Caution

Failing to read the Release Notes before beginning installation may result in an improperly installed product. The IBM Lotus Workplace 2.01 Release Notes contain information that is required for properly installing the product. This information was not available when the Installation Guide was produced and is only available as release notes.

The Release Notes are posted at the following Web address: http://www-10.lotus.com/ldd/notesua.nsf/

This address hosts the Lotus Technical Library. To locate the Workplace documentation:
1. Click by product under “Documentation links”.
2. Click Lotus Workplace (includes Workplace Messaging).
3. Click 2.01.
4. Click Download PDF under “2.01 Release Notes”.

Installation Guide
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Phase 1
Planning to Install Lotus Workplace
Chapter 1
Planning the Lotus Workplace installation

This chapter provides information for planning the installation of IBM(R) Lotus(R) Workplace products.

Lotus Workplace installation

To prepare for installation, read this topic and its related topics before you start the installation program. Also review the Lotus Workplace 2.0 requirements for information on hardware and software requirements, supported hardware and software versions, and capacity planning.

Use the Lotus Workplace installation program to install the Lotus Workplace products: IBM(R) Lotus(R) Workplace Collaborative Learning, IBM Lotus Workplace Documents, IBM Lotus Managed Client, IBM Lotus Workplace Messaging(TM), and IBM Lotus Workplace Team Collaboration. In addition, a Lotus Workplace environment requires several other software components. The Lotus Workplace installation program can install some of these; others you must install separately, using the vendor’s documentation.

Use the Lotus Workplace rich client provisioning server installation program to install a downloadable copy of the Lotus Workplace rich client where users can access it.

Requirements

This topic describes the following requirements for the 2.0.1 release of the IBM(R) Lotus(R) Workplace products:

- Server hardware requirements
- Rich client hardware requirements
- Network connectivity requirements
- Server software and operating system requirements
- Client software and operating system requirements
This requirements information may be updated periodically on the Web. For the latest information see the Lotus Workplace Release Notes at http://www.lotus.com/ldd/notesua.nsf.


Server hardware requirements
This section describes the server hardware requirements.

Server processor and memory requirements
The following table lists the minimum server processor and memory requirements for a pilot deployment. Please work with your IBM representative to customize these requirements for your organization’s deployment.

<table>
<thead>
<tr>
<th>Server platform</th>
<th>Minimum processor</th>
<th>Minimum RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM(R) AIX(R)</td>
<td>1.2 GHz Power4+ or higher processor</td>
<td>4 GB</td>
</tr>
<tr>
<td>Linux(R)</td>
<td>2.0 GHz Intel(R) Pentium(R) 4 or equivalent processor</td>
<td>4 GB</td>
</tr>
<tr>
<td>Microsoft(R) Windows(R)</td>
<td>2.0 GHz Intel Pentium 4 or equivalent processor</td>
<td>4 GB</td>
</tr>
</tbody>
</table>

Using the NTFS file system is recommended for Windows systems.

Server disk space requirements
Installing IBM(R) WebSphere(R) Application Server, IBM WebSphere Portal, IBM HTTP Server, Lotus Workplace products, and the Lotus Workplace databases, requires a minimum of 17 GB of free disk space. This amount does not include the disk space required to install the database software. Installation of the rich client provisioning server requires an additional 1.5 GB.

If you use a two-server deployment or a multiple-server network deployment, the server that stores the Lotus Workplace databases requires a minimum of 10 GB of free disk space. The server that stores the other Lotus Workplace software components requires a minimum of 7 GB of free disk space, or if you install the rich client provisioning server, 8.5 GB of free disk space.

Note To install on IBM AIX, the /usr directory and /tmp directory each require a minimum of 2 GB of free disk space. To install on Linux, the /opt
directory and /tmp directory each require a minimum of 2 GB of free disk space.

**Estimating disk space requirements for IBM Lotus Workplace Messaging**

The database stores mail messages, address books, calendar data, and attachments. Before you install IBM(R) Lotus(R) Workplace Messaging(TM), determine the total number of messaging user accounts, the allowable mailbox size for each account, and the deleted message stub retention period. The required disk space will then dictate the number of disk drives. By default, Lotus Workplace Messaging allots 60 MB of storage to each mail account.

Use the following table to estimate the gigabytes needed for the mail data. For example, if you have 1000 users and each user uses the default disk space of 60 MB, you need approximately 73 GB of disk space. The numbers in the table are based on an average message size of 50 KB and 90 day message stub retention. It is also important to note that these estimates are for core Lotus Workplace Messaging. Additional database storage is required for WebSphere Portal and for archiving, if you implement an archiving solution.

Note IBM(R) DB2(R) has a size limit of 512 GB per table in a System Managed Store table space. Although the total disk space required for Lotus Workplace Messaging data may exceed 512 GB, the amount of data in its largest single table may not.

**Estimating disk space requirements for Lotus Workplace Collaborative Learning**

The amount of disk space required for the data and indexes that comprise a Learning database depends on the following factors:

- Number of courses
- Number of registered users

---

Chapter 1: Planning the Lotus Workplace installation  3
- Average courses per user
- Average nodes (course elements) per course

Use the following formulas to estimate the size of the data and indexes in a Learning database:

**To estimate the data size (in KB), use this formula:**

\[
\text{number_of_courses} \times (57 + \text{average_nodes_per_course} \times 30.4) + \\
\text{number_of_users} \times (10 + \text{average_courses_per_user} \times (3.8 + \text{average_nodes_per_course} \times 1.1))
\]

**To estimate the index size (in KB), use this formula:**

\[
\text{number_of_courses} \times (12.3 + \text{average_nodes_per_course} \times 1.4) + \\
\text{number_of_users} \times (1.5 + \text{average_courses_per_user} \times (1.6 + \text{average_nodes_per_course} \times 0.14))
\]

To calculate the required disk space, add the data size to the index size. If the Learning and Learning Delivery servers are installed on one server, multiply the result of this calculation by 2 to determine the required disk space.

**Rich client hardware requirements**

The minimum rich client processor and memory requirements are as follows:

- Intel Pentium 3 processor, 800 MHz
- 512 MB RAM

To reduce client startup time, you can use an Intel Pentium 4 processor and increase the amount of memory to, for example, 1 GB. This increase in processor speed and memory does not provide significant performance gains after startup.

Disk space recommendations for the rich client are described in the following table.

<table>
<thead>
<tr>
<th>Installation scenario</th>
<th>Recommended disk space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document editors not installed</td>
<td>350 MB</td>
</tr>
<tr>
<td>Document editors installed without language pack</td>
<td>600 MB</td>
</tr>
<tr>
<td>Document editors installed with language pack</td>
<td>700 MB</td>
</tr>
</tbody>
</table>

**Network connectivity requirements**

The network connectivity requirements are as follows:

4 IBM Lotus Workplace 2.0.1 Installation Guide
• Network adapter and connection to a physical network that can carry IP packets. For example, Ethernet, token ring, ATM, and so on.
• Static IP address with an entry in DNS.
• Configured fully qualified host name. The portal system must be able to resolve an IP address from its fully qualified host name.

To ensure that the host name is correctly configured in DNS, type one of these commands at the command line of another server on the network:
• ping hostname.yourco.com
• nslookup hostname.yourco.com (for use on Windows)
• dig hostname.yourco.com (for use on Linux)

Server software and operating system requirements
This section describes the server software and operating system requirements.

Note Software marked with a plus sign (+) is shipped with Lotus Workplace. Other software not listed may also ship with Lotus Workplace.

Supported server operating systems
One of the following operating systems is required on the server where Lotus Workplace will be installed:
• IBM AIX 5.1 with Maintenance Level 4
• IBM AIX 5.2
• Microsoft Windows 2000 Server with Service Pack 4
• Microsoft Windows 2000 Advanced Server with Service Pack 4
• Microsoft Windows Server 2003 Standard Edition
• Microsoft Windows Server 2003 Enterprise Edition
• Red Hat Enterprise Linux AS for Intel (x86) 2.1
• SuSE Linux Enterprise Server 8.24 for Intel (x86)

Supported WebSphere Application Server version
One of the following WebSphere Application Server software is required:
• +IBM WebSphere Application Server Enterprise 5.0.2.6
• +IBM WebSphere Application Server Network Deployment 5.0.2.6

Supported WebSphere Portal version
• +IBM WebSphere Portal Enable for Multiplatforms 5.0.2.2
**Supported databases**
Lotus Workplace requires one of the following databases running on a supported operating system listed above:

- +IBM(R) Cloudscape(TM) 5.1.36
- +IBM DB2 Universal Database Enterprise Server Edition 8.1 with FixPak 4a and a hotfix
- IBM DB2 Universal Database Workgroup Server Edition 8.1 with FixPak 4a
- IBM DB2 7.2 (Learning servers only)
- Microsoft SQL Server 2000 with Service Pack 2 (Learning servers only)
- Oracle Enterprise Edition 9i Release 2 (9.2.0.4)

**Note**  The IBM DB2 software that is provided with Lotus Workplace is licensed for use only with Lotus Workplace products. FixPak 4a for DB2 Enterprise Server Edition 8.1 on AIX is not included on the installation CDs.

**Supported HTTP servers**
Lotus Workplace requires one of the following HTTP servers:

- Apache HTTP Server 1.3.20
- Apache HTTP Server 1.3.26
- +IBM HTTP Server 1.3.26
- IBM HTTP Server 2.0.42.1
- Lotus(R) Domino(R) Enterprise Server (as Web server) 5.0.9a or later
- Microsoft IIS 5.0
- Sun ONE Web Server (formerly iPlanet), Enterprise Edition 6.0 with Service Pack 4
- iPlanet Web Server Enterprise Edition 4.1, Service Pack 7, 8, or 9

**Supported LDAP directory servers**
Lotus Workplace requires one of the following LDAP directory servers.

- IBM Directory Server 4.1 with Fix Pack 2
- +IBM Directory Server 5.1 with Fix Pack 2
- IBM(R) SecureWay(R) 3.2 (Learning servers only)
- Lotus Domino Enterprise Server (as LDAP server) 5.0.11 or later Release 5 version
- Lotus Domino Enterprise Server (as LDAP server) 6.5.
- Microsoft Active Directory 2000
- Novell eDirectory 8.7
• Sun ONE Directory Server 5.1 with Service Pack 3

Note
• IBM Directory Server requires IBM DB2 as the database store.
• If the LDAP server is Lotus Domino 6.5, Lotus Workplace supports searches of secondary Domino directories that are designated as “Domain type: Notes” in a directory assistance database on the server.

Supported server Java Development Kit (JDK)
JDK 1.4.1 (Synchronous Development only)

Supported Portal Document Manager content management software
• IBM(R) DB2(R) Content Manager Enterprise Edition, Version 8.2

Supported third-party single sign-on (SSO) products for the browser client
• IBM(R) Tivoli(R) Access Manager 4.1 (Lotus Workplace Messaging only)
• IBM Tivoli Access Manager 5.1 (Lotus Workplace Messaging only)
• Netegrity Policy Server 5.5

Supported third-party public key infrastructure (PKI) products
• Lotus Domino 6.5.2
• Microsoft PKI provided with Windows 2000 server
• VeriSign 6.0

Supported proxy servers
IBM WebSphere Edge Server 2.0 (Lotus Workplace Messaging only)

Additional requirements for Lotus Workplace Collaborative Learning
To support complete functionality for live classroom sessions, Lotus Workplace Collaborative Learning requires IBM Lotus Virtual Classroom 1.1.1 or later.

Client software and operating system requirements
This section describes the client software and operating system requirements for the 2.0.1 release of the Lotus Workplace products.

Supported operating systems for the browser client
The following operating systems are supported for browser clients:
• Microsoft Windows 2000 Professional with Service Pack 2
• Microsoft Windows XP
• Red Hat Enterprise Linux WS 3.0 with Update 1
• SuSE LINUX Desktop 1.0
Workplace Collaborative Learning supports these additional client operating systems for browser access, excluding the portal-based student interface:

- Macintosh 8.0
- Macintosh OS 9
- Macintosh OS X
- Microsoft Windows 98
- Microsoft Windows ME
- Red Hat Linux 7.2 or later

**Note** The Workplace Collaborative Learning Authoring Tool and Offline Learning client support Windows 2000 and Windows XP only.

**Supported operating systems for the rich client**
The following operating systems are supported for the rich client:

- Microsoft Windows 2000 Professional with Service Pack 2
- Microsoft Windows XP
- Red Hat Enterprise Linux WS 3.0 with Update 1; Kernal: 2.4.21-9; Compiler: gcc 3.2, glibc 2.3.2

**Supported browsers**
The following browsers are supported:

- Microsoft Internet Explorer 6.0 with Service Pack 1 — on Windows 2000 and Windows XP with the Sun Java(TM) Runtime Environment (JRE) 1.4.2 or with Microsoft Java Virtual Machine (JVM) 1.1
- Microsoft Internet Explorer 5.5 with Service Pack 2 — on Windows 2000 with Microsoft JVM 1.1
- Mozilla 1.4 on Linux with Sun Java Runtime Environment (JRE) 1.4.2

Workplace Collaborative Learning supports these additional browsers:

- Netscape 6.0x — on supported Windows platforms
- Netscape 6.2 or later — all supported platforms
- Microsoft Internet Explorer 5.0x — Windows and Macintosh platforms

**Supported mail clients**
In addition to the browser client and rich client, Lotus Workplace Messaging supports the following mail clients.

**POP3 clients on Microsoft Windows 2000 and Microsoft Windows XP**
Lotus Workplace Messaging supports the following POP3 clients:

- IBM(R) Lotus(R) Notes(R) 6.5
- Microsoft Outlook Express 6
IMAP clients on Microsoft Windows 2000 and Microsoft Windows XP
Lotus Workplace Messaging supports the following IMAP clients:

- IBM Lotus Notes(R) 6.5
- Microsoft Outlook Express 6
- MS Outlook - XP/2002

Note  Lotus Workplace Messaging support for IMAP-connected clients has enterprise scalability limitations. IMAP support is intended for evaluation purposes in this release.

Supported client Java(TM) Development Kit (JDK)
JDK 1.4.2

Phase 1: Planning to install Lotus Workplace

Planning is crucial. The decisions you make when initially installing Lotus Workplace might be difficult, or impossible, to change after the system is in use. It is important to understand what is involved in deploying Lotus Workplace and its related components, and to complete installation tasks in the proper sequence.

Before you install Lotus Workplace, consider the number of people who will use it, the amount of data you expect to manage, the types of servers you will be hosting the product on, and the third-party components you plan to use with Lotus Workplace. You must make a series of decisions regarding components and configuration, including (but not limited to):

- Will this be a pilot installation, or will it be used for production?
- What type of LDAP directory will you use to store user records?
- Which DBMS will you use for storing Lotus Workplace data?
- Will you be installing Lotus Workplace software on top of an existing WebSphere Portal Server?

Sometimes, the answer to one question affects the answer to another. For example, while the Cloudscape database management system (DBMS) may be a good choice for a pilot installation, it is not sufficiently robust for use in a production environment. If you answer the first question with “production,” you should not answer the third question with “Cloudscape.”

The topics in this section provide an overview of Lotus Workplace installation that explains the sequence of operations, describes the tasks you
Installation overview

You install Lotus Workplace in phases; each phase consists of one or more tasks:

**Phase 1: Planning to install Lotus Workplace**
Plan how many servers you need and complete pre-installation tasks. Also review the Lotus Workplace requirements for information on hardware and software requirements, supported hardware and software versions, and capacity planning.

Phase 1 tasks are described in the chapter, “Planning the Lotus Workplace Installation.”

**Phase 2: Setting up the Network Deployment environment**
Create shared directories for Lotus Workplace, then install and configure the remote HTTP server and the Deployment Manager servers, which are used when you install Lotus Workplace in a Network Deployment.

Phase 2 tasks are described in the chapter, “Preparing the Network Deployment Environment.”

**Phase 3: Setting up the database server**
Install and configure the database server that will host Lotus Workplace data. Install Lotus Workplace on the database server, and then create Lotus Workplace databases.

Phase 3 tasks are described in the chapter, “Preparing the DBMS Server.”

**Phase 4: Planning the LDAP directory**
Prepare the LDAP directory that will be used to manage Lotus Workplace users and ensure that attributes are correctly mapped for WebSphere Member Manager.

Phase 4 tasks are described in the chapter, “Planning the LDAP Directory.”

**Phase 5: Preparing, installing, and configuring the Lotus Workplace server**
Install and configure WebSphere Portal, and then install your licensed Lotus Workplace products:

- Lotus Workplace Collaborative Learning
- Lotus Workplace Documents
• Lotus Workplace Messaging(TM)
• Lotus Workplace Team Collaboration

Phase 5 tasks are described in the chapters, “Preparing, Installing, and Configuring the Lotus Workplace Server” and “Installing Lotus Workplace.”

**Phase 6: Completing Network Deployment setup**

Complete configuration tasks that enable nodes in the Network Deployment to communicate; for example, set up dynamic caching of data, distribute files, and set properties for each node.

Phase 6 tasks are described in the chapter, “Completing the Network Deployment.”

**Phase 7: Installing and distributing the Lotus Workplace rich client**

Install the rich client provisioning server so that users can download the rich client to their workstations. The rich client allows users to work with Lotus Workplace Messaging and Lotus Workplace Documents offline.

Phase 7 tasks are described in the chapter, “Installing the Lotus Workplace Rich Client.”

**Post-installation tasks**

After you complete installation, review these other chapters and appendixes for additional information:

The appendix “Completing Optional Post-installation Tasks” covers additional tasks you may want to complete after basic installation is finished, such as setting up directory attributes for user policies and messaging, mapping lookaside Person attributes to custom LDAP attributes, changing the LDAP directory server name or port after configuration, and changing the HTTP port after configuration.

The appendixes, “Alternative Installation Methods” and “Reference Information,” discuss other ways of installing Lotus Workplace and provide lists of installation directories, configuration commands, and sources of additional documentation.

**Lotus Workplace software components**

The following components are part of a Lotus Workplace environment. The Lotus Workplace installation program installs some of these components; others you must install separately, using the vendor’s documentation.

For details on specific versions of support products, see the Lotus Workplace requirements.

Chapter 1: Planning the Lotus Workplace installation 11
HTTP server
An HTTP server handles client HTTP requests across an intranet or the Internet.
Lotus Workplace supports many HTTP servers, including: Apache HTTP Server, IBM HTTP Server, Lotus Domino Enterprise Server, Microsoft IIS, Sun ONE Web Server, and iPlanet Web Server.
IBM HTTP Server Version 1.3.26 is installed automatically as part of the WebSphere Application Server installation for a pilot environment. When setting up a Network Deployment, you install the HTTP server as a remote server so that all nodes in the configuration can access it.

Database Management System
A database management system (DBMS) hosts the databases that store Lotus Workplace data and manages access to them.
Lotus Workplace supports the following DBMS products for hosting databases: IBM(R) Cloudscape(TM), IBM DB2(TM), and Oracle. In addition, you can use Microsoft(R) SQL Server for hosting the Workplace Collaborative Learning databases.
If the DBMS server is not installed on the same server as Lotus Workplace, you must install the appropriate DBMS client software on the Lotus Workplace server to ensure that it can access the databases.
IBM Cloudscape Network Server Edition and IBM DB2 Universal Database(TM) Enterprise Server Version 8.1 with Fix Pack 4a are included with Lotus Workplace.

LDAP directory
An LDAP directory stores user account information, which is used by Lotus Workplace for authentication.
If your company already uses a supported LDAP directory, you can use it with Lotus Workplace instead of setting up a new one.
IBM Directory Server 5.1 is included with Lotus Workplace.

IBM WebSphere Application Server
WebSphere Application Server is a required base for both WebSphere Portal and Lotus Workplace products. WebSphere Application Server Enterprise Version provides the WebSphere Administrative Console, from which you can configure and administer the WebSphere Application Server and Lotus Workplace products. WebSphere
Application Server also provides the technology for Lotus Workplace to be installed as part of a distributed Network Deployment.

The WebSphere Application Server is installed by the Lotus Workplace pre-installer. If you already have WebSphere Application Server installed, you can choose to use the existing instance rather than install another.

IBM WebSphere Portal
WebSphere Portal provides the infrastructure for Lotus Workplace products. You can use the Lotus Workplace pre-installation program to install WebSphere Portal; if WebSphere Portal is already installed, you can choose to use that existing instance rather than install another.

If you choose to install WebSphere Portal using the Lotus Workplace pre-installer, it also installs the following software as appropriate for your configuration: IBM HTTP Server, Lotus Collaborative component Version 5.0, Odyssey browser framework, WebSphere Member Manager (WMM) Version 5.0, IBM Cloudscape Version 5.1.3.6, WebSphere Studio Site Developer Version 5.1.1, and WebSphere Portal Content(R) Publishing Version 5.0.

Lotus Workplace Collaborative Learning Servers
Lotus Workplace Collaborative Learning requires three servers: a Learning Server, a Learning Delivery Server, and a course content server.

A Learning Server contains the functions and capabilities for configuring and coordinating the other Lotus Workplace Collaborative Learning features. You can choose to have the Lotus Workplace installation program install a Learning Server. Depending on your environment, you can install the Learning Server on its own server or install it on a server with other features and products.

A Learning Delivery Server is a Lotus Workplace Collaborative Learning feature that launches course content, provides course navigation features, tracks student progress, and sends tracking information to the Learning Server. You can choose to have the Lotus Workplace installation program install a Learning Delivery Server. Depending on your environment, you can install a Learning Delivery Server on its own server or install it on a server with other features and products.

A course content server is any file server (usually an HTTP server) that contains content for Lotus Workplace Collaborative Learning courses. The Learning Delivery Server accesses the course content from the course content server. Before installing Lotus Workplace Collaborative Learning, you must know which protocol (usually FTP)
the Learning Delivery Server will use to access the course content server. You must also configure the course content server to use the protocol you have chosen. You can populate the course content server at any time before or after installing Lotus Workplace Collaborative Learning. Depending on your environment, you can maintain a course content server on its own computer, or install it on a computer that hosts other features and products.

Mail Service
The Mail Service allows browser and rich client access to mail on a Lotus Workplace server. The Mail Service also supports Internet Message Access Protocol (IMAP), and Post Office Protocol version 3 (POP3) clients from other mail systems, and includes the following services:

- Simple Mail Transfer Protocol (SMTP) Inbound
- SMTP Outbound/Local Delivery
- Message Handler
- POP3
- IMAP

The Mail Service works with the message queue, the queue directory, and the message store to receive, process, and send e-mail. Depending on your environment, you can install the Mail Service on its own computer, or install it on a computer with other Lotus Workplace services.

You must use the Mail Service installed by the Lotus Workplace installation program, but you can use other SMTP servers within a deployed infrastructure as routing or relay hubs.

The Mail Service is required if you are installing Lotus Workplace Messaging. The POP3 and IMAP services are not required.

Lotus Workplace rich client
The Lotus Workplace rich client is a desktop environment that lets users work with Lotus Workplace Messaging and Lotus Workplace Documents. The rich client installation comprises two procedures: the administrator installs a provisioning server on the Lotus Workplace Server, and users install the rich client on their desktops from the provisioning server.

Lotus Workplace rich client provisioning server
The provisioning server provides the rich client applications to the user workstation during rich client desktop installation. It also provides updates. Every time a user logs in to the rich client, the system checks the provisioning server to determine if there are
updates or new components available. If there are, the user is prompted to update the rich client workplace.

Customers or business partners who are interested in the IBM Workplace Client technology (rich client) should contact their IBM representative for more details.

**Licensing Lotus Workplace products**

You must purchase a license for Lotus Workplace products before you install them. To purchase Lotus Workplace product licenses, contact your IBM representative or go to www.ibm.com.

After installation, click **Lotus Workplace —> Licenses** in the WebSphere Administrative Console to access the Licenses page, which displays the licenses you purchased.

To enable a license for an additional Lotus Workplace product, or to disable a product’s license, be sure to contact your IBM representative first to make the appropriate business arrangements, and then use the Licenses page to enable (License) or disable (Unlicense) the product.

**Lotus Workplace deployments**

Lotus Workplace offers two configurations: a two-server pilot deployment and WebSphere Application Server Network Deployment.

**Note** You can also install Lotus Workplace and its components on a single server; however this configuration taxes server resources, thus limiting its usefulness. The single-server deployment is suitable only for demonstration purposes.

**Two-server pilot deployment**

In this deployment, you split the Lotus Workplace functions between two servers. The first server hosts the LDAP directory and the DBMS; you run a Lotus Workplace data-only installation to set up the Lotus Workplace databases on this computer.

The second server hosts the Lotus Workplace products. On this server, install a DBMS client to access the databases hosted on the first computer. Then use the Lotus Workplace pre-installer to set up WebSphere Application Server, WebSphere Portal, and an HTTP server. Finally, run a Lotus Workplace product-only installation to set up Lotus Workplace products on this computer.

Any supplemental servers needed for the Collaborative Learning and Messaging components are also installed on the second server.

This deployment is best suited for a pilot deployment because it stresses the resources of the two servers and does not support many users or a large
amount of data. If you choose this deployment for a small-to-medium production environment, you should migrate the WebSphere Portal databases from Cloudscape (the default DBMS product) to a more robust DBMS product. For best performance, use the same DBMS product for the Lotus Workplace databases. The following figure illustrates how software could be distributed in a two-server pilot deployment.

WebSphere Application Server Network Deployment
A WebSphere Application Server Network Deployment is a software configuration in which WebSphere Application Servers are managed as a single domain, called a cell. Cells are managed by the Deployment Manager, which usually resides on its own server. In this deployment, you install the various software components required for Lotus Workplace on separate servers, and use WebSphere Application Server Network Deployment technology to group and manage the Lotus Workplace servers.

The WebSphere Application Server Network Deployment is the only configuration suitable for a production environment, because it is scalable and eliminates single points of failure.

The following figure illustrates how software could be distributed in a Network Deployment.
Installation task sequence

The figure that follows shows the general sequence of operations when you install Lotus Workplace, including the decisions you must make and how they affect the flow. The steps in the overall sequence are discussed in Installation task descriptions.

Note If you are not configuring a WebSphere Application Server Network Deployment, skip Phases 2 and 6 in this sequence.
Installation task descriptions

The installation tasks are described in the same order in which they are shown in the installation task sequence diagram. To install Lotus Workplace correctly requires that you complete tasks in the specified order, so that all dependencies are satisfied.
Before installing anything, read through all the planning topics and make sure that you understand what software you will install on various servers, and how you will configure your Lotus Workplace deployment. Completing the Administrative names and passwords worksheet helps you to collect information about the different user accounts that you will use while installing Lotus Workplace and related software. The Pre-installation checklist, which you fill out at the end of Phase 1, ensures that you complete preliminary tasks in the proper order before you install Lotus Workplace products.

**Set up the Network Deployment environment**

For a WebSphere Application Server Network Deployment, you must install some additional components before you can set up the actual Network Deployment and federate Lotus Workplace servers to it. Begin by creating shared directories that will be accessed by all Lotus Workplace servers in the deployment. Then install an HTTP server that the Lotus Workplace servers can all access remotely (this replaces the HTTP server that is installed as part of the Lotus Workplace server in a pilot deployment). Complete Phase 2 by setting up the Deployment Manager.

**Prepare the DBMS server**

All configurations of Lotus Workplace require a relational database management system (DBMS) for storing data; regardless of whether you are installing a pilot deployment or a Network Deployment, you set up the DBMS server before installing the Lotus Workplace products. In this phase, you begin by installing the DBMS server software. Then install Lotus Workplace data on the same computer; finally, complete Phase 3 by creating the Lotus Workplace databases and schemas that will be hosted on the DBMS server.

If you decide to use Cloudscape as your DBMS (suited for single-server demonstration installations only, because it cannot be used remotely), you do not need to install any DBMS server or client on your server, because the Cloudscape DBMS server will be installed with the Lotus Workplace products.

**Note** If the DBMS server does not reside on the Lotus Workplace server, you must also install a DBMS client on the Lotus Workplace server to enable it to access the Lotus Workplace databases hosted on the DBMS server. You will complete this task in Phase 5.

**Plan the LDAP directory**

If your company already uses an LDAP directory, you can choose to use it with Lotus Workplace. You must establish mappings between the LDAP directory and Lotus Workplace to ensure both proper access for users and
proper security levels to protect data. In addition, you must create LDAP administrator accounts for use with Lotus Workplace. For more information on preparing the LDAP directory, see the section on LDAP directory planning.

**Install the DBMS client**

If you are hosting the DBMS server on a different server from the Lotus Workplace server, you must install a DBMS client on the Lotus Workplace server so that it can communicate with the DBMS server. The DBMS client must reside on the server before you begin installing Lotus Workplace software, so that the installation program can detect the client and offer the corresponding DBMS product as an option.

**Run the pre-installer to install the WebSphere Application Server and WebSphere Portal Server**

Lotus Workplace requires WebSphere Application Server and WebSphere Portal as underlying components. If you already have one or both installed, the Lotus Workplace pre-installer detects them, and offers you the choice of installing on top of them, or installing additional copies of them for use by Lotus Workplace. If neither are installed, the pre-installer installs them for you.

If you choose to install Lotus Workplace on top of an existing of WebSphere Application Server, the pre-installer checks whether WebSphere Portal is already installed on top of WebSphere Application Server. If WebSphere Portal is not already installed, the pre-installer installs WebSphere Portal on top of WebSphere Application Server.

If WebSphere Application Server and WebSphere Portal are not installed, or if you choose an additional installation of these components, the Lotus Workplace installation program installs both WebSphere Application Server and WebSphere Portal.

**Migrating WebSphere Portal databases to another DBMS product**

WebSphere Portal always installs with Cloudscape as its default DBMS product, and immediately creates its own databases. Although Cloudscape is sufficient for a pilot installation, you should migrate WebSphere Portal to a more robust DBMS for production use, even if you are using the two-server product configuration. A Network Deployment configuration requires a remote DBMS server, which Cloudscape cannot support, so for this configuration you will need to migrate the WebSphere Portal databases not only to another DBMS product, but to another server. Go to the WebSphere Portal Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html for details on supported DBMS products.

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If you migrate WebSphere Portal to another DBMS product, you must perform the migration before you install the Lotus Workplace software on top of WebSphere Portal. Lotus Workplace does not have to use the same DBMS product as WebSphere Portal because the two applications manage their databases independently; however, for best performance you may choose to use the same DBMS product for both applications.

**Update WebSphere Application Server and WebSphere Portal as needed**

After you have installed both WebSphere Application Server and WebSphere Portal, you must update them to the exact version, including fix packs, required by Lotus Workplace. First you copy fix packs to their required locations; then you run one or more update scripts (described in Phase 5 topics) to bring WebSphere Application Server and WebSphere Portal up to date.

**Install Lotus Workplace**

After the basic requirements have been met for Lotus Workplace components, you can install the Lotus Workplace software, selecting the products to install and the DBMS to host data for each.

**Configure Lotus Workplace**

After you install the Lotus Workplace software, you must complete several configuration tasks to ensure that all of the components can communicate. Configuration is a manual task that involves editing one or more properties files and defining values for your installation.

**Complete the Network Deployment**

If you are installing Lotus Workplace using a Network Deployment, you must complete the Network Deployment before anyone starts using Lotus Workplace. Tasks include setting up dynamic caching so that data can be shared by multiple nodes in the deployment, distributing various files to ensure that all nodes have a copy, and setting properties specific to this type of configuration.

**Install the Lotus Workplace rich client provisioning server**

The provisioning server provides the Lotus Workplace rich client applications to the user workstation during rich client desktop installation. Every time a user logs in to the rich client, the system checks the provisioning server to determine if there are updates or new components available. If there are, the user is prompted to update the rich client workplace.
**Note** Customers or business partners who are interested in the IBM Workplace Client technology (rich client) should contact their IBM representative for more details.

### Administrator names and passwords worksheet

The Lotus Workplace pre-installer and installation program prompt you for names and passwords of people or groups who may administer Workplace products and databases and the underlying database and server software. To prepare for installation, fill in this worksheet with the names and passwords for the administrator users or groups at your site.

<table>
<thead>
<tr>
<th>Information needed</th>
<th>Description</th>
<th>Name and password for your site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Database preparation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Database administrator</td>
<td>Create a user name and password to allow administrator access to the DBMS server. You must also add the user to the administrators group on that server. If you use DB2, this user must be called db2admin.</td>
</tr>
<tr>
<td><strong>Pre-installation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AIX or Linux administrator</td>
<td>Create a user with administrative privileges who can install software on this server.</td>
</tr>
<tr>
<td>3</td>
<td>Windows administrator</td>
<td>Create a user with administrative privileges who can install software on this server.</td>
</tr>
<tr>
<td>4</td>
<td>Database client</td>
<td>Create a user name and password with authority to administer remote databases on the DBMS server. The user must exist in the user directory. If you use DB2, this user must be called db2admin.</td>
</tr>
</tbody>
</table>

*continued*
<table>
<thead>
<tr>
<th>Information needed</th>
<th>Description</th>
<th>Name and password for your site</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 User who can catalog DB2 databases</td>
<td>To catalog DB2 databases, log in as db2admin.</td>
<td></td>
</tr>
<tr>
<td>6 Windows administrator</td>
<td>Supply the name of a user who has administration rights on the Windows server.</td>
<td></td>
</tr>
<tr>
<td>7 WebSphere Portal administrator</td>
<td>Create a user name and password to allow access to WebSphere Portal with administrator authority. You must create, or already have, a record for this user in the user directory, and the user must be a member of the administrators group. This user name is used for WebSphere Portal access and is not related to any users who have access to the operating system itself.</td>
<td></td>
</tr>
<tr>
<td>8 WebSphere Application Server administrator</td>
<td>Create a user name and password to allow access to WebSphere Application Server with administrator authority. You must create, or already have, a record for this user in the user directory, and the user must be a member of the administrators group.</td>
<td></td>
</tr>
<tr>
<td><strong>Lotus Workplace installation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Database administrator</td>
<td>Before installing Lotus Workplace on a DBMS server or on a single Lotus Workplace server, log in with the same user name and password that you created for User #1.</td>
<td></td>
</tr>
<tr>
<td>10 Lotus Workplace requires administrator access</td>
<td>Supply the name of the WebSphere Application Server administrator that you created for User #8.</td>
<td></td>
</tr>
</tbody>
</table>

*continued*
<table>
<thead>
<tr>
<th>Information needed</th>
<th>Description</th>
<th>Name and password for your site</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Learning Server user name and password</td>
<td>Create a user name and password to allow the Learning Server to authenticate the Learning Delivery Servers. The user name and password “lwplms” is useful because it is easily recognized. The name does not have to exist in the user directory.</td>
<td></td>
</tr>
<tr>
<td>12 Learning Server administrator LDAP user or group name</td>
<td>Create a user or group who will administer Lotus Workplace Collaborative Learning. This user must exist in the user directory.</td>
<td></td>
</tr>
<tr>
<td>13 Learning Delivery Server user name and password</td>
<td>Create a user name and password to allow the Learning Delivery Server to authenticate the Learning Server. The user name and password “lwplds” is useful because it is easily recognized. The user name does not have to exist in the user directory.</td>
<td></td>
</tr>
<tr>
<td>14 Learning Delivery Content Deployment FTP user</td>
<td>Supply the user name and password of a user who has sufficient rights to access the FTP server and upload content. The user must already exist in the user directory.</td>
<td></td>
</tr>
<tr>
<td>15 User who has the right to create and modify databases on this server</td>
<td>Supply the name of the database administrator you created for User #1.</td>
<td></td>
</tr>
<tr>
<td>16 User account with which Lotus Workplace will access remote databases</td>
<td>Supply the name of the database client you created for User #4 in this worksheet.</td>
<td></td>
</tr>
</tbody>
</table>

continued
### Pre-installation checklist

Before installing Lotus Workplace, use this checklist to ensure that you have completed all necessary preparations.

