 through 7, but this time we select the Domino directory database and choose the **(CustomerContactData)** form.

10. Now that we have our two NSF components, we need to add them to the blank application section of the window. This is done by simply dragging the components from the component palette onto the blank application. The finished product is shown in Figure 12-33.

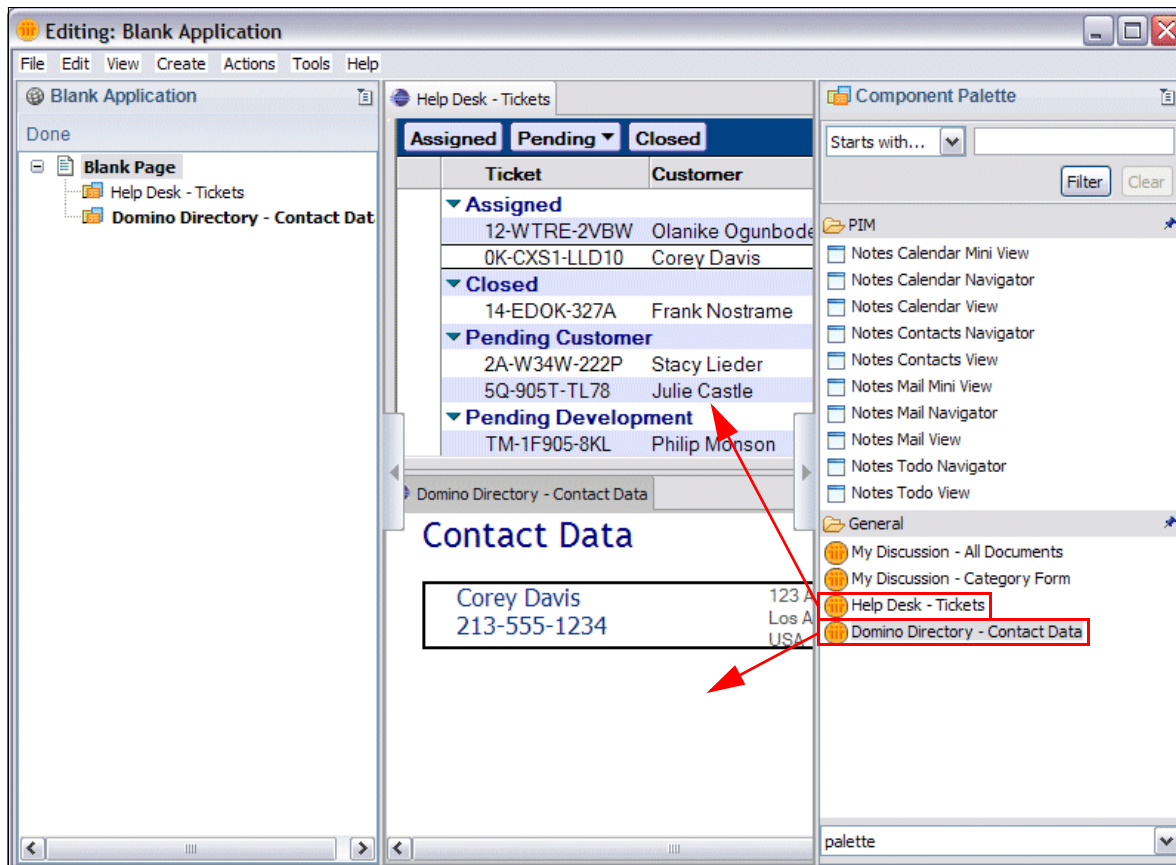


Figure 12-33 Composite application editor

11. Now that we are done with adding our components to the composite application, we select **File → Finished Editing** to save our changes.

### Wiring the components

We now have a composite application with two components. The next step is to wire these components together in order to form an action/event relationship.

1. We re-open the composite application into the composite application editor by selecting the **Action → Edit Application** menu.

2. From the Navigator pane (left most pane), we right-click the **Help Desk - Tickets** component and select the **Wiring** menu option, as shown in Figure 12-34.

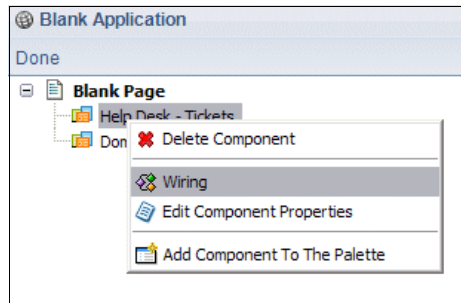


Figure 12-34 Wiring menu

3. The Wiring page is now displayed, as shown in Figure 12-35.

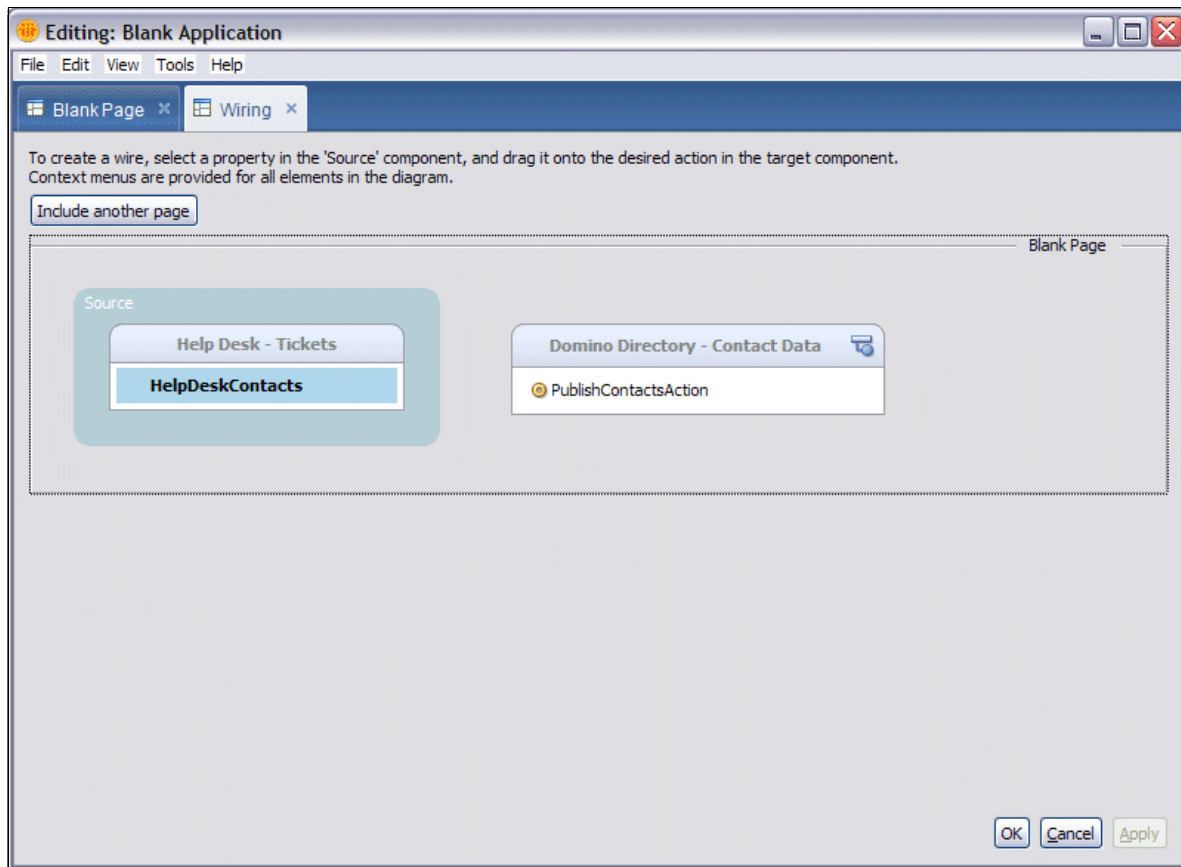


Figure 12-35 Wiring page



4. We wire the two components together by clicking the **HelpDeskContacts** component and dragging it to the PublishContactsAction, HelpDeskContacts component. The result is shown in Figure 12-36.

