# INFORMIX<sup>®</sup>-Universal Server

# **Installation Guide**

for Windows NT  $^{\scriptscriptstyle\rm TM}$ 

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## **About This Manual**

The *INFORMIX-Universal Server Installation Guide for Windows NT* contains instructions for how to install INFORMIX-Universal Server and included database server products on computers that run Windows NT. It also describes the Universal Server program group created by the installation program. In addition, it explains how to start, stop, and remove Universal Server. Keep this installation guide with your Informix software documentation for easy reference.

The information in this guide describes the basic installation procedures in a Windows NT environment for INFORMIX-Universal Server, Version 9.12.

In this manual, all instances of Universal Server refer to INFORMIX-Universal Server.

### **Organization of this Manual**

This guide contains six sections and a list of error messages.

- "Preparing for Installation" on page 2 contains background information, installation prerequisites, and a list of the order in which to install Informix products.
- "Installing Universal Server" on page 6 describes how to launch the installation program and describes the subsequent pages of the installation wizard. This section includes a quick overview of the installation procedure.
- "The INFORMIX-Universal Server Program Group" on page 18 describes the six program items in the program group.

- "Starting and Stopping Universal Server" on page 19 describes how to start Universal Server with startup parameters and how to perform subsequent Universal Server startups without parameters. It also describes how to set up Universal Server to start when Windows NT is launched. In addition, it describes what to do if Universal Server fails to start.
- "Removing Universal Server" on page 21 describes how to remove Universal Server from your system.
- "Error Messages" on page 21 describes error messages that you might encounter when you install Universal Server.

## **Preparing for Installation**

You can install Informix products only as licensed by Informix. You must not transfer software from one computer to another or to another portion of your network without reregistration and the written consent of Informix.

This guide assumes that you are familiar with the operating procedures of your computer and with the Windows NT environment. For information about your file system and windowing environment, refer to your Windows NT documentation.

If you encounter difficulties when you install these products, refer to "Error Messages" on page 21. If you continue to encounter problems, contact the Informix Technical Support Department. In North America, call toll-free (800) 274-8184 or send a FAX to (913) 599-8590. Outside North America, contact your distributor or the nearest Informix subsidiary.

## **Installation Requirements**

You must be a member of the Windows NT Administrators group to install Universal Server. Before installation, verify that your computer meets the following minimum requirements:

- Windows NT, Version 4.0 or later
- TCP/IP
- Sum of RAM and swap file must be at least 64 megabytes

- Destination drive with a Windows NT file system (NTFS)
- 16 megabytes of RAM
- 40 megabytes of disk space (including a minimum of 20 megabytes for dbspace)
- If installation files already exist on the system, the amount of disk space needed is determined at runtime.

Your Informix product materials package contains a serial-number key card and a CD-ROM. The serial-number key card contains information you need for the installation.

## **Order of Installation**

If you install more than one Informix product on the same computer, you must install them in a specific order. The following steps describe, and Figure 1 on page 4 illustrates, this order:

1. Clients

For information, refer to your client installation documentation, for example, the *INFORMIX-Universal Server Client Products Installation Guide for Microsoft Windows Environments*.

2. Database servers

Install Universal Server.

3. DataBlade modules

Install DataBlade modules in order from the oldest to the newest versions. For information on how to install individual DataBlade modules, refer to the DataBlade module documentation.

Before you can use a DataBlade module that you have installed, you must register it with the **BladeManager**, a utility that is included with Universal Server. For information on how to register a DataBlade module, see the *BladeManager User's Guide*.



If you install more than one Informix product, complete all installation procedures for one product before you start to install the next product. Do not load the files from another Informix product onto your computer until you complete the current installation.

If you want to preserve product files of earlier versions, you must create separate directories for each version of your Informix products. If you install multiple versions of an Informix product, you must set the **INFORMIXDIR** environment variable to the appropriate directory name for the version that you want to access.

For information about the **INFORMIXDIR** environment variable, see the *Informix Guide to SQL: Reference*.



**Important:** If you install a new version of an Informix product, you must follow the same order of installation. For example, if you install a new version of a client product, you must then reinstall a comparable version of Universal Server and any additional products.

## **Preinstallation Considerations**

Before you install the database server, you must address the following considerations:

- Check that you are a member of the Administrators group.
- Decide whether you want to install the database server on a domain or a local computer.

#### Administrators Group Membership

To execute the installation program, you must be a member of the Windows NT Administrators group for the domain or the local computer on which you plan to install the database server. The **User Manager** in the **Administrative Tools** program group allows you to add members to the Administrators group. Context-sensitive, on-line help provides detailed instructions on how to create groups and add users to groups.