<table>
<thead>
<tr>
<th>Complete</th>
<th>Pre-installation tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make sure that you have purchased licenses for any Lotus Workplace products you plan to install. To purchase Lotus Workplace product licenses, contact your IBM representative or go to <a href="http://www.ibm.com">www.ibm.com</a>.</td>
</tr>
<tr>
<td></td>
<td>Decide how many servers will be used for your deployment. Read the topic “Phase 1: Planning to install Lotus Workplace” for guidelines.</td>
</tr>
<tr>
<td></td>
<td>Choose whether you will use Cloudscape, DB2, Oracle, or (for Learning only) SQL Server to store your data.</td>
</tr>
<tr>
<td></td>
<td>Verify that you have the necessary hardware and software and their required versions.</td>
</tr>
<tr>
<td></td>
<td>Install and configure an LDAP directory.</td>
</tr>
<tr>
<td></td>
<td>If you are installing Lotus Workplace Collaborative Learning, determine where you will store course content and which method (FTP or local file system) the Learning Delivery Server will use to access the content.</td>
</tr>
<tr>
<td></td>
<td>If you are installing Lotus Workplace Messaging, disable any mail server that is already running, as described in the mail server’s documentation.</td>
</tr>
<tr>
<td></td>
<td>Fill out the “Administrator names and passwords worksheet” and have the information available during installation. Verify that the administrators exist in the user directory and that they are members of the appropriate administrator groups.</td>
</tr>
<tr>
<td></td>
<td>If you will be configuring Lotus Workplace in a WebSphere Application Server Network Deployment, complete preparations for the deployment.</td>
</tr>
</tbody>
</table>
Phase 2
Preparing the Network Deployment Environment
Chapter 2
Preparing the Network Deployment Environment

This chapter describes how to set up a Network Deployment environment before installing Lotus Workplace.

Phase 2: Setting up the Network Deployment environment

Follow these steps to set up the Network Deployment.

1. Create shared Lotus Workplace directories.
2. Install a remote HTTP server.
3. Set up the Deployment Manager.

These steps require from 6 to 8 hours to complete.

If you are installing Lotus Workplace in a pilot environment, skip this phase and go to Phase 3, Setting up the DBMS server.

Creating shared directories for a Network Deployment

To allow Lotus Workplace to function properly, several directories must be accessible to all nodes in the deployment.

1. On the Deployment Manager server, create the main shared directory, for example, q:\NDShares.
2. Create the following directories under the main shared directory:
   - qfilestore
   - logs
   - packages
   - juruindex
   - content
   - WPCPIIndex

Refer to “Setting up the Network Deployment” for additional installation and setup information.
Setting up the remote HTTP server

If you do not already have a remote HTTP server installed, follow these instructions to install the IBM HTTP Server provided with Lotus Workplace.

1. Install IBM HTTP Server using the appropriate WebSphere extensions from the WebSphere Application Server CD.
   For example, in Windows, the install program is run from installihs.bat, which is located in the was\win\ihs directory.

2. Comment out these lines in the httpd.conf file and save the changes.
   
   AfpaEnable
   AfpaCache on
   AfpaLogFile "log file name" V-ECLF

3. Start the HTTP server to verify that it starts correctly.
   AIX and Linux
   /<ihs_root>/bin/apachectl start
   Windows
   c:\<ihs_root>\apache -k start

4. If you plan to install Lotus Workplace Collaborative Learning, create a shared directory called “content” under <ihs_root>\htdocs\en_US\.

5. Stop and restart the HTTP server.

Refer to “Setting up the Network Deployment” for additional installation and setup information.

Setting up the Deployment Manager

A Network Deployment cell is a group of servers (known as nodes) that are managed by a special WebSphere Application Server called the Deployment Manager. Before you install Lotus Workplace on the Deployment Manager, it needs the prerequisite WebSphere Application Server and Deployment Manager software. Unlike the nodes in a Lotus Workplace installation, the Deployment Manager does not use WebSphere Portal software.

In a Network Deployment, you designate one server as the Deployment Manager, which should be a dedicated system. It hosts the WebSphere Administrative Console and provides a single point of administrative control for all elements in the WebSphere Application Server cell.

To install the WebSphere Application Server Deployment Manager, perform the following steps.

1. Log in to the server as a user with administrative privileges.
2. Locate the CD for WebSphere Application Server Deployment Manager.
3. Run the installation program.
   
   **AIX and Linux**
   
   `./<cd_root>/wasnd/<operating_system>/<platform>/install`

   **Windows**
   
   `<cd_root>\wasnd\win\nt\launchpad.bat`

   where:
   
   `<cd_root>` is the root directory of the CD.

4. When selecting the features for the “IBM WebSphere Application Server Network Deployment Version 5,” select Deployment Manager.

5. When typing the node, host, and cell names, the host name is the name of the server on which you are installing the Network Deployment Edition. To form the node and cell names, append the words “Manager” and “Network” respectively, to the host name. For example:

   **Node name: acmeManager**
   
   **Host name: acme**
   
   **Cell name: acmeNetwork**


7. Run the installation program.
   
   **AIX and Linux**
   
   `./<cd_root>/was/<operating_system>/<platform>/install`

   **Windows**
   
   `<cd_root>\was\win\install.bat`

   The WebSphere Application Server Enterprise installation program automatically detects the existing Network Deployment installation and provides the option to extend it with the Enterprise extensions.
Phase 3
Preparing the DBMS Server
Chapter 3
Preparing the DBMS Server

This chapter provides information about setting up the DBMS server that will provide data storage for Lotus Workplace.

Phase 3: Setting up the DBMS server

Preparing the DBMS server consists of three major tasks:

• Installing the DBMS server software
• Installing the Lotus Workplace data (scripts and properties files)
• Creating the Lotus Workplace databases

Install the DBMS server software first, because it will host the data used by Lotus Workplace. Then, run the Lotus Workplace installation program in data-only mode to install only the scripts and properties files required for creating databases. Then, run the scripts and create the Lotus Workplace databases.

The Lotus Workplace products will be installed on a different server, referred to as the Lotus Workplace server.

Installing the DBMS server software

Before you can host Lotus Workplace databases on a server, you must install a supported database management system (DBMS) server on it. Lotus Workplace supports the following DBMS products:

• DB2
• Oracle
• SQL Server (Collaborative Learning databases only)

Note
Lotus Workplace additionally supports the Cloudscape DBMS; however it is not very robust and is suitable only for the single-server deployment. In that configuration, the Cloudscape Network Server is installed automatically during Lotus Workplace installation.

When choosing a database management system for a Lotus Workplace component, remember that you cannot change that selection after Lotus
Workplace has been installed (there are no facilities for migrating Lotus Workplace data to another DBMS product). Although Lotus Workplace is installed on top of WebSphere Portal, it does not have to use the same DBMS product as the two applications manage their databases independently.

Install the DBMS server before you install the Lotus Workplace software, even if they will be hosted on different servers. If the DBMS server will not be hosted on the same server as Lotus Workplace, there is an additional step to install the appropriate DBMS client on the Lotus Workplace server, which enables communication between the Lotus Workplace server and the DBMS server; you will complete that task in Phase 5: “Preparing, installing, and configuring the Lotus Workplace server.”

If you intend to use different DBMS products for different Lotus Workplace components, set up all of your DBMS servers, and install all of the corresponding DBMS clients, before installing Lotus Workplace software.

**Caution** Because Lotus Workplace supports a variety of national languages, all Lotus Workplace DBMS servers and clients must use Unicode as the database character set, with UTF-8 as the National Character Set (for character encoding). Creating databases with a different character set may cause problems for users who run the application in a different language from that used by the DBMS.

### Setting up the DB2 server

The DB2 Universal Database Server Version 8.1 is provided on the Lotus Workplace installation CDs. For detailed information on installing the DB2 server, see the DB2 documentation at http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/winos2unix/support/v8pubs.d2w/en_main

### Creating the db2admin user

Lotus Workplace requires that the DB2 server be administered by a user called **db2admin**; this name is referenced when you install Lotus Workplace and create its databases in DB2:

- AIX and Linux users must set an appropriate profile for this user before installing DB2.
- Windows users create this user and assign Windows administration privileges to the account. If you have already installed DB2 using a different user, you can add this user to the DB2 administration group.

**Note** Every computer hosting a DB2 server or a DB2 client must support this user.
Creating the `db2admin` user in AIX and Linux

Lotus Workplace requires that you install the DB2 server with a user called `db2admin` as the DB2 administrator:

- If you have already installed DB2 using `db2admin` as the DB2 administrator, skip this task and proceed to the topic “Installing Lotus Workplace data.”
- If you installed DB2 but did not use `db2admin` as the DB2 administrator, you must create this user and install a new copy of the DB2 server software with this administrator. Follow the instructions in this topic to create the `db2admin` user.
- If you have not installed the DB2 server, follow these instructions to create the `db2admin` user.

Follow these steps to create the `db2admin` user.

1. Log in to the AIX or Linux server as a user with administrative privileges on the server and create a user called `db2admin`:

2. Make sure that `db2admin`’s profile contains the following lines:

   ```
   if [ -f /home/db2admin/sqlib/db2profile ]; then
     . /home/db2admin/sqlib/db2profile
   fi
   ```

**Note** Whenever you restart the DB2 server, you must log in as `db2admin` to ensure that DB2 has proper access to services on this server.

Proceed to the topic “Installing the DB2 server in AIX and Linux”.

Creating the `db2admin` user in Windows

If you installed DB2 using `db2admin` as the administrator, skip this task and proceed to the topic “Installing Lotus Workplace data.”

If you have not created the `db2admin` account, follow these instructions, even if you have already installed the DB2 server:

1. Log in to the server as a Windows administrator.
   
   Be sure to log in to the Windows computer where the DB2 server is, or will be, hosted.

2. Create a user called `db2admin`.
   
   For security reasons, do not use “password” or “db2admin” for the password.

3. Add `db2admin` to the Windows Administrators group.


5. Click Local Security Policy.
6. In the left window pane, expand the Local Policies object, and then click User Rights Assignment.

7. Apply the following advanced user rights to the db2admin user by repeating steps a through c for each policy:
   - Act as part of the operating system
   - Create a token object
   - Increase quotas
   - Log in as a service
   - Replace a process level token
     a. In the right pane, click a policy in the Policy column to select it.
     c. Click Add, then select db2admin and click Add, and then click OK.

       This adds user db2admin to the list of users assigned to the selected policy.

8. Click OK.

   If you have already installed the DB2 server, proceed to the topic “Adding db2admin to the DB2 administrators group” for instructions on designating this user as a DB2 administrator.

   If you have not installed the DB2 server, proceed to the topic “Installing the DB2 server in Windows” to install the DB2 server software using db2admin as the administrator.

**Adding db2admin to the DB2 administrators group**

If you installed the DB2 server using a name other than db2admin as the DB2 administrator, add that user to the DB2 administrators group now.

1. On the DB2 server, verify that you have created the db2admin account and added it to the Windows Administrator group as described in the topic “Creating the db2admin user in Windows.”

2. Open a DB2 command window.

3. Type the following command:
   
   `get dbm cfg`

4. Scroll through the results until you locate the following value:

   ```
   SYSADM group name (SYSADM_GROUP) =DB2GRP
   ```

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5. Determine whether an administrator group has been defined for DB2:
   • If no name has been assigned to the SYSADM_GROUP, then there is no specific group defined for DB2 administrators. This means that the \texttt{db2admin} account you created will automatically be accepted as a DB2 administrator. Skip the remainder of this task and proceed to the topic “Installing the DB2 server in Windows” to install the DB2 server software using \texttt{db2admin} as the administrator.
   • If the SYSADM_GROUP has a name assigned ("DB2GRP" shown in this example), then administrator privileges in DB2 are limited to the users in that group. To designate the \texttt{db2admin} user as a DB2 administrator, you must create a Windows Administrator group using the same name, and then add the \texttt{db2admin} user to that new group. Continue with the next step in this procedure.

6. Close the DB2 command window.
7. In Windows, click \textbf{Start —> Settings —> Control Panel —> Users and Passwords}.
8. Click the \textbf{Advanced} tab, and then click the \textbf{Advanced} button.
9. Right-click \textbf{Groups} and then click \textbf{New Group}.
10. Type a name and a description for the new group. \textbf{Caution} The name must match the SYSADM\_GROUP used by DB2.
11. Add the \texttt{db2admin} user to this group.
    To do this, click the \textbf{Add} button, locate \texttt{db2admin} in the list of users, and then click the \textbf{Add} button again to add that user to this new group. Click \textbf{OK}.
12. Click \textbf{Create} to create the new group, and then click \textbf{Close}.
13. Click \textbf{OK} to close the Users and Passwords panel.
    After you have ensured that \texttt{db2admin} has administrator privileges in DB2, proceed to the topic “Installing Lotus Workplace data.”

\textbf{Installing the DB2 server}

Install the DB2 server software on the server that will host the Lotus Workplace databases. After you install the server software, be sure to install the required fix pack and hotfix.

Procedures for installing DB2 varies by platform; see the appropriate topic for Installing the DB2 server in Windows and Installing the DB2 server in AIX and Linux.
Installing the DB2 server in AIX and Linux

To install DB2 Universal Database Server on AIX and Linux, follow these steps:

1. Log in to the server as `db2admin`.
2. Insert one of the following CDs:
   - The CD containing the DB2 Enterprise Server Edition for Linux.
   - The CD containing the DB2 Enterprise Server Edition for AIX Single-Byte Character Set (SBCS).
   - The CD containing the DB2 Enterprise Server Edition for AIX Double-Byte Character Set (DBCS).
3. Start the launch pad by typing the following command:
   `./db2setup`
4. Click Installation Prerequisites to review the system requirements.
5. Click Install Products.
6. Make sure that DB2 UDB Enterprise Server Edition is selected, and then click Next.
7. Read the “Welcome” panel text, and then click Next.
8. Read the License Agreement, select I accept the terms in the license agreement, and then click Next.
9. In the “Select Installation Type” panel, select Typical (do not select Data warehousing or Satellite administration capability), and then click Next.
   If you are prompted with a warning about using APPC to connect to remote servers, click OK.
10. In the “Select the Installation Action” panel, make sure that Install DB2 UDB Enterprise Server Edition on this computer is selected. (do not select Save your settings in a response file), and then click Next.
11. In the “Set user information for the DB2 Administration Server” panel, do the following steps, and then click Next:
   a. Type the user name `db2admin`.
      This user will also be granted administrative privileges in DB2.
   b. Type the group name that this user belongs to, for example: `db2grp`.
   c. Type and confirm a password.
   d. Type the user’s home directory; for example: `/home/db2admin`.
12. Do one of the following steps, and then click Next.
• (AIX) Accept the default Create a DB2 instance -32 bit (if your system is 32 bit option this will not display).
• (Linux) Accept the default Create a DB2 instance.

13. Select how the instance will be used, accept default Single-partition instance, and then click Next.

14. To set user information for the DB2 instance owner, do the following steps, and then click Next:
   a. Type db2admin.
   b. Type the group name that this user belongs to, for example: db2grp.
   c. Type and confirm a password.
   d. Type the user’s home directory, for example: /home/db2admin.

15. To set user information for the fenced user, do the following steps, and then click Next:
   a. Type the user name; for example: db2admin.
   b. Type the group name; for example: db2grp.
   c. Type and confirm a password.
   d. Type the user’s home directory; for example: /home/db2admin.

16. In the “Prepare the DB2 tools catalog” panel, select Prepare the DB2 tool catalog in a local database, and then click Next.

17. In the “Specify a local database to store the DB2 tools catalog” panel, accept the defaults, and then click Next.
    If you are prompted with a warning about SMTP, click OK.

18. In the “Set up the administration contact list” panel, select Local - create a contact list on this system, and then click Next.

19. In the “Specify a contact for health monitor notification” panel, select Defer the task after installation is complete, and then click Next.

20. In the “Start copying files” panel, review the list, and then click Install.

21. Restart the server.

22. Install the DB2 Fix Pack 4a as described in the procedure that follows.

**Installing DB2 FixPak 4a for AIX**

FixPak 4a for DB2 is posted on the DB2 Web site, and can be accessed using the following steps:

1. Log in to the server as db2admin.
2. Go to the following address and download the FixPak to your DB2 server:

3. Go to the following address and follow the instructions for installing the FixPak (FP4a):

4. Install the hotfix for this fix pack as described in the section "Installing the hotfix to DB2 FixPak 4a for AIX and Linux", later in this topic.

**Installing DB2 FixPak 4a for Linux**

1. Log in to the server as `db2admin`.
2. Go to the following address and download the FixPak to your DB2 server:

3. Go to the following address and follow the instructions for installing the FixPak (FP4a):

4. Install the hotfix to this FixPak as described in the procedure that follows.

**Installing the hotfix to DB2 FixPak 4a for AIX and Linux**
The hotfix for DB2 FixPak 4a is available on your Lotus Workplace installation CDs. This hotfix will be supported until one month after the release DB2 FixPak 7.

1. Install DB2 and FixPak 4a.
2. Log in to the server as `db2admin`:
3. Open a command window.
4. Verify that you have the correct DB2 version and FixPak installed by typing the following command:
   
   # db2level

   If you have the correct software installed, you will see the following result:

   DB21085I Instance "db2inst1" uses "32" bits and DB2 code release "SQL08014" with level identifier "02050106".
   Informational tokens are "DB2 v8.1.1.40", "n040122", "U497250", and FixPak "4".
   Product is installed at "/usr/opt/db2_08_01".

5. Stop all database instances by typing the following command:
   
   db2stop force

6. Switch to root authority by running the su - root command (or log in as root):
   
   # su - root

7. Run the following commands, where <iname> represents the instance owner name (the default iname is "db2inst1").

   Note  If you are a hacmp user, you must use the ha_db2stop command to stop DB2 instead of the db2stop command. Otherwise, the db2stop command triggers a failure event.
   
   su - <iname>
   . $HOME/sqllib/db2profile
   db2 force applications all
   db2 terminate
   db2stop
   db2licd -end  # run at each physical node
   exit

8. Switch to root authority by running the following command:
   
   su - root

9. Run the following commands:
   
   su - db2admin
   . $HOME/db2admin/db2profile
   db2admin stop
   exit

10. Stop all applications that access DB2.
11. For AIX installations only, type the following command from the root to clean up any applications lingering in memory:

```
issue "slibclean"
```

12. Back up the original files under `/usr/opt/db2_08_01/<directory>`, where `<directory>` includes the following directories:

- `/usr/opt/db2_08_01/adm/`
- `/usr/opt/db2_08_01/adm64/`
- `/usr/opt/db2_08_01/bin/`
- `/usr/opt/db2_08_01/bin64/`
- `/usr/opt/db2_08_01/function/`
- `/usr/opt/db2_08_01/function64/`
- `/usr/opt/db2_08_01/instance/`
- `/usr/opt/db2_08_01/lib/`
- `/usr/opt/db2_08_01/lib64/`

13. Untar the hotfix file for AIX or Linux to a temporary directory.

The TAR files are located on the DB2 CDs that come with your Lotus Workplace installation CDs:

- **AIX**
  - `special_10915.tar`

- **Linux**
  - `special_10835.tar`

14. Copy the new files into place and use the `chmod` command to ensure the same permission and ownership are maintained.

The following list shows permissions and ownership for files that are commonly shipped for special builds:

- `r--r--r--` `bin:bin libdb2.a`
- `r--r--r--` `bin:bin libdb2e.a`
- `r-xr-xr-x` `bin:bin db2level`

**Note** If a provided file does not exist on your system, it does not need to be copied or installed.

15. Issue the following command on each instance.

Use `dasiupdt` for the DAS Administrative instance if it exists. For example:

```
db2iupdt db2inst1
```
16. To switch back to the original level, simply follow the same procedure, replacing the new files with the originals.

Checksum output for files provided (AIX only)

<table>
<thead>
<tr>
<th>FILE NAME</th>
<th>SIZE</th>
<th>CKSUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>adm/db2dart</td>
<td>890723</td>
<td>341534847</td>
</tr>
<tr>
<td>adm/db2fmp</td>
<td>36430</td>
<td>1954585723</td>
</tr>
<tr>
<td>adm/db2fmpterms</td>
<td>29516</td>
<td>663112382</td>
</tr>
<tr>
<td>adm/db2sysc</td>
<td>99567</td>
<td>3261510542</td>
</tr>
<tr>
<td>bin/db2cat</td>
<td>281072</td>
<td>3860449732</td>
</tr>
<tr>
<td>bin/djxlinkInformix</td>
<td>25106</td>
<td>2178083931</td>
</tr>
<tr>
<td>bin/djxlinkMssql</td>
<td>17220</td>
<td>3795393694</td>
</tr>
<tr>
<td>bin/djxlinkOracle</td>
<td>29873</td>
<td>2742197443</td>
</tr>
<tr>
<td>bin/djxlinkSybase</td>
<td>33260</td>
<td>1690632772</td>
</tr>
<tr>
<td>function/db2exsrv</td>
<td>208776</td>
<td>2883352826</td>
</tr>
<tr>
<td>instance/native/install/libdb2install.a</td>
<td>5330</td>
<td>3337975884</td>
</tr>
<tr>
<td>instance/native/install/libdb2isys.a</td>
<td>340394</td>
<td>1804274359</td>
</tr>
<tr>
<td>lib/db2_36.o</td>
<td>13587092</td>
<td>1389839431</td>
</tr>
<tr>
<td>lib/libSTctlib.a</td>
<td>687606</td>
<td>2582079704</td>
</tr>
<tr>
<td>lib/libSTdblib.a</td>
<td>648141</td>
<td>3675754884</td>
</tr>
<tr>
<td>lib/libdb2.a</td>
<td>13140378</td>
<td>2678666442</td>
</tr>
<tr>
<td>lib/libdb2STinformixF.a</td>
<td>704181</td>
<td>1487249030</td>
</tr>
<tr>
<td>lib/libdb2STmssql3F.a</td>
<td>519013</td>
<td>538655088</td>
</tr>
<tr>
<td>lib/libdb2STnet8F.a</td>
<td>553982</td>
<td>1468668253</td>
</tr>
<tr>
<td>lib/libdb2STnet8U.a</td>
<td>332737</td>
<td>4099451475</td>
</tr>
<tr>
<td>lib/libdb2STsqlnetF.a</td>
<td>409014</td>
<td>1112103832</td>
</tr>
<tr>
<td>lib/libdb2STsqlnetU.a</td>
<td>293326</td>
<td>640597935</td>
</tr>
<tr>
<td>lib/libdb2apie.a</td>
<td>7652</td>
<td>2892011071</td>
</tr>
<tr>
<td>lib/libdb2dbg.a</td>
<td>27055</td>
<td>2792360542</td>
</tr>
<tr>
<td>lib/libdb2drdaF.a</td>
<td>1866330</td>
<td>3042570890</td>
</tr>
<tr>
<td>lib/libdb2drdaU.a</td>
<td>1629175</td>
<td>1291832441</td>
</tr>
</tbody>
</table>

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lib64/libdb2jext.a  228704  4286620828
lib64/libdb2net8U.a  375807  758483010
lib64/libdb2qgstp.a  788162  3666672517

17. Run the following command to check whether the hotfix was applied properly:
   
   # db2level

   If you applied the hotfix correctly, you will see the first result below; otherwise you will see the second result.

   The differences between the results of the db2level command with the hotfix applied and without the hotfix applied are highlighted in italics:

   **Hotfix correctly applied:**
   
   $ db2level
   
   DB21085I Instance "db2inst1" uses "32" bits and DB2 code release "SQL08014" with level identifier "02050106".

   Informational tokens are "DB2 v8.1.1.41", "special_10915", "U497250_10915", and FixPak "4".

   Product is installed at "/usr/opt/db2_08_01".

   **No hotfix applied:**
   
   # db2level
   
   DB21085I Instance "db2inst1" uses "32" bits and DB2 code release "SQL08014" with level identifier "02050106".

   Informational tokens are "DB2 v8.1.1.40", "n040122", "U497250", and FixPak "4".

   Product is installed at "/usr/opt/db2_08_01".

   After the DB2 server has been installed, proceed to the topic "Installing Lotus Workplace data."

**Installing the DB2 server in Windows**

To install DB2 Universal Database Server on Windows, follow these steps:

**Caution** When you type a path name during installation in a Windows environment, do not include spaces. Path names that contain spaces might cause problems when you configure the product.

1. Log in to the Windows server as db2admin.
2. Insert the CD containing the DB2 Server for Windows.

   The auto-run feature automatically opens the DB2 launch pad in the DB2 Setup wizard.
3. Click **Installation Prerequisites** to review the system requirements.
4. Click **Install Products**.
5. Make sure that “DB2 UDB Enterprise Server Edition” is selected, and then click **Next**.
6. Read the “Welcome” panel text, and then click **Next**.
7. Read the License Agreement, select **I accept the terms in the license agreement**, and then click **Next**.
8. In the “Select Installation Type” panel, select **Typical** (do not select “Data warehousing” or “Satellite administration capability”), and then click **Next**.
   If you are prompted with a warning about using APPC to connect to remote servers, click **OK**.
9. In the “Select the Installation Action” panel, make sure that **Install DB2 UDB Enterprise Server Edition on this computer** is selected (do not select **Save your settings in a response file**), and then click **Next**.
10. Choose a drive and directory on which to install the DB2 server, and then click **Next**.
   Do not use the default C:\Program Files\SQLLIB, and do not include spaces in the path name. For example, use C:\IBM\SQLLIB.
11. In the “Set user information for the DB2 Administration Server” panel, type **db2admin** as the administrator name.
   In this step, you are granting DB2 administrator privileges to that Windows account named “db2admin,” ensuring that the DB2 administrator now has all of the necessary privileges in both DB2 and Windows.
12. Type the password for that account and confirm it. Leave **Use the same user name and password for the remaining DB2 services** checked, and then click **Next**.
13. In the “Set up the administration contact list” panel, select **Local - create a contact list on this system**, and then click **Next**.
14. In the **Configure DB2 instances** panel, click **Next**.
15. In the “Prepare the DB2 tools catalog” panel select **Prepare the DB2 tool catalog in a local database**, and then click **Next**.
16. In the “Specify a local database to store the DB2 tools catalog” panel, accept the defaults and then click **Next**.
   If a warning about SMTP displays, click **OK**.
17. In the “Specify a contact for health monitor notification” panel, select **Defer the task after installation is complete**, and then click **Next**.
18. In the “Start copying files” panel, review the list, and then click **Install**.

19. Restart the server.

20. Install the DB2 Fix Pack 4a as described in the procedure that follows.

**Installing DB2 FixPak 4a for Windows**

1. Log in to the server as **db2admin**.

2. Go to the following address and download the FixPak to your DB2 server:


3. Go to the following address and follow the instructions for installing the FixPak (FP4a):


4. Install the hotfix to this FixPak, as described in the procedure that follows.

**Installing the hotfix to DB2 FixPak 4a for Windows**

1. Install DB2 and FixPak 4a.

2. Log in to the server as **db2admin**.

3. Copy the file hotfixpkg_10837.exe from Lotus Workplace DB2 disk 26 to the DB2 installation folder.

   Typically this is:

   C:\IBM\SQLLIB

4. Open a DB2 command window and type the following command to stop all DB2 processes and install the hotfix:

   hotfixpkg_10837 -a -f

5. Type the following command to verify the installation:

   hotfix -l

   You will see the following response:

   **List of previous fixes:**

   HotFix10837

6. Open a Windows command prompt and run the following program:

   C:\Program Files\SQLLIB> db2level

   You will see the following response:
Setting up the Oracle server

Setting up the Oracle server involves installing the Oracle database management server and creating a database instance for use with Lotus Workplace.

Setting up the AIX or Linux environment for Oracle

In AIX and Linux, the user that starts WebSphere must have the correct environment set up in order to use the Oracle driver. When the environment is not correctly setup, you will see errors in the logs; for example:

UnsatisfiedLinkError: Can't find library ocijdbc9 (libocijdbc9.so) in java.library.path

To correct this, perform the following steps:

1. Stop all WebSphere instances.
2. Modify the .profile file for the account you use to start WebSphere, and add the following line:
   
   Linux
   LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/jdbc/lib

   AIX
   LIBPATH=$ORACLE_HOME/lib:$ORACLE_HOME/jdbc/lib

   Where $ORACLE_HOME has been defined in the environment as the base directory for your Oracle installation; for example:
   $ORACLE_HOME=/home/oracle/OraHome1

   Also, make sure $ORACLE_HOME/bin is defined in the $PATH environment variable.

3. Log out / back in for the .profile change to take effect.
4. Restart your WebSphere instances.

**Installing the Oracle server**

For instructions on installing the Oracle DBMS server software, consult your Oracle documentation. When installing the Oracle server software, complete the Database Instance and Service naming task (described in this topic) to ensure proper access to databases from Lotus Workplace.

**Caution** When you type a path name during installation in a Windows environment, do not include spaces. Path names that contain spaces might cause problems when you configure the product.

**Setting the database instance and service names**

1. Log in to the server as a user with administrative privileges.

2. While installing the Oracle server software, create a database instance called WRKPLC using the UTF-8 character set.

   This database instance will contain the schemas used by Lotus Workplace, and must be created using the UTF-8 character set to ensure accessibility in all languages.

   **Tip** If you omit this step during installation, you can create the database instance later using the Oracle Database Configuration Assistant tool.

3. Edit the Oracle\Ora9\network\admin\tnsnames.ora file, and set the SERVICE_NAME parameter to WRKPLC to match the database instance name created in Step 2.

   In the example that follows, the SERVICE_NAME (shown italicized) matches the "tns" entry in which it is included; this match between names is required for Lotus Workplace.

   \[WRKPLC =
   \]
   \[
   (DESCRIPTION =
   \]
   \[
   (ADDRESS_LIST =
   \]
   \[
   (ADDRESS =
   \]
   \[
   (PROTOCOL = TCP)
   \]
   \[
   (HOST = workplaceserver.acme.com)
   \]
   \[
   (PORT = 1521)
   \]
   \)
   \)
   \[
   (CONNECT_DATA =
   \]
   \[
   (SERVER = DEDICATED)
   \]
   \]
The PORT indicates the port that the Oracle server and client use for communicating (they must use the same port).

4. Save and close the tnsnames.ora file.

After the Oracle server has been installed, proceed to the topic "Installing Lotus Workplace data."

Setting up SQL Server

Lotus Workplace supports Microsoft SQL Server 2000 for the Collaborative Learning databases (LWPLMS and LWPLDS). You cannot use SQL Server to host any other Lotus Workplace databases.

For instructions on installing the SQL Server 2000 DBMS server software, consult the SQL Server documentation.

**Note** If you host the SQL Server and DB2 on the same physical server, you might need to rename the isql.bat file for at least one of these products to avoid conflicts.

After the SQL Server software has been installed, proceed to the topic "Installing Lotus Workplace data."

Installing Lotus Workplace data

Follow these steps to install Lotus Workplace on a server that will contain Lotus Workplace databases only. The server must already have the DBMS server software installed. WebSphere Portal Server and WebSphere Application Server are not required on this server.

**Caution** When you type a name during installation in a Windows environment, do not include spaces. Path names that contain spaces might cause problems when you configure the product.

1. Verify that the server has the appropriate DBMS server software installed.
2. Log in to the server as a user with administrative privileges.
   If you are using DB2 as your DBMS, log in as **db2admin**.
3. Create a local directory for the installation files.
This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.

AIX
/usr/lwp201code/

Linux
/opt/lwp201code/

Windows
c:\lwp201code\n
4. Copy the CDWorkplace directory and its files from the CD to the new directory.

5. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.

6. Stop the WebSphere Application Server and WebSphere Portal Server if they are running on this computer.

7. Open a command prompt, navigate to the CD or folder called CDWorkplace, and enter the appropriate command to start installation. Run the program from a local drive, not a mapped network drive.

   Note You can run the installation program with the case-sensitive parameter -skipDbChecking to see all database panels available in the installation program. This is useful for adding database options even if you do not have the necessary database software installed.

   AIX
   ./usr/lwp201code/CDWorkplace/aixlwpSuite

   Linux
   ./opt/lwp201code/CDWorkplace/linlwpSuite

   Windows
   winlwpSuite.exe

8. At the panel "Select a language to be used," select a language, and then click Next.

9. At the panel "The installer will install IBM Lotus Workplace on your server," click Next.

10. At the panel "Select the Lotus Workplace products that you have purchased licenses for," select all the products for which you have licenses, and then click Next.

11. At the panel "Host Lotus Workplace," select This computer will host Lotus Workplace data only and click Next.
12. At the panel, “Based on the products you selected on the previous panel, the following databases are available for configuration,” clear any databases you do not plan to use on this server, and then click Next.

13. At the License Agreement, click I accept the terms and click Next.

14. At the panel that describes the installation options, select one of the following options, and click Next:

- **Install and set configuration properties** — (Suitable for most installations) This option installs Lotus Workplace and provides default configuration settings in the lwpprops.properties file. Requires some additional configuration after installation.

- **Install without configuring** — (For experienced installers only) This option installs Lotus Workplace on this server, but does not provide any configuration information in the lwpprops.properties file. You must complete all configuration manually after installation.

- **Set configuration properties only** — (For reinstalling with new options) Select this option to change configuration properties for an existing Lotus Workplace installation. Changes are made to existing files; no new files are installed.
  
  For more information, see the topic, "Installing Lotus Workplace using the configure-only option."

15. At the panel "Click Next to install IBM Lotus Workplace to this directory,” specify one of the following directories, and then click Next.

   - **AIX**
     `/usr/WorkplaceServer`
   
   - **Linux**
     `/opt/WorkplaceServer`
   
   - **Windows**
     `c:\WorkplaceServer`

The characters in the directory path name must be single-byte coded (8 bit) characters from the ISO 8859-1 West European (Latin-1) character set.

16. If you are not installing Workplace Collaborative Learning, proceed to Step 23.

If you are installing Workplace Collaborative Learning, the panel "Learning Server Settings" is displayed. Type the following information, and then click Next:

- **Server URL** — Type http://serverfullDNSname (your full hostname) as the Learning Server Web address.
• **User name and password** — Type lwplms as the user name and password that the Learning Server uses to authenticate the Learning Delivery Servers. The user name does not have to exist in a directory.

17. At the panel "Additional Learning Server Settings," provide the following information, and then click **Next**:

• **Learning Server administrator LDAP user or group name** — Type the name of the user or group who will serve as the administrator for Lotus Workplace Collaborative Learning. The name in this field must exist in the LDAP directory.

• **Learning Server administrator name type** — Choose User or Group for the name you specified in the previous field.

• **Path for imported course packages** — Type the path name to the directory in which you want the Learning server to store course packages imported from other servers. Specify a full directory path name, for example: /usr/lms_packages (AIX), /opt/lms_packages (Linux), or c:\lms_packages (Windows).

  **Note** If you are setting up a two-server Lotus Workplace deployment, this directory denotes a local directory on the Lotus Workplace product server. Specify the directory as if it is local to this server. If you are installing in a Network Deployment, specify the network path name to the shared directory called "packages" that you created before installation.

18. At the second “Additional Learning Server Settings” panel, provide the following information, and then click **Next**:

• **Juru index path** — Type the path name to a directory where the Learning Server will store Juru index files, for example: /usr/juruindex (AIX), /opt/juruindex (Linux), or c:\juruindex (Windows). Juru is a full-text search capability that allows extended searches of document collections.

  **Note** This directory denotes a local directory on the Lotus Workplace product server. Specify the directory as if it is local to this server. If you are installing in a Network Deployment, specify the network path name to the shared directory called "juruindex" that you created before installation.

• **Juru index language** — Choose the language of the content to be indexed. If the server supports content in multiple languages, choose the most frequently used language.

19. If you selected the Learning Delivery Server feature, the panel "Learning Delivery Server Settings" is displayed. Provide the following information, then click **Next**:

---

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• **Server URL** — Type http://serverfullDNSname (your full hostname) as the Delivery Server Web address.

• **User name and password** — Type lwplds as the user name and password that the Learning Delivery Server uses to authenticate the Learning Server. The user name does not have to exist in a directory.

**Note**  If you are installing a Delivery Server only, the information you specify here must match the configuration for the separately installed Learning Server.

20. At the panel “Additional Learning Delivery Server Settings,” provide the following information, and then click **Next**:

• **Server ID** — Type a text string that will be used to identify this Delivery Server when you deploy courses or manage servers using the Learning Server user interface, for example DS1.

• **Description** — Type a description to help distinguish among multiple Delivery Servers, for example, Learning Delivery Server 1.

21. At the second “Additional Learning Delivery Server Settings” panel, provide the following information, and then click **Next**:

• **E-mail address to receive system notifications sent by the Learning Delivery Server** — Specify a valid e-mail address for the administrator, for example, admin@yourhostname.

• **E-mail address from which Learning Delivery Server system notifications are sent** — Specify an e-mail address to display for Learning Delivery Server notifications, for example, admin@yourhostname; this does not have to be a valid address.

22. At the panel “Learning Delivery Server Content Deployment Settings,” provide the following information:

a. For **Content URL**, type the Web address where the Delivery Server looks for content when it opens a course, for example, http://serverfullDNSname/content. Then click **New** to specify a server to provide course content.

b. Provide the following additional information:

   **Deployment type** — Select File system to have the Learning Server copy course content directly to the location you specify (in **Location for deployed content**, which follows) or select FTP to have the Learning Server transfer course content to the indicated FTP server. If you select FTP, additional installation choices display.

   **Server name** — Specify a name (your full hostname) to identify this Content server on the Content Deployment Settings panel.