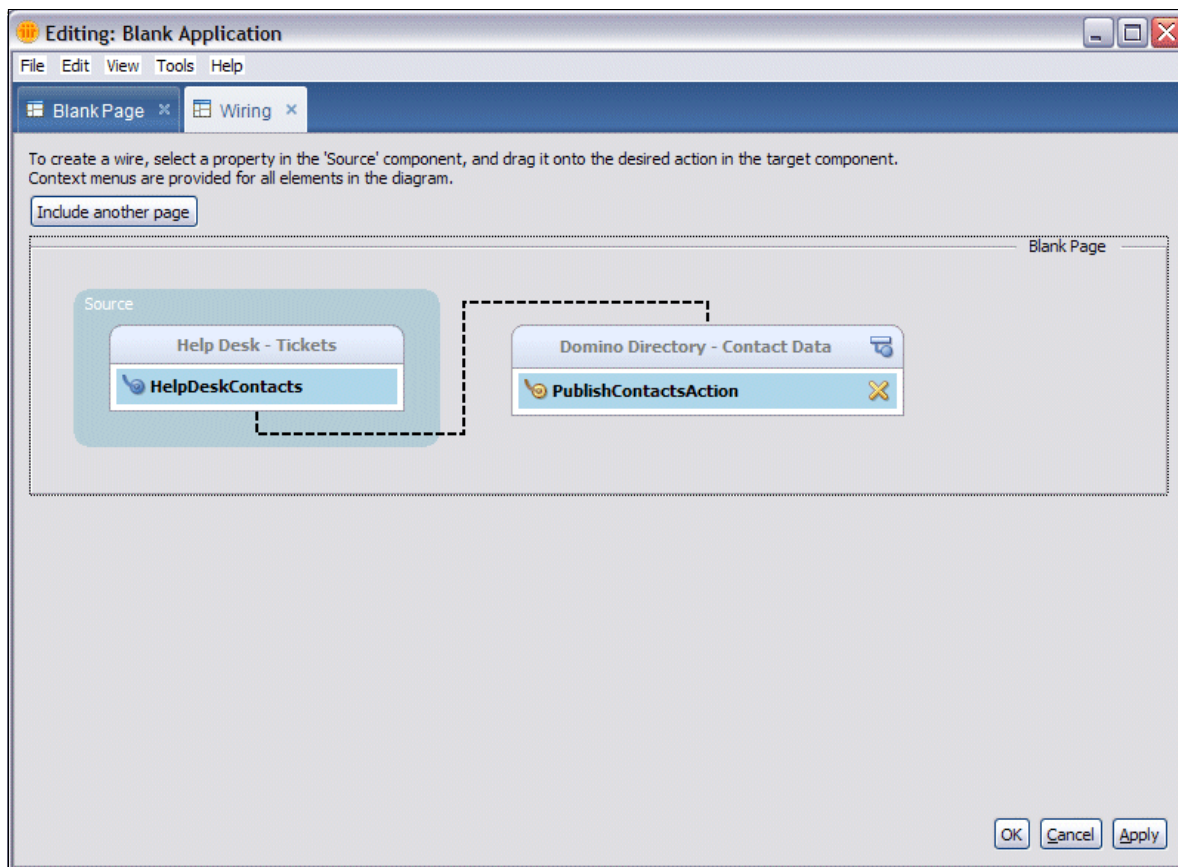


Figure 12-36 Two wired components

5. We click the **OK** button to exit out of the Wiring page.
6. We can now save and close out of the CAE by selecting **File** → **Finished Editing** menu.

### The finished product

In this example we have completed the following tasks:

- ▶ Built publisher and consumer components
- ▶ Added components to composite application
- ▶ Wired components

With these tasks done, we now have a finished and fully functional application, as shown in Figure 12-37.

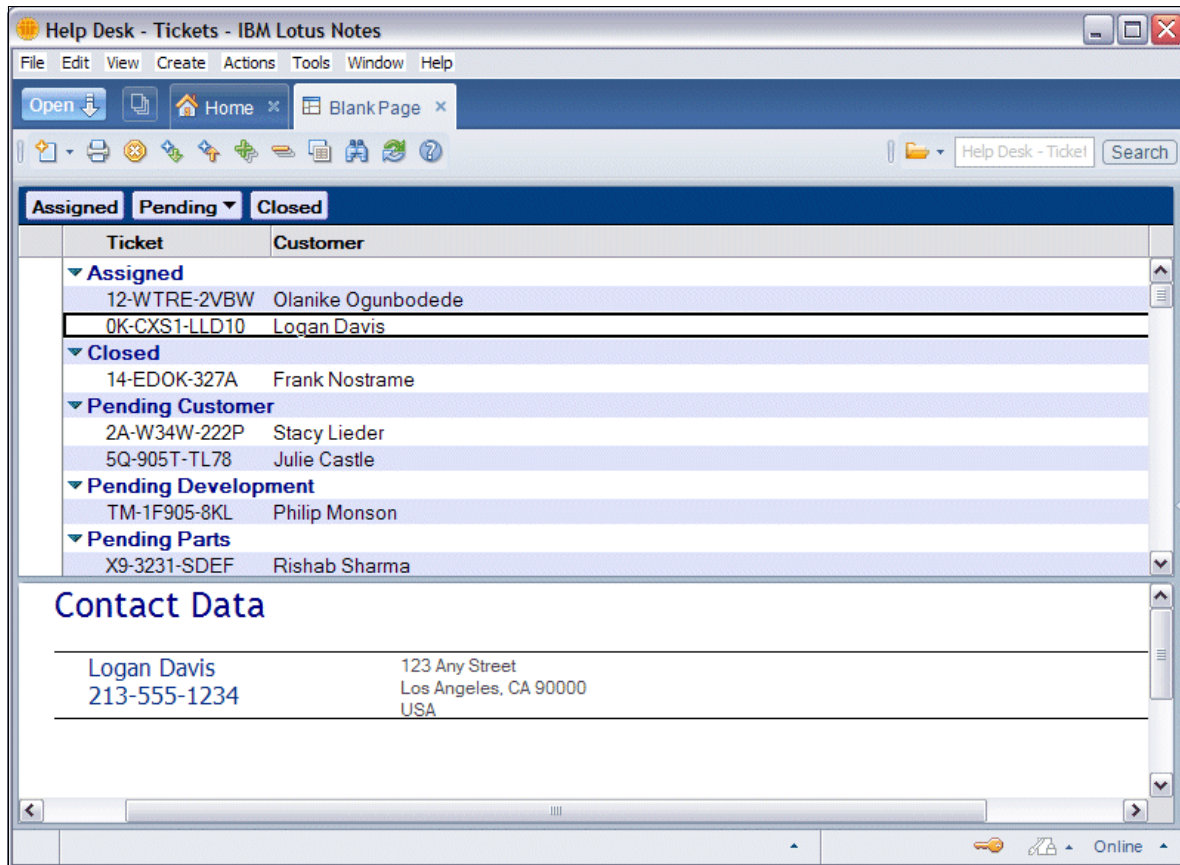


Figure 12-37 A composite application

For every trouble ticket we click, the user's contact data displays in the bottom pane of the application.