#### Domain Installation

If you plan to access the database server from client computers, install the database server on the domain controller. Users on other Windows NT computers can then access the database server if they belong to either the same domain or a trusted domain. You can use the Windows NT domain controller to manage the user account information for all domain members. (For information on how you can provide increased database security, see "Dividing Administrative Tasks" on page 11.)

If you want Universal Server to run on a domain, log on to the domain before you run the installation program. If you are logged on to a domain in which you have user privileges but not administrative privileges, you will receive an error when you run the installation program. For an explanation and corrective action, see "Error Messages" on page 21.

For more information on domains and the domain controller, refer to your operating system documentation.

#### Local Installation

If you do not plan to have client computers access the database server, install the database server on the local computer. If you do not have administrative privileges on the domain, this is the only option available to you.

If you choose to install the database server locally and later want to allow client computers to have access to the database server, at that time you must create a **hosts.equiv** file to specify trusted Universal Server clients who can connect from remote computers. For more information, see the *INFORMIX-Universal Server Administrator's Supplement for Windows NT, Version 9.12x.* 

If you want Universal Server to run locally, log on to the local computer before you run the installation program.

## **Installing Universal Server**

This section describes the installation procedure. The first subsection provides a quick overview of the installation procedure. It lists steps that correspond to the pages of the installation wizard. Subsequent sections provide more detailed information about the installation procedure.

The installation program installs Universal Server as a Windows NT service. It creates a user account called **informix** and an administrative group called **Informix-Admin**. The installation program automatically assigns the **informix** user account, which Universal Server runs under, to the **Informix-Admin** group and to the **Administrators** group. If you enable role separation when you install Universal Server, you can change the name of the **Informix-Admin** group.

If you plan to customize your installation of Universal Server, read all of these instructions before you run the installation program. Keep the following manuals nearby because they provide detailed discussions of specific installation and configuration-parameter options, such as role separation, the root dbspace, the default sbspace, and tape devices:

- INFORMIX-Universal Server Trusted Facility Manual
- INFORMIX-Universal Server Administrator's Guide
- INFORMIX-Universal Server Administrator's Supplement for Windows NT, Version 9.12x

### **Universal Server Installation: A Quick Overview**

When you install Universal Server, you perform the following tasks:

- Run **setup.exe** to launch the installation program.
- Supply your serial number and serial number key, as shown on the serial-number key card in your product materials package.
- Supply product-registration information such as your name, title, and company.
- Supply address information.
- Supply contact information such as your telephone number, fax number, and Internet address.
- Specify an installation directory.
- Enable role separation if you need *trusted facility* features. Otherwise, disable role separation.

If you enable role separation, you perform three additional tasks:

- Divide administrative tasks into categories such as Auditing, Security Administration, and General Administration.
- Supply a name for the Auditing Administrator.
- **u** Supply a name for the Security Administrator.
- Supply a name for the database server.
- Specify the storage location and size of a primary and a mirrored root dbspace.
- Specify the storage location and size of a primary and a mirrored default sbspace.
- Specify information, such as path, block size, and capacity, about the tape device used for the backup and restore of dbspaces and logical logs.
- Add the **informix** user password.
- Specify the location of the **sqlhosts** table.

### Launching the Universal Server Installation Program

You can install Universal Server from the Windows NT taskbar or the Windows NT Explorer. To abort the installation at any time, click **Cancel**.



*Important:* These installation instructions assume you are installing from the **D**: drive. If you are installing from another drive, substitute the appropriate drive in the installation instructions.

#### To begin the installation from the taskbar

- 1. Insert the CD into the **D**: drive.
- 2. To open the Run dialog box, choose **Start** $\rightarrow$ **Run** from the taskbar.
- 3. Type D:\setup.exe in the Command Line text box.
- 4. Click OK.

#### To begin the installation from the Windows NT Explorer

- 1. Insert the CD into the **D**: drive.
- 2. In Explorer, double-click the **D**: drive.
- 3. Double-click **setup.exe**.

The main page of the installation wizard appears, as Figure 2 illustrates.

#### **Figure 2** The Installation Wizard Main Page



The installation option that the installation wizard executes next is displayed in boldface type.

The **Next** button becomes the **Finish** button when the last page is displayed.

The Universal Server installation wizard guides you through three steps of the installation procedure. The pages of the installation wizard contain buttons that enable you to navigate between pages. In most cases, you can click **Next** to advance to the following page or click **Back** to return to the previous page. To abort the process at any time and return to Windows NT, click **Cancel**.



*Tip:* On pages in which you are required to enter information, press TAB to move the cursor from one text box to another.