   **Location for deployed content** — Specify the file path name that the Learning Server should use when deploying content to this content
server; the value must correspond to the Content URL and must be accessible from the Learning Server. If you selected FTP, the Learning Server will use this location when it connects to the specified FTP server.

**Note** This directory denotes a local directory on the Lotus Workplace product server. Specify the directory as if it is local to this server. If you are installing in a Network Deployment, specify the network path name to the shared directory called "content" that you created before installation.

Examples of locations include:

**AIX**
/\usr/IBMHttpServer/htdocs/en_US/content

**Linux**
/opt/IBMHttpServer/htdocs/en_US/content

**Windows**
c:\IBMHttpServer\htdocs\en_US\content
x:\content

**FTP Settings:**
- **FTP Server** — If you selected FTP, enter the fully qualified FTP server address
- **FTP Username** — If you selected FTP, specify a user account with sufficient rights to access the FTP server and upload content
- **FTP Password** — If you selected FTP, specify the password for the FTP user account.
- **Confirm Password** — Confirm the FTP password.

c. Click **OK**, then click **Next**.

23. If the message "The installation program did not find any supported database software on this machine" displays, the server does not have the required DBMS software. Cancel the installation and install the DBMS software.

24. At the panel "Lotus Workplace supports multiple database vendors," select one of the following options, and then click **Next**:

- **Use a single database server configuration** — Select this if you have one DBMS server.
- **Use multiple database server configurations** — Select this if you have several DBMS servers, each supporting different Lotus Workplace products.
25. If you selected "Use a single database server configuration" in the previous panel, you see the panel "The installation program can create a single database for all installed products, or create a separate database for each." Select one of the following options, and then click Next.

- Select Create one database.
  This option creates one Lotus Workplace database that includes the information for all products you are installing. You will be prompted for Steps 26 through 30.

- Select Create multiple databases.
  This option creates a separate database for each product. You will be prompted to repeat Steps 26 through 30 for each product.

26. At the panel "Select which type of database to configure," choose the database product you have installed on this server, and then click Next.

- DB2
- Oracle
- MS SQL (displays if you are installing only the Collaborative Learning component on this server)

27. At the panel "Specify the information needed to connect to the DBMS server," provide the following information, and then click Next.

- DBMS Program Directory — Specify the database vendor’s program directory, for example, /home/db2admin/sqllib (AIX) or c:\IBM\SQLLIB (Windows).

- DBMS Server name -- Type a fully qualified server name (for example, myserver.yourcompany.com).

- DBMS Port number -- The installation program provides the default port number for your database software (for example, 50000 for DB2 and 1521 for Oracle). For DB2 on Linux, the default port number is 50001.

- DBMS Service Name -- Type your common server name (for example, "myserver"). This is optional for DB2 servers and required for others.

28. At the panel "Specify the name and password of a user who has the right to create and modify databases," type the name and password of the DBMS administrator for the Lotus Workplace database and DBMS server, for example "db2admin." Then click Next.

29. At the panel "Specify the name and password of a user that Lotus Workplace applications will use to access this database," provide the name and password that Lotus Workplace should use when it accesses and writes to the Lotus Workplace database, for example "db2admin." Then click Next.
30. At the panel “Type the path to the data directory,” specify the location for creating Lotus Workplace databases. You must create the data and backup directories before proceeding. Provide the following information, and then click Next:

- **Data directory** — Type or browse for the directory path name where you want to store the Lotus Workplace databases. For example, /usr/WebSphere/lwpdata (AIX), /opt/WebSphere/lwpdata (Linux), or c:\lwpdata (Windows).

- **Backup directory** — Type or browse for the directory path name where you want to store copies of the databases created in the data directory. For example, /usr/WebSphere/lwpbackups (AIX), /opt/WebSphere/lwpbackups (Linux), or c:\lwpbackups (Windows).

31. If you are creating multiple databases on this server, repeat Steps 26 through 30 for each database you are creating on this server; otherwise, go to Step 32.

32. At the panel “Summary Information,” click Next when finished.

   **Note** If this panel does not appear, minimize the Installation program window, and then restore it to display this panel.

33. After about 10 to 15 minutes, the last panel displays. Click Finish to complete the installation.
Chapter 4
Creating the Lotus Workplace databases

This chapter provides information about creating the databases for Lotus Workplace.

Creating the Lotus Workplace Databases

After you install Lotus Workplace, you create the databases to be used by its various components. How and where you create the databases depends on several factors, including:

- The DBMS product hosting the databases
- Which components you installed (and therefore require databases)
- Whether you have already installed any databases

The following sections explain what the various databases are used for, and how to create them using different DBMS products and allowing for these factors.

Start by reviewing the topics “Lotus Workplace databases” and “Factors affecting database creation” to understand the process involved in creating databases. Then, proceed to one of the following topics to create databases in your selected DBMS product:

- Creating the Cloudscape database
- Creating the DB2 databases
- Creating the Oracle database schemas
- Creating the SQL Server databases

When you finish creating your databases, proceed to Phase 4: Planning the LDAP directory.

Lotus Workplace databases

Lotus Workplace uses one or more of the following databases, depending on the type of deployment you selected and the components you installed:
<table>
<thead>
<tr>
<th>Database Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Com           | Single database  
This database can be stored in DB2 or Oracle. It contains data used for maintaining the infrastructure of Lotus Workplace. |
| Delivery      | Learning Delivery Server database  
This database can be stored in DB2, Oracle, or SQL Server. It stores immediate data related to students and specific course activities until that information is relayed to the Learning Server database for permanent storage. |
| LMS           | Learning Server database  
This database can be stored in DB2, Oracle, or SQL Server. It stores long-term data related to courses and students for the Learning component. |
| Nagano        | Messaging database  
This database can be stored in DB2 or Oracle. It stores data related to user messaging accounts, as well as the e-mails users receive. |
| Arc           | Messaging Archive database  
This database can be stored in DB2 or Oracle. It is used by the Archive feature to track the archived mail messages for individual users. This database contains links to the archived content, which is stored as .ZIP files on the file system. When you create the Messaging database (Msg), this database is automatically created, too. |
| SQL           | Single database  
This database can only be stored in Cloudscape. It contains schemas for all components and is typically used in a single-server configuration for demonstrations only. If you select Cloudscape as your DBMS, this database is created automatically. Because it is designed for use only in demonstration installations, this database should not be used for production data. |

**Factors affecting database creation**

Before you create the Lotus Workplace databases, consider the factors that may affect how and where you perform this task. Advance planning can help you to avoid problems when you begin storing production data.

The procedures for creating Lotus Workplace databases may vary slightly depending on the database management system (DBMS) product you use, and its own requirements.
Creating databases for multiple DBMS products

If you use two or more DBMS products, you must create the databases for them separately because the procedure varies by product. Install Lotus Workplace on each of the DBMS servers and select the components whose data will be hosted in the current database product; then create only the appropriate databases on each server.

Creating databases for specific Lotus Workplace components

You create databases only for the Lotus Workplace components you install. When you selected components during installation, the appropriate flags were set in the lwpprops.properties file: True for the databases associated with the selected components; and False for all others. When you run the script to create databases, the only databases created are those associated with the installed components.

Creating databases for add-on components

To add a component to an existing Lotus Workplace installation, run the installation program on the DBMS server and select the new component to be hosted in that database product. Then edit the lwpprops.properties file to set the LWP.Common.DB.Create parameter to False, to ensure that the Common database is not created a second time.

When you select components during installation, the LWP.db_name.DB.Create property is set to True for the corresponding databases. But this property is always set to True for the Common database, so you must edit the lwpprops.properties file and set the LWP.Common.DB.Create parameter to False before running the database-creation script for the additional components.

Caution Failing to set the database creation flag to False for the Common database before installing an additional component will result in a fatal error during database creation.

For example, if you installed the Messaging component, you created the Msg and Common databases at that time. If you subsequently add the Learning component to your Lotus Workplace installation, you will create the LMS and LDS databases while leaving the previously created databases untouched. To ensure that databases will be created only for new components, edit the lwpprops.properties file, and verify that the LWP.db_name.DB.Create property is correctly set for each database. In this example, the properties should look like this:

```
# Database creation options
LWP.Single.DB.Create=False
```

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Creating the Cloudscape database

If you select Cloudscape as your DBMS product, a single database will be created for all of Lotus Workplace, regardless of how many components you actually install. Cloudscape is acceptable for demonstrations and pilot programs, but for production purposes you should select a more robust product.

Because Cloudscape is always installed directly on the Lotus Workplace server, you always create Cloudscape databases on the Lotus Workplace server, using the LWPdbconfigOC version of the database-creation script.

To create the Cloudscape database, follow these steps:

1. Log on to the Lotus Workplace server as a user with administrative privileges.
2. Navigate to the Appserver\bin directory:
   - AIX and Linux
     `<was_root>/Appserver/bin`
   - Windows
     `<was_root>\Appserver\bin`
3. Run the following command to open a command window:
   - AIX and Linux
     `.setupCmdLine.ksh`
   - Windows
     `setupCmdLine`
4. Navigate to the Networkserver\bin directory:
   - AIX and Linux
     `<was_root>/PortalServer/shared/app/cloudscape/NetworkServer/bin`
   - Windows

LWP.Portal.DB.Create=False
LWP.Com.DB.Create=False
LWP.Nagano.DB.Create=False
LWP.LMS.DB.Create=True
LWP.Delivery.DB.Create=True
5. Start the Cloudscape Network Server by typing the following commands:
   AIX and Linux
   . ./setNetworkServerCP.ksh
   . ./startNetworkServer.ksh
   Windows
   setNetworkServerCP
   startNetworkServer
6. Navigate to the <lwp_root>\config directory.
7. Run the following script to create the Lotus Workplace database:
   AIX and Linux
   ./LWPdbconfigOC.sh lwp-create-db >dbcreate.log
   Windows
   LWPdbconfigOC lwp-create-db >dbcreate.log

The Cloudscape database is stored on the Lotus Workplace server, in the following WebSphere Portal directory:

<wp_root>\PortalServer\shared\app\cloudscape\cloudscape\LWPSQL

### Specifying Learning properties for the Cloudscape database

If you plan to install the Collaborative Learning component, you must specify appropriate database properties so that Lotus Workplace can properly access the Learning information stored in the Cloudscape database.

If you will not install Collaborative Learning, skip this task.

1. Log in as a user with administrative privileges on the server.
2. Navigate to the <lwp_root>\config directory.
3. Open the lwpprops.properties file, stored in this directory.
4. Locate the following properties and change their values to true:

   # Features\sub-features to configure

   LWP.Learning.LMS=false
   LWP.Learning.LDS=false

5. Locate the following properties and set their values to the user name and password, respectively, for the LMS database administrator account.
Locate the following properties and set their values to the user name and password, respectively, for the LDS database administrator account (these properties are used by the corresponding “LWPDbDmoDBAdmin” properties for accessing the Learning tables in the Cloudscape database):

# LWPLDSDBAdminUser:
# LWPLDSDBAdminPassword:

6. Locate the following properties and set their values as shown:

# LWPLMSDBType: LMS and Delivery Server database type:
# LWPLDSDBType: Delivery Server database type:
# LWPLMSDBName: LMS database name
# LWPLDSDBName: LDS database name

7. Create the Lotus Workplace databases by running the LWPdbconfig version of the database-creation script.

8. Save and close the file.

Creating the DB2 databases

DB2 requires that you always create databases directly on the DB2 server (that server in turn may be hosted on the Lotus Workplace server). Before creating the databases, set aside table space for the Messaging database, which allows it to grow as needed when users save their e-mail.

When creating the DB2 databases, you must log in to DB2 as an administrator to ensure proper access to the databases you are creating. Create the Lotus Workplace databases by running the LWPdbconfig version of the database-creation script.
If the DB2 server is not hosted on the Lotus Workplace server, you must install the DB2 client on the Lotus Workplace server to ensure access to the databases from that server. Install the DB2 client on every Lotus Workplace server that will require access to the databases.

After installing the DB2 client, use it to catalog the databases hosted on the DB2 server. This ensures that the Lotus Workplace server has a complete list of available databases. Do this on every Lotus Workplace server that will access those databases.

Creating the databases in DB2 involves the following tasks, which must be performed in the order shown here:

1. (Optional) Create table space containers for the Messaging database.
2. Run the database-creation scripts for DB2.

**Setting a list of DB2 table space containers for the Messaging database**

Specifying a list of table space containers for the Messaging database is a way to load balance the large volume of data generated by thousands of users. By default, Lotus Workplace Messaging creates a list of table space containers for the messaging database on a single drive. At setup, Lotus Workplace Messaging uses the value of the data directory property in the lwpprops.properties file to create all the messaging table space containers in the default directory C:\\lwpdata.

To load balance data, consider placing table space containers across multiple drives by specifying the table space container directory path in the following files:

- `<lwp_root>`\config\database\mailbox\db2\mbox_database.properties
- `<lwp_root>`\config\database\common\db2\lwp_database.properties

Changes to properties in mbox_database.properties and lwp_database.properties will override properties set in lwpprops.properties when table space containers are created. Note that container directories can only be created at database creation time. Afterwards, additional containers may not be added.

1. Using a text editor, open the file:
   `<lwp_root>`\config\database\mailbox\db2\mbox_database.properties
2. Scroll down to the line “# SMS Tablespace” and note the eight table space containers listed below.
3. Change the drive and folder locations for each table space container.
4. Remove the hash mark (#) in front of each edited line.
5. Save and close the file.
6. Using a text editor, open the file:
   `<lwp_root>/config/database/common/db2/lwp_database.properties`
7. Scroll down to the following two lines:
   ```
   #db2.lwp.comm.reg.tablespace.container.list='C:\db2\data\LWPCOMMREG'
   #db2.lwp.comm.tmp.tablespace.container.list='C:\db2\data\LWPCOMMTMP'
   ```
8. Change the drive and folder locations.
9. Remove the number sign (#) in front of each edited line.
10. Save and close the file.

**Granting access to an additional user for the Messaging database**

When you install Lotus Workplace using DB2 as the DBMS server, you create a DB2 administrator (called db2admin) to access the Lotus Workplace databases.

The Lotus Messaging component supports the use of an additional user account for access to the Messaging database (NAGANO) only. This user account can be another administrative user, or an application user name, which restricts access to the database. If you use an application user name, you must create that account before you create the Messaging database.

This task is optional; if you skip it, db2admin must be used for access to the Messaging database.

To grant access to an additional user for the Messaging database:

1. Edit the messaging database properties file:
   ```
   AIX and Linux
   `<lwp_root>/config/database/mailbox/db2/mbox_database.properties`
   Windows
   `<lwp_root>/config/database/mailbox/db2/mbox_database.properties`
   ```
2. Locate the `db.appuser` property, and assign it the name of the application user account.
3. Locate the `db.schema` property and assign it the same value, too.
4. Save your changes and close the file.
5. Create the application user account.
If you intend to create only the single Cloudscape database, make the same changes to the 
<\lwp_root>\config\database\common\db2\lwp_database.properties file.

**Running the database-creation scripts for DB2**

You create the Lotus Workplace databases in DB2 by running a series of database-creation scripts. Then, if you are using the Collaborative Learning component, you must populate its databases before they are ready for use.

Create and populate the databases as follows:

1. Log in to the DB2 server as db2admin.
2. Open the <\lwp_root>\config\lwpprops.properties file.
3. If you plan to install the Messaging component, locate the following properties and verify that their values match (modify them if needed, these values must match):
   
   #Database Schema Name
   
   LWPMsgDBSchema=db2admin
   
   # LWPArcDBSchema: Archive database schema value
   
   LWPArcDBSchema=db2admin

4. If you plan to install the Collaborative Learning component, locate the following properties and change their values to true:
   
   # Features\sub-features to configure
   
   LWP.Learning.LMS=false
   
   LWP.Learning.LDS=false

5. Save and close the file.
6. Run the following script to create the basic Lotus Workplace databases:
   
   AIX and Linux
   
   ./LWPdbconfig.sh lwp-create-db >createdb.log
   
   Windows
   
   LWPdbconfig lwp-create-db >createdb.log

7. (Optional) Protect the lwpprops.properties file by opening it, deleting any passwords stored in the file, and then saving and closing the file.

---

**Creating the Oracle database schemas**

When you install the Oracle server, a single database instance is created, for use by all Lotus Workplace components. After you install Lotus Workplace,
you impose schemas on the database. Do this by running the LWPdbconfigOC version of the database-creation script on the Oracle server.

If the Oracle server is not hosted on the Lotus Workplace server, you must install the Oracle client on the Lotus Workplace server to ensure access to the databases from that server. Install the Oracle client on every Lotus Workplace server that will access those databases.

Creating the database schemas in Oracle involves several tasks, which must be performed in the order shown here:

1. Specify database properties for Oracle.
2. Create data directories to be used as table space containers for the Messaging databases.
3. Run the database-creation scripts for Oracle.

**Specifying properties for Oracle databases**

Before creating the Lotus Workplace databases on the Oracle server, you must specify some database properties so that Lotus Workplace can properly access those databases.

1. Log in as a user with administrative privileges on the server.
2. Navigate to the `<lwp_root>/config` directory.
3. Open the lwpprops.properties file, stored in this directory.
4. Locate the following property and change its value from the default of “db2admin” to LPWCOMM:
   
   ```
   # LWPCommDBSchema: General schema name for common database
   LWPCommDBSchema=LPWCOMM
   ```

5. Locate the following property and change its value to the path name of the data directory that you will assign to the LWPCOMMON table space container for the Common database (these values must match).

   For the example Oracle data directories used in this documentation, use the following values:

   **AIX and Linux**
   ```
   # DBDataPath: database data path
   LWPCommDBDataPath=/U09/LWPMSGDATA
   ```

   **Windows**
   ```
   # DBDataPath: database data path
   LWPCommDBDataPath=f:\U09\LWPMSGDATA
   ```
Note  You will create data directories and assign table space containers to them in the next task.

6. If you plan to install the Messaging component, make the following changes:
   a. Locate the following properties and verify that their values match (modify them if needed to make them match):
      #Database Schema Name
      LWPMsgDBSchema=db2admin

      # LWPArcDBSchema: Archive database schema value
      LWPArcDBSchema=db2admin

   b. Locate the following property and change its value from the default of “MSG” to the value assigned to the database-instance name when you installed the Oracle server:
      # LWPMsgDsName: messaging database name
      LWPMsgDBName=NAGANO

Caution  This value must match the database-instance name exactly to ensure that Lotus Workplace can access the database tables. Make sure you enter the same name for this database if prompted during installation.

   In the sample code used for installing the Oracle database, the database instance was named WRKPLC. If you used that name when installing Oracle, use it here also:
      # LWPMsgDsName: messaging database name
      LWPMsgDBName=WRKPLC

   c. Locate the following property and change its value to the path name of the data directory that you will assign to the LWPARC table space container for the Archive database (these values must match).

   For the example Oracle data directories used in this documentation, use the following values:

   AIX and Linux
   LWPArcDBDataPath=/U09/LWPARCDATA

   Windows
   LWPArcDBDataPath=f:\U09\LWPARCDATA

7. If you plan to install the Collaborative Learning component, make the following changes:
   a. Locate the following properties and change their values to true:
# Features

### sub-features to configure

LWP.Learning.LMS=false

LWP.Learning.LDS=false

b. Modify the following properties to specify owner accounts for the Learning databases to ensure that they can be accessed in Oracle:

- **# LWPLMSDBOwner**: LMS database owner username
  
  LWPLMSDBOwner=

- **# LWPLMSDBOwner**: LMS database owner password
  
  LWPLMSDBOwnerPassword=

- **# LWPLDSDBOwner**: LDS database owner username
  
  LWPLDSDBOwner=

- **# LWPLDSDBOwner**: LDS database owner password
  
  LWPLDSDBOwnerPassword=

Use the database administrator name and password that you entered for the Oracle DBMS while running the Lotus Workplace installation program.

8. Save your changes and close the file.

After you have specified the preceding database properties, you are ready to create the data directories that Oracle will use as table space containers for the Messaging and Common databases.

### Creating Oracle data directories for the Messaging databases

Before setting up the database schemas in Oracle, you must set aside table space containers for the Messaging and Common databases.

**Note**  If you will not be installing the Messaging component, you can skip this task.

Set up the table space containers by creating a set of data directories and assigning each as storage for a table space container. This enables you to provide more storage capacity for the database while improving performance through reduced I/O contention.

Create eight data directories for the Messaging database, which allows it to grow as users receive and save e-mail. Create two more data directories for the Common database to support Messaging-related functionality.

The steps for creating the data directories vary slightly depending on whether you are using Windows, AIX, or Linux.
Creating Oracle data directories in AIX and Linux

When creating data directories, remember that the Messaging database requires eight directories and the Common database requires two directories to support Messaging-related functionality.

Create the directories and assign the table space containers to them by following these steps:

1. Create 10 directories distributed over several drives and volumes, with no more than one directory on each volume. Each data directory must reside at the root of its particular volume.
   
   For example, if you have five drives with two logical volumes on each, the list of volumes and data directories might look like this:
   
   /u01/LWPMMSGDATA
   /u02/LWPMMSGDATA
   /u03/LWPMMSGDATA
   /u04/LWPMMSGDATA
   /u05/LWPMMSGDATA
   /u06/LWPMMSGDATA
   /u07/LWPMMSGDATA
   /u08/LWPMMSGDATA
   /u09/LWPMMSGDATA
   /u10/LWPMMSGDATA

2. Edit the `<lwp_root>/config/database/mailbox/mailbox/oracle/mbox_database.properties` file to assign a table space container to each data directory.

   In this file, specify the path name of a data directory for each table space container, as shown in this example:

   ```
   ora.mbox.reg.rand.tablespace=NAGANOREGRAND
   ora.mbox.reg.rand.tablespace.datafile=/U01/LWPMMSGDATA/DATA01.DBF
   ora.mbox.reg.seq.tablespace=NAGANOREGSEQ
   ora.mbox.reg.seq.tablespace.datafile=/U02/LWPMMSGDATA/DATA01.DBF
   ora.mbox.msg.tablespace=NAGANOMSG
   ora.mbox.msg.tablespace.datafile=/U03/LWPMMSGDATA/DATA01.DBF
   ora.mbox.map.tablespace=NAGANOMAP
   ```

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ora.mbox.map.tablespace.datafile=/U04/LWPMSGDATA/DATA01.DBF
ora.mbox.mta.tablespace=NAGANOMTA
ora.mbox.mta.tablespace.datafile=/U05/LWPMSGDATA/DATA01.DBF
ora.mbox.file.tablespace=NAGANOFILE
ora.mbox.file.tablespace.datafile=/U06/LWPMSGDATA/DATA01.DBF
ora.mbox.index.tablespace=NAGANOINDEX
ora.mbox.index.tablespace.datafile=/U07/LWPMSGDATA/DATA01.DBF
ora.mbox.lob.tablespace=NAGANOLOB
ora.mbox.lob.tablespace.datafile=/U08/LWPMSGDATA/DATA01.DBF

In the example, the table space container names and the volumes associated with each appear in italics for readability. Notice that table space containers all use the same data directory name and data file name for simplicity; because they are assigned to different volumes there is no conflict, even when they are stored on the same drive.

3. Save and close the properties file.

After you have created the data directories and assigned them to table space containers, you are ready to run the database-creation scripts for Oracle.

Creating Oracle data directories in Windows

When creating data directories, remember that the Messaging database requires eight directories and the Common database requires two directories to support Messaging-related functionality.

Create the directories and assign the table space containers to them by following these steps:

1. Create 10 directories distributed over several drives and volumes, with no more than one directory on each volume. Each data directory must reside at the root of its particular volume.

   For example, if you have four drives available (c, d, e, f), you might create several volumes on each and store the data directories like this:

   \c:\u01\LWPMSGDATA
   \c:\u02\LWPMSGDATA
   \c:\u03\LWPMSGDATA
   \d:\u04\LWPMSGDATA
   \d:\u05\LWPMSGDATA

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2. Edit the `<lwp_root>/config/database/mailbox/mailbox/oracle/mbox_database.properties` file to assign a table space container to each data directory.

In this file, specify the path name of a data directory for each table space container, as shown in this example (note that the properties file requires a double back slashes for Windows paths):

```plaintext
ora.mbox.reg.rand.tablespace=NAGANOREGRAND
ora.mbox.reg.rand.tablespace.datafile=c:\\U01\\LWPMSGDATA\\DATA01.DBF
ora.mbox.reg.seq.tablespace=NAGANOREGSEQ
ora.mbox.reg.seq.tablespace.datafile=c:\\U02\\LWPMSGDATA\\DATA01.DBF
ora.mbox.msg.tablespace=NAGANOMSG
ora.mbox.msg.tablespace.datafile=c:\\U03\\LWPMSGDATA\\DATA01.DBF
ora.mbox.map.tablespace=NAGANOMAP
ora.mbox.map.tablespace.datafile=d:\\U04\\LWPMSGDATA\\DATA01.DBF
ora.mbox.mta.tablespace=NAGANOMTA
ora.mbox.mta.tablespace.datafile=d:\\U05\\LWPMSGDATA\\DATA01.DBF
ora.mbox.file.tablespace=NAGANOFILE
ora.mbox.file.tablespace.datafile=d:\\U06\\LWPMSGDATA\\DATA01.DBF
ora.mbox.index.tablespace=NAGANOINDEX
ora.mbox.index.tablespace.datafile=e:\\U07\\LWPMSGDATA\\DATA01.DBF
ora.mbox.lob.tablespace=NAGANOLOB
ora.mbox.lob.tablespace.datafile=e:\\U08\\LWPMSGDATA\\DATA01.DBF
```
In the example, the table space container names and the drives and volumes associated with each appear in italics for readability. Notice that table space containers all use the same data directory name and data file name for simplicity; because they are assigned to different volumes there is no conflict, even when they are stored on the same drive.

3. Save and close the properties file.

After you have created the data directories and assigned them to table space containers, you are ready to run the database-creation scripts for Oracle.

**Running the database-creation scripts for Oracle**

The Oracle database instance was created when you installed the Oracle server. In this task, you impose the Lotus Workplace schemas on the Oracle database by running a series of database-creation scripts. Then, if you are using the Collaborative Learning component, you must populate its databases before they are ready for use.

Create and populate the schemas as follows:

1. Log in to the Oracle DBMS server as a user with administrative privileges.
2. Navigate to the `<lwp_root>`\config directory.
3. Run the following script to create the Lotus Workplace database schemas:
   - **AIX and Linux**
     
     ```sh
     ./LWPdbconfigOC.sh lwp-create-db >createdb.log
     
     Windows
     LWPdbconfigOC lwp-create-db >createdb.log
     ```

4. Protect the `lwpprops.properties` file by opening it, deleting any passwords stored in the file, and then saving and closing the file.

---

**Creating the SQL Server databases**

Lotus Workplace supports the use of SQL Server only for the Workplace Collaborative Learning databases. If you use SQL Server for Collaborative Learning, all other component databases, as well as the Common database, must be hosted in either DB2 or Oracle.

You create the Lotus Workplace databases directly on the SQL Server computer, by running the LWPdbconfigOC version of the database-creation script.
If the SQL Server computer is not hosted on the Collaborative Learning server, you must install the SQL Server client on the Collaborative Learning server to ensure it can access the Learning databases. Install the SQL Server client on every server that will require access to the Collaborative Learning databases.

Creating the Learning databases in SQL Server involves two tasks, which must be performed in the order shown here:

1. Specify database properties for SQL Server.
2. Run the database-creation scripts for SQL Server.

Specifying database properties for SQL Server

Before creating the Lotus Workplace Collaborative Learning databases in SQL Server, you must specify some database properties so that Lotus Workplace properly accesses those databases. Remember that you can use SQL Server only to host Collaborative Learning databases (LWPLMS and LWPLDS).

1. Log in to the SQL Server computer as a user with administrative privileges.
2. Navigate to the <lwp_root>\config directory.
3. Open the lwpprops.properties file, stored in this directory.
4. Locate the following properties and change their values to true:

```
# Features\sub-features to configure
LWP.Learning.LMS=false
LWP.Learning.LDS=false
```

5. Modify the following properties to specify owner accounts for the Learning databases to ensure that they can be accessed in SQL Server:

```
# LWPLMSDBOwner: LMS database owner username
LWPLMSDBOwner=

# LWPLMSDBOwner: LMS database owner password
LWPLMSDBOwnerPassword=

# LWPLDSDBOwner: LDS database owner username
LWPLDSDBOwner=

# LWPLDSDBOwner: LDS database owner password
LWPLDSDBOwnerPassword=
```

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Use the database administrator name and password that you entered for
the SQL Server DBMS while running the Lotus Workplace installation
program.

6. Save your changes and close the file.
After you have specified these database properties, you are ready to run the
database-creation script for SQL Server.

Running the database-creation scripts for SQL Server
You can only use SQL Server for the Collaborative Learning databases.
Create and populate the LMS and Delivery databases by running a series of
database-creation scripts.
Create and populate the databases as follows:
1. On the SQL Server computer, navigate to the <lwp_root>\config
directory.
2. Create the LMS database running the database-creation script:
   AIX and Linux
   ./LWPdbconfigOC.sh lwp-create-lms >createlsms.log
   Windows
   LWPdbconfigOC lwp-create-lms >createlsms.log
3. Create the Delivery database by running this version of the script:
   AIX and Linux
   ./LWPdbconfigOC.sh lwp-create-lds >createdls.log
   Windows
   LWPdbconfigOC lwp-create-lds >createdls.log
4. Protect the lwpprops.properties file by opening it, deleting any
   passwords stored in the file, and then saving and closing the file.
Phase 4
Planning the LDAP Directory
Chapter 5
LDAP Directory Planning

WebSphere Member Manager is the component of WebSphere Portal that manages Lotus Workplace user and group attributes — user and group information such as names, e-mail addresses, and telephone numbers. Member Manager collects attributes associated with each user and group in profiles. All Lotus Workplace components share profiles, so that users can log in once to use any Lotus Workplace component.

The Member Manager user directory configuration supported by Lotus Workplace is a lookaside database used along with an LDAP directory. The LDAP directory stores attributes that are defined in the LDAP directory schema, for example first names, last names, and e-mail addresses. The lookaside database stores attributes that are particular to Lotus Workplace products. Member Manager manages the lookups to the LDAP directory and to the lookaside database.

Lotus Workplace does not support the use of an LDAP directory alone as a Member Manager user directory configuration. You can install Lotus Workplace over a WebSphere Portal installation that uses an LDAP directory alone. If you do this, Lotus Workplace stores the attributes particular to Lotus Workplace in a lookaside database.

To configure Member Manager to work with an LDAP directory, you enable security between WebSphere Portal and the LDAP directory. This step is done after you install WebSphere Portal and before you install Lotus Workplace. The following topics describe planning issues related to using an LDAP directory with Lotus Workplace. For additional LDAP directory planning information, go to the WebSphere Portal 5.0.2 Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

For information on enabling directory security, see the chapter “Preparing, Installing, and Configuring the Lotus Workplace Server.”

Phase 4: Planning the LDAP directory

WebSphere Member Manager is the component of WebSphere Portal that manages Lotus Workplace user and group attributes — user and group
information such as names, e-mail addresses, and telephone numbers. Member Manager collects attributes associated with each user and group in profiles. All Lotus Workplace components share profiles, so that users can log in once to use any Lotus Workplace component.

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Lotus Workplace does not support the use of an LDAP directory alone as a Member Manager user directory configuration. You can install Lotus Workplace over a WebSphere Portal installation that uses an LDAP directory alone. If you do this, Lotus Workplace stores the attributes particular to Lotus Workplace in a lookaside database.

To configure Member Manager to work with an LDAP directory, you enable security between WebSphere Portal and the LDAP directory. This step is done after you install WebSphere Portal and before you install Lotus Workplace. Refer to the following information for issues to consider when planning to use an LDAP directory with Lotus Workplace. For additional LDAP directory planning information, go to the WebSphere Portal 5.0.2 Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

**External ID mapping**

If you use an LDAP directory, Lotus Workplace requires unique identifiers (IDs) in the LDAP directory to identify users and groups when it retrieves user-specific information such as contact lists and when it controls user access to components such as team spaces and Web conferences. You must map the Member Manager `extId` attribute to the LDAP attribute used for the unique IDs. This mapping is done after WebSphere Portal installation but before enabling directory security.

For more information on mapping external IDs to LDAP unique IDs see the chapter “Preparing, Installing, and Configuring the Lotus Workplace Server.”
LDAP directory settings in the wpconfig.properties file

Part of enabling security between WebSphere Portal and an LDAP directory involves modifying properties in the `<wp_root>/config/wpconfig.properties` file, including properties related to the LDAP directory. You specify LDAP directory properties such as the following ones in the file:

- LDAP directory server host name and port number
- Administrative accounts in the directory that WebSphere Portal uses
- Suffixes — locations in the directory name space at which to begin searches
- Object classes used for users and groups
- Use of a lookaside database

For details on these properties, go to the topics on configuring LDAP in the WebSphere 5.0.2 Portal Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

Note the following points when you modify values in the `wpconfig.properties` file:

- Lotus Workplace requires the use of a lookaside database, so you must type true as the value for the Lookaside property.
- When you configure WebSphere Portal to use a Domino Release 5 directory, type dominoPerson as the value for the LDAPUserObjectClass property, and type dominoGroup as the value for the LDAPGroupObjectClass property in the `wpconfig.properties` file. These recommendations differ from the WebSphere Portal Information Center recommendations.

For information on enabling directory security, see the chapter “Preparing, Installing, and Configuring the Lotus Workplace Server.”

LDAP administrative accounts required in the LDAP directory

Part of completing the `wpconfig.properties` file when you enable security between WebSphere Portal and the LDAP directory is specifying administrative account names located in the LDAP directory. These LDAP accounts, described in the following table, should exist in the LDAP directory before you enable directory security. For tight security, read-only access is recommended for these accounts.
<table>
<thead>
<tr>
<th>LDAP account</th>
<th>Related properties in wpconfig properties</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name used to authenticate the WebSphere Application Server administrator</td>
<td>WasUserid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WasPassword</td>
<td></td>
</tr>
<tr>
<td>Name used to authenticate the WebSphere Portal administrator</td>
<td>PortalAdminId</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PortalAdminIdShort</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PortalAdminPwd</td>
<td></td>
</tr>
<tr>
<td>Name of the WebSphere Portal administrator group</td>
<td>PortalAdminGroupId</td>
<td>Group should include the name of the WebSphere Portal administrator.</td>
</tr>
<tr>
<td></td>
<td>PortalAdminGroupIdShort</td>
<td></td>
</tr>
<tr>
<td>Name that Member Manager uses to access the LDAP directory</td>
<td>LDAPAdminUId</td>
<td>Note that if this account has read-only access, Lotus Workplace cannot make changes to the directory and users cannot use self-registration and self-care to modify attributes in the directory.</td>
</tr>
<tr>
<td></td>
<td>LDAPAdminPwd</td>
<td></td>
</tr>
<tr>
<td>Name used to bind to the LDAP directory in order to authenticate names above</td>
<td>LDAPBindID</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LDAPBindPassword</td>
<td></td>
</tr>
</tbody>
</table>

For more information on read-only access, see the topic “Read-only LDAP directory access.” For more information on enabling directory security between WebSphere Portal and the LDAP directory, see the chapter “Preparing, Installing, and Configuring the Lotus Workplace Server.”

### Read-only LDAP directory access

For tightest security, you can configure read-only access to the LDAP directory. You must do this before enabling directory security. If you configure read-only access, Lotus Workplace users cannot use self-registration or self-care to modify attributes in the directory. Therefore you will need to remove the “Sign up” link from the Portal page because users cannot use the link to register accounts for themselves in the LDAP directory. Also remove any fields that correspond to LDAP directory attributes from the “Change personal information” page that is accessed through the Portal page “Edit My Profile” link. Keep only the fields that correspond to attributes in the lookaside database, because users will be able to edit only these. The following default fields in the “Change personal information” page correlate to LDAP attributes and should be deleted:

- Password
For more information on making changes such as these, go to the WebSphere Portal 5.0.2 Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html. See the topics that describe designing your portal.

**Note** If you use IBM Directory Server 4.1, Lotus Workplace must have write access to the directory. Write access is required to allow Member Manager to generate unique IDs, because this directory server cannot generate the IDs itself.

For information on configuring read-only access, see the chapter “Preparing, Installing, and Configuring the Lotus Workplace Server.”

**Attribute customization**

The user and group attributes used in Lotus Workplace are defined as Member Manager attributes. Some Member Manager attributes map to attributes stored in the LDAP directory. Member Manager attributes that are particular to Lotus Workplace and do not correlate to LDAP directory attributes are stored in the Member Manager lookaside database by default.