**Tip:** For more information about composite applications, including IBM Lotus Component Designer, WebSphere Portal, and NSF-based composite applications, refer to the IBM developerWorks composite applications page at:

<http://www.ibm.com/developerworks/lotus/composite-apps/>

Also, refer to the IBM Redbooks Publication *Building Composite Applications*, SG24-7367:

<http://www.redbooks.ibm.com/redpieces/abstracts/sg247367.html>

### 12.6.3 Considerations when creating composite applications

From an application development standpoint, composite applications are likely to be considered the most important change in Notes 8. The ability to build business applications in Notes, combined with Notes superior collaboration capabilities, is likely to spur a new growth in demand for the ND developer.

NSF-based components and NSF-based composite applications are still in their infancy, therefore some restrictions apply. The following is a list of currently known limitations in

NSF-based composite applications in Notes and Domino 8. Some of these may be addressed in later releases of ND.

- ▶ No support for design locking

Design locking allows developers working in teams to lock other developers out of the design elements that they are currently working on. This prevents two or more developers from modifying the same element at the same time. Currently, the IBM Lotus composite application editor does not support design element locking.

- ▶ No browser support through Domino

Notes databases built on the blank composite application template are not accessible via a Web browser. Currently, NSF-based composite applications are intended for viewing through Notes 8 only. In order to create a composite application that is accessible via a Web browser, the application must reside on a WebSphere Portal Server.

- ▶ Replication

Although replication is fully supported with NSF-based composite applications, the ability for components to exist anywhere, including locally, can pose some challenges for replicating composite applications. Before doing so, you must take into consideration the components that make up your applications and whether they will be accessible if the application is replicated to another server.

## 12.7 DB2 integration

DB2 integration provides the ability to store Domino data in a DB2 database rather than the standard NSF database. Though the feature was available in ND7, it was not fully supported. Now, with Notes and Domino 8, DB2 integration is a fully supported feature of Domino.

The power of this feature can be realized through Domino applications that would benefit from a relational database back-end as opposed to the *flat* structure of the NSF. Furthermore, developers are not restricted DB2 or NSF and can build applications that bridge data between DB2 back ends and NSF databases.

Implementation of the DB2 integration feature requires a DB2 server to store a representation of the Domino data, but maintains full functionality as though the data were stored in an NSF. Accessing the DB2 Domino data requires a DB2 Access View (DAV) and Query view.

For more information about DB2 integration refer to 9.11, “Domino and DB2 deployment” on page 286.

**Tip:** An in-depth overview of DB2 integration from an application developers point-of-view is available in Chapter 2, “Using DB2 integration to enhance the ITSO Electronics application” on page 7, of the *Lotus Domino 7 Application Development*, REDP-4102:

<http://www.redbooks.ibm.com/abstracts/redp4102.html>





## Considerations for upgrading from Notes and Domino 6.5.x to 8

This appendix aims to summarize the information from this book and other sources of information that is specific to an upgrade from Notes and Domino 6.5.x to 8. While it is not possible to cover every scenario and every aspect of the upgrade process in this short summary, we aim to raise awareness of some of the main points of consideration.

If you are planning to upgrade your Notes and Domino environment from 6.5.x to 8, it is important to remember that adequate planning and testing of the upgrade within your own unique Notes and Domino environment is an essential part of a successful upgrade.

Upgrading directly from Notes and Domino 6.5.x to 8 is supported, and has been tested as part of the development process for Notes and Domino 8.

This appendix contains the following information:

- ▶ General Upgrade considerations for Notes and Domino 6.5.x to 8
- ▶ Upgrade considerations for the Domino server
- ▶ Upgrade considerations for the Notes client
- ▶ Coexistence considerations for Notes and Domino 6.5.x and 8

# Introduction

For the most part, upgrading from Notes and Domino 6.5.x to 8 follows the same process and has the same considerations as upgrading from Notes and Domino 7.x to 8. All the important tasks of planning and testing the upgrade remain the same, and most implementation steps also do not differ. Therefore, if you are planning to upgrade your Notes and Domino environment directly from 6.5.x to 8, it is important to understand the concepts and steps detailed throughout this book. In particular, review these chapters to assist with the actual upgrade process:

- ▶ Chapter 2, “Planning the Notes and Domino 8 Deployment” on page 15
- ▶ Chapter 3, “Deploying the Domino 8 server” on page 45
- ▶ Chapter 4, “Deploying the Notes 8 client” on page 63
- ▶ Chapter 5, “Coexistence: Domino/Domino and Domino/Microsoft Exchange” on page 93

This appendix chapter aims to provide a summary of information that is specific to a Notes and Domino 6.5.x to 8 upgrade, using the information presented in the above chapters and other known sources of best practice information.

## Upgrade considerations for Notes and Domino 6.5.x to 8

This section highlights some of the known areas of change between Notes and Domino 6.5.x and 8 that may affect the overall Notes and Domino upgrade and environment.

### Encryption key length and large key support

Many changes were made to encryption key length in Notes and Domino 7 and 8, to provide enhanced security. These changes are backward compatible, so older keys can be used on newer Notes clients, but they are not all forward compatible. Therefore, if you are upgrading to Notes and Domino 8 directly from ND6.5, you need to be aware of the changes in each version and the compatibility of the different key lengths, especially if you are planning to use the higher encryption strength keys but you still have 6.5.x Notes clients in the environment.

**Tip:** The use of larger keys will not impact performance or impact the users. It is worthwhile to consider upgrading your ID files after your Notes and Domino 8 environment is in place, as longer keys do add additional security.

Note that you can view the encryption strength of an ID file by looking at the ID properties.

The following list provides information to assist with planning key upgrades in mixed release environments:

- ▶ Notes and Domino 6.0:
  - Can use 1024-bit RSA keys, but will not generate them
  - Can use 128-bit RC4 keys, but cannot use 128-bit RC2 keys
- ▶ Notes and Domino 6.0.4/6.5.1:
  - Can use 1024-bit RSA keys, but will not generate them
  - Can use 128-bit RC2 keys, but will not generate them

- ▶ Notes and Domino 7.0:
  - Can generate and use 1024-bit RSA keys
  - Can generate and use 128-bit RC2 keys
  - Adds underlying support for 2048-bit RSA keys
- ▶ Notes and Domino 8.0:
  - Can generate and use 2048-bit RSA keys for users and servers
  - Can generate and use 4096-bit RSA keys for certifiers
  - Adds underlying support for 4096-bit RSA keys for users and servers

**Some encryption key history:** Prior to 5.0.4, key lengths were restricted for the purposes of encrypting data, but not for authentication or signing. Anything over 512-bit RSA key and 56-bit symmetric key was considered strong encryption and was not allowed for export by the U.S. Government. Customers were required to order and choose among kits of different cryptographic strengths.

After the relaxation of U.S. government regulations on the export of cryptography, the Domino server and the Domino Administrator, Domino Designer, and Lotus Notes client products consolidated all previous encryption strengths (North American, International, and France) into one strong encryption level resulting in a single global release of the products. The global release adopts the encryption characteristics previously known as North American. Strong encryption in global products can be used worldwide, except in countries whose import laws prohibit it, or except in those countries to which the export of goods and services is prohibited by the U.S. government. Customers are no longer required to order Notes software according to cryptographic strength.

For additional information about Notes and Domino encryption key length, large key support, and upgrade considerations for Notes and Domino 6.5 environments, refer to mino Administrator 8 Help.

## Hierarchical certification for Notes IDs

When Lotus Notes was first released, it offered only flat certification for the purpose of naming users and servers within the Notes environment. Hierarchical certification was introduced with Release 3 of Lotus Notes.

Support for flat certification was removed in Notes and Domino 7.0 due to its inherent lack of security and its inability to be used with the administration process.

If you are upgrading directly from Notes and Domino 6.5.x to 8 and are still using flat certification, you need to convert all flat names to hierarchical names as part of the upgrade project.

To update a flat user name and ID to a hierarchical one, use the user rename process and select the option **Upgrade to Hierarchical**. To update a flat server name to hierarchical, use the administrator client, Server view (on the Configuration tab), and select **Actions - Upgrade server to hierarchical** from the menu.

For additional information and step-step instructions to upgrade your users and servers to hierarchical naming, refer to the following topics in Lotus Domino 8 Administrator Help:

- ▶ Upgrading a user name from flat to hierarchical
- ▶ Upgrading a server to hierarchical

# Upgrade considerations for the Domino server

This section highlights some of the known areas of change between Domino 6.5.x and 8 that may affect your Domino server upgrade.

## Clustering

Upgrading your clustered servers at different times is supported, so you can have a mixed 6.5.x and 8.x cluster during the coexistence period of your project. Keep in mind, however, that the cluster replication task does not restrict the replication of any design elements.

While this is a consideration for Domino server upgrades both from 6.5.x and from 7.x, there is a higher likelihood of experiencing issues with an 8 design on a 6.5.x server or client.

The Domino directory 8 design is backward compatible with Notes and Domino 6.5.x. Other databases may, however, cause issues on earlier Domino servers and Notes clients. If you want to keep design elements at the same version as the server, do not put Domino 6.5.x or 7.0 in the same cluster with Domino 8 servers.

For further information about design upgrades during coexistence, refer to the following sections:

- ▶ 5.1.2, “Templates and design elements” on page 96
- ▶ 5.1.3, “System databases” on page 99
- ▶ 5.1.4, “Clusters” on page 103

## Resource reservations

Resource reservations has seen significant changes since Domino 6.5. Prior to Domino 7, the resource and reservation functionality was distributed amongst the resource template, the router task, and the schedule manager task. Beginning with Domino 7, this functionality was combined into a single server task: rooms and resource manager, or RnRMgr.

If you are upgrading directly from Domino 6.5.x or earlier be aware that these points apply to Domino 8 just as they did for Domino 7.

**Note:** Resource reservations databases (RRDB) based on a 6.x or earlier design do not function properly on Domino 8 servers. Overbooking of rooms and resources can easily occur if you attempt to use a pre-Domino 7 RRDB on a 7.0 or later server. Replace the design of the resource reservation template immediately. In Releases 7.0.2 and later, this is done automatically at server startup.

For additional information about how to configure the RnRMgr, refer to the following sources:

- ▶ The Rooms and Resources Manager topic in Lotus Domino Administrator 7 Help
- ▶ Technote #7002648 “What is and how to set up resource scheduling for Notes/Domino 6.x or 7.x Calendaring & Scheduling”:  
<http://www.ibm.com/support/docview.wss?rs=203&uid=swg27002648>
- ▶ Resource Reservations database in the *Notes and Domino 7 Upgrade Best Practices Redpaper*, REDP-4120-00



# Upgrade considerations for the Notes client

This section highlights some of the known areas of change between Notes 6.5.x and 8 that may affect your Notes client upgrade.

## Client features and functionality

Changes in Notes client features and functionality can have a huge impact on user productivity and perception of the upgrade. It is therefore important to understand the major areas of change between the old and new client version.

This requirement is even more pronounced if you are skipping a version of the Notes client when you upgrade, such as when moving from Notes 6.5.x to 8.x.

We therefore highly recommend that you review the major feature and functionality changes between each of the releases to help plan the user training requirements for the upgrade project.

Some good resources to assist with this process are:

- ▶ Chapter 4, “Deploying the Notes 8 client” on page 63
- ▶ Chapter 2, “Changes for the user,” in the *Lotus Notes and Domino 8 Reviewers Guide*:  
[ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8\\_Reviewers\\_Guide.pdf](ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND8_Reviewers_Guide.pdf)
- ▶ “New client features” in the *Notes and Domino 7 Upgrade Best Practices*, REDP-4120-00
- ▶ “What’s New in Lotus Notes 7: Features and benefits” in the *Lotus Notes and Domino 7 Reviewers Guide*:  
[ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND7\\_Reviewers\\_Guide.pdf](ftp://ftp.software.ibm.com/software/lotus/lotusweb/product/domino/ND7_Reviewers_Guide.pdf)

## Smart Upgrade

Smart Upgrade was introduced in Notes and Domino 6.0 for the purpose of centrally managing and automating Notes client upgrades. Changes and enhancements to the Smart Upgrade functionality were made in various point releases of Notes and Domino 6.0 and 6.5.

If you are planning to use Smart Upgrade to upgrade your Notes clients from 6.5.x to 8, it is worthwhile to understand the client, template, and server dependencies for the functions of Smart Upgrade. For example, if you are upgrading from 6.5.2 or earlier, Smart Upgrade kit download will not occur as a background task in the Notes client, so users will not be able to use their Notes client while kit download is occurring.

For the full list of Smart Upgrade client, template, and server dependencies, refer to 5.1.7, “Smart Upgrade” on page 104.

For details on how Smart Upgrade works, its features, and steps to deploying the Notes client using Smart Upgrade, refer to the IBM Redpaper, *Understanding Lotus Notes Smart Upgrade*, REDP-4180:

<http://www.redbooks.ibm.com/abstracts/redp4180.html?Open>

## Multi-lingual Notes interface support (MUI)

Notes 7.0 added support for easier multi-lingual support in the Notes client using multi-user interface (MUI) packs. Although it was possible in Notes 6.5.x to set up a multi-lingual Notes client, it was a little more difficult (and not quite as functional) than in Notes 7.x.

If you are upgrading multi-lingual Notes clients directly from 6.5.x to 8, or if you would like to implement the newer functionality after the client upgrade, refer to Technote #1239269 “Notes Client Multilingual User Interface (MUI) functionality changes between 6.x and 7.x” for more information:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21239269>

**Background information:** In Notes 6.5.x, to install multiple languages of the Notes client on a workstation, you would run through the setup.exe for each language separately. The Notes single-user setup did not support this, so the Notes client needed to be installed as a multi-user setup. By doing this, a MUI directory was created in the Notes program directory (for example, C:\Program Files\Lotus\Notes\MUI). The MUI directory contained the language files for the required language interface. To swap between languages, the user would need to change to the other user you had installed (with the multi-user installation). Using this method, the user would actually have a different local data directory for each language.

Starting with Notes 7.0, the limitations described above do not exist. A *MUI Pack* installation can be performed for the required language, then the user can swap between languages from within the Notes client just with a preference setting change.

## Coexistence considerations for Notes and Domino 6.5.x and 8

This section highlights some of the known areas of change between Notes and Domino 6.5.x and 8 that may affect the overall Notes and Domino upgrade and environment.

### Automatic diagnostic data collection and fault analyzer

In Domino 6.5.x, automatic diagnostic data collection could be enabled to automatically send diagnostic files to a mail-in database on the Domino server. Fault analyzer was introduced in Domino 7 to provide diagnostic data analysis for troubleshooting Domino server issues.

Fault analyzer analyzes the data collected by automatic diagnostic data collection so if you use automatic diagnostic data collection with Domino 6.5.x, and you plan to use fault analyzer after upgrading to Domino 8, be aware that fault analyzer will also analyze the existing fault report documents collected in your mail-in database. This analysis can be time-consuming. However, fault analyzer works well against Domino 6.5.x server failure reports, so as soon you have one server upgraded, you can take immediate advantage of fault analyzer.