You can customize the Member Manager attributes that Lotus Workplaces uses in the following ways.

**Lookaside-to-LDAP mapping**

If you have added an attribute to your LDAP directory that is the equivalent of a Member Manager attribute stored in the lookaside database by default, you can map the Member Manager attribute to the LDAP attribute so that Member Manager uses the attribute in the LDAP directory instead. The advantages to this approach are that applications other than Lotus Workplace products can use the attribute, and you can use LDAP directory administration tools to populate the attribute values.

For more information on mapping lookaside attributes to LDAP attributes, see the chapter “Completing Optional Post-installation Tasks.”

**People Finder attributes**

People Finder is a feature used to search for and display information about people in the user directory. After you have installed and set up Lotus Workplace, you can use the configuration mode of the People Finder portlet...
to customize the Member Manager attributes that the People Finder displays.

For more information on configuring the People Finder, go to the Lotus Workplace Information Center.

**Directory Search attributes**
Directory Search is a feature users can use to search for names of people and groups as they do tasks such as addressing mail. The Directory Search feature displays multiple columns of attributes about a person or group in its search results. After you have installed and set up Lotus Workplace, optionally you can customize the attributes that display in these columns.

For more information on configuring the Directory Search feature, go to the Lotus Workplace Information Center.

**Optional user policy and messaging attributes**
You can configure optional attributes for use with Lotus Workplace. These attributes are used for user policies, group mail addresses, e-mail aliases, forwarding e-mail addresses, mail cells, and mailing lists.

For more information on using these optional attributes, see the chapter “Completing Optional Post-installation Tasks.”

---

**Multiple LDAP directories**
Lotus Workplace can work with multiple LDAP directories in the following contexts.

**Additional searchable directories**
You can make additional searchable LDAP directories available to mail users. The users can then use the Directory Search feature to search for names in these directories, in addition to the LDAP directory configured for Lotus Workplace, when they complete tasks such as addressing e-mail. Searches of these additional directories are direct-to-LDAP searches that are independent of Member Manager. You set up additional searchable LDAP directories from the WebSphere Administrative Console after you set up Lotus Workplace.

For more information on additional searchable directories, go to the Lotus Workplace Information Center.

**Directory coexistence**
If Lotus Workplace doesn’t support your organization’s LDAP directory, or if you use a pilot version of Lotus Workplace, you can install an LDAP...
directory specifically for Lotus Workplace and use IBM Tivoli Directory Integrator to integrate it with your organization directory. Directory coexistence has the following advantages:

- The organization and Lotus Workplace directory, the organization legacy mail system, and Lotus Workplace Messaging can use the same domain name space for mail addressing.
- Person records in the organization directory can be automatically copied, and then continually updated in the organization directory.
- Automatic account creation in Lotus Workplace can be done through the organization mail system administrative console.
- You can choose whether to migrate mail from organization mail accounts on a per account basis.

For more information on coexisting LDAP directories, go to the Lotus Workplace Information Center.

**Directory assistance**

If your LDAP directory server is Lotus Domino 6.5, Lotus Workplace can search secondary Domino directories designated in a directory assistance database. Lotus Workplace supports only searches of Domino directories configured in the directory assistance database as “Domain type: Notes” and not directories configured as “Domain type: LDAP”.

For more information on directory assistance, see Domino Administrator Help.
Phase 5
Preparing, Installing, and Configuring
the Lotus Workplace Server
Chapter 6
Preparing WebSphere Portal on the Lotus Workplace Server

This chapter describes how to install and set up the required WebSphere Portal Server.

Phase 5: Preparing, installing, and configuring the Lotus Workplace server

For any server that will store Lotus Workplace products, the underlying foundation of WebSphere Portal and WebSphere Application Server has to be laid first. This section describes how to:

1. Install the DBMS client.
2. Install WebSphere Portal Version 5.0.2.2.
3. (For the first node in a Network Deployment environment) Migrate WebSphere Portal databases in the Network Deployment.
4. Upgrade WebSphere Portal to run with Lotus Workplace.
5. (For subsequent nodes in a Network Deployment environment) Connect additional nodes to the WebSphere Portal databases.
6. Enable security for the user directory.
7. Install Lotus Workplace products.
   This step is described in the chapter, “Installing Lotus Workplace.”
8. Configure Lotus Workplace.
   This step is described in the chapter, “Setting Up Lotus Workplace.”

These steps require from 8 to 10 hours to complete.

Installing the DBMS client

The Lotus Workplace databases are stored on the DBMS server. If the DBMS server is not hosted on the same server as Lotus Workplace, you must install the appropriate DBMS client application on that server instead, to ensure that the Lotus Workplace server can access the databases.
You can install clients for the following DBMS products:

- DB2
- Oracle
- SQL Server (used with Learning databases only)

Because the Cloudscape database must always reside on the Lotus Workplace server, it has no client application.

---

**Installing the DB2 client**

Follow this procedure to install the DB2 Administration Client:

1. Log in to the server `db2admin`.
2. Download the DB2 Administration Client and fix pack appropriate to your operating system from the following Web address:
   

   Also see the DB2 documentation at:
   
   `http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/winos2unix/support/v8pubs.d2w/en_main`

When you are prompted for the DB2 administrator during client installation, provide the name of the user account that has DB2 administrator privileges on the DB2 server; you created this account in Windows when you were Setting access rights in Windows and then you granted it DB2 privileges when you were Installing the DB2 server.

**Note** The DB2 client must always use the same connection port as the DB2 server, to ensure that the two can communicate. The DB2 server usually defaults to port 50000 for connections and port 50001 for interrupts. On SuSE Linux 8.2, port 50000 may already be reserved for another use; if so, DB2 automatically increments the port numbers by one.

To check which ports have been assigned to DB2 on the server, look at the `/etc/services` file (available on AIX, Linux, and Windows). This file contains two entries: the entry prefixed with `db2c` represents the connection port, and the entry prefixed with `db2i` represents the interrupt port. For example, if the owner of the first DB2 instance installed on the server is “db2inst1,” the `/etc/services` file contains entries like these:

```
  db2cdb2inst1  50000/tcp  # Connection port for DB2 instance db2inst1
  db2idb2inst1  50001/tcp  # Interrupt port for DB2 instance db2inst1
```

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In addition to using the same connection port for the DB2 server and client, you must configure TCP/IP to work between them.

**Cataloging the DB2 databases**

After you install the DB2 client on the Lotus Workplace server, you must use it to catalog the Lotus Workplace databases that are hosted on the DB2 server. The Lotus Workplace application cannot access the databases until you complete this task.

Cataloging the databases requires that you have previously completed the following tasks:

- Installed a DB2 server.
- Set aside table space on the DB2 server for the Messaging database.
- Created the databases on the DB2 server.
- Installed the DB2 client on the Lotus Workplace server.

Follow these steps to catalog the DB2 databases:

1. Log in to the Lotus Workplace server as **db2admin**:
2. Open a DB2 command window by typing the following command at the command prompt:
   ```
   db2
   ```
3. In the DB2 command window, type the following command:
   ```
   catalog tcpip node nodename remote
   fullyqualifiedDB2servername server port
   ```
   In this step you provide the DB2 client with a DB2 server name and connection port.
   Replace **nodename** with a name that you create (using no more than 8 characters); to represent the DB2 server in the rest of the catalog commands.
   Replace **port** with the connection port used by DB2.
   Example:
   ```
   db2 => catalog tcpip node LWPDB remote myserver.acme.com server 50000
   ```
   In this example, LWPDB is designated as the node name (to be used in the rest of the commands) and 50000 is the connection port. The client always uses the same connection port as the DB2 server.
4. Type the following commands as appropriate to catalog the databases that are hosted on the DB2 server:
   ```
   catalog database LWPCOM at node nodename
   ```
catalog database LWPLMS at node nodename
catalog database LWPLDS at node nodename
catalog database NAGANO at node nodename
catalog database LWPARC at node nodename
quit

You might not need all of the preceding commands if you did not install all Lotus Workplace components, or if you did not host all the Lotus Workplace databases on the DB2 server.

**Note** If you catalog an incorrect database name, you can undo the command by typing the following command:

```plaintext
uncatalog database database_name
```

5. Close the command prompt.
6. Test connectivity between client and server for all databases to ensure cataloging was successful.

For more information on cataloging DB2 databases, see the DB2 documentation at

http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/winos2unix/support/v8pubs.d2w/en_main

---

**Installing the Oracle client**

For instructions on installing the Oracle client, refer to the Oracle documentation.

**Note** Be sure to install the client using the same port that that DBMS server uses, so that they can communicate properly.

After you install the Oracle client, copy the following files from the Oracle server to the client:

- tsnames.ora
- classes12.zip

Edit the tsnames.ora file and add a reference to the Oracle DBMS server, and verify that it specifies the port used by the Oracle server and client.

---

**Installing the SQL Server client**

For instructions on installing the SQL Server 2000 DBMS client software, consult the SQL Server documentation.

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**Note**  Be sure to install the client using the same port that that DBMS server uses, so that they can communicate properly.

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**Installing WebSphere Portal**

If you do not already have a WebSphere Portal 5.0.2.2 server installed, follow these steps to run the Lotus Workplace pre-installer, which installs WebSphere Portal 5.0.2.2. During this installation, the WebSphere Portal databases are created automatically and require no intervention from you.

By default, WebSphere Portal uses Cloudscape for its database management system (DBMS). For production use, you will probably want to migrate the WebSphere Portal databases to a more robust DBMS. See the “Databases” section of the WebSphere Portal Information Center for information on migrating the Portal databases to another product, and for the list of DBMS products supported by WebSphere Portal. If you choose to migrate the WebSphere Portal databases, you will probably want to do so before you install Lotus Workplace.

**Caution**  If your server already has WebSphere Portal installed and you want to install an additional instance for hosting Lotus Workplace, use these instructions. However, during this additional installation of WebSphere Portal, provide installation directory names that are different from those used in the existing installation to avoid overwriting existing directories.


1. Log in to the server as a user with administrative privileges.
   
   If you are using DB2 as your DBMS, log in as **db2admin**.

2. Create a local directory for the installation files.
   
   This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.

   **AIX**
   
   `/usr/lwp201code/portal_ga_cds`

   **Linux**
   
   `/opt/lwp201code/portal_ga_cds`

   **Windows**
   
   `c:\lwp201code\portal_ga_cds`
3. If you created a local directory in the previous step, copy the following installation directories from the appropriate CD (shown in parentheses) to the new directory.

**AIX**
- cdSetupLWP (Lotus Workplace Server Setup)
- cdWorkplace (Lotus Workplace Server 1)
- cdSetup (LWP - WebSphere Portal for Multiplatforms)
- cd1-5 (WebSphere Application Server Enterprise for AIX)
- cd1-10 (WebSphere Application Server PTF and Cumulative Fixes for AIX)
- cd2 (Portal Server, WebSphere Portal Content Publisher)
- cd1-17 (WebSphere Application Server Network Deployment for AIX, required for a Network Deployment)
- cd1-18 (WebSphere Application Server Network Deployment Fixes for AIX, required for a Network Deployment)

**Linux**
- cdSetupLWP (Lotus Workplace Server Setup)
- cdWorkplace (Lotus Workplace Server 1)
- cdSetup (LWP - WebSphere Portal for Multiplatforms)
- cd1-3 (WebSphere Application Server Enterprise for Linux)
- cd1-8 (WebSphere Application Server PTF and Cumulative Fixes for Linux Intel)
- cd2 (Portal Server, WebSphere Portal Content Publisher)
- cd1-14 (WebSphere Application Server Network Deployment for Linux, required for a Network Deployment)
- cd1-19 (WebSphere Application Server Network Deployment Fixes for Windows and Linux, required for a Network Deployment)

**Windows**
- cdSetupLWP (Lotus Workplace Server Setup)
- cdWorkplace (Lotus Workplace Server 1)
- cdSetup (LWP - WebSphere Portal for Multiplatforms)
- cd1-1 (WebSphere Application Server Enterprise for Windows)
- cd1-2 (WebSphere Application Server Enterprise for Windows 2003)
- cd1-7 (WebSphere Application Server PTF and Cumulative Fixes for Windows)
- cd2 (Portal Server, WebSphere Portal Content Publisher)
cd1-13 (WebSphere Application Server Network Deployment for Windows, required for a Network Deployment)
cd1-15 (WebSphere Application Server Network Deployment for Windows 2003, required for a Network Deployment)
cd1-19 (WebSphere Application Server Network Deployment Fixes for Windows and Linux, required for a Network Deployment)

4. If you are not running the installation program from a CD, start the installation program as follows.
   Open a command prompt window and navigate to the cdSetupLWP directory (on a local drive, not a mapped network drive). Then enter the following command:
   
   **AIX and Linux**
   ./install.sh

   **Windows**
   install.bat

5. At the panel “Select a language to be used for this wizard,” select the language to be used and click **OK**.

6. At the launch pad, click **Install**. Other options are:
   
   - **Readme** — Opens a PDF file containing the Lotus Workplace Release Notes.
   
   - **Installation Guide** — Opens a PDF file containing the Lotus Workplace Installation Guide.
   
   - **Prerequisites** — Opens an HTML document that describes the installation requirements for Lotus Workplace.
   
   - **Exit** — Closes the launch pad without installing Lotus Workplace on the server.

7. At the panel “Welcome to the IBM Lotus Workplace Installation,” click **Next**.

8. At the panel “Results of System Check,” click **Next**.

9. At the panel “WebSphere Portal must be installed,” click **Next**.
   
   **Note** If you already have an existing WebSphere Portal Installation that you want to use, select your existing Portal installation and proceed to Step 23.

10. When you are ready to proceed, click **Next** from the Welcome panel.

11. At the panel “License Agreement,” click **Accept** and then click **Next**.
12. Disable any running fire wall products if prompted, and then click OK to continue.

13. At the panel “Choose the setup type that best suits your needs”, select Full to install WebSphere Application Server, WebSphere Portal, and the IBM HTTP Server. Click Next.

14. At the panel “WebSphere Application Server will be installed in the following directory,” set the installation directories as shown with the following commands, and then click Next. The installation directories are:
   
   AIX
   `/usr/WebSphere/AppServer`
   
   Linux
   `/opt/WebSphere/AppServer`
   
   Windows
   `c:\WebSphere\AppServer`
   
   If you must change the default directory (for example, if you are installing an additional instance of WebSphere Portal), do not use a directory name that has spaces in it.

15. At the panel “IBM HTTP Server will be installed in the following directory,” accept the default, and click Next. The default installation directories are:
   
   AIX
   `/usr/IBMHttpServer`
   
   Linux
   `/opt/IBMHttpServer`
   
   Windows
   `c:\IBMHttpServer`

16. *(Windows only)* At the panel “You can use Windows Services to run the following WebSphere Application Server features,” select only IBM HTTP Server. Enter the Windows administrator name and password, and click Next.
   
   You might need to add local policy rights to the service account user (Windows administrator) for Log on as service and Act as part of the operating system.

17. At the panel “Enter a node name for this instance of IBM WebSphere Application Server,” provide the following information, and then click Next:
• **Node name** — Type the node name for the WebSphere Application Server to be installed (for example, myserver). The node name is your system name.

• **WebSphere Application Server hostname** — The hostname is your system’s fully qualified hostname (for example, myserver.acme.com). Correct this entry if necessary with the fully qualified DNS name of the server.

18. At the panel "WebSphere Portal will be installed in the following directory," the directory should default to the one of following values:
   - AIX
     
     /usr/WebSphere/PortalServer
   
   - Linux
     
     /opt/WebSphere/PortalServer
   
   - Windows
     
     c:\WebSphere\PortalServer
   
   Correct the directory path if necessary but do not select a directory path name that contains spaces. Click **Next** when you have finished.

19. At the panel "Enter the Portal administrative user and password," provide the following information, confirm the password, and click **Next**.

   • **Portal administrative user** — Type the user name of the WebSphere Portal administrator.
     
     This is someone who already exists in the user directory and is a member of an administrators group in that directory. If you are using the Administrator Names and Passwords worksheet, this user name corresponds to User #8.

   • **Portal administrative user password** — Create a password for the user whose name you entered in the previous field.

     **Note** Make a note of the administrator name and password. You will need it for Lotus Workplace installation later.

20. At the panel "Lotus Workplace is ready to install," click **Next**.

21. Unless you copied the CD images to disk, insert CDs as needed during the installation process.

   The installation process may take about two hours.

   **Note** During installation and setup of WebSphere Portal, you may encounter some exceptions when attributes are added to the WebSphere Member Manager (WMM). The errors indicate that the installation program attempted to insert duplicate entries into the WebSphere Portal...
WMM database. You can ignore these messages, as they are merely informational and do not interfere with the proper configuration of WebSphere Application Server and WebSphere Portal.

22. At the panel "Installation is successful," clear Launch First Steps, and click Finish.

23. At the panel "Installation completed," uncheck Finish to close the Portal installation program.

24. Click Exit to close the Lotus Workplace pre-installation program.

25. If this is the first node in a Network Deployment, finish migrating data. Otherwise, upgrade WebSphere Portal with the software needed for Lotus Workplace.

**Migrating WebSphere Portal databases in the Network Deployment**

WebSphere Portal installs a local Cloudscape database by default, but in a Network Deployment, you use a remote DBMS server. You must migrate the WebSphere Portal databases to a different DBMS product hosted on a different server (Cloudscape cannot be used remotely and is not robust enough to support a Network Deployment).

After installing WebSphere Portal on the first node, you migrate the WebSphere Portal databases to another server, and then configure the first node’s instance of WebSphere Portal to use the remote database. Do this by updating wpconfig.properties and running the WPSconfig script with the database-transfer-export or database-transfer-export-linux target.

These steps are described in more detail in the Database section of the WebSphere Portal Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html. The topics also describe the various DBMS products supported by WebSphere Portal.

When you are done, upgrade WebSphere Portal with the software needed for Lotus Workplace.

---

**Upgrading WebSphere Portal to run with Lotus Workplace**

Lotus Workplace requires that specific WebSphere Portal upgrades and fix packs be installed on the server. The software requirements differ slightly depending on the version of WebSphere Portal you have already installed. Follow these steps to apply the correct upgrades to your WebSphere Portal server.

1. Prepare to upgrade the server to work with Lotus Workplace.
2. Upgrade WebSphere Portal and apply fixes.

**Preparing to upgrade WebSphere Portal**

Follow these steps to prepare for the WebSphere Portal upgrade.

1. Log in to the server as a user with administrative privileges.  
   If you are using DB2 as your DBMS, log in as **db2admin**.
2. Open a command prompt and change the directory to \<was_root>\bin.  
3. Type the stopServer command to stop the servers for WebSphere Portal and WebSphere Application Server.  
   If security is disabled on WebSphere Application Server, type the following commands, keeping in mind that server names are case-sensitive:  
   **AIX and Linux**  
   ```bash
   ./stopServer.sh server1  
   ./stopServer.sh WebSphere_Portal
   ```  
   **Windows**  
   ```bash
   stopServer server1  
   stopServer WebSphere_Portal
   ```  
   If security is enabled, include the administrator name and password for security authentication:  
   **AIX and Linux**  
   ```bash
   ./stopServer.sh server1 -user admin_userid -password admin_password  
   ./stopServer.sh WebSphere_Portal -user was_admin_userid -password was_admin_password
   ```  
   **Windows**  
   ```bash
   stopServer server1 -user admin_userid -password admin_password  
   stopServer WebSphere_Portal -user was_admin_userid -password was_admin_password
   ``` 4. Add the administrator names and passwords to the wpconfig.properties file, stored in the \<wp_root>\config directory. These are the names you supplied during WebSphere Portal installation.  
   **WasUserId** — WebSphere Application Server administrator  
   **WasPassword** — WebSphere Application Server password
PortalAdminPwd — WebSphere Portal administrator password
If you are using the Administrator Names and Passwords worksheet, these values correspond to User #8 and User #7, respectively.

5. Add the administrator name and password and Timeout setting to the soap.client.props file, stored in the <was_root>\properties directory.
   com.ibm.SOAP.loginUserid — WebSphere Portal administrator
   com.ibm.SOAP.loginPassword — WebSphere Portal password
   com.ibm.SOAP.requestTimeout — Set the timeout to 6000

6. Make a “backup” image of your system at this point so you can revert to it if needed during the WebSphere Portal upgrade.

Installing WebSphere Portal upgrades
You install the WebSphere Portal upgrades and fix packs by running an upgrade script. This process takes about an hour to complete.

Before you begin
1. Verify that you have enough disk space to run the upgrade script targets.
   You must have at least 1 GB free disk space on your temp directory disk and 1 GB free disk space on your <was_root> disk.
2. Verify that you have stopped the servers and completed other preparations, as described in Preparing to upgrade WebSphere Portal.
3. (AIX and Linux only) Set the JAVA_HOME variable to point to the appropriate directory as shown:
   AIX
   JAVA_HOME="/usr/WebSphere/AppServer/java"
   Linux
   JAVA_HOME="/opt/WebSphere/AppServer/java"

Running the upgrade script
Follow these steps on the WebSphere Portal server.

1. Open a command prompt window and navigate to the <wp_root>\updatePDM directory.
2. Run the following command.
   AIX and Linux
   ./updatePDM.sh >updatePDM.log
   Windows
   updatePDM >updatePDM.log
3. Check the updatePDM.log file to ensure that the update operation was successful.
   You can disregard any errors in the log about "server1" not being reachable. This message displays because you stopped the servers before you started this process.

Post-upgrade tasks
1. (AIX and Linux only) Configure document conversion settings in WebSphere Portal.
   To ensure that the Lotus Workplace Web Conferencing component performs properly, configure document conversion settings in the WebSphere Portal Document Manager. This step enables users to view documents created in applications, such as Microsoft Power Point, even if that application is not installed on the Lotus Workplace server. For details on configuring document conversion, see the "Document conversion" section of the "Document Manager" topic in the WebSphere Portal Information Center, located at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

2. Start the WebSphere Portal and WebSphere Application servers.
   If security is disabled on WebSphere Application Server, type:
   
   **AIX and Linux**
   ```
   ./startServer.sh server1
   ./startServer.sh WebSphere_Portal
   ```
   
   **Windows**
   ```
   startserver server1
   startserver WebSphere_Portal
   ```
   
   If security is enabled, add a user ID and password for security authentication:
   
   **AIX and Linux**
   ```
   ./startServer.sh server1 -user admin_userid -password admin_password
   ./startServer.sh WebSphere_Portal -user was_admin_userid -password was_admin_password
   ```
   
   **Windows**
   ```
   startServer server1 -user admin_userid -password admin_password
   ```
   
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startServer WebSphere_Portal -user was_admin_userid
-password was_admin_password

3. Verify that you can log in to the WebSphere Application Server:
   http://yourserver.xxx.com:9090/admin

4. Verify that you can log in to WebSphere Portal using the Portal administrator name and password:
   http://serverfullDNSname:9081/wps/portal

5. Make a “backup” image of your system now so you can revert to it if needed during Lotus Workplace installation.
   If you are preparing WebSphere Portal for a first node or for a pilot deployment, enable security on the WebSphere Portal server. After that, you will be ready to install Lotus Workplace products on the server.
   If you are installing a second or subsequent node in a Network Deployment environment, connect to the remote WebSphere Portal databases.

Connecting additional nodes to the WebSphere Portal databases

WebSphere Portal installs a local Cloudscape database by default, but on the second and subsequent nodes in a Network Deployment, you connect to the same remote data sources that the first node uses. After installing and upgrading WebSphere Portal on the second or subsequent node in a Network Deployment, you must configure WebSphere Portal to connect to the remote data sources. Do this by updating the wpconfig.properties file and running the WPSconfig script with the connect-database target.

Note Be sure to set the DbSafeMode property to True in the wpconfig.properties file to prevent any further modifications to the remote database.

These steps are described in more detail in the "Installing into a cluster" section of the WebSphere Portal Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

At this point, do not access WebSphere Portal and do not log in to WebSphere Portal as any user, because it could result in database corruption. Next, enable security on the WebSphere Portal server. After that, you will be ready to install Lotus Workplace products on the server.
External ID mapping

If you use an LDAP directory, Lotus Workplace requires unique identifiers (IDs) in the LDAP directory to identify users and groups when it retrieves user-specific information such as contact lists, and when it controls user access to components such as team spaces and Web conferences. You must map the Member Manager extId attribute to the attribute used for the unique LDAP IDs. The following table lists the recommended LDAP unique ID attribute for each supported LDAP directory.

<table>
<thead>
<tr>
<th>Directory</th>
<th>Unique ID attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domino Directory</td>
<td>dominoUNID</td>
</tr>
<tr>
<td>IBM Directory Server 4.1</td>
<td>ibm-appUuid</td>
</tr>
<tr>
<td>IBM Directory Server 5.1</td>
<td>ibm-entryUuid</td>
</tr>
<tr>
<td>Microsoft Active Directory 2000</td>
<td>objectGUID</td>
</tr>
<tr>
<td>Sun ONE Directory Server</td>
<td>nsuniqueid</td>
</tr>
<tr>
<td>Novell eDirectory</td>
<td>GUID</td>
</tr>
</tbody>
</table>

Note the following points:

- If your LDAP directory is the Domino Directory, the recommended dominoUNID attribute is not part of the default schema, so you must add it to the schema.
- All of the directory servers listed in the table except IBM Directory Server 4.1 generate the ID values in the directory themselves. Therefore part of configuring external ID mapping for these directory servers is disabling Member Manager generation of the ID values in the directory.
- If your directory server is IBM Directory Server 4.1, WebSphere Portal by default maps the extId attribute to ibm-appUuid. WebSphere Portal must generate the ID values in the directory. It generates the ID values automatically as long as it has write access to the directory. To allow write access, when you enable directory security, you specify a name that has write access as the value for the LDAPAdminUid property in the wpconfig.properties file.
- Although the ibm-entryUuid attribute is provided with the IBM Directory Server 4.1 schema, it is not a suitable attribute to use for unique IDs on that server. Use ibm-entryUuid only with IBM Directory Server 5.1.
- If you are upgrading Lotus Workplace Messaging 1.1 to Lotus Workplace Messaging 2.0, after you complete the upgrade you must use the Lmadmin command WmmIDSynch to migrate 1.1 messaging IDs to 2.0 external IDs. This step is necessary to enable users to continue to access their mail accounts. For more information, see the upgrade documentation.
• If you change the external ID mapping after users have already used Lotus Workplace, user data that mapped to the old external ID, for example, mail accounts, become inaccessible after the remapping.

• Unlike WebSphere Portal, Lotus Workplace does not support mapping extId to distinguished names. If security is already enabled between WebSphere Portal and the LDAP directory and you mapped distinguished names to extId, you must disable security, map an appropriate LDAP attribute to extId, and then re-enable security. Make a backup of the WebSphere Portal configuration before disabling security. For more information on disabling and enabling security, go to the WebSphere Portal 5.0.2 Information Center at http://publib.boulder.ibm.com/pvc/wp/502/ent/en/InfoCenter/index.html.

Properties of unique IDs

The attribute designated as the unique ID in the LDAP directory requires the following properties:

• The value should be unique in the directory
• The value should never change
• If deleted, the value should never be re-used
• The value should have fewer than 128 characters
• The value should not contain commas
• The value should not be a distinguished name

If the user IDs do not meet these requirements or the Member Manager extId attribute is not mapped to them, users may be unable to do the following tasks:

• Add members to team spaces and add participants to Web conferences
• Create team spaces and Web conferences
• Add contacts to the My Contacts list
• Access Lotus Workplace data after a user name change

Adding dominoUNID to the Domino Directory

Unlike the schemas of the other LDAP directories supported by Lotus Workplace, the default schema for the Domino Directory does not provide a suitable unique ID attribute to map to extId. Follow these steps to add the hidden dominoUNID field to the schema. Then you can use dominoUNID as the unique ID attribute.
This procedure assumes you have an understanding of customizing the Domino Directory and of extending the LDAP schema. For more information on completing these tasks, see Domino Administrator Help.

1. Log in to Domino Designer using the name and password of a server administrator.

2. Add a field named dominoUNID to the Person, Group, and Server\Certifier forms in the Domino Directory. Create it as a “Computed when Composed” field and specify the following formula for it:
   @If(dominoUNID != ""; dominoUNID; @Text(@DocumentUniqueID))

   **Note** The recommended method for customizing the Domino Directory is making changes in a copy of the Domino Directory template and then applying the changes to the Domino Directory database. See Domino Administrator Help for more information.

3. To add the field to the schema, enter this command from the Domino server console:
   
   ```text
   tell ldap reloadschema
   ```

4. Domino automatically populates the `dominoUNID` attribute in new Person, Group, and Server\Certifier documents. To create a Domino agent that populates the attribute in existing Person, Group, and Server\Certifier documents, follow these steps:
   a. Open the Domino Directory database (NAMES.NSF).
   b. Choose Create —> Design —> Agent.
   c. Type a name for the agent.
   d. In the Runtime box, select the following options: “On event,” “Action menu selection,” and “Target All selected documents.”
   e. Close the properties box.
   f. In the Objects pane, click Action.
   g. From the drop-down list, select Formula and type the following formula:
      
      ```text
      FIELD dominoUNID := @If(dominoUNID != ""; dominoUNID; 
      @Text(@DocumentUniqueID));
      ```
   h. In the Objects pane, click Document Selection.
   i. Click Add Condition, select “By Form” as the condition, select the Group, Person, and Server\Certifiers forms, and click Add.
   j. Save the agent.
Right-click the agent in the agent view, click Design Properties, select the third tab, and select "Prohibit design refresh or replace to modify."

To run the agent, choose Actions from the Notes menu.

(Domino 6.5 only) If the Domino LDAP service searches additional Domino Directories configured through directory assistance, repeat Steps 1 through 4 for each additional directory.

Continue to the procedure “Mapping extId to LDAP unique IDs.”

Mapping extId to LDAP unique IDs

If your directory server is IBM Directory Server 5.1, Lotus Domino, Microsoft Active Directory, Novell eDirectory, or Sun ONE Directory Server, follow these steps to map the Member Manager extId attribute to an appropriate LDAP unique ID attribute for your directory and to prevent Member Manager from generating the IDs in the directory.

Note If you use the Domino Directory, make sure you have followed the steps in the topic "Adding dominoUNID to the Domino Directory” before continuing.

Follow these steps before you enable directory security.

1. Go to the <wp_root>\config\templates\wmm directory on the WebSphere Portal server.

2. With a text editor, open the wmm_LDAP.xml file for your LDAP type: wmm_LDAP.xml.<YourLDAPType>.3.wmm

   where:
   
   <YourLDAPType> is your LDAP directory type, for example, IBM_DIRECTORY_SERVER

   Note Be sure to choose the file that ends as .3.wmm, which indicates the use of a lookaside database. Lotus Workplace requires a lookaside database.

3. Find the ldapRepository tag and set the wmmGenerateExtId attribute to "false".

4. Search for ibm-appUUIDAux and ibm-appUUID and if you find any occurrences delete them from the file.

5. If your directory server is Domino, find the supportedLdapEntrytypes tag and update the values in bold below.

   <supportedLdapEntryTypes>
     <supportedLdapEntryType name="Person"
      rdnAttrTypes="@LdapUserPrefix@"
objectClassesForRead="dominoPerson"
objectClassesForWrite="dominoPerson"/>
<supportedLdapEntryType name="Group"
 rdnAttrTypes="@LdapGroupPrefix@"
 objectClassesForRead="dominoGroup"
 objectClassesForWrite="dominoGroup"/>
<supportedLdapEntryType name="Organization"
 rdnAttrTypes="o"
 objectClassesForRead="dominoOrganization"
 objectClassesForWrite="dominoOrganization"/>
<supportedLdapEntryType name="OrganizationalUnit"
 rdnAttrTypes="ou"
 objectClassesForRead="dominoOrganizationalUnit"
 objectClassesForWrite="dominoOrganizationalUnit"/>

6. Save the edited file.
7. With a text editor, open the wmmLDAPAttributes.xml file for your LDAP type:
   wmmLDAPAttributes_<YourLDAPType>.xml

   where:
   <YourLDAPType> is your LDAP directory type, for example,
   IBM_DIRECTORY_SERVER

8. Search for the definition of the extId attribute.
9. Change the default pluginAttributeName in the extId attribute definition
to the value indicated for your directory in the table below. If you use
Microsoft Active Directory or Novell eDirectory, also change the default
pluginDataType to the value indicated.
10. Save the edited file.
11. If you want to configure read-only access to the directory, continue to
the procedure “Configuring read-only LDAP directory access.”
Otherwise, continue to the procedure “Enabling directory security.”
### AttributeMap values

<table>
<thead>
<tr>
<th>Directory</th>
<th>AttributeMap values</th>
</tr>
</thead>
</table>
| IBM Directory Server 5.1   | `<attributeMap wmmAttributeName="extId" applicableMemberTypes="Person;Group;Organization;OrganizationalUnit" pluginAttributeName="ibm-entryUuid" dataType="String" multiValued="false" readOnly="true"/>
                                          |
| IBM Lotus Domino           | `<attributeMap wmmAttributeName="extId" applicableMemberTypes="Person;Group;Organization;OrganizationalUnit" pluginAttributeName="dominoUNID" dataType="String" multiValued="false" readOnly="true"/>
                                          |
| Microsoft Active Directory | `<attributeMap wmmAttributeName="extId" applicableMemberTypes="Person;Group;Organization;OrganizationalUnit" pluginAttributeName="objectGUID" dataType="String" pluginDataType="OctetString" multiValued="false" readOnly="true"/>
                                          |
| Novell eDirectory          | `<attributeMap wmmAttributeName="extId" applicableMemberTypes="Person;Group;Organization;OrganizationalUnit" pluginAttributeName="GUID" dataType="String" pluginDataType="OctetString" multiValued="false" readOnly="true"/>
                                          |
| Sun ONE Directory Server   | `<attributeMap wmmAttributeName="extId" applicableMemberTypes="Person;Group;Organization;OrganizationalUnit" pluginAttributeName="nsuniqueid" dataType="String" multiValued="false" readOnly="true"/>
                                          |

### Configuring read-only LDAP directory access

To configure read-only access, perform the following steps on the WebSphere Portal server before enabling security. Configuring read-only access is optional.

For more information on configuring read-only access, see the chapter “LDAP Directory Planning.”

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Note If you use IBM Directory Server 4.1, Lotus Workplace must have write access to the directory. Write access is required to allow Member Manager to generate unique IDs, because this directory server cannot generate the IDs itself.

1. Go to the \wp_root\config\templates\wmm directory on the WebSphere Portal server.

2. With a text editor, open the wmm.xml file for your LDAP type:
   \wmm_LDAP.xml.<YourLDAPType>.3.wmm
   where:
   \<YourLDAPType> is your LDAP directory type, for example, IBM_DIRECTORY_SERVER.
   
   Note Be sure to choose the file that ends as .3.wmm, which indicates the use of a lookaside database. Lotus Workplace requires a lookaside database.

3. Find the ldapRepository tag and add the attribute ignoreReadOnlyUpdate with "true" as the value.

4. Save the edited file.

5. Open the wmmLDAPAttributes.xml file for your LDAP type:
   \wmmLDAPAttributes_<YourLDAPType>.xml
   where:
   \<YourLDAPType> is your LDAP directory type, for example, IBM_DIRECTORY_SERVER.

6. Set the readOnly attribute to true in every attributeMap tag, for example:
   \<attributeMap wmmAttributeName="uid"
   ...
   readOnly="true"
   
   Note Add the readOnly attribute if it is not already defined.

7. Save the edited file.

8. Continue to the procedure “Enabling directory security.”

Note When you enable security between WebShere Portal and the LDAP directory, make sure the LDAP name specified for the LDAPAdminUid property in the wpconfig.properties file has only read access.
Enabling directory security

After you have successfully installed and upgraded WebSphere Portal, enable security by following these steps:

1. Read about planning the LDAP directory.
2. Map the WebSphere Member Manager extId attribute to an LDAP unique ID attribute.

Note: Lotus Workplace requires the use of a lookaside database, so you must type True as the value for the Lookaside property in the wpconfig.properties file.

Configuring extId mapping and read-only access

If you have already received the following error message when enabling directory security, perform the steps below to configure extId mapping or to configure read-only LDAP directory access.

```
action-create-deployment-credentials:

[xmlaccess] <?xml version="1.0" encoding="UTF-8" ?>
[xmlaccess]
[xmlaccess]
com.ibm.wps.command.xml.XmlCommandServlet$AuthorizationException

XMLC0005E:

1. Perform the steps in the procedure “Mapping extId to LDAP unique IDs.”
2. (Optional) Perform the steps in the procedure “Configuring read-only LDAP directory access.”
3. Run the following configuration task:
   `<wp_root>\config\wpsconfig.bat init action-update-wmm-ldap`
4. Stop and start WebSphere_Portal
5. Run the following configuration task:
   `<wp_root>\config\wpsconfig.bat action-create-deployment-credentials`
```
Chapter 7
Installing Lotus Workplace

This chapter describes how to install and set up the required WebSphere Portal Server, and then complete the Lotus Workplace installation.