For more information about automatic diagnostic data collection and fault analyzer, refer to the topic “Collecting diagnostic information after a server or client crash” in Lotus Domino Administrator 8 Help.

## Domino directory design interoperability

A Domino directory based on the Domino 8 design can run on both Domino 6.5 and Domino 7 servers. For more information about managing the Domino directory design during the coexistence phase, refer to “Domino directory” on page 99.

## Mail design interoperability

As discussed in “Client/template interoperability” on page 105, the mail template is usually upgraded after the Notes client upgrade. Table A-1 details the supported client and mail template versions for interoperability.

*Table A-1 Supported client/template coexistence*

	Lotus Notes 8.x	Lotus Notes 7.x	Lotus Notes 6.5.x
Notes 8 template	Supported	Supported <sup>a</sup>	Unsupported
Notes 7 template	Supported	Supported	Supported <sup>a</sup>
Notes 6 template	Supported	Supported	Supported

a. Although this configuration is supported, it is not considered a best practice because there will be limited functionality available to the user.

If you are upgrading your Notes clients directly from Notes 6.5.x to 8, it is essential to upgrade the clients prior to the mail template upgrade, as the use of the 8 mail template is not supported and causes issues.

**Tip:** Remember, if you have users who delegate mail access to others (such as a personal assistant) you need to upgrade both Notes clients to 8 before either of the mail templates is upgraded.

For additional information, refer to Technote #1264690 at:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21264690>

## Calendar and scheduling interoperability

The functionality of calendar and scheduling in the Notes client has been extensively enhanced since Notes 6.5. Many of the newer features do not function correctly on older Notes clients and older Domino servers. In some cases, functionality that was available to Notes users in the 6.5.x calendar and scheduling does no longer function if they use a newer (7.x or 8.x) mail template or are on an upgraded Domino server.

For example, Domino 7 introduced a new feature that enables you to specify what action should be performed on a user's meeting invitations. If a user is on a pre-Domino 7 server but has upgraded her Notes client and template to Notes 7 (or later), the “Automatically accept even if time is not available” option in calendar and scheduling does not work. The meeting invitation is either not processed or it is declined. In a mixed release clustered environment, if a user is on a Domino 7 or 8 server and Notes client, but fails over to a Domino 6.5.x server in the cluster, the user will encounter this issue.

For additional information, refer to “Calendar and Scheduling” in the *Notes and Domino 7 Upgrade Best Practices* Redpaper, REDP-4120-00.

## Out of office

Domino 8 introduced the option to use the router to process out-of-office responses, using the Out of Office router service. If this option is configured on a Domino 8 server that has Notes 6.5.x mail templates, the users with the 6.5.x template will not be able to utilize the new Out of Office router service. These users will still be able to continue using the out-of-office agent, but they will not be able to use the new features such as out-of-office start and end-time setting.

For a summary of the differences between the functionality of the out-of-office agent and the router service, refer to Table 9-1 on page 242. For more information about the new Out of Office router service, refer to 9.2, “Out of Office router service” on page 242.

## Domino Web Access interoperability

If you will be housing DWA6.5.x users on your Domino 8 server, you should also note that the instant messaging settings and local archive setting in the configuration document of the Domino directory are intended only for users using the DWA8 template. In order to configure these options for DWA6.5 users you need to utilize the appropriate INI parameters.

For more information about Domino Web Access 8, see Chapter 8, “Domino Web Access” on page 215.

In a mixed server environment, if you make a replica of a Domino Web Access database on a Domino 6.x server, this server loads the Release 6 design automatically whether you are using a Release 6.x design or later design. In this scenario, users get the functionality of the version of the Domino server they are on. They do not have the features available to them in newer DWA template versions on a Domino 6.x server.

## Domino domain monitoring

Domino domain monitoring was introduced in Domino 7. To gain full functionality from Domino Domain Monitor, a Domino 7 or later server is required. However, a Domino 7 or 8 server can monitor areas on pre-Domino 7 servers using three of the Domino domain monitor probes: the security, Web, and replication probes.

For additional information about Domino domain monitoring, refer to these sources:

- ▶ 9.9, “New Domino domain monitoring features” on page 265
- ▶ *Lotus Domino Domain Monitoring*, REDP-4089

## Policies

Policies were introduced to Notes and Domino 6 to assist administrators with the task of implementing standardized Notes client configuration settings. With each new major release of Notes and Domino, policies have been enhanced to provide additional configuration options and more complete standardization.

Some of the major enhancements to policies since Notes and Domino 6 are:

- ▶ Mail policy settings documents, introduced in Domino 7
- ▶ Custom password settings, introduced in Domino 6.5.4
- ▶ Ability to lock down policy settings so that users cannot change them, introduced in Domino 7
- ▶ Productivity tools and activities policy settings documents, introduced in Domino 8

- Enhancements to the ability to lock down policy settings, and additional options for choosing how and when settings are applied to users, introduced in Domino 8

Most of the new capabilities of policies in Domino 7 and 8 are ignored by Notes 6.5.x clients. For example, policy lock-down settings have no effect on 6.5.x clients, and the new types of Policy Settings (Mail, productivity tools, and activities) are also ignored.

While these newer policy settings and options do not have any adverse effects on the Notes 6.5.x client, it is worthwhile understanding that during the co-existence period users are not able to utilize these new settings and options until they are upgraded to Notes 8.

**Tip:** You can assign policies to users while they are still running 6.5x, so that when they upgrade to 8.0, the policies take effect. This provides greater timing flexibility during your upgrade, because the timing of policy creation and client upgrade do not have to be coordinated.

For additional information, refer to these sources:

- 9.8, “Policy enhancements” on page 262
- “Policy document compatibility” in the *Notes and Domino 7 Upgrade Best Practices*, REDP-4120-00

## Further reading

While many new features have been added to Domino 8, it is Notes 8 that received most of the attention in this release. Though we tried to keep Domino 6.5 in mind throughout this book, we recommend that if you are considering upgrading to Domino 8 directly from Domino 6.5 you also consult *Notes and Domino 7 Upgrade Best Practices*, REDP-4120-00, as much of the information in it applies to Domino 8 as well. The Redpaper can be found at:

<http://www.redbooks.ibm.com/abstracts/redp4120.html>





# B

## **Lotus Notes and Domino client feature comparison**

This appendix contains a matrix comparing the features in Lotus Notes 8 with the Domino Web Access 8 Client, as well as previous releases of Domino Web Access.

We also provide you with information about the differences between Lotus Notes 8 client and Lotus Notes 8 basic configuration client.

While it is not possible to cover every feature in the clients, we hope that it helps you in making decisions on your upgrade process and deciding which client is best for your users.

# Lotus Notes 8 and Lotus Notes 8 Basic Configuration Client

A *basic* configuration of Notes 8 is available in case you do not have the system resources required to run the *standard* configuration. In the basic configuration of the Notes client, the following Lotus Notes 8 standard configuration features are not available:

- ▶ User interface
  - Access to the Notes Getting Started page using Help → Getting Started Page from the main menu
  - Side bar to provide access and mini-views of Sametime instant contacts, feed reader, calendar, and activities
  - Consolidated user preferences
  - Choice of preview pane location, below list or beside list
  - Open button to open applications
  - Ability to set how Window tabs display in user preferences
  - Embedded Web browser, with the option to set default to your chosen browser
  - Easier methods to find and work with location documents
  - New user interface for help that lets you keep the help pane open as you work
- ▶ Mail
  - Improved choices for reply to all, include history, and include attachments
  - Thread layout display when applying to a mail thread.
  - The ability to right-click operations for an entire mail thread, such as deleting a thread or moving a thread to a folder
  - The ability to perform operations for an entire mail thread, such as deleting a thread or moving a thread to a folder
  - Within the inbox, the ability to see all related messages in a thread
- ▶ Contacts

Recent Contacts view that shows users with whom you have recently interacted, such as e-mail correspondence or chats.
- ▶ Search
  - New centralized search interface for queries and results (domain search, find people, find application, web/intranet searches available as search scopes)
  - New search capability for help that searches across all *books* in the help system, such as Lotus Notes help and activities help
  - Optional desktop search that can be launched by right-clicking live names, and is also available in the Search scope drop-down menu
- ▶ Composite applications

Composite applications that make it convenient for a user to access a collection of components (applications) to address a business need for a particular group of users



- Other
  - The home page includes buttons for the IBM Lotus Productivity tools (documents, spreadsheets, presentations). However, these tools are not included with the basic configuration of Notes, and the buttons are not active. To use these tools, you must install the standard configuration.
  - Ability to view collaboration history with another user, such as e-mail correspondence, saved chat transcripts, or shared documents.

For the latest comparison on the two configuration of the client, refer to the following Lotus Software Knowledge Base Documents:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21264877>

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21256781>

## Lotus Notes and Domino Web Access client comparison

A comparison chart of the major mail, calendar, to do, and contacts features for the Lotus Notes 8 client and the Domino Web Access client is shown in next sections (Table B-2 on page 464, Table B-3 on page 468, Table B-4 on page 468, and Table B-5 on page 469).

For the latest version of this comparison chart, refer to the Lotus Domino Web Access product page at:

<http://www-142.ibm.com/software/sw-lotus/products/product1.nsf/wdocs/webaccesshome>

Or refer to the Lotus Notes product page at:

<http://www-142.ibm.com/software/sw-lotus/products/product4.nsf/wdocs/noteslibrary>

## Mail features comparison

Table B-1 shows the major mail features between the Lotus Notes 8 client, Domino Web Access 8, Domino Web Access 7, and Domino Web Access 6.5.

Table B-1 Mail features

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
<b>Views and folders</b>				
File type used	NSF (server, local)	NSF (server)	NSF (server)	NSF (server)
In-box view	Yes	Yes	Yes	Yes
Drafts view	Yes	Yes	Yes	Yes
All Documents view	Yes	Yes	Yes	Yes
Discussion Thread view	Yes	Yes	Yes	No
Folders	Yes	Yes	Yes	Yes
Nested folders	Yes	Yes	Yes	Yes
Create and delete folders	Yes	Yes	Yes	Yes

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Drag and drop messages into folders	Yes	Yes	Yes	Yes
Copy and move to folder	Yes	Yes	Yes	Yes
Discover folder	Yes	No	No	No
Unread count within folders	Yes	No	No	No
Soft deletes	Yes	Yes	Yes	Yes
Restore a message	Yes	Yes	Yes	Yes
From the action bar, open mail into specific view (that is, inbox, sent, drafts, and so on)	No	Yes	Yes	Yes
Support displaying columns defined in mail template	Yes	Yes	Yes	Yes
Support resizing various column widths	Yes	Yes	Yes	Yes
Forwarding multiple selected documents	Yes	Yes	Yes	Yes
Printing multiple selected documents	Yes	Yes	Yes	Yes
Displaying attention indicator	Yes	Yes	Yes	Yes
Color coding view lines based on sender	Yes	No	No	No
Color coding view lines based on Recipients	Yes	Yes	No	No
Allow individual users to show/hide various columns	Yes	No	No	No
<b>Message creation and addressing</b>				
Create new message	Yes	Yes	Yes	Yes
Customize header display for new messages	Yes	Yes	No	No
Type-ahead addressing	Yes	Yes, automatic name resolution provides this function	Yes, automatic name resolution provides this function	Yes, automatic name resolution provides this function
Recent contacts	Yes	No	No	No
Support file attachments	Yes	Yes	Yes	Yes
View file attachments from within message	Yes	No, third-party products are available for this	No, third-party products are available for this	No, third-party products are available for this
Spell checking	Yes	Yes	Yes	Yes
Alternate name support	Yes	Yes	Yes	Yes

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Sametime integration	Yes	Yes	Yes	Yes
Perform name and address book lookup	Yes	Yes	Yes	Yes
Display contacts sorted by organizational unit	Yes	Yes	Yes	Yes
Perform integrated address book lookup when sending a message	Yes	Yes	Yes	Yes
Name lookups to LDAP directories	Yes	Yes	Yes	Yes
Personal contacts address book	Yes	Yes	Yes	Yes
Delivery options (importance, delivery priority, delivery report)	Yes	Yes	Yes	Yes
Forward message	Yes	Yes	Yes	Yes
Save message draft	Yes	Yes	Yes	Yes
Create a serial route memo	Yes	Yes	Yes	Yes (new in 6.5.3)
Copy into - convert item to task, calendar entry or new memo	Yes	Yes	No	No
Return receipt	Yes	Yes	Yes	Yes
Prevent copying	Yes	No	No	No
Apply mood stamps to messages	Yes	No	No	No
Create/use stationery	Yes	Yes	Yes	No
Choose a letterhead	Yes	No	No	No
Create a message containing a signature file	Yes	Yes	Yes	Yes
Type-ahead within Move to Folder dialog	Yes	No	No	No
Specify outbound message with a reply by date	Yes	No	No	No
Specify message expiration date	Yes	No	No	No
Utilize plain text or rich text editor	No	Yes	Yes	Yes
Internet Message format	Yes	Yes	Yes	Yes
<b>Viewing and responding to message items</b>				
Preview pane	Yes	Yes	No	No
Support for read/unread marks	Yes	Yes	Yes	Yes
Navigate to next document without returning to view	Yes	Yes	Yes	Yes
Delete current document and navigate to next document without returning to view	Yes	Yes	Yes	No

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Perform mail file delegation	Yes	Yes	Yes	Yes
Reply with history	Yes	Yes	Yes	Yes
Reply to memo	Yes	Yes	Yes	Yes
Reply to all	Yes	Yes	Yes	Yes
Reply without attachments	Yes	Yes	Yes	Yes
View rich text within a message	Yes	Yes	Yes	Yes
Support for doc links, view links, and database links	Yes	Yes	Yes	Yes
View tables within messages	Yes	Yes	Yes	Yes
Create tables within messages	Yes	Yes	Yes	Yes
Resend documents from within a delivery failure	Yes	Yes	Yes	Yes
View sections	Yes	Yes	Yes	Yes
Action bar	Yes	Yes	Yes	Yes
Add Sender of message to personal contacts list from view	Yes	Yes	No	No
Add sender of message to personal contacts list from message	Yes	Yes	Yes	Yes
Modify/view the file's ACL from client	Yes	No	No	No
Display of Importance/type icons in views	Yes	Yes	Yes	Yes
Read encrypted mail and verify signature of signed mail	Yes	Yes	Yes	Yes
Verify signature of signed mail	Yes	Yes	Yes	Yes
Next/previous navigation within an open mail message	Yes	Yes	Yes	Yes
Preference setting for new mail on top/bottom	No	Yes	Yes	Yes
Automatically checking for new messages	Yes	Yes	Yes	Yes
Follow up flags	Yes	Yes	Yes	Yes
Column sort in general	Yes	Yes	Yes	Yes
Sort by subject	Yes	Yes	Yes	No
Display mail thread for current message	Yes	Yes	Yes	No
Advanced editing features in Rich Text field				