Installing Lotus Workplace: Types of installations

The deployment you choose for Lotus Workplace determines which server installations you complete. Your deployment choices are:

• Installing in a pilot environment
• Installing in a Network Deployment

For demonstration purposes only, you also can install Lotus Workplace on a single server.

Single-server installation is described in the topic “Alternative Installation Methods.”

For more information on pilot deployments and Network Deployments, see the topic “Lotus Workplace deployments.”

Installing in a pilot environment

In a pilot environment, you run the Lotus Workplace installation program on two servers. In this type of deployment, you typically install the LDAP directory and the DBMS server on one machine (Server 1), and Lotus Workplace on the other (Server 2).

If you use Cloudscape as your DBMS, it must be hosted on Server 2 with Lotus Workplace (Cloudscape cannot be used remotely). In this case you might create a two-server configuration by hosting only the LDAP directory on Server 1, or by adding the Collaborative Learning servers.

Sequence of operations

For a two-server pilot configuration, you omit Phases 2 and 6 from your sequence of tasks, because they are specific to setting up a Network Deployment.
1. Verify that you have planned your installation (Phase 1).
   Have the Administrator Names and Passwords worksheet on hand if you filled it out.

2. Verify that you have prepared and installed Lotus Workplace on the DBMS Server (Phase 3).

3. Verify that you have set up the LDAP directory (Phase 4).

4. Verify that you have completed the first part of Phase 5 by:
   • Installing the DBMS client (skip this task if you are using Cloudscape).
   • Installing and upgrading WebSphere Portal.
   • Enabling WebSphere Portal security.

5. Stop the WebSphere Application Server (“server1”) and the WebSphere Portal server.

6. You are now ready to install Lotus Workplace on Server 2, selecting the product-only installation option.

Installing Lotus Workplace products in a pilot environment

Follow these steps to install Lotus Workplace on a server that will contain Lotus Workplace products only. You must already have set up the DBMS server.

**Caution** When you type a path name during installation in a Windows environment, do not include spaces. Path names that contain spaces might cause problems when you configure the product.

1. Log in as a user with administrative privileges on the server.
   If you are using DB2 as your DBMS, log in as db2admin.

2. Verify that WebSphere Portal has been installed with the necessary fix packs and configured to run Lotus Workplace applications.

3. Verify that WebSphere Portal is operational on the node by logging in from a browser and typing the administrator user name and password.

4. Create a local directory for the installation files.
   This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.

   **AIX**
   `/usr/lwp201code/`

   **Linux**
   `/opt/lwp201code/`
Windows
\c:\lwp201code\n
5. Copy the CDWorkplace directory and its files from the CD to the new directory.

6. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.

7. Stop the WebSphere Portal and WebSphere Application Servers.

8. Open a command prompt, navigate to the CD or folder called CDWorkplace, and enter the appropriate command to start installation. Run the program from a local drive, not a mapped network drive.

   AIX
   .\usr\lwp201code\CDWorkplace\aixlwpSuite

   Linux
   .\opt\lwp201code\CDWorkplace\linlwpSuite

   Windows
   winlwpSuite.exe

   **Note**  You can run the installation program with the case-sensitive parameter `-skipDbChecking` to see all database panels available in the installation program. This is useful for adding database options even if you do not have the necessary database software installed.

9. At the panel “Select a language to be used,” select a language, and then click **Next**.

10. At the panel “The installer will install IBM Lotus Workplace on your server,” click **Next**.

11. At the panel “Select the Lotus Workplace products that you have purchased licenses for,” select all the products for which you have licenses, and then click **Next**.

12. At the panel “Host Lotus Workplace,” select **This computer will host Lotus Workplace products**, and click **Next**.

13. At the panel “Based on the products you selected on the previous panel, these features are available for configuration,” clear any features you do not plan to use on this server, and then click **Next**.

14. At the License Agreement, click **I accept the terms**, and click **Next**.

15. At the panel that describes the installation options, select one of the following, and click **Next**.
• **Install and set configuration properties** — (Suitable for most installations) Installs Lotus Workplace and provides default configuration settings in the lwpprops.properties file. Requires some additional configuration after installation.

• **Install without configuring** — (For experienced installers only) Installs Lotus Workplace on this server, but does not provide any configuration information in the lwpprops.properties file. You must complete all configuration manually after installation.

• **Set configuration properties only** — (For reinstalling with new options) Select this option to change configuration properties for an existing Lotus Workplace installation. Changes are made to existing files; no new files are installed.

  For more information, see the topic "Installing Lotus Workplace using the configure-only option."

16. At the panel "Click Next to install IBM Lotus Workplace to this directory," specify one of the following directories, and then click **Next**.

   **AIX**
   
   /usr/WebSphere/WorkplaceServer

   **Linux**
   
   /opt/WebSphere/WorkplaceServer

   **Windows**
   
   c:\WebSphere\WorkplaceServer

   The characters in the directory path name must be single-byte coded (8 bit) characters from the ISO 8859-1 West European (Latin-1) character set.

17. At the panel "The following WebSphere Portal Servers were found on this computer," select the WebSphere Portal Server that you prepared for Lotus Workplace if it is not already selected. Then click **Next**.

   The default installation directories are:

   **AIX**
   
   /usr/WebSphere/PortalServer

   **Linux**
   
   /opt/WebSphere/PortalServer

   **Windows**
   
   c:\WebSphere\PortalServer

18. At the panel "The following WebSphere Application Servers were found on this computer," select the WebSphere Application Server that you
prepared for Lotus Workplace if it is not already selected. Then click Next.
The default installation directories are:

AIX
/usr/WebSphere/AppServer

Linux
/opt/WebSphere/AppServer

Windows
c:\WebSphere\AppServer

19. At the panel "Lotus Workplace requires administrator access to this server," provide Lotus Workplace with the credentials required for administrator access to the WebSphere Application Server on this server. Complete the following information, and then click Next:

- **WebSphere administrator name** — Type the user name of the administrator of the WebSphere Application Server installed on the server.

- **WebSphere administrator password** — Type the password of the administrator of the WebSphere Application Server installed on the server.

20. If you are installing Lotus Workplace Messaging or Team Spaces, the panel “Network Path of the Mail Service queue directory” displays. Provide the following information, and then click Next:

- **Network path of the mail service queue directory** — Type the path name to a server and directory in which the Mail Service will store messages before they are delivered. The directory must already exist. All Mail Services in the cell will use the same queue directory located on a network server. On Windows systems, use Universal Naming Convention (UNC) notation to specify the path name (for example, \\servername\qfilestore) or use the drive letter and full path name (for example, c:\qfilestore).

- **E-mail address for the postmaster account** — Type the e-mail address that you want the mail service to use as the return address when sending failure notifications and other administrative messages and to which you want messages addressed to "postmaster" to be sent. The address you specify must belong to an existing mail account, such as your administrator e-mail address, or refer to a mail or mail alias attribute, such as “postmaster@domain.com,” that is included in the user directory.

21. If you are not installing Workplace Collaborative Learning, proceed to the next step.
If you are installing Workplace Collaborative Learning, the panel “Lotus Workplace Collaborative Learning Settings” displays. Specify the Web address for the Learning Server (http://serverfullDNSname) specified when you installed Lotus Workplace on the DBMS server, and then click Next.

22. At the panel “Lotus Workplace supports multiple database vendors,” select one of the following options, and then click Next:
   - **Use a single database server configuration** — Select this if you have one DBMS server.
   - **Use multiple database server configurations** — Select this if you have several DBMS servers, each supporting different Lotus Workplace products.

23. If you selected "Use a single database server configuration" in the previous panel, you see the panel "The installation program can create a single database for all installed products, or create a separate database for each." Select one of the following options, and then click Next.
   - **Create one database.**
     This option creates one Lotus Workplace database that includes the information for all products you are installing. You will be prompted for Steps 24 through 28.
   - **Create multiple databases.**
     This option creates a separate database for each product. You will be prompted to repeat Steps 24 through 28 for each product.

24. At the panel “Select which type of database to configure,” choose the database product you have installed on your DBMS server, and then click Next.
   - DB2
   - Oracle
   - MS SQL (displays only if you are installing the Learning product on this server)

   **Note** Your selections in this and the other panels must be identical to those that you made for the DBMS server.

25. At the panel “Specify the information needed to connect to the DBMS server,” provide the following information, and then click Next.
   - **DBMS Program Directory** — Specify the database vendor’s program directory, for example, /home/db2admin/sqlib (AIX) or c:\IBM\SQLLIB (Windows).
   - **DBMS Server name** -- Type a fully qualified server name (for example, myserver.yourcompany.com).
• **DBMS Port number** -- The installation program provides the default port number for your database software (for example, 50000 for DB2 and 1521 for Oracle). Be sure to modify this setting if you selected a different port when you installed the DBMS server software (for example, in SuSE Linux 8.2 you may have used port 50001 for the DB2 server). The DBMS client and server must use the same port.

• **DBMS Service Name** -- Type your common server name (for example, “myserver”). This is optional for DB2 servers and required for others.

26. At the panel “Specify the name and password of a user who has the right to create and modify databases,” type the name and password of the DBMS administrator for the Lotus Workplace database and DBMS server, for example, “db2admin.” Then click Next.

27. At the panel ”Specify the name and password of a user that Lotus Workplace applications will use to access this database,” type the name and password that Lotus Workplace should use when it accesses and writes to the Lotus Workplace database. Then click Next.

28. If you are installing Lotus Workplace on an Oracle database platform, the panel “Type the path to the data directory” displays. Specify the location for creating Lotus Workplace databases. You must create the data and backup directories before proceeding. Provide the following information, and then click Next.

   **Note** The directories you provide here denote local directories on the DBMS server. Specify the directories as if they are local to this server.

   • **Data directory** — Type or browse for the directory path name where you want to store the Lotus Workplace databases. For example, /usr/WebSphere/lwpdata (AIX), /opt/WebSphere/lwpdata (Linux), or c:\lwpdata (Windows).

   • **Backup directory** — Type or browse for the directory path name where you want to store copies of the databases created in the data directory. For example, /usr/WebSphere/lwpbackups (AIX), /opt/WebSphere/lwpbackups (Linux), or c:\lwpbackups (Windows).

29. If you are creating multiple databases, repeat Steps 24 through 28 for each database you are creating on this server; otherwise, go to Step 30.

30. At the panel “Summary Information,” click Next when finished.

   **Note** If this panel does not appear, minimize the Installation program window, and then restore it to display this panel.

31. After about 10 to 15 minutes, the last panel displays. Click Finish to complete the installation.

You are now ready to set up Lotus Workplace.
Installing Lotus Workplace in a Network Deployment

In a Network Deployment, you run the Lotus Workplace installation program on every server in the deployment except on the LDAP server and the remote HTTP server. The program detects the software that is already installed on each server, and then installs the appropriate Lotus Workplace component. You then join each Lotus Workplace server to the deployment node and create a cluster of Lotus Workplace servers.

You cannot install Lotus Workplace on a WebSphere node that is already part of a Network Deployment. You must instead install and configure Lotus Workplace on multiple standalone servers, and then add (or “federate”) each of these servers to the Network Deployment environment.

Sequence of operations

1. Verify that you have planned your installation (Phase 1). Refer to the Administrator Names and Passwords worksheet if you filled it out.
2. Verify that you have set up the Network Deployment environment (Phase 2).
3. Verify that you have prepared and installed Lotus Workplace on the DBMS Server (Phase 3).
4. Verify that you have set up the LDAP directory (Phase 4).
5. Prepare and install Lotus Workplace on the Deployment Manager (Phase 5 tailored to the Deployment Manager server). You do not install WebSphere Portal on this server.
   a. Install the DBMS client.
   b. Stop the WebSphere Application Server.
   c. Install Lotus Workplace, selecting the product-only installation, and then complete the setup process.
   d. Enable security on the Deployment Manager.
6. Prepare and install Lotus Workplace on Node 1, the first Lotus Workplace product server (Phase 5, including steps for migrating the Portal databases and adding the node to the Network Deployment cell).
   a. Install the DBMS client.
   b. Install WebSphere Portal, using Cloudscape as the default database.
   c. Migrate Portal databases in the Network Deployment.
   d. Upgrade WebSphere Portal to run with Lotus Workplace.
   e. Enable WebSphere Portal security.
f. Stop the WebSphere Application and WebSphere Portal Servers.

g. Install Lotus Workplace, selecting the product-only installation with all the products you want to install in this Network Deployment, and then complete the setup process. Every other node you install later must be identical to this one.

h. Federate Node 1 to the cell.

7. On the Deployment Manager, create the Lotus Workplace clusters and add Node 1 to the clusters.

8. Prepare and install Lotus Workplace on Node 2, an additional Lotus Workplace node (Phase 5, including steps for connecting the node to the remote Portal databases and adding the node to the Network Deployment cell).

   a. Install the DBMS client.
   b. Install and upgrade WebSphere Portal, using Cloudscape as the default database.
   c. Connect Node 2 to the remote WebSphere Portal databases.
   d. Enable WebSphere Portal security.
   e. Perform a Lotus Workplace product-only installation and then complete the setup process. During the installation, you must make the same choices that you made for Node 1.
   f. Federate this node to the cell. This step creates the node agent that enables each node to function as part of the cell. Do not use the -includeapps option when adding the second and subsequent nodes.
   g. On the Deployment Manager, add the node to the clusters.

9. Repeat Step 8 for all additional nodes.

10. Finish setting up the Network Deployment environment (Phase 6).

### Installing Lotus Workplace products in a Network Deployment

Follow these steps to install Lotus Workplace on a server that will contain Lotus Workplace products only.

**Caution** When you type a path name during installation in a Windows environment, do not include spaces. Path names that contain spaces might cause problems when you configure the product.

1. Log in as a user with administrative privileges on the server.
   - If you are using DB2 as your DBMS, log in as `db2admin`.
2. Verify that WebSphere Portal has been installed with the necessary fix packs and configured to run Lotus Workplace applications.
3. Verify that WebSphere Portal is operational on the node by logging in from a browser and typing the administrator user name and password.

4. Create a local directory for the installation files.
   This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.
   
   **AIX**
   `/usr/lwp201code/

   **Linux**
   `/opt/lwp201code/

   **Windows**
   `c:\lwp201code`

5. Copy the CDWorkplace directory and its files from the CD to the new directory.

6. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.

7. Stop the WebSphere Portal and WebSphere Application Servers.

8. Open a command prompt, navigate to the CD or folder called CDWorkplace, and enter the appropriate command to start installation. Run the program from a local drive, not a mapped network drive.
   
   **AIX**
   `./usr/lwp201code/CDWorkplace/aixlwpSuite`

   **Linux**
   `./opt/lwp201code/CDWorkplace/linlwpSuite`

   **Windows**
   `winlwpSuite.exe`

   **Note** You can run the installation program with the case-sensitive parameter `-skipDbChecking` to see all database panels available in the installation program. This is useful for adding database options even if you do not have the necessary database software installed.

9. At the panel "Select a language to be used,” select a language, and then click Next.

10. At the panel "The installer will install IBM Lotus Workplace on your server,” click Next.

11. At the panel "Select the Lotus Workplace products that you have purchased licenses for,” select all the products for which you have licenses, then click Next.
12. At the panel "Host Lotus Workplace," select This computer will host Lotus Workplace products and click Next.

13. At the panel "Based on the products you selected on the previous panel, these features are available for configuration," clear any features you do not plan to use on this server, and then click Next.

14. At the License Agreement, click I accept the terms and click Next.

15. At the panel that describes the installation options, select one of the following, and click Next:

   - **Install and set configuration properties** — (Suitable for most installations) Installs Lotus Workplace and provides default configuration settings in the lwpprops.properties file. Requires some additional configuration after installation.
   - **Install without configuring** — (For experienced installers only) Installs Lotus Workplace on this server, but does not provide any configuration information in the lwpprops.properties file. You must complete all configuration manually after installation.
   - **Set configuration properties only** — (For reinstalling with new options) Select this option to change configuration properties for an existing Lotus Workplace installation. Changes are made to existing files; no new files are installed.
     
     For more information, see the topic "Installing Lotus Workplace using the configure-only option."

16. At the panel "Click Next to install IBM Lotus Workplace to this directory," specify one of the following directories, and then click Next.

   AIX
   
   /usr/WebSphere/WorkplaceServer

   Linux
   
   /opt/WebSphere/WorkplaceServer

   Windows
   
   c:\WebSphere\WorkplaceServer

   The characters in the directory path name must be single-byte coded (8 bit) characters from the ISO 8859-1 West European (Latin-1) character set.

17. If you are installing Lotus Workplace on the Deployment Manager, proceed to the next step.

   At the panel "The following WebSphere Portal Servers were found on this computer," select the WebSphere Portal Server that you prepared for Lotus Workplace if it is not already selected. Then click Next.
The default installation directories are:

AIX
/usr/WebSphere/PortalServer

Linux
/opt/WebSphere/PortalServer

Windows
c:\WebSphere\PortalServer

18. At the panel "The following WebSphere Application Servers were found on this computer," select the WebSphere Application Server that you prepared for Lotus Workplace if it is not already selected.

(If you are installing Lotus Workplace on the Deployment Manager, select the Deployment Manager that you prepared for Lotus Workplace.) Then click Next.

The default installation directories for the Deployment Manager are:

AIX
/usr/WebSphere/DeploymentManager

Linux
/opt/WebSphere/DeploymentManager

Windows
c:\WebSphere\DeploymentManager

The default installation directories for a node are:

AIX
/usr/WebSphere/AppServer

Linux
/opt/WebSphere/AppServer

Windows
c:\WebSphere\AppServer

19. At the panel "Lotus Workplace requires administrator access to this server," provide Lotus Workplace with the credentials required for administrator access to the WebSphere Application Server on this server. Complete the following information, and then click Next:

- **WebSphere administrator name** — Type the user name of the administrator of the WebSphere Application Server installed on the server.
• **WebSphere administrator password** — Type the password of the administrator of the WebSphere Application Server installed on the server.

20. If you are installing Lotus Workplace Messaging or Team Spaces, the panel “Network Path of the Mail Service queue directory” displays. Provide the following information, and then click **Next**:

  - **Network path of the mail service queue directory** — Type the path name to a server and directory in which the Mail Service will store messages before they are delivered. All Mail Services in the cell will use the same queue directory located on a network server. Specify the network path name to the shared directory called “qfilestore” that you created before installation.

  - **E-mail address for the postmaster account** — Type the e-mail address that you want the mail service to use as the return address when sending failure notifications and other administrative messages and to which you want messages addressed to "postmaster" to be sent. The address you specify must belong to an existing mail account, such as your administrator e-mail address, or refer to a mail or mail alias attribute, such as “postmaster@domain.com,” that is included in the user directory.

21. If you are not installing Workplace Collaborative Learning, proceed to the next step.

   If you are installing Workplace Collaborative Learning, the panel “Lotus Workplace Collaborative Learning Settings” displays. Specify the Web address for the Learning Server (http://serverfullDNsname) specified when you installed Lotus Workplace on the DBMS server, and then click **Next**.

22. At the panel “Lotus Workplace supports multiple database vendors,” select one of the following options, and then click **Next**:

   - **Use a single database server configuration** — Select this if you have one DBMS server.

   - **Use multiple database server configurations** — Select this if you have several DBMS servers, each supporting different Lotus Workplace products.

23. If you selected "Use a single database server configuration" in the previous panel, you see the panel "The installation program can create a single database for all installed products, or create a separate database for each." Select one of the following options, and then click **Next**.
• Create one database.
  This option creates one Lotus Workplace database that includes the
  information for all products you are installing. You will be prompted
  for Steps 24 through 28.
• Create multiple databases.
  This option creates a separate database for each product. You will be
  prompted to repeat Steps 24 through 28 for each product.

24. At the panel "Select which type of database to configure," choose the database
  product you have installed on your DBMS server, and then click Next.
  • DB2
  • Oracle
  • MS SQL (displays only if you are installing the Learning product on
    this server)

  Note  Your selections in this and the other panels must be identical to
  those that you made for the DBMS server.

25. At the panel "Specify the information needed to connect to the DBMS
  server," provide the following information, and then click Next.
  • DBMS Program Directory — Specify the database vendor’s program
    directory, for example, /home/db2admin/sql (AIX) or
    c:\IBM\SQLLIB (Windows).
  • DBMS Server name -- Type a fully qualified server name (for
    example, myserver.yourcompany.com).
  • DBMS Port number -- The installation program provides the default
    port number for your database software (for example, 50000 for DB2
    and 1521 for Oracle). Be sure to modify this setting if you selected a
    different port when you installed the DBMS server software (for
    example, in SuSE Linux 8.2 you may have used port 50001 for the
    DB2 server). The DBMS client and server must use the same port.
  • DBMS Service Name -- Type your common server name (for
    example, ”myserver”). This is optional for DB2 servers and required
    for others.

26. At the panel "Specify the name and password of a user who has the right
  to create and modify databases," type the name and password of the
  DBMS administrator for the Lotus Workplace database and DBMS
  server, for example, ”db2admin.” Then click Next.

27. At the panel "Specify the name and password of a user that Lotus
  Workplace applications will use to access this database,” type the name
  and password that Lotus Workplace should use when it accesses and
  writes to the Lotus Workplace database. Then click Next.
28. If you are installing Lotus Workplace on an Oracle database platform, the panel “Type the path to the data directory” displays. Specify the location for creating Lotus Workplace databases. You must create the data and backup directories before proceeding. Provide the following information, and then click Next:

- **Data directory** — Type or browse for the directory path name where you want to store the Lotus Workplace databases. For example, /usr/WebSphere/lwpdata (AIX), /opt/WebSphere/lwpdata (Linux), or C:\lwpdata (Windows).

- **Backup directory** — Type or browse for the directory path name where you want to store copies of the databases created in the data directory. For example, /usr/WebSphere/lwpbackups (AIX), /opt/WebSphere/lwpbackups (Linux), or c:\lwpbackups (Windows).

29. If you are creating multiple databases, repeat Steps 24 - 28 for each database you are creating on this server; otherwise, go to Step 30.

30. At the panel “Lotus Workplace Collaborative Learning Settings,” specify the Web address for the Learning Server (http://serverfullDNSname), and click Next.

31. At the panel “Summary Information,” click **Next** when finished.

   **Note** If this panel does not appear, minimize the Installation program window, and then restore it to display this panel.

32. After about 10 to 15 minutes, the last panel displays. Click **Finish** to complete the installation.

You are now ready to set up Lotus Workplace.

**Enabling security on the Deployment Manager**

Configure LDAP and security settings for the Network Deployment by following these steps on the Deployment Manager.

1. Open the WebSphere Administrative Console.

2. Click Security —> User Registries —> LDAP and enter the following information:

   - **Server User ID** - Type the common name of the WebSphere Portal administrator; for example:
     
     uid=wpsadmin,cn=Users,l=Nashville,st=Tennessee,c=US,ou=SE,o=Sales,dc=acme,dc=com

   - **Server User password** - Type the password of the user specified in the previous field.

   - **Type** - Choose the type of LDAP directory to be used; for example:
IBM_Directory_Server

**Host** - Type the fully qualified host name of the LDAP server; for example:
ids51ldap.acme.com

**Port** - Type the number of the TCP port on which the LDAP server listens for incoming requests; for example:
389

**Base Distinguished Name** - Type the base distinguished name of the directory service, indicating the starting point for LDAP searches of the directory service; for example:
l=Nashville,st=Tennessee,c=US,ou=SE,o=Sales,dc=acme,dc=com

**Bind Distinguished Name** - Type the fully qualified distinguished name that the application server must use to bind to the LDAP directory; for example,
uid=wpsbind,cn=Users,l=Nashville,st=Tennessee,c=US,ou=SE,o=Sales,d
c=acme,dc=com

**Bind Password** - Type the password of the user specified in the previous field.

**Search timeout** - Type the number of seconds that an LDAP server has to respond to requests from the application server before the request is canceled; for example, 120.

**Reuse Connection** - Select the check box.

**Ignore case** - Select the check box.

**SSL Enabled** - Clear the check box.

3. Click **Apply**.

4. Under Additional Properties, click **Advanced LDAP Settings**.

5. Add the mail attribute to the User Filters setting; for example:
\((\&(\mid(uid=%v)(mail=%v))(objectclass=inetOrgPerson))\)

6. Click **OK**.

7. Click **Security —> Authentication Mechanisms —> LTPA**, and specify the LTPA password. Then click **Single Signon (SSO)** in the Additional Properties section, select **Enabled**, and specify the domain name.

8. Save your changes to the master configuration before enabling Global Security.

9. Click **Security —> Global Security** and complete the following information:

   **Enabled** - Select the check box.
Enforce Java 2 Security - Clear the check box.
Use Domain Qualified User IDs - Clear the check box.
Cache Timeout - Type 600.
Issue Permission Warning - Select the check box.
Active Protocol - Choose CSI and SAS.
Active Authentication Mechanism - Choose LTPA (Lightweight Third Party Authentication).
Active User Registry - Choose LDAP.
10. Log out from the WebSphere Administrative Console and close the browser.
11. Restart the Deployment Manager.
   The Deployment Manager should now be configured.
12. Log in to the WebSphere Administrative Console as follows:
   \[https://deployment_manager_name:9043/admin\]
   If security is enabled properly, you are prompted for a password.
   Refer to "Installing in a Network Deployment" for additional installation and setup information.

Federating Lotus Workplace nodes to a cell

After you install Lotus Workplace products on standalone WebSphere Application Server nodes, use the addnode command to federate the nodes, which adds them the Network Deployment cell. Depending on the size and location of the node that you incorporate into the cell, this command can take a few minutes to complete.


Before you begin
1. On the node you want to add, open the addNode script or batch file located in the \(<was_root>\bin directory.
2. Add the -Xmx512m option to each Java command.
   This increases the maximum heap size to 512 MB, which is the recommended size.
3. Save the revised script or batch file.
4. Open the node’s removeNode script or batch file. Make the same changes to the maximum heap size and save the file.
5. Open a command prompt and navigate to the `<was_root>\config` directory.
6. Stop each server by typing the following commands from the `<was_root>\bin` directory, keeping in mind that server names are case-sensitive:
   
   **AIX and Linux**
   
   ```
   ./stopServer.sh server1
   ./stopServer.sh WebSphere_Portal
   ./stopServer.sh Lotus_Workplace_server
   ```
   
   **Windows**
   
   ```
   stopServer server1
   stopServer WebSphere_Portal
   stopServer Lotus_Workplace_server
   ```
   
7. (Linux only) On the Deployment Manager, add each node’s hostname and full DNS hostname in the `/etc/hosts` file and save the file. Without the node’s name in the hosts file, you will receive errors when you try to add a node to the cell.
8. On the Deployment Manager, open a command prompt and navigate to the `<was_root>\DeploymentManager\bin` directory.
9. Type the following command:
   
   **AIX and Linux**
   
   ```
   ./startManager.sh
   ```
   
   **Windows**
   
   ```
   startmanager
   ```

### Adding nodes to the cell

Follow these steps to add a node to the cell.

1. From the node you want to add, type the following command on a single line from the `<was_root>\bin` directory. The command is different for the first node in the cluster.
   
   **Node 1**
   
   **AIX and Linux**
   
   ```
   ./addNode.sh deployment_manager_host port_number -username admin_user_id -password admin_password -includeapps
   ```
   
   **Windows**
   
   ```
   addnode deployment_manager_host port_number -username admin_user_id -password admin_password -includeapps
   ```
   
   **Node 2 and subsequent nodes**

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```bash
./addNode.sh deployment_manager_host port_number -username
admin_user_id -password admin_password
```

Windows

```bash
addnode deployment_manager_host port_number -username
admin_user_id -password admin_password
```

where:

- `deployment_manager_host` is the Deployment Manager host name.
- `port_number` is the Deployment Manager SOAP connector-address. The default value is 8879.
- `admin_user_id` is the WebSphere Application Server administrator user name.
- `admin_password` is the administrator user password.

After a node has been successfully added, a confirmation message displays.

2. Remove the Administrative Console application. You can no longer administer the node locally.
   a. From the WebSphere Administrative Console on the node, click **Applications —> Enterprise Applications**.
   b. Page through the applications until you find the **WpsAdminconsole** application.
   c. Select the application, and click **Uninstall**.
   d. Select **Synchronize changes with nodes**.
   e. Save your changes.

3. If you used the default HTTP port values when installing on the node, the Deployment Manager might require a virtual host entry for the port used to access WebSphere Portal. For example, if you access WebSphere Portal on a node using the Web address http://lwp01:9081/wps/portal, you must add a Virtual Host definition for port 9081 to the Deployment Manager.

To add a node as a virtual host:

a. From the WebSphere Administrative Console on the Deployment Manager, click **Environment —> Virtual Hosts**.

b. Click the **default_host** entry or the entry for the virtual host that is being used to access the WebSphere Portal application.

c. Select **Host Aliases**.
d. On the Host Aliases panel, verify that one of the host name and port combinations matches the values used to access WebSphere Portal (for example, ":9081").

e. Start the WebSphere Portal instance and verify that it is operational by logging in from a browser and typing the administrator user name and password.


Refer to the topic "Installing in a Network Deployment" for additional installation and setup information.

Creating Lotus Workplace clusters

In a Network Deployment, you create WebSphere Portal and WebSphere Application Server clusters to provide load balancing and better performance for Lotus Workplace.

After you have installed and set up Lotus Workplace on the first node in the cell, you can create the clusters. When you install other Lotus Workplace nodes, add them to the clusters.


Creating the Lotus Workplace clusters and adding Node 1

Follow these steps on the Deployment Manager to create WebSphere Portal and WebSphere Application Server clusters for Lotus Workplace servers. Then add the first node to the clusters.

Creating the cluster

1. On the Deployment Manager, open the WebSphere Administrative Console and click Servers -> Clusters.

2. Click New to open the Create New Cluster page.

3. Provide the following information, and then click Next:

   - **Cluster name** — Type a name for the cluster, such as LWPCluster.
   - **Prefer local enabled** — Select this option to improve performance by enabling client requests to be sent to local EJBs.
   - **Create Replication Domain** — Select this option.
   - **Select an existing server to add to this cluster** — Select this option and then from the list, select Node 1.
Create Replication Entry in this Server — Select this option.

4. Click Next and review the summary of changes.

5. Click Finish to complete the configuration.

6. Select Synchronize changes with Nodes, and then click Save.

By default, automatic synchronization occurs between every node when a change is made to the configuration of the cell, which is checked for updates once every minute.

7. Return to the Servers —> Clusters page.

8. Click New to open the Create New Cluster page.

9. Provide the following information, and then click Next:
   - **Cluster name** — Type a name for the cluster, such as server1_Cluster.
   - **Prefer local enabled** — Select this option to improve performance by enabling client requests to be sent to local EJBs.
   - **Create Replication Domain** — Select this option.
   - **Select an existing server to add to this cluster** — Select this option and then from the list, select the server “server1” from Node 1.
   - **Create Replication Entry in this Server** — Select this option.

10. Click Next and review the summary of changes.

11. Click Finish to complete the configuration.

12. Select Synchronize changes with Nodes, and then click Save.

Connecting Node 1 to the cluster

1. On Node 1, open the DeploymentService.properties file, stored in `<wp_root>\PortalServer\shared\app\config\services`.

2. Enter the cluster name as the value for wps.appserver.name and save the file.

Verifying the cluster members

1. To view the cluster topology, open the WebSphere Administrative Console on the Deployment Manager and click Servers —> Cluster Topology. The new server cluster members display in the application server view.

2. Click Servers —> Clusters —> Server Cluster and start the clusters you defined.

   This may take a few minutes.

Refer to "Installing in a Network Deployment" for additional installation and setup information.
Adding subsequent nodes to the clusters
After you have installed and set up Lotus Workplace on a new node, add it to the clusters.

1. On the Deployment Manager, go to the WebSphere Administrative Console and click Servers — Clusters.
2. Select the WebSphere Portal cluster you created for Node 1.
3. Select Cluster Member and click New.
4. Provide the following information, and then click Apply:
   - Cluster member name — Type the name of the new node to be added to the cluster. Assign names other than WebSphere_Portal, for example, LWP02 for the second Lotus Workplace node in the cluster).
   - Select node — Select the node (for example, Node 2).
   - Generate Unique HTTP Ports — Clear the check box for this option.
5. Click Next and review the summary of changes.
6. Click Finish to complete the configuration.
7. Select Synchronize changes with Nodes, and then click Save.
   By default, automatic synchronization occurs between every node when a change is made to the configuration of the cell, which is checked for updates once every minute.
8. Return to the Servers — Clusters page.
9. Select the WebSphere Application Server cluster you created for Node 1.
10. Select Cluster Member and click New.
11. Provide the following information, and then click Apply:
    - Cluster member name — Type the name of the new node to be added to the cluster. Assign names other than server1, for example, server1_Node2 for the second Lotus Workplace node in the cluster).
    - Select node — Select the node (for example, Node 2).
    - Generate Unique HTTP Ports — Clear the check box for this option.
12. Click Next and review the summary of changes.
13. Click Finish to complete the configuration.
14. Select Synchronize changes with Nodes, and then click Save.
15. From the WebSphere Administrative Console, click Application Servers.
16. In the Name column, click the name of the additional WebSphere Portal server running on the node; for example, LWP02.

17. Click Process Definition in the Additional Properties section of the Configuration tab for the server.

18. Click Java Virtual Machine in the Additional Properties section of the Process Definition tab.

19. Click Custom Properties in the Additional Properties section of the Java Virtual Machine tab.

20. Click pzn.root.dir.

21. Edit the path name in the Value field so that it refers to the node directory for the new node. By default, this path name refers to the directory for the first node added to the cell.

For example, in AIX and Linux:

<was_root>/wpcp/config/node_name/WebSphere_Portal/runtime

where node_name is the name of the Lotus Workplace node.

22. Click Apply, and then click OK.

23. Click wcm.root.dir.

24. Edit the path name in the Value field so that it refers to the node directory for the new node. By default, this path name refers to the directory for the first node added to the cell.

For example, in AIX and Linux:

<was_root>/wpcp/config/node_name/WebSphere_Portal/author

25. Click Apply, and then click OK.

Connecting the new node to the cluster

To connect the new node to the cluster, perform these steps:

1. On the new node, open the DeploymentService.properties file, stored in <wp_root>/PortalServer\shared\app\config\services.

2. Type the cluster name as the value for wps.appserver.name and save the file.

Refer to "Installing in a Network Deployment" and "Phase 6: Completing Network Deployment Setup" for additional installation and setup information.

Determining the SOAP port to use to connect to the Deployment Manager

If you do not know which SOAP port to use to connect to the Deployment Manager, you can find it by performing the following steps:
1. Open the WebSphere Administrative Console for the Deployment Manager.
2. Select **System Administration** —> **Deployment Manager**.
3. Select **End Points** in the **Additional Properties** table.
4. Select **SOAP_CONNECTOR_ADDRESS**.

Refer to the topic "Installing in a Network Deployment," for additional installation and setup information.
Chapter 8
Setting Up Lotus Workplace

This chapter provides information about setting up Lotus Workplace after installation.

Setting up Lotus Workplace

After you install Lotus Workplace on the product server, finish setting it up by performing the following tasks:

1. Edit the lwpprops.properties file to be appropriate for your site.
2. Run configuration scripts on the Lotus Workplace server.
3. (If you installed Lotus Workplace on an existing Portal server) Create a Redirect on the HTTP server.
4. Run configuration scripts on the Lotus Workplace server.
5. Set up Collaborative Learning.

Editing the lwpprops.properties file

After the Lotus Workplace installation program finishes running, you must review and update values in the lwpprops.properties file. It is very important to perform this step carefully — before running the Lotus Workplace configuration scripts — to help prevent errors from occurring when the configuration scripts run.

The properties that you set, and the values that you assign them, depend on several factors, such as the server configuration, the DBMS vendor, and which of the Lotus Workplace components you install. For example, if you configure a Network Deployment, you will use different property settings for the first node in the deployment than you will for all of the other servers in that deployment.

In the lwpprops.properties file, each property is preceded with an explanatory comment to help you determine its correct value for your situation.
Syntax rules for property values
- Do not enclose any value in quotes.
- Windows path names can use either forward slashes (/) or double backslashes (\).
- Windows long path names (directory names and file name containing more than 8 characters) are acceptable.

Editing the lwpprops.properties file
1. The lwpprops.properties file is located in the `<lwp_root>\config` directory. Make a backup copy of the installed version of the lwpprops.properties file and name it lwpprops.old.
   You can revert to this version if necessary.
2. Update properties to be accurate for your Lotus Workplace deployment:
   - Set the WpsHostName to the fully qualified DNS name of your Portal server; for example:
     `WpsHostName=myPortalServer.acme.com`
     This value defaults to localhost.
   - Replace any default values created during installation that are not correct for your site.
   - For all products that you installed, add values for any properties that do not have a default value. Leave properties for uninstalled products blank.
     If you chose Install and configure or Configure only in the installation program, the lwpprops.properties file contains some values that must be customized for your site.
     If you chose Install only, you must supply all values that would normally be set by the installation program.
3. Save the revised version of the file.
   Then run the Workplace configuration scripts to continue setting up Lotus Workplace.

Setting properties in a Network Deployment
In a Network Deployment configuration, the Deployment Manager must have this property set:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PortalClusterName</td>
<td>Specify the cluster you created for the Workplace cluster; for example, LWPCluster.</td>
</tr>
</tbody>
</table>
In addition, the “first node” in the deployment often uses different values from the other servers in the configuration for certain properties. For example, the following properties are different for the first node:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value for first node in ND</th>
<th>Value for remaining servers</th>
</tr>
</thead>
<tbody>
<tr>
<td>WorkplaceFirstNode</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>LWP.DB.Drop</td>
<td>True</td>
<td>False</td>
</tr>
</tbody>
</table>

**Setting properties for the Messaging component**

If you install the Lotus Workplace Messaging component, there are several basic properties that help determine how e-mail is routed:

<table>
<thead>
<tr>
<th>Messaging Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWMLocalDomainNames</td>
<td>Specify the domain names that are considered local. Use commas to separate multiple names. Do not use a single asterisk (wild card) to indicate that any domain is local.</td>
</tr>
<tr>
<td>LWMFullyQualifiedDomainName</td>
<td>Specify the fully qualified domain name of the Mail Service; for example, myserver.domain.com. This name identifies the Mail Service when establishing a connection to other mail systems and when sending Delivery Status Notification messages.</td>
</tr>
<tr>
<td>LWMDnsNames</td>
<td>Specify host names or IP addresses of DNS servers that resolve names and addresses and provide MX attributes. For example, server1.lotus.com, server2.lotus.com. Use commas to separate multiple names. To find DNS server names on a Windows server, open a command prompt and type <code>nslookup</code>.</td>
</tr>
<tr>
<td>LWMMailServiceRoot</td>
<td>Specify the network path of the mail service queue directory only if it has changed since Lotus Workplace was installed. The value is a path name to a server and directory in which the Mail Service will store messages before they are delivered. On Windows systems, use Universal Naming Convention (UNC) notation to specify the path name (for example, \servername\qfilestore) or use the drive letter and full path name (for example, c:\qfilestore).</td>
</tr>
<tr>
<td>LWMPostmasterEmail</td>
<td>Specify the e-mail address for the postmaster account. Messages addressed to “postmaster” and internal system reports are sent here.</td>
</tr>
</tbody>
</table>

*continued*
<table>
<thead>
<tr>
<th>Messaging Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWMLDAPName</td>
<td>Specify a descriptive name for the WebSphere Application Server User Registry (LDAP directory). This name appears in the common name picker directory list. A name is not needed if the LDAP directory is not used for account creation and mail routing.</td>
</tr>
</tbody>
</table>

**Setting properties for Collaborative Learning component**

If you install the Lotus Workplace Collaborative Learning and you use a separate Workplace data server (as in the two-server or Network Deployment configuration), you must set the following properties:

<table>
<thead>
<tr>
<th>Learning Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWP.Learning.LMS</td>
<td>Set to True for Learning Server settings.</td>
</tr>
<tr>
<td>LWP.Learning.LDS</td>
<td>Set to True for Learning Delivery Server settings.</td>
</tr>
</tbody>
</table>

**Lotus Workplace configuration scripts**

After Lotus Workplace is installed and you have edited the lwpprops.properties file, you run certain configuration scripts to prepare the software for use. There are two Lotus Workplace configuration scripts: LWPconfig and LWPdbconfig. Each command accepts a range of options or “targets” to perform a specific task or action.

Configuration scripts read the values of properties in the lwpprops.properties file and perform configuration functions based on these values. To minimize configuration errors, finalize the lwpprops.properties file before running the Lotus Workplace configuration scripts.

To finish setting up Lotus Workplace products, you must run the scripts described in Running configuration scripts on the Lotus Workplace server in the next section.

For a complete list of scripts, see Configuration targets in the Reference Information section.

**Launching configuration scripts**

To run a configuration script, follow these general steps:

1. Log in to the server as a user with administrative privileges.
   
   If you are using DB2 as your DBMS, log in as db2admin.

2. If the server is running DB2, Oracle, or SQL, go to the next step.
If the server is running with Cloudscape as the DBMS server, start the Cloudscape network server:

a. Navigate to the Appserver\bin directory:
   - AIX and Linux
     <was_root>/Appserver/bin
   - Windows
     <was_root>\Appserver\bin

b. Run the following command to open a command window:
   - AIX and Linux
     ./setupCmdLine.sh
   - Windows
     setupCmdLine

c. Navigate to the Networkserver\bin directory:
   - AIX and Linux
     <was_root>/PortalServer/shared/app/cloudscape/NetworkServer/bin
   - Windows
     <was_root>\PortalServer\shared\app\cloudscape\NetworkServer\bin

d. If you are running Cloudscape on this server (for example, in a single-server configuration), start the Cloudscape Network Server by typing the following commands:
   - AIX and Linux
     ./setNetworkServerCP.sh
     ./startNetworkServer.sh
   - Windows
     setNetworkServerCP
     startNetworkServer

3. Open a command prompt to the <lwp_root>\config subdirectory.

4. Type:

   `<configcommand> <target> >commandname.log`

   where `<configcommand>` is the name of the configuration command (LWPconfig or LWPdbconfig) and `<target>` specifies the command option. Use the command that is appropriate for the server’s operating system.
Always add the ">commandname.log" switch to send the output of the lwpconfig scripts to a text file. The logs are useful for your own troubleshooting and when you need to request help from IBM Lotus Workplace Product Support.

AIX and Linux

`.LWPconfig.sh`

`.LWPdbconfig.sh`

For example:

`.LWPconfig.sh lwp-base-setup >lwpsetup.log`

Windows

LWPconfig

LWPdbconfig

For example:

`LWPconfig lwp-base-setup >lwpsetup.log`

5. Check the log file and correct any errors before proceeding to the next command.

Running configuration scripts on the Lotus Workplace server

For instructions on configuring the Lotus Workplace server, see Appendix D in this guide.
For additional troubleshooting information, see the topic “Troubleshooting configuration scripts.”

If you installed Collaborative Learning, finish the additional configuration needed for Collaborative Learning.

Troubleshooting configuration scripts

Be sure to log all output to a file (as shown in the procedures for each command). This log file, along with the configtrace.log file, gives you information about any problems that occur.

Correcting problems with lwp-base-setup

The lwp-base-setup command encompasses several scripts. Problems can occur in the execution of any of those scripts.

Take these steps to correct a failed lwp-base-setup command:

1. Review the log files to see what caused the problem.
2. Correct the problem.
3. From the log files, determine which scripts ran successfully.
4. Edit LwpWasConfig.xml, stored in the <lwp_root>\config directory to comment out scripts that have already run successfully. Then resave the file.
   To indicate which lines of code should be ignored, wrap a “<!—” (note the double dash) and “—>” (with a double dash) around the targets you want to comment out, as shown in the following example:
   
   <!--
   <antcall target="lwpT-wps-config"/>
   <antcall target="lwpT-wmm-setup"/>
   -->
   
5. Run the lwp-base-setup command again.

Rerunning lwpT-portal-setup against a Cloudscape database in AIX and Linux

When you install WebSphere Portal on the Lotus Workplace server, it uses Cloudscape as its backend DBMS by default. If you run the lwpT-portal-setup configuration script and it fails, you must complete the following procedure before rerunning this script.
This procedure removes any changes created by the failed script. As part of the procedure, you transfer a file to a Windows computer so you can edit it in CVIEW (as that product is not available in AIX and Linux), and then transfer the file back to your AIX or Linux server.

**Step 1. On the AIX or Linux server**
1. Stop the WebSphere Portal server.
2. Navigate to the following directory:
   ```
   workplaceserver\config\teamplaces\actions
   ```
   and open the file named `wps_cfg.xml` so you can make the following changes:
   a. Locate the statement:
      ```
      <copy
      file="${messaging.portal.access.dir}/RemoveWorkplacePortlets.xml" todir="${work.dir}" overwrite="true"/>
      ```
   b. Change it to:
      ```
      <copy
      file="${team.portal.access.dir}/RemoveWorkplacePortlets.xml" todir="${work.dir}" overwrite="true"/>
      ```
   3. If it exists, delete the following directory (delete the entire directory, not just the file):
      ```
      WebSphere\PortalServer\shared\app\config\CSEnvironment.bak
      ```
      **Note** If you backed up the original by renaming it, and then FTP’d the modified file over, it likely has very strict permissions that need to be opened up to allow the config tasks to read it. Ensure that you do not run into any permissions errors during the running of `lwpT-portal-remove`.
   4. Start the WebSphere Portal server.
   5. Navigate to the directory:
      ```
      WorkplaceServer\config
      ```
      and run the following script:
      ```
      lwpconfig lwpT-portal-remove > portalremove.log
      ```
   6. Stop the WebSphere Portal server.
   7. Back up your `wps50` database by copying it to `wps50BU`.
   8. Navigate to the directory:
      ```
      /usr/WebSphere/PortalServer/cloudscape
      ```
      and run the following command:
```
tar -cf PortalDB.tar wps50
```

This creates a tar file named PortalDB.tar with the contents of the wps50 directory.

9. Navigate to the directory:
   `/usr/WebSphere/PortalServer/cloudscape`

   and run the following command:
   ```
gzip PortalDB.tar
```

   This creates a gzip file named PortalDB.tar.gz.

10. FTP PortalDB.tar.gz to a Windows computer on which WebSphere Portal is installed, so you can use the CVIEW program.

**Step 2. On the Windows computer**

1. On the Windows computer, create a new directory and unzip PortalDB.tar.gz to that new directory.
   WinZip will prompt to decompress the file to a temporary location and open it from there; click Yes. You now have a subdirectory named wps50 in your newly created directory.

2. From a command prompt, issue the following command:
   ```\WebSphere\PortalServer\shared\app\cloudscape\bin\setCP.bat```

   This sets the classpath for CVIEW. If it displays a "'java' is not a recognizable program" error add:
   ```\WebSphere\AppServer\java\bin```

   to your path environment variable and rerun setCP.bat

3. From a command prompt, issue the following command to start CVIEW:
   ```\WebSphere\PortalServer\shared\app\cloudscape\bin\cview.bat```

4. Click File —> Open and browse to the wps50 subdirectory within the directory you created in step 1, and then click Open.

5. Expand TABLES.

6. Expand UNIQUE_NAME.

7. Click the DATA tab.

8. Find the values that match the following criteria:
   ```
   *lotus.workplace.hiddenpage*
   *wps.Workplace.Builder*
   *lotus.workplace.meeting*
   ```
9. Highlight each “found” row by clicking the row number, and then delete that row by clicking the minus (-) symbol (do not use the Delete button).

10. Click OK.

11. Click File —> Close, and then click File —> Exit.

12. Zip the newly modified wps50 directory.

13. Back up your wps50 directory on your AIX or Linux server.

14. FTP the newly zipped version of the wps50 directory to:
   
   /usr/WebSphere/PortalServer/cloudscape/ your UNIX system

Step 3. Back on the AIX or Linux server

1. Navigate to the directory:
   
   /usr/WebSphere/PortalServer/cloudscape/

   and run the following command:

   unzip <your zip file name, including extension>

   This unzips your newly created wps50 directory. Make sure you set the correct permissions on the directory.

2. Start the WebSphere Portal server.

3. Navigate to the directory:

   /usr/WebSphere/WorkplaceServer/config

   and rerun lwpT-portal-setup, piping it to a new log file, for example:

   /LWPconfig.sh lwpT-portal-setup > portalsetup2.log

   Make sure that you receive a “BUILD SUCCESSFUL” message.

Correcting out-of-memory errors in AIX

If you receive an “Out of memory” error while configuring Lotus Workplace in AIX with one of the provided configuration scripts, modify the script that you are attempting to run (such as LWPconfig.sh or LWPdbconfig,bat) and add the -Xmx512m option to any place in the line containing the script executable, to increase the JAVA memory heap size.

For example, in lwpConfig.sh, modify the last line and add this option as shown in bold below:

$WAS_HOME/bin/ws_ant -buildfile ./LwpWASconfig.xml
   -Dplatform.script.ext=sh -Xmx512m $* 2>&1 |
"$WAS_HOME/java/bin/java" -Xmx512m -cp lwpinstconfig.jar
   com.ibm.lwp.install.config.logging.Tee
   ../log/LWPConfigTrace.log

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Creating a Redirect on the HTTP Server

When installing Lotus Workplace over an existing installation of IBM WebSphere Portal, the existing root URL for WebSphere Portal is preserved, so users will log in at the "/wps/myportal" URL instead of the standard "/lwp/myworkplace" URL. IBM Lotus Workplace requires that the "/lwp/myworkplace" URL exist. Without it, Workplace templates will be unavailable.

To resolve this, use your HTTP Server's administration tools to create a Redirect from "/lwp/myworkplace" to "/wps/myportal" on the server. Users can still use "/wps/myportal" to log in via their browser.

The following steps describe how to create a redirect on the IBM HTTP Server. If you are using a different HTTP server, the procedure will be different. Consult the documentation for your server for instructions on creating a redirect.

To create a Redirect with IBM HTTP Server:

1. Log into the IBM HTTP Server administration console and click on Mappings on the left.
2. Click Redirects.
3. Click Add.
4. Make sure Directory or file name specified as is set to URL.
5. Type the URL "/lwp/myworkplace" in the box labeled Redirected directory or filename.
6. Choose (301) Moved permanently for the status.
7. In the field URL the user is redirected to, enter the full URL to the context root of your server. For example, http://servername/wps/myportal.
8. Click Apply.
9. Click Submit.
10. Stop and restart the IBM HTTP Server.
11. Verify that you can use a browser to navigate to http://yourhostname/lwp/myworkplace and that you are redirected to the regular /wps/myworkplace page.
12. Stop and restart WebSphere Portal.

The Workplace templates should now be available.
Setting up Collaborative Learning

To finish setting up Collaborative Learning, perform the following tasks:

- Add the Delivery Server’s information to the Learning Server.
- Grant Learning access to the WebSphere Portal administrator
- Connect Collaborative Learning portlets to a remote Learning Server.
- Set up access control for Collaborative Learning portlets.
- Install Xvfb on AIX and Linux servers to enable reporting.
- Configure help for the Collaborative Learning administrator interface.

For more information about managing Collaborative Learning, see the Collaborative Learning section of the Lotus Workplace Information Center at http://www.lotus.com/doc.

Adding the Delivery Server information to the Learning Server’s settings

A Learning Delivery Server is a Lotus Workplace Collaborative Learning server that launches course content, provides course navigation features, tracks student progress, and sends tracking information to the Learning Server. You can choose to have the Lotus Workplace installation program install a Learning Delivery Server. Depending on your environment, you can install a Learning Delivery Server on its own server or install it on a server with other features and products.

For the Learning Server to access the Learning Delivery Server, you must add specific Learning Delivery Server information to the Learning Server’s settings. To add a Delivery Server’s information to the Learning Server’s settings, perform the following steps:

1. Go to the Learning Server start page at:

   http://<learning_server_name>/<learning_server_context_root>

   For example:

   http://learning.acme.com/lms-lmm

2. Go to Settings —> Delivery Server and click Add.

3. Type a name, description, user name and password for the Learning Delivery Server. The Web address for the Delivery Server is:

   http://<delivery_server_name>/<delivery_server_context_root>

   For example:

   http://delivery.acme.com/lms-ds
4. Click Save.

Granting Learning access to the WebSphere Portal administrator

When you install Lotus Workplace with the Collaborative Learning component, the WebSphere Portal “wpsRunAsAdmin” administrator role is automatically set to the user name “wpsadmin.” As a result, if a course uses a Discussion database, only the course creator can enroll.

Correct this problem by completing the following steps to grant Learning access to any WebSphere Portal administrator:

1. Log in to the WAS Admin Console.
2. Click Applications—> Enterprise Applications—> IBM_Lotus_LMS_LMM.
3. Click Map RunAs roles to users.
4. Select the check box near wpsRunAsAdmin, and then click Remove to delete “wpsadmin” as the user value.
5. Click OK, then click Save, and then click Save again when you are prompted to confirm.
6. Click Applications—> Enterprise Applications—> IBM_Lotus_LMS_LMM.
7. Click Map security roles to users/groups.
8. Select the check box near wpsRunAsAdmin, and then click the Lookup users button.
9. Locate the WebSphere Portal administrator user name and add it to the wpsRunAsAdmin role.
10. Click OK, click OK again, click Save, and then click Save again when you are prompted to confirm.
11. Select Applications—> Enterprise Applications—> IBM_Lotus_LMS_LMM.
12. Click Map RunAs roles to users.
13. Select the check box near wpsRunAsAdmin, and then type the WebSphere Portal administrator’s user name and password in the appropriate fields.
14. Click Apply.
15. Click OK, then click Save, and then click Save again when you are prompted to confirm.
16. Restart the server.
Connecting Learning portlets to a remote Learning Server

If you installed Collaborative Learning on a different node from the Learning server or are using a remote HTTP server, add a Web address on the portlet server to allow the Learning portlets to communicate with the Learning Server through Web services.

1. On the server where the Collaborative Learning portlets are installed or on the remote HTTP server, open the WebSphere Application Server Administrative Console.

2. Open the URLs list (Resources —> URL Providers —> Switch to cell level -> Default URL Provider -> URLs).

3. Change the Specification value of LMS_URL to be one of the following:
   a. If you are using a remote HTTP server (as is recommended in a Network Deployment), change the URL to reflect the Web address of the remote HTTP server.

This Web address is not needed on servers that run only the Learning Server or Learning Delivery Server.

Setting up access control for Collaborative Learning portlets

To provide users selective access to Lotus Workplace Collaborative Learning portlets, you must set up access control through WebSphere Portal. Give access to the Configure Mode of Learning portlets to administrators only.

Use the following procedure to set up access to the Learning portlets:

1. In the WebSphere Portal Administration area, go to the User and Group Permissions selection.

2. Select Users to set access control for an individual user or select User Groups to set access control for entire groups.

3. Find the users or groups whose access you want to modify and click Select Resource Type to display a list of resources. You must modify the Pages and Portlet Applications entries.

4. Select Pages and browse the page hierarchy until you see the Learning page.

5. At the Learning page entry, click Assign Access.

For students, select Privileged User access. Anything above Privileged User in the list corresponds to higher access. Make sure that no higher level access is granted to student. The value set here can be inherited from pages up higher in the hierarchy, meaning that you can set Student
access at the My Portal level and have it filter down. Make sure that no higher level access is granted, either explicitly or as inherited.
For administrators, choose Administrator.

6. Click OK, and then click Done to return to the list of resources.

7. Select Portlet Applications and search for “Learning” to include the Learning application in your results.

8. At the Learning application page entry, click Assign Access and give the same access rights as you just did for students and administrators in Step 5. Make sure that no higher level access is granted to students than Privileged User, either explicitly or as inherited. For administrators, choose Administrator.

9. Click OK, and then click Done to return to the list of resources.

When you finish, users logged in as Students should see the following options in their portlet title bars:

- My Learning - Help Mode, Minimize, Maximize
- Announcements - Minimize, Maximize
- My Competencies - Help mode, Minimize, Maximize

Administrators should have an additional Configure mode option for the My Learning portlet.

Installing Xvfb on AIX and Linux platforms to enable reporting

If you are running Lotus Workplace Collaborative Learning on AIX or Linux, you must install Xvfb (Xserver virtual frame buffer) on the product server to enable the reporting feature. Xvfb provides a virtual Xserver that runs without a head or graphics card, so that you do not have to run a real Xserver.

Xvfb installation and configuration differs for AIX and Linux.

Installing Xvfb on AIX


1. Log in to the server as a user with administrative privileges.
2. Add the following line to /etc/inittab:
   ```
   xvfb:2:respawn:/usr/bin/X11/X -force -vfb -x abx -x dbe -x GLX :1 > /dev/null
   ```
3. Set DISPLAY by adding the following line to .profile:

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DISPLAY='hostname':1.0
export DISPLAY

4. Restart the server.
5. Disable JIT on application servers.

**Installing Xvfb on Linux**

Xvfb for Linux is a free-ware product and can be obtained from x.org’s X11R6 distribution. Use the following procedure to install Xvfb on Linux:

1. Log in to the server as a user with administrative privileges.
2. Check the directory /usr/X11R6/bin for a file named Xvfb.
   - If you have this file, skip to Step 4.
   - If you do not have this file, proceed with Step 3.
3. Download the Xvfb file from the following link to a directory on the Linux server:
   ```
   ftp://ftp.xfree86.org/pub/XFree86/4.2.0/binaries/Linux-ix86-glibc22/
   ```
4. Extract the file with the following scripts:
   ```
   chmod +x extract
   mkdir /etc/X11
   ./extract -C /usr/X11R6 Xvfb
   ```
5. Generate a script file named /etc/init.d/xvfb containing the following, and make it executable:
   ```
   #!/bin/sh
   mode=$1
   case "$mode" in
   start)
      # start the X Virtual Framebuffer (Xvfb)
      if [ -f /usr/X11R6/bin/Xvfb ]; then
         echo "****Starting up the Virtual Frame Buffer on Screen 1****"
         /usr/X11R6/bin/Xvfb :1 -screen 0 1152x900x8 &
      fi
   ;;
   *)
   ```

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echo " Usage: ">
echo "$0 start (start XVFB)"
echo "$0 stop (stop XVFB - not supported)"
exit 1

6. Change the run-level to 3 by doing the following tasks:
   Edit etc/inittab
   # Default run-level. The run-levels used by RHS are:
   # 0 - halt (Do NOT set initdefault to this)
   # 1 - Single user mode
   # 2 - Multiuser, without NFS (The same as 3, if you do not have networking)
   # 3 - Full multiuser mode
   # 4 - unused
   # 5 - X11
   # 6 - reboot (Do NOT set initdefault to this)
   #
   id:5:initdefault:
   Change id:5:initdefault: to id:3:initdefault:

   Note If you use a different run-level, be sure to match it when you set up the soft link in the next step.

7. Create a soft link:
   ln -s /etc/init.d/xvfb /etc/rc3.d/S75xvfb

   This example uses run-level 3. If you intend to use Xvfb in a different run-level, set up the soft link to the appropriate /etc/rcx.d directory. (The run-level of your Linux system is specified in your /etc/inittab file.)

   Note Always verify the setting and exporting of the DISPLAY variable, and start Xvfb from the soft link to help with consistent reporting performance.

8. Restart the server.
9. Verify that Xvfb is running with the following command:
   ```
   ps -ef | grep Xvfb
   ```

10. Set DISPLAY from the command line using:
    ```
    DISPLAY=hostname:1.0
    export DISPLAY
    ```
    Previous lines can be added to .bash_profile or whatever profile you’re using.


**Configuring help for the Collaborative Learning administrator interface**

Most Collaborative Learning administration is performed through the separate Lotus Workplace Collaborative Learning administrator interface. You access the interface with a Web address such as http://www.servername.com/lms-lmm. To access help and online documentation while you are using the administrator interface, configure the help system by following these steps.

1. Log in to the server as a user with administrative privileges.

2. Create a directory in the HTTP Server document root to store the help files.
   
   AIX and Linux users creating directories must have root privileges. Do not use spaces when creating directory names.
   
   **AIX**
   ```
   /usr/IBMHttpServer/htdocs/en_US
   ```
   
   **Linux**
   ```
   /opt/IBMHttpServer/htdocs/en_US
   ```
   
   **Windows**
   ```
   c:\IBMHttpServer\htdocs\en_US
   ```

3. Copy the lms-help.zip file from the `<lwp_root>\misc\learning` directory to the new local directory.

4. With a browser, access the Learning Server start page as an Administrator and navigate to **Settings —> LMM General Settings —> General** tab.

5. In the “URL” field for the Help System on the General settings page, type:
   ```
   http://$LMM_HOSTNAME /$HELP_DIR/
   ```
   where $HELP_DIR is the help directory created previously within the HTTP server’s document root.
Starting Lotus Workplace

After you have installed Lotus Workplace, start Lotus Workplace on every server in your deployment, except on a separate database server or on a separate LDAP server.

Starting Lotus Workplace in AIX and Linux

1. Log in to the server as a user with administrative privileges.
2. If you are running with Cloudscape as the DBMS server, start the Cloudscape Network Server by running the following commands:
   - `$WAS_HOME/bin/setupCmdLine.ksh`
   - `$WPS_HOME/shared/app/cloudscape/NetworkServer/setNetworkServerCP.ksh`
   - `$WPS_HOME/shared/app/cloudscape/NetworkServer/startNetworkServer.ksh`
   **Caution** You must always start the Cloudscape server before starting Lotus Workplace; always leave the resulting window open (closing the window improperly stops the Cloudscape server).
3. Open a command shell.
4. Navigate to the `<was_root>/bin` directory.
5. Start the WebSphere Application Server with this command:
   - `./startServer.sh server1`
6. Start WebSphere Portal with this command.
   - `./startServer.sh WebSphere_Portal`
7. Start Lotus Workplace with this command.
   - `./startServer.sh LotusWorkplace_Server`
8. Start the HTTP Server by typing the appropriate command:
   - AIX
     - `./usr/IBMHttpServer/bin/apachectl start`
   - Linux
     - `./opt/IBMHttpServer/bin/apachectl start`
9. Open the WebSphere Administrative Console from a browser window by typing:
http://servername.yourcompany.com:9091/admin

For information on configuring Lotus Workplace using the WebSphere Administrative Console, see the IBM Lotus Workplace Information Center on the Web at http://www.lotus.com/doc.

**Stopping the Cloudscape server**
If you are using Cloudscape as your DBMS server, you should always stop the Cloudscape server before stopping Lotus Workplace. To stop the Cloudscape server, run the following commands:

```
$WAS_HOME/bin/setupCmdLine.ksh
$WPS_HOME/shared/app/cloudscape/NetworkServer/setNetworkServerCP.ksh
$WPS_HOME/shared/app/cloudscape/NetworkServer/stopNetworkServer.ksh
```

**Starting Lotus Workplace in Windows**

1. Log in to the server as a user with administrative privileges.
2. If you are running with Cloudscape as the DBMS server, start the Cloudscape Network Server by running the following commands:
   
   `%WAS_HOME%/bin/setupCmdLine`

   `%WPS_HOME%/shared/app/cloudscape/NetworkServer/setNetworkServerCP`

   `%WPS_HOME%/shared/app/cloudscape/NetworkServer/startNetworkServer`

   **Caution** You must always start the Cloudscape server before starting Lotus Workplace; always leave the resulting window open (closing the window improperly stops the Cloudscape server).

3. Open a command prompt.
4. Navigate to the `<was_root>/bin` directory.
5. Start the WebSphere Application Server with this command. (Server names are case-sensitive.)
   ```
   startServer server1
   ```

6. Start the WebSphere Portal with the following command (server names are case-sensitive):
   ```
   startServer WebSphere_Portal
   ```

7. Start Lotus Workplace with the following command. (server names are case-sensitive):
   ```
   startServer LotusWorkplace_Server
   ```

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8. Open Start —> Programs —> Administrative Tools —> Services and start the IBM HTTP Server.

9. Open a browser and type
   http://servername.yourcompany.com:9091/admin to open the WebSphere Administrative Console.

   For information on configuring Lotus Workplace using the WebSphere Administrative Console, see the IBM Lotus Workplace Information Center on the Web at http://www.lotus.com/doc.

**Stopping the Cloudscape server**

If you are using Cloudscape as your DBMS server, you should always stop the Cloudscape server before stopping Lotus Workplace. To stop the Cloudscape server, run the following commands:

```
%WAS_HOME%/bin/setupCmdLine
%WPS_HOME%/shared/app/cloudscape/NetworkServer/setNetworkServer CP
%WPS_HOME%/shared/app/cloudscape/NetworkServer/stopNetworkServer
```

**Running the Lotus Workplace installation program again**

If you need to change configuration settings for an existing Lotus Workplace installation, you can run the installation program a second time with the “Configure only” option. Reinstalling a full version of Lotus Workplace onto an existing installation is not supported.

Use this option to specify configuration settings, or to add Lotus Workplace Components to an existing installation.

**Note** If you are installing an additional component, you will need to create a database for it. For more information, see “Creating the Lotus Workplace databases.” Pay particular attention to the section on “Creating databases for add-on components” under “Factors affecting database creation.”

1. Open a command prompt and follow the instructions for the server’s operating system.
   
   **AIX**
   
   Enter the command to start the installation program:
   
   ```
   ./usr/lwp201code/CDWorkplace/aixlwpSuite
   ```
   
   **Linux**
   
   Enter the command to start the installation program:
Windows
From the CD or folder called CDWorkplace, run:
winlwpSuite.exe

2. At the “Select a language to be used” panel, select the language to be used, and then click Next.

3. At the “The installer will install IBM Lotus Workplace on your computer” panel, and click Next.

4. Because you have already installed Lotus Workplace on this server, the “The installation program has detected Lotus Workplace on this computer” panel displays. Select Update the configuration.

5. Proceed through the installation and adjust the selections as needed.
   For a review of the installation screens, see the instructions for Installing Lotus Workplace.

6. Click Finish to complete the installation.

Setting up Lotus Workplace
After you have installed the Lotus Workplace software, see Setting Up Lotus Workplace for instructions on completing system setup and configuration.

Uninstalling Lotus Workplace
When you uninstall Lotus Workplace, all the changes made on the server by the Lotus Workplace installation program are reversed. After you uninstall Lotus Workplace, you must separately uninstall WebSphere Portal and WebSphere Application Server.

To uninstall Lotus Workplace, complete the following steps:

1. (Windows), click Start —> Settings —> Control Panel —> Add/Remove programs.

2. Click Lotus Workplace in the list of software programs, and then click Remove.

Before reinstalling Lotus Workplace, you must uninstall the existing instance and delete all directory contents to avoid invalid XML configurations. You must also remove or edit the vpd.properties file.

Editing the vpd.properties file
When WebSphere Portal or WebSphere Application Server is installed on a server, the installation program creates entries in the vpd.properties file. If you later uninstall one or both of these products, the entries created during
installation are not removed from the file. Because the Lotus Workplace installation program checks the vpd.properties file to determine which WebSphere products are installed, you must remove the vpd.properties file or edit the file to remove all lines containing “WSB,” “WSM,” “WSN,” or “WSE.”

The vpd.properties file is found in the following locations:

**AIX**
/usr/lib/objrepos

**Linux**
The home directory of the root user:
/root

**Windows**
c:\winnt
Phase 6
Completing the Network Deployment
Chapter 9
Completing the Network Deployment

This chapter provides information about post-installation steps needed if you installed Lotus Workplace in a Network Deployment environment.

Phase 6: Completing Network Deployment setup
To complete the Lotus Workplace setup in a Network Deployment environment, a few additional steps are necessary.

- Enable dynamic caching.
- Enable Search in the cluster.
- Distribute embedded messaging files.
- Update and distribute the plugin-cfg.xml file.
- Update Workplace properties files.

When setup is complete, you can start Lotus Workplace.

Enabling dynamic caching
You must enable dynamic caching in your WebSphere Portal cluster environment to synchronize the cached views and access rights for all nodes. Otherwise, users might have different views or different access rights, depending on which node handles the user’s request. The steps are different for the first node in the cluster.

Enabling dynamic caching on Node 1

2. Select Enable service at server startup and Enable cache replication.
3. Click the Enable cache replication link to go to the Internal Messaging view.
4. Select the WebSphere Portal cluster as the domain for the replicator and one of the server members as the replicator.
**Note** All cluster members must use these same replication settings:
- Select Runtime mode = Push only.
- Set the Push frequency to 1 second.

5. Apply the changes and click **OK**.
6. Repeat the preceding steps for all nodes in the cluster.
7. Save the changes to the Deployment Manager’s master configuration by clicking the **Save** link after the last modification.

**Enabling dynamic caching on Node 2 and subsequent nodes**

Perform these steps for Node 2 and every subsequent node you add to the cluster.

1. On the Deployment Manager, click **Environment —> Internal Replication Domains**.
2. Click **PortalCluster**.
3. Click **Replicator Entries**.
4. Click **New**.
5. Give this new replicator a name; for example, LWPPortalServer02.
6. Select the node you want to configure and enter the host name for this server. You can only create one replicator on a server, so the list shows only those servers that do not have a replicator.
7. Select unique ports on this node for the replicator and client port such that there are no port conflicts with other services on this node; for example, 7980 and 7981. Avoid port numbers from 7973 and up, as Replication will generally pick those numbers.
8. Click **OK**, then click **OK** again, and save your settings.
9. Click **Servers —> Application Servers —> Name of Portal server node —> Dynamic Cache Service —> Enable Cache Replication**.
10. Keep the replication domain as PortalCluster and select the new replicator (for example, LWPPortalServer02) from the list of replicators.
11. Click **OK**, then click **OK** again, and save your settings.

**Enabling Search in the cluster**

When using Portal Document Manager in a clustered environment, the search does not work because the search index location is not available to all
the machines in the cluster. To enable Search for a clustered environment, edit the WCM.properties file on each machine in the cluster to reference the shared WPCPIndex directory that you created when you set up the Network Deployment environment.

**Modify the WCM.properties file**

Do this on every server in the cluster:

1. Navigate to the `<was_root>\wpcp\config\WebSphere_Portal/author` directory.
2. Open the WCM.properties file with a text editor.
3. Locate the following statement:
   
   #wcm.indexedsearch.path=/

4. Remove the # comment marker:
   
   wcm.indexedsearch.path=/

5. Add the path to the shared directory at the end of the statement; for example:
   
   wcm.indexedsearch.path=Q:/WPCPIndex

   **Note** Always use a forward slash in this path, regardless of the operating system.

6. Save your changes.

**Update the search index**

1. Navigate to the shared directory you specified in the `wcm.indexedsearch.path` property, and if a search index file exists, delete it.

2. Update the search index.
   
   You can either wait until the next scheduled update occurs, or you can change the interval to the shortest possible time to force the update to occur sooner. Refer to the “Managing documents > Document Manager > Search” topic in the WebSphere Portal Information Center for details on setting the update interval.

3. Verify that the update process is complete by going to the directory where the search index file is located and monitoring the disk space used by the file. When the size of the file stabilizes, the update is complete.
Distributing embedded messaging files

Files related to the Embedded Messaging feature might exist on the Deployment Manager server even though you did not select this feature when you installed the Deployment Manager. For example, these files might have been installed when you installed WebSphere Application Server Enterprise or fix packs.

If the files exist on the Deployment Manager, you must also copy them to each node in the environment:

1. Search for the cmm.jar and cmmlmpl.jar files. By default, these files appear in the `<was_root>`\lib directory.
2. If the files are not present on the Deployment Manager machine, no further action is needed.
   If the files are present, copy them to the `<was_root>`\lib directory on each node.

Updating and distributing the plugin-cfg.xml file

An updated version of the Deployment Manager plugin-cfg.xml file needs to be placed on the remote HTTP server and on all nodes in the Network Deployment. Follow these steps to generate the plugin-cfg.xml file and then distribute it.

1. On the Deployment Manager, open a command prompt window and navigate to the `<lwp_root>`\bin directory.
2. Type the following command to generate the plugin-cfg.xml file.
   AIX and Linux
   
   ```
   ./lwpGenPluginCfg.sh >lwpgenplugin.log
   ```
   Windows
   
   ```
   lwpGenPluginCfg.bat >lwpgenplugin.log
   ```
3. Find the plugin-cfg.xml file on the Deployment Manager in one of the following locations:
   AIX
   
   ```
   /usr/WebSphere/DeploymentManager/config/cells/plugin-cfg.xml
   ```
   Linux
   
   ```
   /opt/WebSphere/DeploymentManager/config/cells/plugin-cfg.xml
   ```
Windows

\texttt{c:}\textbackslash WebSphere\textbackslash DeploymentManager\textbackslash config\textbackslash cells\textbackslash plugin-cfg.xml

4. Copy the Deployment Manager’s plugin-cfg.xml to the remote HTTP server’s \texttt{<was\_root>\config\cells} directory.

5. Open the plugin-cfg.xml file with a text editor.

6. Replace all instances of “DeploymentManager” with “AppServer.”

7. Save the file.

8. Copy the updated plugin-cfg.xml file from the remote HTTP server to Node 1.

9. Repeat the previous step for all other nodes in the environment.

10. Stop and restart the HTTP server.
    
    For example, if you are using IBM HTTP Server, use one of the following commands:
    
    AIX and Linux
    
    \texttt{/<ihs\_root>/bin/apachectl start}
    
    Windows
    
    \texttt{c:\<ihs\_root>\apache -k start}

11. From the Deployment Manager Administrative Console, click Servers \textrightarrow Clusters \textrightarrow Server Cluster and start the cluster you defined for Lotus Workplace.