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Left, right and center, indent, outdent text justification	Yes	Yes	Yes	Yes
Tables - simple tables, not all complex	Yes	Yes	Yes	Yes
View sections	Yes	Yes	Yes	Yes
Support for embedded OLE objects	Yes	No	No	No
Java applet support	Yes	No	No	No
Page break	Yes	Yes	Yes	Yes
Horizontal line	Yes	Yes	Yes	Yes
Hotspots	Yes	No	No	No
Insert image resources	Yes	Yes	Yes	Yes
Create sections	Yes	No	No	No
Ability to switch language dictionaries for spell checking	No	Yes	Yes	Yes
Support for both bullets and number lists	Yes	Yes	Yes	Yes
Undo	Yes	Yes	Yes	Yes
<b>User preferences</b>				
New mail notification	Yes	Yes	Yes	Yes
Default mail send/save setting	Yes	Yes	Yes	Yes
Ability to archive mail and C&S documents	Yes	Yes	Yes	Yes
Lookup across multiple address books	Yes	Yes	Yes	Yes
Automatically create a reply message by clicking on the From field	No	Yes	Yes	Yes
<b>Security</b>				
Send signed and/or encrypted mail	Yes	Yes	Yes	Yes
S/MIME	Yes	Yes	Yes	No
Read encrypted mail	Yes	Yes	Yes	Yes
Field, form, view, document, section level security	Yes	No	No	No
User roles	Yes	No	No	No
Local encryption of mail database	Yes	Yes	Yes	Yes
<b>Other features</b>				

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Control of database properties/design (refresh, replace, and so on)	Yes	No	No	No
Support for alternate editors for mail messages	Yes	No	No	No
Built-in news reader, POP mail, IMAP mail	Yes	No	No	No
Support for Notes/Domino database subscriptions	Yes	No	No	No
Extended search (w/in databases, attachments, messages, and so on) control of search - refinement of search with form, and so on	Yes	No	No	No
Drag and drop documents between frames	Yes	Yes	Yes	Yes
User can change their own password from client	Yes	Yes	Yes	Yes
Support for mail rules	Yes	Yes	Yes	Yes
Integrated instant messaging	Yes	Yes	Yes	Yes
Usage indicator (quota)	No	Yes	Yes	No
Out of office	Yes	Yes	Yes	Yes
Support for new out of office service	Yes	Yes	No	No
Auto discover user configuration	N/A	Yes	Yes	Yes
Quick find	Yes	Yes	Yes	Yes
Support setting as default mail client on Win32® system	Yes	Yes	Yes	Yes
Send current document from Microsoft Office applications	Yes	Yes	Yes	Yes
Support for RSS Feeds/Atoms	Yes	Yes	No	No
Supported on Linux	Yes	Yes	Yes (New in 7.0.1)	No

## Calendar features comparison

Table B-2 shows the major calendar features between the Lotus Notes 8 client, Domino Web Access 8, Domino Web Access 7, and Domino Web Access 6.5.

Table B-2 Calendar features

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
<b>Views</b>				

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
From the Action bar, open calendar into specific view (that is, 1-day, 1 week, 1-month, and so on)	No	Yes	Yes	Yes
Calendar views	1 day, 2 day, 5 day, 1 week, 2 week, 1 month	1 day, 2 day, 5 day, 1 week, 2 week, 1 month, 1 year	1 day, 2 day, 5 day, 1 week, 2 week, 1 month, 1 year	1 day, 2 day, 5 day, 1 week, 2 week, 1 month, 1 year
Summarized calendar views	Yes	Yes	Yes	Yes
Display unprocessed invites in calendar	Yes	Yes	Yes	Yes
Unaccepted meetings displayed within calendar	Yes	Yes	Yes	Yes
Meeting view	Yes	Yes	Yes	Yes
Calendar print preview	Yes	Yes	Yes	Yes
In-line calendar view editing	Yes	Yes	Yes	Yes
Work/non-work hour differentiation	Yes	Yes	Yes	Yes
Calendar filtering	Yes	Yes	No	No
Ability for chairperson to see status of invitees from the view level	Yes	Yes	Yes	Yes
<b>Calendar entries and group scheduling</b>				
Double-click within the calendar view to create an entry	Yes	Yes	Yes	Yes
Create appointment	Yes	Yes	Yes	Yes
Create all day event	Yes	Yes	Yes	Yes
Create reminder	Yes	Yes	Yes	Yes
Create anniversary	Yes	Yes	Yes	Yes
Create meeting invitation	Yes	Yes	Yes	Yes
Save calendar entry as draft	Yes	Yes	Yes	No
Forward a calendar entry	Yes	Yes	Yes	No
Create rich text in detailed description field	Yes	Yes	Yes	Yes
Automatic date (calendar picture) and time selector controls	Yes	Yes	Yes	Yes
Centrally managed rooms and resources	Yes	Yes	Yes	Yes
Create repeating entries	Yes	Yes	Yes	Yes

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Add alarms to entries	Yes	Yes	Yes	Yes
Attach a file to invitation forms	Yes	Yes	Yes	Yes
Pencil in a meeting/tentatively schedule	Yes	Yes	Yes	Yes
Mark an entry private/"not for public viewing"	Yes	Yes	Yes	Yes
Delivery options on calendar entries	Yes	Yes	Yes	Yes
Address lookup for inviting people	Yes	Yes	Yes	Yes
Check freetime availability for invitees	Yes	Yes	Yes	Yes
Support for counter-proposal	Yes	Yes	Yes	Yes
Freetime search within a counter-proposal	Yes	Yes	Yes	No
Respond with comments within a counter-proposal	Yes	Yes	Yes	Yes
Edit calendar entries	Yes	Yes	Yes	Yes
Send a reschedule notice	Yes	Yes	Yes	Yes
Add additional invitees after invitation is sent	Yes	Yes	Yes	Yes
Send "broadcast" invitation (no RSVPs/responses)	Yes	Yes	Yes	Yes
Send meeting confirmation	Yes	Yes	Yes	Yes
Display invitee responses in invitation	Yes	Yes	Yes	Yes
Accept invitation	Yes	Yes	Yes	Yes
Decline invitation	Yes	Yes	Yes	Yes
Counter propose an alternative time	Yes	Yes	Yes	Yes
Accept/decline with comments	Yes	Yes	Yes	Yes
Delegate an invitation	Yes	Yes	Yes	Yes
Check calendar from invitation page	Yes	Yes	Yes	Yes
Create and maintain group calendar	Yes	Yes	Yes	Yes
Create meeting invitation from group calendar view populating group members in invitation	No	Yes	Yes	Yes
Accept counter proposal	Yes	Yes	Yes	Yes



Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Support for meetings spanning midnight	Yes	Yes	Yes	Yes
C&S entry support for online Sametime meetings	Yes	Yes	Yes	Yes
Ability to specify time zones in C&S entries	Yes	Yes	Yes	Yes
Users in different time zones can share the same server and still see meeting times with respect to their own zone	Yes	Yes	Yes	Yes
Generate PDF calendar printouts	No	Yes	Yes	Yes
Drag and drop to reschedule a calendar entry	Yes	Yes	Yes	Yes
Import corporate holidays	Yes	Yes	Yes	No
<b>User preferences</b>				
Default location for resources	Yes	Yes	No	No
Set global default appointment duration	Yes	Yes	Yes	Yes
Set global default calendar entry type	Yes	Yes	Yes	Yes
Option to make freetime available to only certain users	Yes	Yes	Yes	Yes
Options to set allowable freetime	Yes	Yes	Yes	Yes
Enable conflict checking for calendar entries	Yes	Yes	Yes	Yes
Allow another user to manage Calendar without allowing access to e-mail	Yes	Yes	Yes	Yes
Mark default calendar entry as 'not for public viewing'	Yes	Yes	Yes	Yes
<b>Autoprocessing of calendar information</b>				
Option to remove invitations from Inbox after processing	Yes	Yes	Yes	Yes
Ability to autoprocess invitations	Yes	Yes	Yes	Yes

## To do features comparison

Table B-3 shows the major to do features between the Lotus Notes 8 client, Domino Web Access 8, Domino Web Access 7, and Domino Web Access 6.5.