**Updating Lotus Workplace properties files**

To allow nodes to connect to the remote HTTP server, follow these steps to update the properties files on Node 1 and all subsequent nodes.

1. Open the following files in a text editor:
   
   \texttt{<was\_root>\properties\lwpagenda.properties}
   
   \texttt{<was\_root>\properties\lwpchatroom.properties}
   
   \texttt{<was\_root>\properties\lwpdiscussion.properties}
   
   \texttt{<was\_root>\properties\lwpdmadapter.properties}
   
   \texttt{<was\_root>\properties\lwpsadapter.properties}
   
   \texttt{<was\_root>\properties\lwptaistorage.properties}
   
   \texttt{<was\_root>\properties\lwpteamtasklist.properties}

2. Edit the value for \texttt{wpcp\_serverUrl} to use the remote HTTP server Web address; for example:
wpcp.serverURL.serverUrl=http://remotehttp.lotus.com/<contextroot>/wcp

where <contextroot> is the value specified in the wcm.webappRootPath of the
<was_root>\wpcp\config\WebSphere_Portal\author\WCM.properties file.
Then save the files.

3. Open the following file in a text editor:
   <was_root>\properties\lwpworkplaceurl.properties

4. Edit the value for workplaceurl.serverUrl to use the remote HTTP server Web address; for example:
   workplaceurl.serverUrl=http://remotehttp.lotus.com/<contextroot>/wcp

Then save the file.
Phase 7
Installing the Lotus Workplace Rich Client
Chapter 10
Installing the Lotus Workplace Rich Client

This chapter provides information about installing the Lotus Workplace rich client onto user workstations.

Phase 7: Rich client installation and configuration

The Lotus Workplace rich client is a desktop environment that lets users work with Lotus Workplace Messaging and Lotus Workplace Documents. Installing the rich client comprises two procedures: the administrator creates a provisioning server by installing provisioning components on the Lotus Workplace Server, and users install the rich client on their desktops from the provisioning server.

The rich client user environment is controlled by user policy (set by the administrator) and user preferences (set by the user). The user starts desktop installation using the Rich Client tab, which is available if the user policy setting Allowed clients is set to Rich client.

If you are interested in licensing the IBM Workplace client technology, contact your IBM representative.

Rich client installation

Before users can install the Lotus Workplace rich client on their desktops, you must install and configure the IBM Lotus Workplace server and complete the following tasks:

1. Install and configure the rich client provisioning components.
2. Specify the provisioning server Web address as a resource in the WebSphere Administrative Console and provide this Web address to users. This is used at the start of rich client desktop installation.
3. Ensure that each user has a Lotus Workplace account.
4. Set user policy for rich client users to include Rich client as an Allowed client.
The Rich Client tab, with which the user starts the installation process, is available only if his or her user policy setting Allowed client is set to Rich client.

5. (Optional) Enable SSL provisioning of the rich client.

6. Provide each user with a user ID, password, and the Lotus Workplace server name and port (or instruct the user to accept the default Lotus Workplace server name and port). The installation program will prompt for this information.

7. Configure personal credential store settings.

In order to install the Workplace client platform, the user must have write access privilege to the parent directory into which it is being installed. By default, the installation directory is as follows:

C:\Program Files\IBM\Lotus Workplace Client\ (on Windows)

/opt/IBM/Lotus Workplace Client/ (on Linux)

**Note** The installation program creates the IBM\Lotus Workplace Client directories, if they do not already exist. A different installation directory can be specified by changing the value in the edit field during rich client installation.

Once the Workplace client platform is installed in the above directory, the user no longer needs to have write access to that directory. If there are multiple users of the installation, it is recommended that only the administrator have write access to that directory.

In order to first run the client and subsequently update or otherwise provision applications onto the base configuration, the user must have write access to his or her workspace. The default workspace location is shown below:

C:\Documents and Settings\<username>\IBM\RCP\<install id>\<username> (on Windows)

/home/<username>/IBM/RCP/<install id>/<username> (on Linux)

This directory is changeable by using the -data switch at startup.

---

**Installing and configuring the provisioning server**

Before users can install the rich client, you must install and configure the Lotus Workplace rich client provisioning components on the same machine as the Lotus Workplace server.
The provisioning server provides rich client applications to the user desktops during desktop installation. Every time a user logs in to the rich client, the system checks the provisioning server to determine if there are updates available. If there are, the user is prompted to update the rich client workplace.

To install the provisioning server, complete the following steps:

1. On the Lotus Workplace server machine, start the IBM Lotus Workplace rich client provisioning setup program.
   - Remember, to license the IBM Workplace client technology, contact your IBM representative.

2. When prompted, specify the language in which to display the screen text and then click OK to continue.

3. Follow the directions on the screens.

4. (Optional) Specify a trusted root certificate to install to the rich client desktop.
   - Specifying a trusted root certificate instructs the rich client to trust the provisioning server. If you do not specify a trusted root certificate to install to the rich client workstation, the user will be prompted to trust the provisioning server after each update. Click Next to continue.

5. Specify the following information and then click Next to continue.
   - WebSphere Application Server server name
   - WebSphere Application Server bin directory using full path format
   - WebSphere Application Server installation apps directory using full path format
   - HTTP servers static content root
   - Note When installing the rich client provisioning server, you are prompted to enter the Websphere Application Server bin directory and Websphere Application Server apps directory. The default Websphere Application Server bin and Websphere Application Server apps directories and the actual deployment directories may differ. The default locations for Lotus Workplace servers are C:\WebSphere\AppServer\bin and C:\WebSphere\AppServer\InstallableApps, respectively. Unless otherwise configured, specify these directories.

6. Follow any additional directions on the screens.

7. After the summary screen appears, click Finish.
Specifying the provisioning server Web address

During Lotus Workplace installation, the system creates a default “Lotus Workplace Provisioning Server” URL resource. The administrator sets the Web address of the provisioning server as a Resource in the WebSphere Application Server Administrative Console as follows:

1. Click Resources —> URL Provider —> Default URL Provider —> URLs.
2. On the URLs page, open “Lotus Workplace Provisioning Server.”
3. Enter the Web address of the provisioning server.

Configuring the provisioning server for secure installation and update with SSL

You can configure the rich client provisioning server for Secure Sockets Layer (SSL) if the WebSphere Application Server and the HTTP server are already configured to use SSL.

For information on configuring the WebSphere Application Server and the HTTP server to use SSL, see the topic “Securing the network for Lotus Workplace” in the Lotus Workplace information center.

If you want users to download the IBM Lotus Workplace rich client technology from the provisioning server over https, specify the URL Provider settings for SSL provisioning using the following procedure:

1. Log in to the WebSphere Application Server Administrative Console.
2. Click Resources —> URL Providers.
3. Make sure that the scope is set to cell.
4. If there is a node name filled in, remove it and click Apply.
5. Click Default URL Provider —> URLs —> Lotus Workplace Provisioning Server.
6. Change the Specification to link to https://yourserver. Do not change the jndi name or any other fields.

Uninstalling the provisioning server

Use the following steps to uninstall the provisioning server from the Lotus Workplace Server system. You must uninstall the provisioning server before reinstalling.

Uninstalling on Windows workstations
Uninstall the provisioning server from a Windows workstation using the following procedure:
1. Click **Add/Remove Programs** from the Control Panel.
2. Locate **Lotus Workplace rich client provisioning components** in the application list.
3. When prompted, specify the language in which to display the screen text and then click **OK** to continue.
4. Follow the directions on the screens.
5. Select the rich client features to uninstall and then click **Next** to continue.
   **Note** You must uninstall all listed features.
6. Read the summary of what will be uninstalled and then click **Next** to continue.
7. Click **Finish** to exit.

**Uninstalling on Linux workstations**
Uninstall the provisioning server from a Linux workstation using the following procedure:

1. Open a command prompt window.
2. Navigate to the root install location the administrator specified during install (by default /opt/IBM/IBM Lotus Workplace Client Provisioning).
3. Navigate to the _uninst directory.
4. Run the uninstaller.bin program.
5. Uninstall all features.
6. Exit the program.

---

**Installing rich client software on the desktop**

After you install the Lotus Workplace provisioning server and specify its Web address as a resource, users can install the rich client software on their desktops. You must provide users with their Lotus Workplace user ID, password, and Lotus Workplace server name and port to use during rich client installation.

The rich client installation screens display content in the language specified in the desktop operating system’s locale setting.

To install rich client Lotus Workplace core on the desktop, users should perform the following steps:

1. Start Lotus Workplace.
2. Click the **My Workplace** tab.
3. Click the Rich Client tab.

4. Click the Download Lotus Workplace rich client software link to start the installation program.
   Note If Java is not enabled for the user’s Web browser, clicking the link lets users open the installation program directly or specify a location on their hard drive in which to save it. Linux users will not be able to run the installation program, saved as the setup_wct_platform.bin file on their desktop, because they do not have execution rights to the BIN file. To reset the execution rights for the installer, Linux users should run the following command after saving the installation executable to disk.
   chmod 755 setup_wct_platform.bin

5. Follow the directions on the screens that appear.

6. Linux users should be prompted to download the Mozilla 1.4 Web browser or specify its directory if the installation program cannot find it. Download the browser or specify its location and then click Next to continue.
   Note Linux users that do not see the Mozilla installation screen, or that receive a Mozilla error message, should see the Release Notes for current information regarding Mozilla-related installation and support.

7. When the installation summary screen appears, click Next to restart the rich client and complete installation and setup.

Upon restart, users will be prompted to log in. Rich client products will be downloaded from the provisioning server.

To install Lotus Workplace rich client applications on the desktop, users should perform the following steps:

8. When prompted to log in, type the following information and then click Next to continue.
   • Workplace user name
   • Workplace password
   • Workplace server name
   • Workplace server port

   The system initializes the credential store, checks user policy to configure the workspace, and retrieves the rich client components that the user has been authorized to use.

9. When workspace configuration is complete, click Next to restart the rich client.

10. After the server starts, log in. Click Next to continue.
11. If user policy assigns access to IBM Lotus Workplace Messaging, the Messaging configuration screen appears. When Messaging configuring is complete, click **Next** to continue.

12. If user policy assigns access to IBM Lotus Workplace Documents, the Documents configuration screen appears. When Documents configuring is complete, click **Next** to continue.

13. If user policy assigns access to Instant Messaging, the user is prompted to enter server, port, and status information. Specify the following information and then click **Next** to continue.
   - Instant messaging server name
   - Instant messaging server port
   - A **Startup status** of *I am available*, *I am away*, *Do not disturb*, or 
     **Edit the current status** message to type new status text. This allows a user to always log in with the same Instant Messaging message.

14. Click **Finish** to exit the installation program.

15. If one or more of the certificates was not installed or setup correctly, the Trust Certificate Prompt screen will appear. Click **Yes** if you want to trust this server.

   **Note** Every time a user logs in to the rich client, the system checks the provisioning components to determine if there are updates available. If there are, the user is prompted to update the rich client workplace.

**Changing the rich client search bar appearance**

You can add a graphic image, such as your logo, to the search bar in the rich client user interface. The Lotus Workplace graphic will still be visible. You can also change the background color of the search bar.

**Adding a search bar graphic**

To add your graphic to the search bar, replace the supplied brand.gif file with your graphic. You must use the brand.gif file name and it must reside in the following path:

```
rcp/rcp/eclipse/plugins/com.ibm.rcp.platform/brand.gif
```

**Changing the search bar color**

To replace the supplied color of the search bar with another color, change the color values in the following file:

```
rcp/rcp/eclipse/plugins/com.ibm.rcp.platform/plugin.xml
```

**Note** The color values appear italicized in the following file excerpt.

```
<extension
   point="org.eclipse.ui.themes">
```
Uninstalling the rich client

Use the following steps to uninstall the rich client core from a user desktop.
You must uninstall the rich client before reinstalling the same version or installing a more recent version.

Note  The uninstall program does not remove the application files for Lotus Workplace Messaging and Lotus Workplace Documents.

Windows
Uninstall the rich client from a Windows workstation using the following procedure:

1. Click Add/Remove Programs from the Control Panel.
2. Locate IBM Lotus Workplace products rich client in the application list.
3. Click Remove.
4. Respond to the prompts that appear.
5. Click Finish to exit.
6. Delete the following directory:
Linux
Uninstall the rich client from a Linux workstation using the following procedure:

1. Navigate to the root installation directory chosen during rich client desktop installation.
2. Navigate to the _uninst subdirectory.
3. Run the ./uninstall.bin program.
4. Delete the following file:
   
   **Setup_wct_platform.bin**
Appendixes
Appendix A
Alternative Installation Methods

This appendix contains information about other types of installations that are not covered in the earlier parts of the guide.

Other ways to install Lotus Workplace

In addition to running the Lotus Workplace installation program from the graphical interface, you can install Lotus Workplace in these other ways:

- Installing from the console
  This method allows you to run the pre-installer and the Lotus Workplace installation to install WebSphere Portal and Lotus Workplace interactively from a command prompt.

- Installing silently
  This method allows you to run an unattended installation of the Lotus Workplace software. You must first prepare the WebSphere Portal for this type of installation.

You also have the option of using the graphical interface to complete these other types of installations:

- Installing Lotus Workplace on a single server
  This method allows you to install a full version of Lotus Workplace on one server for demonstration purposes.

- Installing with the configure-only option.
  This method allows you to change configuration settings that you set during the initial Lotus Workplace installation.

Installing WebSphere Portal and Lotus Workplace using the console interface

The Lotus Workplace pre-installer and installation program provide a console interface, which enables you to perform an interactive installation from a command prompt. The console interface presents the same content as the graphical interface, but in a textual form, and it bypasses the initial
launch pad screen, which is not available in the console interface. Prompts at the bottom of each screen tell you how to enter numbers to make your selections and proceed to the next screen.

As with the graphical interface, you first run the pre-installer to lay down the base WebSphere Portal Server and WebSphere Application Server software. After you finish configuring WebSphere Portal and installing upgrades and fix packs, you then run the Lotus Workplace installation.

**Before you begin**

1. Complete the steps in the pre-installation checklist.
2. Install your DBMS server product and create the Lotus Workplace Databases.
3. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.
4. Copy the contents of the installation CD to a location on your hard drive to a directory named installProgram. Then include that path name when you run the installation program.

   Do not install directly from the CD, because the CD drive might become unmountable.

**Running the pre-installer**

To install WebSphere Application Server and WebSphere Portal, enter the following command at the console. These examples assume you have created a directory named “installProgram.”

**AIX and Linux**

```
./installProgram/install.sh -console
./install.sh -console
```

**Windows**

```
c:\\installProgram\install.bat -console
```

After completing this step, finish preparing the server for the Lotus Workplace software before installing Lotus Workplace. For more information, see “Preparing, installing, and configuring the Lotus Workplace server.”

**Installing Lotus Workplace**

To install the Lotus Workplace program, open a command prompt and enter the following command at the console. These examples assume you have created a directory named “installProgram.”
AIX
./installProgram/aixlwpSuite.exe -console

Linux
./installProgram/linlwpSuite.exe -console

Windows
c:\installProgram\winlwpSuite.exe -console

**Setting up Lotus Workplace**

After you have installed the Lotus Workplace software, see Setting Up Lotus Workplace for instructions on completing system setup and configuration.

---

**Installing Lotus Workplace silently**

Lotus Workplace can be installed from a command prompt through the use of a response file, thus removing the need to display the graphical interface and wait for user input. This is known as a silent installation. A silent installation is useful when you want to install Lotus Workplace on multiple servers using a similar configuration, or when it is impractical to manually enter responses during installation.

This form of the installation program installs only the Lotus Workplace program. It assumes that the required versions of WebSphere Application Server and WebSphere Portal have already been installed and updated to meet Lotus Workplace requirements.

**Caution** Although WebSphere Portal Server also provides a silent install, it is not compatible with Lotus Workplace. Always use the Lotus Workplace pre-installer to install WebSphere Application Server and WebSphere Portal Server for Lotus Workplace, as the pre-installer includes additional files required by Lotus Workplace.

The Lotus Workplace silent install also assumes that you have entered the necessary configuration settings into the lwpprops.properties file. To ensure that the file is correctly filled out, run your initial Lotus Workplace installation using the graphical installation program, because the information you enter at that time is stored in the lwpprops.properties file for use with subsequent installations.

**Before you begin**

1. Complete the steps in the pre-installation checklist.
2. Install your DBMS server product and create the Lotus Workplace Databases.

---

Appendix A: Alternative Installation Methods 171
3. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.

4. Create a response file and enter the parameters describing the installation you want to create.

**Running the installation program**

1. Verify that WebSphere Application Server and WebSphere Portal have been installed with the necessary fix packs and configured.

2. Verify that WebSphere Portal is operational on the node by logging in from a browser using the administrator user name and password.

3. Stop the WebSphere Portal and WebSphere Application Servers.

4. Create a local directory for the installation files.
   - This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.
   - **AIX**
     
     /usr/lwp201code/
   
     **Linux**
     
     /opt/lwp201code/
   
     **Windows**
     
     c:\lwp201code

5. Copy the CDWorkplace directory and its files from the CD to the new directory.

6. If you are not running from a CD, open a command prompt, navigate to the CD or folder called CDWorkplace, and enter the appropriate command to start installation.
   - **AIX**
     
     ./usr/lwp201code/CDWorkplace/aixlwpSuite -options
     /path/response_file -silent
   
     **Linux**
     
     /opt/lwp201code/CDWorkplace/linlwpSuite -options
     /path/response_file -silent
   
     **Windows**
     
     c:\cdWorkplace\winlwpSuite.exe -options path\response_file
     -silent

   Each platform uses a different version of the installation program, prefixed with the code for that platform. Provide the full path name to
the response file containing the values you want to use during installation, and the name of that file. Note that the -silent argument is required.

7. See the topic “Setting Up Lotus Workplace” for instructions on completing system setup and configuration.

Response file parameters for a silent installation

The response file contains the information you normally provide directly during installation, through either the installation screens or the command console. During a silent installation, the information is read from the response file as needed, and is used for basic configuration of Lotus Workplace.

You must supply the parameters in the following table in your response file. Each parameter is shown with its default value in column 1; column 2 explains the purpose of the parameter and provides possible values for it.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-W dataProdOrBothPanel.lwpInstallType=</td>
<td>Type of installation dataOnly</td>
</tr>
<tr>
<td></td>
<td>Install the Lotus Workplace data, which installs only data-management software (not the entire application). Run this directly on the DBMS server.</td>
</tr>
<tr>
<td></td>
<td>productOnly</td>
</tr>
<tr>
<td></td>
<td>Install the Lotus Workplace application, which installs only the Lotus Workplace program (no data). Run this on the Lotus Workplace server.</td>
</tr>
<tr>
<td></td>
<td>dataAndProduct</td>
</tr>
<tr>
<td></td>
<td>Install both the data and the application on a single server (suitable for demonstration purposes only).</td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-W UserConIn.selection=&lt;value&gt;</code></td>
<td>Configure or install option</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Run the Lotus Workplace installation in configure-only mode. Assumes you</td>
</tr>
<tr>
<td></td>
<td>have already run the installation in install-only mode to install the</td>
</tr>
<tr>
<td></td>
<td>software, and are now going to change configuration settings.</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Run the Lotus Workplace installation program in install-and-configure mode</td>
</tr>
<tr>
<td></td>
<td>(the default). This is the option you will generally want to use in silent</td>
</tr>
<tr>
<td></td>
<td>mode.</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Run the Lotus Workplace Installation program in install-only mode, which</td>
</tr>
<tr>
<td></td>
<td>installs the software but does not configure it. You must specify</td>
</tr>
<tr>
<td></td>
<td>configuration settings manually after installation.</td>
</tr>
<tr>
<td><code>-P installLocation=&lt;value&gt;</code></td>
<td>Installation directory</td>
</tr>
<tr>
<td></td>
<td>Instructs the Lotus Workplace installation program where to install</td>
</tr>
<tr>
<td></td>
<td>program files. Fill in the path to the directory where you want to install</td>
</tr>
<tr>
<td></td>
<td>Lotus Workplace.</td>
</tr>
<tr>
<td></td>
<td>Examples:</td>
</tr>
<tr>
<td></td>
<td>AIX and Linux</td>
</tr>
<tr>
<td></td>
<td>/websphere/workplaceserver</td>
</tr>
<tr>
<td></td>
<td>Windows</td>
</tr>
<tr>
<td></td>
<td>c:\websphere\workplaceserver</td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-W WASHOMEP.wasHome=&lt;value&gt;</code></td>
<td>WebSphere Application Server home directory&lt;br&gt;Specifies the location of the WebSphere Application Server home directory for use during installation, as some WebSphere Application Server settings must be modified for use by Lotus Workplace.&lt;br&gt;Examples:&lt;br&gt;<strong>AIX and Linux</strong>&lt;br&gt;/websphere/appserver&lt;br&gt;<strong>Windows</strong>&lt;br&gt;d:\websphere\appserver</td>
</tr>
<tr>
<td><code>-W wbwasadmin.fldAdmin=&lt;value&gt;</code></td>
<td>WebSphere Application Server Administrator user name&lt;br&gt;Specifies a valid WebSphere Application Server Administrator user name, which is required for modifying WebSphere Application Server settings during installation.</td>
</tr>
<tr>
<td><code>-W wbwasadmin.fldPw=&lt;value&gt;</code></td>
<td>WebSphere Application Server Administrator password&lt;br&gt;Supplies the password needed for access to the WebSphere Application Server Administrator account.</td>
</tr>
<tr>
<td><code>-W wbwasadmin.fldwasconfirmpw=&lt;value&gt;</code></td>
<td>Confirm WebSphere Application Server Administrator password&lt;br&gt;Verifies the previous password before allowing access to that user account and through it, the WebSphere Application Server settings.</td>
</tr>
<tr>
<td><code>-W existingPortalInstance. portalHome=&lt;value&gt;</code></td>
<td>WPS Home&lt;br&gt;Specifies the home directory of an existing WebSphere Portal installation in which to install Lotus Workplace.&lt;br&gt;Examples:&lt;br&gt;<strong>AIX and Linux</strong>&lt;br&gt;/websphere/portalserver&lt;br&gt;<strong>Windows</strong>&lt;br&gt;d:\websphere\portalserver</td>
</tr>
</tbody>
</table>

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### Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>-l</code></td>
<td>Properties file to use for installation</td>
</tr>
</tbody>
</table>
| silentHelper.lwppropsFile="<value>" | Specifies the path and file name of the properties file containing configuration information for the current Lotus Workplace installation. Enclose the value in quotation marks. Normally, you will use the lwpprops.properties file for this purpose. Examples:  
AIX  
"/usr/WebSphere/WorkplaceServer/config/lwpprops.properties"  
Linux  
/opt/WebSphere/WorkplaceServer/config/lwpprops.properties"  
Windows  
"c:\WebSphere\WorkplaceServer\config\lwpprops.properties" |
| `-G replaceNewerResponse="noToAll"` | Replace file with newer version During the installation, a newer version of some files might already exist on the server; you must indicate in advance how to handle the duplicate files:  
noToAll  
Do not replace any files with older versions (keep the newer versions that are already on the server).  
yesToAll  
Replace all files with older versions. |

**Caution**  The response file is not encrypted. Because anyone who can access this file can read it, you should not store actual user names and passwords in this file. When you want to run an installation using the file, edit it and insert the correct values for all user names and passwords. After the installation is complete, edit the file again and remove the user names and passwords.

### Installing Lotus Workplace on a single server

Use the data-and-product installation option to install Lotus Workplace on a single server. This deployment is suitable only for demonstrations because it taxes the server’s resources.
In a single-server deployment, all of the software required to run Lotus Workplace resides on one server, including: the LDAP directory, the DBMS server, WebSphere Application Server, WebSphere Portal, and the Lotus Workplace application itself.

**Note** If you are installing a two-server pilot deployment but are using Cloudscape as your DBMS, then you install both Cloudscape and Lotus Workplace on a single server, using these instructions. Your other server can host the LDAP directory plus the Collaborative Learning servers.

The following figure illustrates how Lotus Workplace components are hosted on a single server.

If you install the Lotus Workplace Collaborative Learning component, then the Learning Server, the Learning Delivery Server, and the course content server are also installed on this computer. And if you install Lotus Workplace Messaging, then the SMTP, and the IMAP or POP3, servers are installed on the computer as well.

**Installation sequence**

Even though you install all Lotus Workplace components on a single server, you must still complete tasks in the proper sequence, as summarized in the following figure:
Before you begin, install the DBMS server software (if you will be using Cloudscape as your DBMS, skip this step). During installation, the absence of a DBMS server or client on the server will signal the installation program to offer Cloudscape as your DBMS server.

Create the Lotus Workplace databases.

Then install an LDAP directory for user management.

Next, start the Lotus Workplace pre-installer and install the WebSphere Application Server and WebSphere Portal programs. Update both programs as needed to meet Lotus Workplace requirements.

Stop the WebSphere Application and WebSphere Portal Servers.

Run the Lotus Workplace software installation program using the data-and-product option to install both the Lotus Workplace application and the associated data-management software.

Finally, perform the manual configuration tasks to finish setting up Lotus Workplace.

**Running the Lotus Workplace installation program on a single server**

Follow these steps to install Lotus Workplace on a single server. Remember, this type of deployment should be used for demonstration purposes only.

**Note** These instructions assume that you have already installed an LDAP directory, a DBMS server, WebSphere Application Server, and WebSphere
Portal, and that you have upgraded WebSphere Application Server and WebSphere Portal to meet Lotus Workplace requirements.

When you install Lotus Workplace using a single-server configuration, you omit Phases 2 and 6 from the sequence of tasks, as they are specific to a Network Deployment.

Caution When you type a path name during installation in a Windows environment, do not include spaces. Path names containing spaces may cause problems when you configure the product.

1. Verify that you have completed Phase 1 (planning your installation).
   Refer to the Administrator Names and Passwords worksheet if you filled it out.

2. Verify that you have installed a DBMS product on the server (Phase 3) if you are not planning to use Cloudscape as your database product.

   Caution Do not create the Lotus Workplace databases yet.

3. Verify that you have installed an LDAP directory on the server (Phase 4).

4. Verify that you have completed the first part of Phase 5 by:
   • Installing and upgrading WebSphere Portal.
   • Enabling WebSphere Portal security.

5. Log in to the server as a user with administrative privileges.
   If you are using DB2 as your DBMS, log in the server as db2admin.

6. Create a local directory for the installation files.
   This step is required for AIX and Linux. It is also a convenient option for Windows installations because you will not be prompted to insert CDs as often during the installation process.

   AIX
   /usr/lwp201code/

   Linux
   /opt/lwp201code/

   Windows
   c:\lwp201code

7. Copy the CDWorkplace directory and its files from the CD to the new directory.

8. Deactivate any screen savers you have running, because they might interfere with the operation of the installation program.

9. Stop the WebSphere Application and WebSphere Portal Servers.
10. Open a command prompt, navigate to the CD or folder called CDWorkplace, and enter the appropriate command to start installation.

AIX
./usr/lwp201code/CDWorkplace/aixlwpSuite

Linux
./opt/lwp201code/CDWorkplace/linlwpSuite

Windows
winlwpSuite.exe

Note You can run the installation program with the case-sensitive parameter -skipDbChecking to see all database panels available in the installation program. This is useful for adding database options even if you do not have the necessary database software installed.

11. At the panel “Select a language to be used,” select the language to be used, and then click Next.

12. At the panel “The installer will install IBM Lotus Workplace on your computer,” click Next.

13. At the panel “Select the Lotus Workplace products that you have purchased licenses for,” select all the products for which you have licenses, and then click Next.

14. At the panel “Host Lotus Workplace,” select This computer will host Lotus Workplace data and products, and click Next.

15. At the panel “Based on the products you selected on the previous panel, these features are available for configuration,” clear any features you do not plan to use on this server, and then click Next.

16. At the License Agreement, click I accept the terms, and click Next.

17. At the panel that describes the installation options, select Install and set configuration properties, and click Next.

18. At the panel “Click Next to install IBM Lotus Workplace to this directory,” specify one of the following directories, and then click Next.

AIX
/usr/WebSphere/WorkplaceServer

Linux
/opt/WebSphere/WorkplaceServer

Windows
c:\WebSphere\WorkplaceServer
The characters in the directory path name must be single-byte coded (8 bit) characters from the ISO 8859-1 West European (Latin-1) character set.

19. At the panel “The following WebSphere Portal Servers were found on this computer,” select the WebSphere Portal Server that you prepared for Lotus Workplace if it is not already selected. Then click Next.

The default installation directories are:

AIX
/usr/WebSphere/PortalServer

Linux
/opt/WebSphere/PortalServer

Windows
c:\WebSphere\PortalServer

20. At the panel “The following WebSphere Application Servers were found on this computer,” select the WebSphere Application Server that you prepared for Lotus Workplace if it is not already selected. Then click Next.

The default installation directories are:

AIX
/usr/WebSphere/AppServer

Linux
/opt/WebSphere/AppServer

Windows
c:\WebSphere\AppServer

21. At the panel “Lotus Workplace requires administrator access to this server,” provide Lotus Workplace with the credentials required for administrator access to the WebSphere Application Server on this server. Complete the following information, and then click Next:

- **WebSphere administrator name** — Type the user name of the administrator of the WebSphere Application Server installed on the server.

- **WebSphere administrator password** — Type the password of the administrator of the WebSphere Application Server installed on the server.

22. If you are installing Lotus Workplace Messaging or Team Spaces, the panel “Network Path of the Mail Service queue directory” displays. Provide the following information, and then click Next:
• **Network path of the mail service queue directory** — Type the path to a server and directory in which the Mail Service will store messages before they are delivered. The directory must already exist. All Mail Services in the cell will use the same queue directory located on a network server. On Windows systems, use Universal Naming Convention notation to specify the path (for example, \\servername\qfilestore) or use the drive letter and full path (for example, c:\qfilestore).

• **E-mail address for the postmaster account** — Type the e-mail address that you want the mail service to use as the return address when sending failure notifications and other administrative messages and to which you want messages addressed to “postmaster” to be sent. The address you specify must belong to an existing mail account, such as your administrator e-mail address, or refer to a mail or mail alias attribute, such as “postmaster@domain.com,” that is included in the user directory.

23. If you are not installing Collaborative Learning, proceed to Step 31.

If you selected the Learning Server feature, the panel "Learning Server Settings" is displayed. Provide the following information, then click Next:

• **Server URL** — Enter http://serverfullDN5name (your full hostname) as the Web address for the Learning server.

• **User name and password** — Enter lwplms as the user name and password that the Learning Server uses to authenticate the Learning Delivery Servers. The user name does not have to exist in a directory.

24. At the panel "Additional Learning Server Settings," provide the following information, and then click Next:

• **Learning Server administrator LDAP user or group name** — Type the name of the user or group who will serve as the administrator for Lotus Workplace Collaborative Learning. The name in this field must exist in the LDAP directory.

• **Learning Server administrator name type** — Choose the type for the name you specified in the previous field: User or Group.

• **Path for imported course packages** — Type the path name to the directory in which you want the Learning server to store course packages imported from other servers. Specify a full directory path name, for example:

  AIX
  /usr/lms_packages

  Linux

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/opt/lms_packages

Windows
c:\lms_packages

25. At the second “Additional Learning Server Settings” panel, provide the following information, and then click Next:

- **Juru index path** — Juru is a full-text search capability that allows extended searches of document collections. Type the path to a directory where the Learning Server will store Juru index files, for example:
  - AIX
    /usr/juruindex
  - Linux
    /opt/juruindex
  - Windows
    c:\juruindex

- **Juru index language** — Choose the language of the content to be indexed. If the server supports content in multiple languages, choose the most frequently used language.

26. If you selected the Learning Delivery Server feature, the panel “Learning Delivery Server Settings” is displayed. Provide the following information, and then click **Next**:

- **Server URL** — Type http://serverfullDNSname (your full hostname) as the Web address for the Delivery Server.

- **User name and password** — Type lwplds as the user name and password that the Learning Delivery Server uses to authenticate the Learning Server. The user name does not have to exist in a directory.

27. At the panel “Additional Learning Delivery Server Settings,” provide the following information, and then click **Next**:

- **Server ID** — Type a text string that will be used to identify this Delivery Server when you deploy courses or manage servers using the Learning Server user interface, for example, DS1.

- **Description** — Type a description to help distinguish among multiple Delivery Servers, for example, Learning Delivery Server 1.

28. At the second “Additional Learning Delivery Server Settings” panel, provide the following information, and then click **Next**:

- **E-mail address to receive system notifications sent by the Learning Delivery+ Server** — Specify a valid e-mail address for the administrator, for example, admin@yourhostname.

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• **E-mail address from which Learning Delivery Server system notifications are sent** — Specify an e-mail address to display for Learning Delivery Server notifications, for example, admin@yourhostname; this does not have to be a valid address.

29. At the panel “Learning Delivery Server Content Deployment Settings,” provide the following information:

a. For **Content URL**, type the Web address where the Delivery Server looks for content when it launches a course, for example, http://serverfullDNSname/content. Then click **New** to specify a server to provide course content.

b. Provide the following additional information, and then click **OK**:

   **Deployment type** — Select File system to have the Learning Server copy course content directly to the location you specify (in Location for deployed content, which follows) or select FTP to have the Learning Server transfer course content to the indicated FTP server. If you select FTP, additional installation choices display.

   **Server name** — Specify a name (your full hostname) to identify this Content server on the Content Deployment Settings panel.

   **Location for deployed content** — Specify the file path name that the Learning Server should use when deploying content to this content server; the value must correspond to the Content URL and must be accessible from the Learning Server. If you selected FTP, this location is where the Learning Server will change to when it connects to the specified FTP server. Create this directory now if it does not already exist.

Examples of locations include:

- **AIX**
  /usr/IBMHttpServer/htdocs/en_US/content

- **Linux**
  /opt//IBMHttpServer/htdocs/en_US/content

- **Windows**
  c:\IBMHttpServer\htdocs\en_US\content (Windows)

**FTP Settings:**

- **FTP Server** — If you selected FTP, enter the fully qualified FTP server address

- **FTP Username** — If you selected FTP, specify a user account with sufficient rights to access the FTP server and upload content

- **FTP Password** — If you selected FTP, specify the password for the FTP user account.
Confirm Password — Confirm the password that you just entered.

c. Click Next.

30. At the panel “Lotus Workplace Collaborative Learning Settings,” specify the Web address for the Learning Server (http://serverfullDNSname) specified earlier, and click Next.

31. If you do not have a DBMS server installed, the installation program sets up the Cloudscape database server, which is provided with Lotus Workplace. Proceed to Step 38.

   If you have a DBMS server installed, you see the panel “Lotus Workplace supports multiple database vendors.” Select Use a single database server configuration, and then click Next.

32. Because you selected “Use a single database server configuration” in the previous panel, you see the panel “The installation program can create a single database for all installed products, or create a separate database for each.” Select one of the following options, then click Next.

   • Select Create a single database.
     This option creates one Lotus Workplace database that includes the information for all products you are installing. You will be prompted through Steps 33 to 37.

   • Select Create multiple databases.
     This option creates a separate database for each product. You will be prompted to repeat Steps 33 to 37 for each product.

33. At the panel “Select which type of database to configure,” choose the DBMS product you have installed on this server, and then click Next.

   • DB2
   • Oracle
   • MS SQL (displays if you are installing only the Collaborative Learning component on this server)

34. At the panel “Specify the information needed to connect to the DBMS server,” provide the following information, and then click Next.

   • DBMS Program Directory — Specify the database vendor’s program directory, for example, /home/db2admin/sqlib (AIX) or c:\IBM\SQLLIB (Windows).

   • DBMS Server name -- Type a fully qualified server name (for example, myserver.yourcompany.com).

   • DBMS Port number -- The installation program provides the default port number for your database software (for example, 50000 for DB2 and 1521 for Oracle).

Appendix A: Alternative Installation Methods  185
The DB2 server and client must use the same connection port. In SuSE Linux 8.2, port 50000 may have been in use already when DB2 was installed; if so, it was automatically incremented to port 50001. To determine the connection port used on the DB2 server, check the entry prefixed with “db2c” in the /etc/services file (available on AIX, Linux, and Windows).

- **DBMS Service Name** -- Type your common server name (for example, “myserver”). This is optional for DB2 servers and required for others.

35. At the panel “Specify the name and password of a user who has the right to create and modify databases,” type the name and password of the DBMS administrator for the Lotus Workplace database and DBMS server, for example “db2admin.” Then click **Next**.

36. At the panel “Specify the name and password of a user that Lotus Workplace applications will use to access this database,” provide the name and password that Lotus Workplace should use when it accesses and writes to the Lotus Workplace database. Then click **Next**.

37. At the panel “Type the path to the data directory,” specify the location for creating Lotus Workplace databases. You must create the data and backup directories before proceeding. Provide the following information, and then click **Next**:
   - **Data directory** — Type or browse for the directory path where you want to store the Lotus Workplace databases. For example:
     - **AIX**
       `/usr/WebSphere/lwpdata`
     - **Linux**
       `/opt/WebSphere/lwpdata`
     - **Windows**
       `C:\lwpdata` (Windows)
   - **Backup directory** — Type or browse for the directory path where you want to store copies of the databases created in the data directory. For example:
     - **AIX**
       `/usr/WebSphere/lwpbackups`
     - **Linux**
       `/opt/WebSphere/lwpbackups`
     - **Windows**
       `C:\lwpbackups` (Windows)
38. At the panel “Summary Information,” click **Next** when finished.

**Note** If this panel does not appear, minimize the Installation program window, and then restore it to display this panel.

39. After about 10 to 15 minutes, the last panel displays. Click **Finish** to complete the installation.

Finally, complete Lotus Workplace setup as described in the topic "Setting up a single Lotus Workplace server.”

**Setting up a single Lotus Workplace server**

After you install Lotus Workplace on a single server, follow these steps to complete setup.

1. Make a backup copy of the installed version of the lwpprops.properties file and name it lwpprops.old.
   The lwpprops.properties file is located in the `<lwp_root>`\config directory.

2. Edit the lwpprops.properties file to be accurate for your site and save the revised version.
   • For all features you installed, specify values for any properties that do not have a default value and verify that the properties that are there are accurate.
   • For features that you did not install, the properties should be left blank. For example, if you chose not to install Collaborative Learning, do not complete the properties in the "Learning" section of the file.
   For more information, see the topic "Editing the lwpprops.properties file."

3. Create the Lotus Workplace databases.
   **Caution** You must create the Lotus Workplace databases before attempting to run any configuration scripts.

4. Log in to the server as a user with administrative privileges.
   If you are using DB2 as your DBMS, log in as **db2admin**.

5. Open a command prompt to the `<lwp_root>`\config subdirectory.

6. If you are running with DB2, Oracle, or SQL Server, go to the next step.
   If you are running with Cloudscape as the DBMS server, start the Cloudscape Network Server by running the following commands:
   **AIX and Linux**
   `$WAS_HOME\bin\setupCmdLine.ksh`
$WPS_HOME\shared\app\cloudscape\NetworkServer\setNetworkServerCP.ksh

$WPS_HOME\shared\app\cloudscape\NetworkServer\startNetworkServer.ksh

Windows

%WAS_HOME%/bin/setupCmdLine

%WPS_HOME%/shared/app/cloudscape/NetworkServer/setNetworkServerCP

%WPS_HOME%/shared/app/cloudscape/NetworkServer/startNetworkServer

Caution  You must always start the Cloudscape server before starting Lotus Workplace; always leave the resulting window open (closing the window improperly stops the Cloudscape server).

7. Enter the following command to start the default WebSphere Application Server server, keeping in mind that server names are case-sensitive.

AIX and Linux
./startServer.sh server1

Windows
startServer server1

This step is required because the backup command stops all servers.

8. Start the WebSphere Portal with the following command (server names are case-sensitive):

AIX and Linux
./startServer.sh WebSphere_Portal

Windows
startServer WebSphere_Portal

9. Run configuration scripts as explained in the WebSphere Portal Information Center, at:

In particular, you should review the topic, "Configuration task reference, " which lists prerequisites and assumptions and then explains how to execute the configuration scripts.

For more information about configuration commands, see Editing the lwpprops.properties file.

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10. (If applicable) Set up Collaborative Learning, as described in Setting Up Lotus Workplace.
Appendix B
Completing Optional Post-installation Tasks

After you complete installing and setting up Lotus Workplace, you can choose to perform some additional configuration tasks for your site.

Optional post-installation tasks

After you have completed installing and setting up Lotus Workplace, you can choose to perform some additional configuration tasks for your site. These can include the following tasks:

- Setting up directory attributes for user policies and messaging
- Mapping lookaside Person attributes to custom LDAP attributes
- Changing the LDAP server name or port after configuration
- Changing the HTTP port after configuration

For more information about administering and configuring individual Lotus Workplace features, refer to the appropriate sections of the Lotus Workplace Information Center at:

Optional directory attributes for user policies and messaging

You can set up optional attributes for use with Lotus Workplace user policies and messaging. Some optional attributes must be in the LDAP directory.

User policy attribute

The default user policy attribute *ibm-lwpUserPolicy*, found in member profiles in the WebSphere Member Manager lookaside database, is used for storing the name of the user policy to which the user is assigned. When it comes to assigning users to policies, a policy attribute gives you greater flexibility than DN scope matching because members of the same DN scope share the same policy, while a policy attribute lets you assign different policies to members of the same DN scope. If you are using the policy attribute method of assigning users to policies, you populate or change a user's policy by running the Lmadmin UpdateAccount command.
You can use a policy attribute in LDAP instead. You must either extend the LDAP directory schema, or use an existing attribute for the policy attribute that is equivalent to the `ibm-lwpUserPolicy` attribute in the lookaside database. You map the lookaside attribute to the LDAP attribute so that Member Manager uses the LDAP attribute instead.

**Group mail attribute**
Consider extending the LDAP schema for groups to include a mail attribute for group records. If a group uses the `mail` attribute in LDAP, the attribute value can be used automatically by Lotus Workplace as the e-mail address for the group. This works because the `ibm-primaryEmail` lookaside attribute, which maps to the LDAP attribute `mail`, is configured by default to apply to groups.

Otherwise, the e-mail address is derived from the common name (CN) of the group. If a common name contains only ASCII letters, numbers, underscores, or dash characters, Lotus Workplace Messaging takes the name and appends the local domain name to make the group addressable. If a common name contains spaces, then the e-mail address must be encoded by Lotus Workplace Messaging. To avoid encoded group e-mail addresses, consider either adding a `mail` attribute to group records, or adding another common name value without spaces. For example, the LDAP group “acme support” can be made into “acme_support” as an additional common name.

**E-mail aliases attribute**
An e-mail alias is an alternate user name that can be used in e-mail addresses. For example, Robert_Smith@acme.com can have the mail aliases Bob_Smith@acme.com or BobSmith@acme.com. You can populate the `ibm-otherEmail` attribute, the lookaside attribute used for e-mail aliases, by using the Lmadmin UpdateAccount command.

Multiple mail addresses are also supported in the WMM lookaside `ibm-primaryMail` attribute. The e-mail alias attribute can reside in the lookaside database or LDAP directory. At installation, the alias attribute is configured to be a lookaside attribute.

**Mail forwarding attribute**
You can use the `ibm-forwardingEmail` attribute in the Member Manager lookaside database to store a single value for a forwarding e-mail address in person records in Member Manager. To change the forwarding e-mail address, run the Lmadmin UpdateAccount command.

The mail forwarding attribute can reside in the WMM lookaside database or LDAP. At installation, it is configured to be a lookaside attribute.
Mail cell attribute
A mail cell attribute can be used for directory lookups and routing mail to other mail systems in the same domain. You can use an existing LDAP attribute or extend the LDAP schema to create a new attribute to hold the cell name for each person record. Alternatively, you can register each mail cell and lookup users and route mail using mail cell membership filters.

Mail list object
You can create a mail list object in an LDAP directory to create mail lists that can contain e-mail addresses that are not in your LDAP directory. If your environment contains, for example, Lotus Workplace Messaging and Domino e-mail addresses, you may need to create the mail list object to enable users to send mail to groups. Because standard groups in LDAP contain only distinguished names, groups contain only people who are in the LDAP directory. Mail lists contain e-mail addresses and may include external Internet addresses not listed in the LDAP directory.

Creating a mail list object in the LDAP directory
You can extend the LDAP schema to create a mail list object in the LDAP directory. Unlike LDAP groups that can contain only distinguished names of users in the LDAP directory, mail lists can contain external e-mail addresses.

1. Extend the LDAP schema by creating the ibm-mailListMember attribute. This multi-valued attribute holds the e-mail addresses for the members of the list. Insert the following attribute in your LDAP directory:

   (  
   1.3.18.0.2.4.3014  
   NAME 'ibm-mailListMember'  
   DESC 'Mailing List member entries'  
   EQUALITY caseIgnoreIA5Match  
   SUBSTR caseIgnoreIA5SubstringsMatch  
   USAGE userApplications  
   )

2. Extend the LDAP schema by creating the object class ibm-mailList using the schema below.

   (  
   1.3.18.0.2.6.557  
   NAME 'ibm-mailList'  
   )

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DESC 'Used to store Mailing List entries for IBM Lotus Email.'

STRUCTURAL
SUP top
MUST ( cn $ mail )
MAY ( ibm-mailListMember $ description )

3. Assign the required attributes cn and mail to the object class. The cn attribute value must be a short descriptive name for the mail list. The mail attribute is the e-mail address assigned to the list.

4. (Optional) Type e-mail addresses in the place reserved for ibm-mailListMember. How multiple e-mail addresses are entered depends on the user interface of your LDAP tools. IBM Directory Server puts the different values on separate lines without additional delimiters.

5. (Optional) Enter comments about the list in the place reserved for description.

6. (Optional) Create an instance of the object class for each mail list.

---

Mapping lookaside person attributes to custom LDAP attributes

The attributes used in Lotus Workplace are defined as Member Manager attributes. Some Member Manager person attributes correspond to attributes used in the LDAP directory. Lotus Workplace uses these LDAP attributes and maps them to their corresponding Member Manager attribute names. The file <wp_root>\wmm\wmmLDAPServerAttributes.xml defines this mapping.

Lotus Workplace stores Member Manager person attributes that do not correspond to LDAP directory attributes in the Member Manager lookaside database by default. The file <wp_root>\wmm\wmmlAAttributes.xml defines the attributes stored in the lookaside database. If you have added a custom person attribute to your LDAP directory that is the equivalent of a Member Manager attribute stored in the lookaside database, you can map the Member Manager attribute to the LDAP attribute so that Member Manager uses the attribute stored in the LDAP directory instead. The advantages to this approach are that applications other than Lotus Workplace products can use the attribute, and you can use LDAP directory administration tools to populate the attribute values. If you map a lookaside attribute to an LDAP attribute, no data is transferred from the lookaside database to the LDAP directory. Rather, the repository for the attribute changes.
The content of the wmmLDAPServerAttributes.xml and wmmLAAttributes.xml varies slightly depending on which LDAP directory you configure to work with Lotus Workplace.

Examples of person attributes that are stored in the lookaside database by default that you might want to map to LDAP attributes are: \textit{ibm-middleName}, \textit{ibm-personalTitle}, and \textit{ibm-forwardingEmail}.

\textbf{Note} All group attributes are stored in the LDAP directory.

To map a lookaside attribute to a custom person LDAP attribute, follow these steps after you have installed Lotus Workplace:

1. Using a text editor, open the file \texttt{<wp_root>/shared/app/wmm/wmm.xml} and search for the tag <supportedLdapEntryType name="Person".

2. In the wmm.xml file, add the custom object class that defines the custom person attribute to objectClassesForRead and objectClassesForWrite.

3. Open the file \texttt{<wp_root>/wmm/wmmLAAttributes.xml} and then remove the attributeMap tag for the lookaside attribute.

4. Open the file \texttt{<wp_root>/wmm/wmmLDAPServerAttributes.xml} and then add the same attributeMap tag that you deleted in Step 3 but change the pluginAttributeName value to the LDAP attribute name.

5. Restart the WebSphere, WebSphere Portal, and Lotus Workplace servers.

Example of mapping \textit{ibm-MiddleName} to \textit{middleName} in IBM Directory Server 5.1

The following example shows how to map the lookaside attribute \textit{ibm-MiddleName} to the IBM Directory Server 5.1 \textit{middleName} attribute that is defined in the ePerson auxiliary object class.

1. Open \texttt{<wp_root>/shared/app/wmm/wmm.xml}, search for <supportedLDAPEntryType name="Person">, and then add ePerson as a value for objectClassesForRead and objectClassesForWrite:

   \begin{verbatim}
   <supportedLdapEntryType name="Person"
rdnAttrTypes="uid"
objectClassesForRead="inetOrgPerson;ePerson"
objectClassesForWrite="inetOrgPerson;ePerson"
searchBases="cn=users,dc=acme,dc=com"/>
   \end{verbatim}

2. Open \texttt{<wp_root>/wmm/wmmLAAttributes.xml}, and then remove the following attributeMap tag:

   \begin{verbatim}
   <attributeMap wmmAttributeName="ibm-middleName"
    pluginAttributeName="ibm-middleName"
   \end{verbatim}
3. Open `<wp_root>\wmm\wmmLDAPServerAttributes.xml`, and then add the same attributeMap tag you deleted in step 2, but specify `middleName` as the pluginAttributeName value:

```xml
<attributeMap wmmAttributeName="ibm-middleName"
             pluginAttributeName="middleName"
             applicableMemberTypes="Person"
             dataType="String" valueLength="128" multiValued="true"/>
```

4. Restart the WebSphere, WebSphere Portal, and Lotus Workplace servers.

---

### Changing the LDAP server name or port after configuration

Use the following procedure if you change the LDAP server name after configuring Lotus Workplace. This procedure assumes the LDAP directory is identical to the original except for the LDAP server name and port number.

Use the following procedure if you change the HTTP port number after configuring Lotus Workplace.

1. Log in to the server as a user with administrative privileges.
   If you are using DB2 as your DBMS, log in as `db2admin`.
2. Stop the HTTP server, the WebSphere Application Server, the WebSphere Portal server, and the Lotus Workplace server.
3. From the WebSphere Application Server Administrative console, click `yourNode —> Security —> User Registries —> LDAP`, and update the host and port values. Click `OK` to save your changes.
4. Open `wmm.xml`, stored in the `<wp_root>\shared\app\wmm` directory, and change the values for `ldapHost` and `ldapPort`. Save your changes.
5. Open the `lwpprops.properties` file, stored in the `<lwp_root>\config` directory, and change the LDAP server and port values. Save your changes.
6. If you are using a secondary LDAP directory for messaging, you might need to modify the `messaging.xml` file.
   a. Open `messaging.xml`, stored in the `<was_root>\config\cells\nodeName` directory.
   b. Change the values for `name` and `port` to reflect the correct values. Save your changes.
7. (Learning installations) Run the following configuration scripts from the `<lwp_root>\config` directory:
AIX and Linux
./LWPconfig.sh update-settings >updatesettings.log

Windows
LWPconfig update-settings >updatesettings.log

For more information about configuration scripts, see Running configuration scripts.

8. Check the log file to be sure the command was successful.
9. Restart the application servers for the changes to take effect.

Changing the HTTP port after configuration

Use the following procedure if you change the HTTP port number after configuring Lotus Workplace.

1. Log in to the server as a user with administrative privileges.
   If you are using DB2 as your DBMS, log in as db2admin.
2. Stop the HTTP server, the WebSphere Application Server, the WebSphere Portal server, and the Lotus Workplace server.
3. Open the httpd.conf file, stored in the <ihs_root>/conf directory, and change the following values:
   a. Change the Port value to the new port number.
   b. If HTTP is answering on multiple ports, change the Listen value to reflect the new port number; otherwise, leave the line commented out.
   c. Save your changes.

4. Open the ConfigService.properties file, stored in the <wp_root>/shared/apps/services directory.
   Change the host.port.value to the new port number and save your changes.

5. Edit the ConfigService.properties file to reflect the new port value.

6. Open the lwpdiscussion.properties file, stored in the <was_root>/properties directory.
   Update the wpcp.server.Url to reflect the port number; for example, http://lwpserver.yourco.com:82/wps/wcp. Save your changes.

7. Open the lwpmadapter.properties file, stored in the <was_root>/properties directory.
   Update the wpcp.server.Url to reflect the port number; for example, http://lwpserver.yourco.com:82/wps/wcp. Save your changes.

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8. Open the lwpprops.properties file, stored in the `<lwp_root>`\config directory and change the following values to reflect the new port number. Save your changes.

- `lmmserver_url` (for example, http://lms.acme.com:82)
- `dsserver_url` (for example, http://lds.acme.com:82)
- `lmscontent_base_url` (for example, http://content.acme.com:82/content)
- `learning_url` (for example, http://content.acme.com:82)
- `WpsHostPort=82`

9. Use the WebSphere Application Server Administrative Console to update the new HTTP port number as shown in the following steps:

a. Click `yourNode` —> Environment —> Virtual Hosts —> default_host —> Aliases.

b. Edit the Host name form or create a new one and provide values for Host name and Port.

c. Click Apply.

d. Click `yourNode` —> Environment —> Virtual Hosts —> Update Web Server Plugin and click OK.

e. From the Administrative Console, click `yourNode` —> Resources —> URL providers.

f. Clear the Node and Server values and click OK.


h. Update this value with your new HTTP server port number and click OK.

i. Click Servers —> Lotus Workplace Servers —> Lotus Workplace Services/Instant Messaging and Presence Service —> Web server network address.

j. Update this value with your Web server network address and click OK.

k. (Learning installations) Click Resource `yourNode` —> Default URL Provider —> Additional Properties/URLs —> LMS_URL.

l. (Learning installations) Update the Web address for the Collaborative Learning administrator interface with the new HTTP port number; for example, http://lwpsserver.yourco.com:82/lms-lmm. Click OK.

10. (Learning installations) Run the following configuration script from the `<lwp_root>`\config directory:
AIX and Linux
./LWPconfig.sh update-settings >updatesettings.log

Windows
LWPconfig update-settings >updatesettings.log

For more information about configuration scripts, see Running configuration scripts.

11. Check the log file to be sure the command was successful.
12. Restart the application servers for the changes to take effect
Appendix C
Reference Information

This appendix contains reference information related to installing and setting up Lotus Workplace.

Reference information

This following topics contain information that you might want to refer to during or after installation.

- Root installation directories
- Installation logs
- Installed folders
- Configuration targets for LWPconfig and LWPdbconfig
- Related product information

Root installation directories

The default installation directories for the products used with Lotus Workplace are as follows.

**Lotus Workplace  `<lwp_root>` -- Product and Data-and-Product servers**

- **AIX**
  `/usr/WebSphere/WorkplaceServer`
- **Linux**
  `/opt/WebSphere/WorkplaceServer`
- **Windows**
  `C:\WebSphere\WorkplaceServer`

**Lotus Workplace  `<lwp_root>` -- Data-only servers**

- **AIX**
  `/usr/WorkplaceServer`
Installation logs

The Lotus Workplace installation program records information about the installation and configuration tasks it performs in a set of three log files. These files are created in the log subdirectory of the Lotus Workplace program directory that you selected during installation. For example, if you
installed Lotus Workplace to the default directory, the log files are created in
the following locations:

AIX
<lwp_root>/log

Linux
<lwp_root>/log

Windows
c:\<lwp_root>\log

Log file names
The following log files are created:

- **lwpinstalllog.txt** - This file contains installation information, in English
  only.

- **LWPConfigMessages.log** - This file contains information about tasks
  performed by the configuration scripts.

- **LWPConfigTrace.log** - This file records the trace output of the
  configuration scripts.

Open the log files using any text editor. Each log entry begins with the date
and time of an action.

When you run the installation program more than once on a server, the
information for each successive installation is added to the existing log file,
resulting in a large file. Delete old log messages as needed to reduce the size
of the file.

Installed folders
This section describes the installed folders on a Lotus Workplace product
server that includes Collaborative Learning.

**Lotus Workplace Home**

_ .jvm
  ant
  bin
    WebSphere node files
  classes
  config
Configuration Library folders and files pertaining to:
  Database schema scripts
  WebSphere Deployment Manager
  Portlet node files
  Workplace configuration plug-ins to the WebSphere Administrative Console
doc
  Folder for standalone Lotus Workplace documentation, such as the Lotus Workplace Information Center and the Installation Guide.
doc/learning
  Folder for the Collaborative Learning guides
Java141
lib
log
lsfdata
lwps_extdir
misc
  WebSphere Deployment Manager, WebSphere node files
misc/learning
  Folder for Collaborative Learning online help and API/Web Services documentation
ps_extdir
security
shared
  shared/app
    WebSphere node files
trace
uninstall
wpcresource

**WebSphere Application Server Home**
bin
  WebSphere Deployment Manager, WebSphere node files

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Configuration targets for the LWPconfig and LWPdbconfig files

After you install Lotus Workplace, you run one or more configuration scripts to prepare the system for use. You run each configuration script with any of several options (known as targets), depending on the type of system and the configuration goal.

Note To save time, verify that the lwpprops.properties file contains values that are correct and complete for your site before you run any scripts.

LWPconfig targets
The following table describes the targets that are available for the LWPconfig command.
<table>
<thead>
<tr>
<th>Target</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>lwp-base-remove</td>
<td>Reverses the configuration implemented by the <strong>lwp-base-setup</strong> option.</td>
<td>Lotus Workplace product server, Single server</td>
</tr>
<tr>
<td>lwp-base-setup</td>
<td>This option runs the following targets:</td>
<td>Lotus Workplace product server, First node Single server</td>
</tr>
<tr>
<td></td>
<td>lwpT-wps-config</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lwpT-wmm-setup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lwpT-compulsory-setup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lwpT-cell-setup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lwpT-node-setup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lwpT-portal-setup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>These targets perform the following configuration tasks:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Add Lotus Workplace extensions to the WebSphere Administrative Console on the WebSphere Portal server and copy the Lotus Workplace cell-level configuration files to the directory <code>&lt;was_root&gt;/config/cell_name</code></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adds cell-level information to the Lotus Workplace XML data files, messaging.xml, license.xml, and so forth.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deploys Lotus Workplace Enterprise Archive (EAR) files and creates the Lotus Workplace server, JDBC providers, data sources, authentication aliases, and other resources.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starts all of the application servers on the node (server1, WebSphere_Portal_Server, and LotusWorkplace_Server).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deploys all WebSphere Portal and Portal Document Manager (PDM) portlets, themes and skins, creates pages, and copies icons and screens to the WebSphere Portal EAR file (wps.ear); configures WebSphere Member Manager (WMM).</td>
<td></td>
</tr>
<tr>
<td>lwp-delete-passwords</td>
<td>After Lotus Workplace installation and configuration is completed, run this target to remove readable password information from the lwpprops.properties file.</td>
<td>DBMS server Workplace product server, First or additional node Single server</td>
</tr>
<tr>
<td>Target</td>
<td>Description</td>
<td>Usage</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>
| lwp-ND-base-config   | Before running this target, configure LDAP and enable security from the WebSphere Administrative Console and then ensure that the correct values are assigned to the properties in the lwpprops.properties file for all installed products. Do not change the values of properties in the following sections: “Portal DB2 Settings” and “Enable security and configure LDAP using Portal.”
   
   This option runs the following targets:
   
   lwpT-compulsory-setup
   
   lwpT-cell-setup
   
   These targets perform the following configuration tasks:
   
   Adds Lotus Workplace extensions to the WebSphere Administrative Console on the WebSphere Portal server and copies the Lotus Workplace cell-level configuration files to the directory `<was_root>\config\cell_name`
   
   Adds cell-level information to XML data files, such as messaging.xml, license.xml, and so forth. |
|                      | Deployment Manager                                                                                                                                                                                         |                           |
| lwp-ND-base-remove   | Reverses the configuration implemented by running the **lwp-ND-base-config** option.                                                                                                                       | Deployment Manager        |
| lwpT-cell-setup      | Adds cell-level information to XML data files, such as messaging.xml, license.xml, and so forth.                                                                                                          | First or additional node  |
| lwpT-cell-remove     | Removes cell-level information from XML data files.                                                                                                                                                      | First or additional node  |
| lwpT-compulsory-removal | Removes the extensions added to the WebSphere Administrative Console by the **lwpT-compulsory-setup** option.                                                                                           | First or additional node  |
| lwpT-compulsory-setup | Adds the extensions for Lotus Workplace to the WebSphere Administrative Console and copies Lotus Workplace cell-level configuration files to the `<was_root>\config\cell_name` directory.                                         | First or additional node  |
| lwpT-node-remove     | Removes the items deployed by the **lwpT-node-setup** option.                                                                                                                                             | First or additional node  |

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### Target Description Usage

<table>
<thead>
<tr>
<th>Target</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>lwpT-node-setup</td>
<td>Deploys Lotus Workplace Enterprise Archive (EAR) files and creates the Lotus Workplace server, JDBC providers, data sources, authentication aliases, and other resources.</td>
<td>First or additional node</td>
</tr>
<tr>
<td>lwpT-portal-remove</td>
<td>Removes the items deployed by the lwpT-portal-setup option.</td>
<td>Workplace product server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First or additional node</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single server</td>
</tr>
<tr>
<td>lwpT-portal-setup</td>
<td>Deploys portlets, themes, and skins, creates pages, copies icons and screens to the wps.ear file, and configures WebSphere Member Manager (WMM).</td>
<td>Deployment Manager Workplace product server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First or additional node</td>
</tr>
<tr>
<td>lwpT-wmm-setup</td>
<td>Updates WebSphere Member Manager files and loads Lotus Workplace attributes into the WMM schema.</td>
<td>Deployment Manager Workplace product server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First or additional node</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single server</td>
</tr>
<tr>
<td>lwpT-wps-config</td>
<td>Removes the WebSphere Portal Content Publishing and PDM portlets, and changes the context root to lwp.</td>
<td>Deployment Manager Workplace product server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First or additional node</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single server</td>
</tr>
</tbody>
</table>

### LWPdbconfig targets

The following table describes the targets that are available for the LWPdbconfig command.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>lwp-create-db</td>
<td>Creates the Lotus Workplace specified in the lwpprops.properties file with a value of True, which is set when you select the corresponding Lotus Workplace components during installation. For a single-server configuration using Cloudscape, a single database is created and contains schemas for all selected components.</td>
<td>DBMS server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single server</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>lwp-create-lds</td>
<td>Creates the Learning Delivery Server database.</td>
<td>DBMS server with Learning Delivery Server installed Single server with Learning Delivery Server installed</td>
</tr>
<tr>
<td>lwp-create-lms</td>
<td>Creates the Learning Server database.</td>
<td>DBMS server with Learning Server installed Single server with Learning Server installed</td>
</tr>
<tr>
<td>lwp-drop-db</td>
<td>Deletes the databases created by the lwp-create-db target.</td>
<td>DBMS server Single server</td>
</tr>
<tr>
<td>lwp-drop-lds</td>
<td>Deletes the Delivery Server database and discards any data it contains.</td>
<td>DBMS server with Learning Delivery Server installed Single server with Learning Delivery Server installed</td>
</tr>
<tr>
<td>lwp-drop-lms</td>
<td>Deletes the Learning Server database and discards any data it contains.</td>
<td>DBMS server with Learning Server installed</td>
</tr>
<tr>
<td>lwp-populate-settings</td>
<td>Populates the Learning databases with the Learning settings. This target is always launched automatically from lwp-create-db; you never run this manually.</td>
<td>First or additional nodes Workplace product server Single server</td>
</tr>
<tr>
<td>populate-lms-settings</td>
<td>Populates the Learning databases with the Learning settings. This target is always launched automatically from lwp-populate-settings; you never run this manually.</td>
<td>Any of the following that have Learning Server installed: Deployment Manager First or additional nodes Workplace product server Single server</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>populate-delivery-settings</td>
<td>Populates the Learning databases with the Learning settings. This target is always launched automatically from lwp-populate-settings; you never run this manually.</td>
<td>Any of the following that have Learning Delivery Server installed: Deployment Manager First or additional nodes Workplace product server Single server</td>
</tr>
<tr>
<td>update-delivery-settings</td>
<td>Updates the Delivery Server database with Learning settings from the lwpprops.properties file. This does not update the Learning Server database, even if the Learning Server was installed.</td>
<td>Any of the following that have Learning Delivery Server installed: Deployment Manager First or additional nodes Workplace product server Single server</td>
</tr>
<tr>
<td>update-lms-settings</td>
<td>Updates the Learning Server database with Learning settings from the lwpprops.properties file. This does not update the Delivery Server database, even if the Delivery Server was installed.</td>
<td>Any of the following that have Learning Server installed: Deployment Manager First or additional nodes Workplace product server Single server</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
<td>Usage</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>update-settings</td>
<td>Updates the Learning Server and/or Delivery Server databases with the Learning settings in the lwpprops.properties file. Run this when you need to change settings for which there is no user interface, or when you need to change settings that you entered incorrectly through the installation program.</td>
<td>Any of the following that have Learning Server or Learning Delivery Server installed: Deployment Manager First or additional nodes Workplace product server Single server</td>
</tr>
</tbody>
</table>

**Related product information**

Refer to the following sources for additional product information.

**IBM Lotus Workplace Release Notes**
The Release Notes describe known limitations, problems, workarounds, hardware and software requirements, supported hardware and software versions, and capacity planning for this release of Lotus Workplace.

For the latest version of the Release Notes, go to http://www.lotus.com/doc.

**IBM WebSphere Administrative Console documentation**
One of the ways you can configure Lotus Workplace is by specifying settings in the WebSphere Administrative Console. For administrative console help, open the console and click the “i” icon next to the setting.

**IBM WebSphere Application Server Information Center**
The IBM WebSphere Application Server Enterprise Information Center provides information on WebSphere Application Server, security, and Network Deployments. HTML or PDF versions of the WebSphere Application Server Information Center are on the Web at http://publib.boulder.ibm.com/infocenter/wasinfo/index.jsp. (The Version 5 Information Center includes information on the 5.0, 5.0.1, and 5.0.2 versions.)

**IBM WebSphere Portal Information Center**
The IBM WebSphere Portal for Multiplatforms Version 5.0 Information Center provides information on WebSphere Portal, including security; WebSphere Member Manager; and portlet
management. HTML or PDF versions of the WebSphere Portal for Multiplatforms Information Center are on the Web at:

IBM DB2 Universal Database Information Center
The DB2 Version 8 Information Center provides information on DB2 products, including installing and using DB2 servers and DB2 clients. The HTML or PDF versions are on the Web at:

IBM HTTP Server Information Center
The IBM HTTP Server Information Center provides information on using the IBM HTTP Server to handle client HTTP requests. HTML or PDF versions of the HTTP Server Information Center are on the Web at:

IBM Directory Server documentation
The IBM Directory Server 5.1 documentation provides information on deploying the IBM Directory Server as an LDAP server. The documentation is on the Web at:

IBM Lotus Domino documentation
Lotus Workplace works with a Lotus(R) Domino(TM) 6.5 LDAP server. For information on configuring an LDAP server on Domino, see the Lotus Domino documentation and Release Notes at:

IBM Lotus Workplace Collaborative Learning Help
Lotus Workplace includes IBM Lotus Workplace Collaborative Learning Help, which is installed during the product installation as part of Lotus Workplace Collaborative Learning. The Lotus Workplace Collaborative Learning Help includes:
Student Help — Provides information on how to use the Student interface to log in, enroll in a course, display and complete course activities, and view student progress reports.
Course Administration Help — Provides information on how to use the Administrator interface to add users and courses to the system, create course offerings, and track student progress.
Authoring Tool Help — Provides information on how to use the authoring tool to create and manage course content.
This help is accessed from the Help button on the Student and Administrator user interfaces when you log in to the Lotus Workplace.

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Collaborative Learning “Learning Server.” Besides being able to access Workplace Collaborative Learning features with the Workplace Collaborative Learning portlets, students and administrators can also access the Learning Server Student and Administrator user interfaces by logging in directly to the Learning Server with a supported browser. The Web address, user name, and password are provided during installation. The user name and password are the same ones that are used for accessing Lotus Workplace. Accessing Workplace Collaborative Learning directly from the Learning Server gives you access to additional Workplace Collaborative Learning features not provided by the portlets.

The Lotus Workplace installation program installs these files in the \misp\learning directory.

**IBM Lotus Workplace Collaborative Learning Guides**

Lotus Workplace includes the following IBM Lotus Workplace Collaborative Learning Guides in PDF file format:

- *Content Guide* — Explains how to integrate course content into Lotus Workplace Collaborative Learning.
- *Customization Guide* — Explains how to customize the Lotus Workplace Collaborative Learning user interface and functionality.
- *Authoring Tool Guide* — Explains how to use the Lotus Workplace Collaborative Learning Authoring Tool to create course content for Lotus Workplace Collaborative Learning. This guide is included in the AuthoringToolGuide.zip file that is installed on the server when you choose the Authoring Tool utility when running the Lotus Workplace Collaborative Learning Client Installer.
- *Database Architecture Guide* — Explains the database schema used with Lotus Workplace Collaborative Learning.

After you have run the Lotus Workplace installation program, these guides are installed to the \doc\learning directory.

To obtain updates of this Lotus Workplace Collaborative Learning documentation, go to http://www.lotus.com/doc. To obtain the latest Migration Guides for Workplace Collaborative Learning, which explain how to migrate from earlier versions of LearningSpace(R) or Learning software, go to http://www-1.ibm.com/support/search/index.html.
IBM Lotus Workplace Collaborative Learning API and Web Services Documentation

This documentation describes how to use the Lotus Workplace Collaborative Learning Application Programming Interface (API), which provides developers with access to many features of Lotus Workplace Collaborative Learning. It uses the Simple Object Access Protocol (SOAP) to provide access to Lotus Workplace Collaborative Learning from any system that supports HTTP, and it supports many different programming languages.

The Lotus Workplace installation program installs these files in the <lwp_root>\misc\learning directory.
Appendix D
Running Configuration Scripts on the Lotus Workplace Server

After completing installation on a product-only server and verifying the values in the lwpprops.properties file, you are ready to run one or more configuration scripts. The scripts configure Lotus Workplace according to the values you provided in the installation panels and the lwpprops.properties file. After the scripts run, check the log and correct any errors. This process takes about an hour.

1. Back up the current configuration. To back up the configuration, open a command prompt and type the following command from the <was_root>\bin directory:

   backupConfig <backup_file>

   where <backup_file> specifies the file to which the backup is written. If you do not specify a file name, a unique name is generated.

   For more information on using the backupConfig command, see the WebSphere Application Server Information Center at http://publib.boulder.ibm.com/infocenter/wasinfo/index.jsp.

2. Enter the following command to start the default WebSphere Application Server server, keeping in mind that server names are case-sensitive.

   **AIX and Linux**
   
   ./startServer.sh server1

   **Windows**
   
   startServer server1

   This step is required because the backup command stops all servers.

3. Start the WebSphere Portal with the following command (server names are case-sensitive):

   **AIX and Linux**
   
   ./startServer.sh WebSphere_Portal

   **Windows**
   
   startServer WebSphere_Portal
4. If you are configuring the Deployment Manager server in a Network Deployment, stop the Deployment Manager server.

5. Open a command prompt to the \(<lwp_root>\)\config subdirectory.

6. Run Portal tasks to validate your WebSphere Portal installation.

   For more information on validating WebSphere Portal, refer to the WebSphere Portal Information Center, at:


7. Run the following configuration script to validate the Workplace components.

   **AIX and Linux**
   
   ```
   ./LWPconfig.sh lwpT-validate-config >lwpvalidate.log
   ```

   **Windows**
   
   ```
   LWPconfig lwpT-validate-config >lwpvalidate.log
   ```

8. Run the setup script that is appropriate for the type of product server you are setting up.

   For a standalone product server or Workplace server nodes, run this script:

   **AIX and Linux**
   
   ```
   ./LWPconfig.sh lwp-base-setup >lwpsetup.log
   ```

   **Windows**
   
   ```
   LWPconfig lwp-base-setup >lwpsetup.log
   ```

   For a Deployment Manager server in a Network Deployment, run this script:

   **AIX and Linux**
   
   ```
   ./LWPconfig.sh lwp-ND-base-config >ndsetup.log
   ```

   **Windows**
   
   ```
   LWPconfig lwp-ND-base-config >ndsetup.log
   ```

   For troubleshooting information, see the topic "Troubleshooting configuration scripts."

If you installed Collaborative Learning, finish the additional configuration needed for Collaborative Learning.
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