Table B-3 To do

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
<b>To do's</b>				
To do's follow day-to-day in calendar view	Yes	Yes	Yes	Yes
Display To Do in Calendar view	Yes	Yes	Yes	Yes
Delegate a to do to another person	Yes	Yes	Yes	Yes
Create to do's (with start and end dates)	Yes	Yes	Yes	Yes
Categorize new to do entries	Yes	Yes	Yes	Yes
Alarm notification on to do's	Yes	Yes	Yes	Yes
Mark to do's complete or uncompleted	Yes	Yes	Yes	Yes
Create group to do's	Yes	Yes	Yes	Yes
Display to do's in gantt chart format	No	Yes	Yes	Yes
Priorities for to do's (high, medium, and low)	Yes	Yes	Yes	Yes
Create personal to do's	Yes	Yes	Yes	Yes
Owner and participant actions	Yes	Yes	Yes	Yes
Forward a to do item	Yes	Yes (header info only)	Yes (header info only)	Yes (header info only)

## Contacts features comparison

Table B-4 shows the major contacts features between the Lotus Notes 8 client, Domino Web Access 8, Domino Web Access 7, and Domino Web Access 6.5.

Table B-4 Contacts

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
<b>Personal contacts</b>				
Sort contacts by last name, company, e-mail, address, and so on	Yes	Yes	Yes	Yes
Add users in Domino directory to personal contact list	Yes	Yes	Yes	Yes
Select multiple contacts and send message	Yes	Yes	Yes	Yes

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Select multiple contacts and schedule a meeting	Yes	Yes	Yes	Yes
Business Card Summary view	Yes	Yes	Yes	Yes
Categorization of contacts	Yes	Yes	Yes	Yes
Automatically add e-mail sender to personal contact list (from inbox)	Yes	Yes	Yes	Yes
Forward a contact	Yes	Yes	Yes	No
Open contacts for another person	Yes	Yes	No	No

## Other features comparison

Table B-5 shows the major mail features between the Lotus Notes 8 client, Domino Web Access 8, Domino Web Access 7, and Domino Web Access 6.5.

Table B-5 Attachment and miscellaneous

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
<b>Attachments</b>				
Unlimited attachments	Yes	Yes	Yes	Yes
Drag and drop attachments from desktop/file system	Yes	Yes	Yes	Yes
Ability to rename attachments on download	Yes	Yes	Yes	Yes
<b>Miscellaneous</b>				
Browser support	N/A	IE 6 and IE 7 (Win XP/Vista), Mozilla 1.7x (Linux; NLD 10 and RHEL 5.0), FireFox 2.0 or later (Linux, Win XP/Vista, and MAC 10.4.x)	7IE 6.0+ (Win32), Mozilla 1.7x (Linux), FireFox 1.0.x (Linux, Win32, and MAC)	IE 5.5/6.0 (Win32), Mozilla 1.3.1+ (Linux)
Advanced search (contextual by text, author, or date)	Yes	Yes	Yes	Yes
Journal integrated in mail file	Yes	Yes	Yes	Yes
Contacts integrated in mail file	Yes	Yes	Yes	Yes
Ability to snooze alarms across multiple sessions/logins	No	Yes	Yes	Yes
Context sensitive help	Yes	Yes	Yes	Yes
Multilingual template support	Yes	Yes	Yes	Yes
Support for all Domino server platforms	Yes	Yes	Yes	Yes

Feature	Notes 8	DWA 8	DWA 7	DWA 6.5
Offline support for messaging, PIM, and collaborative applications	Yes	Messaging, PIM (same DOLS code used for apps)	Messaging, PIM (same DOLS code used for apps)	Messaging, PIM (same DOLS code used for apps)
Home page support	Yes	Yes	Yes	Yes
Mail view filter for unread messages	Yes	Yes	Yes	Yes
Schedule replication	Yes	Yes	Yes	No
Secure Logoff	Yes	Yes	Yes	Yes
Cache cleaning	N/A	Yes	Yes	Yes
Auto save	Yes	No	No	No
Message disclaimers	Yes	Yes	Yes	Yes
Archiving	Yes	Yes	Yes	Yes
Log off instant messaging without getting out of the mail file or turning it off in the preference	Yes	Yes	No	No

# Related publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this book.

## IBM Redbooks

For information about ordering these publications, see “How to get Redbooks” on page 472. Note that some of the documents referenced here may be available in softcopy only.

- ▶ *Lotus Domino 7 Application Development*, REDP-4102
- ▶ *Upgrading to Lotus Notes and Domino 6*, SG24-6889
- ▶ *Understanding Lotus Notes Smart Upgrade*, REDP-4180
- ▶ *Lotus Notes and Domino 7 Enterprise Upgrade Best Practices*, REDP-4120
- ▶ *Distributing Notes Clients Automatically*, REDP-3693
- ▶ *Migrating from Microsoft Exchange 2000/2003 to Lotus Notes and Domino 7*, SG24-7777
- ▶ *Domino 7 Server Consolidation: Best Practices to Get the Most Out of Your Domino Infrastructure*, REDP-4181
- ▶ *Lotus Domino Domain Monitoring*, REDP-4089
- ▶ *Building Composite Applications*, SG24-7367

## Online resources

These Web sites are also relevant as further information sources:

- ▶ IBM Software License Agreements  
<http://www-03.ibm.com/software/sla/sladb.nsf>
- ▶ *Best Practices for large Lotus Notes mail files*  
<http://www.ibm.com/developerworks/lotus/library/notes-mail-files/>
- ▶ *Lotus Notes Mail: comparing Server-based mail and local replica mail*  
<http://www.ibm.com/developerworks/lotus/library/serverlocalmail/>
- ▶ *Notes from Support: Domino Replication*  
[http://www.ibm.com/developerworks/lotus/library/ls-Domino\\_Replication](http://www.ibm.com/developerworks/lotus/library/ls-Domino_Replication)
- ▶ Lotus Notes and Domino Release Notes  
<http://www.ibm.com/developerworks/lotus/documentation/releasenotes/>
- ▶ Lotus Connections  
<http://www.ibm.com/lotus/connections>
- ▶ Lotus Notes/Domino Notes.ini settings  
<http://www.ibm.com/developerworks/lotus/documentation/notes-ini/index.html>

- ▶ How to perform a silent upgrade by mail  
<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21164125>
- ▶ How to Synchronize Notes and Internet Password with Policy Documents in Notes Domino 6  
<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21110671>
- ▶ Deploying Sametime 7.0 Connect for browsers on a Sametime 7.5 server  
<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21243158>
- ▶ IBM developerWorks Composite Applications page  
<http://www.ibm.com/developerworks/lotus/composite-apps/>

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# **IBM Lotus Notes and Domino 8 Deployment Guide**







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# IBM Lotus Notes and Domino 8 Deployment Guide

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