The installation program checks the information that you enter and displays an error message if the information is not valid. If an error occurs, refer to "Error Messages" on page 21 for information.

## **Supplying Customer Information**

Step 1 of the installation procedure includes four pages that prompt you to supply customer information. The following table describes these pages.

Wizard Page	Description of Task
Licensing the Software	Type the case-sensitive serial number and serial-number key exactly as shown on the serial-number key card that is provided in your Informix product materials package.
Product Registration	Type your name, title, and the name of your company. This page is optional. The installation program does not check whether information on this page is valid.
Address Information	Type your address information. This page is optional. The installation program does not check whether information on this page is valid.
Contact Information	Type your entire telephone number, fax number, and Internet address. This page is used to expedite customer service requests.
	This page is optional. The installation program does not check whether information on this page is valid.

## **Selecting Installation Options**

Step 1 of the installation procedure also includes pages that prompt you to select installation options. In this part of the installation, you:

- establish an installation directory.
- choose whether or not to enable role separation.
- name the database server.

#### Establishing an Installation Directory

You must decide where you want the installation files to reside. You can choose to keep the default directory, type a new directory in the **Installation Directory** text box, or click the **Browse** button to select another directory from the Select Directory dialog box. The destination drive must be formatted with NTFS.

If the **INFORMIXDIR** directory has been created, the installation files reside in this directory by default. Otherwise, the default directory is an **Informix** directory on the root of the first NTFS drive that the installation program finds on your system.

#### **Dividing Administrative Tasks**

The **Role Separation** page allows you to enable role separation. If you enable role separation, you provide increased database security because you can split administrative tasks into mutually exclusive roles. If you enable role separation, you gain control over who accesses Universal Server.

However, when you enable role separation, only users who are designated as members of the **IXUSERS** group can access the database. Each new user must be a member of the **IXUSERS** group. For more information about role separation, see the *INFORMIX-Universal Server Trusted Facility Manual*.

The following table describes the administrative-role categories.

Role Category	Role Definition
Auditing	The person who audits the records of specific types of database activities
	If someone attempts to circumvent or corrupt the security mechanism of the database, these actions can be traced.
Security Administration	The person who maintains the security of the database server
	Functions of this role include audit adjustment and changing security characteristics of storage objects.
General Administration	The person responsible for general administrative tasks such as archiving and restoring data, monitoring use and performance, and tuning the system

Browse Button

If you want to enable role separation, make sure that the box on the **Role Separation** page is checked.

*Important:* If you do not enable role separation, to enable it in the future, you must reinstall Universal Server.

If you do not enable role separation, continue with "Naming the Database Server" on page 13.

#### Specifying Universal Server Administrative Groups

Using the roles described in the previous section, you can specify the names of administrative groups that access Universal Server. The following table describes the groups and gives their default names.

Name	Group Type
IXDBSA (INFORMIX-ADMIN)	General administration tasks
IXDBSSO	Security-related tasks
IXAAO	Audit administration tasks
IXUSERS	End-user tasks

You can choose to keep the default group names, type new group names, or click **Browse** to select other group names from the Select Group dialog box.

#### Establishing the Auditing Administrator

When you enable role separation, the database server uses a special account for auditing. You can choose to keep the default user name, type a new user name, or click the **Browse** button to select another user name from the Select User dialog box. Then type a password in the **Password** and **Confirm Password** text boxes.



#### Establishing a Security Administrator

When you enable role separation, the database server uses a special account for security administration. You can choose to keep the default user name, type a new user name, or click **Browse** to select another user name from the Select User dialog box. Then type a password in the **Password** and **Confirm Password** text boxes.

#### Naming the Database Server

On the **Name the Database Server** page, you are required to specify a name for the database server. When a client application connects to a database server, the client application must specify its database server name.



*Tip:* Database server names must begin with a letter and can only contain letters, numbers, and the underscore character.

## **Copying Files**

When you click **Next** on the **Database Server** page, the main page of the wizard appears again with Step 2 highlighted. When you click **Next** on this page, the installation program installs the files on your system in the location and in the manner that you specified.

## **Configuring the Database Server**

After the installation program installs the files on your system, the main page of the wizard appears again with Step 3 highlighted. The pages in this part of the installation program allow you to set specific configuration parameters.

#### Specifying the Root DBSPACE Storage Location

Use the **Root DBSPACE Storage Location** page, as Figure 3 illustrates, to specify a primary and a mirrored data-storage location for the root dbspace. A dbspace is a logical collection of storage areas to which databases and tables are assigned. The mirrored location serves as the backup area if the primary storage device fails. For more information about dbspaces, see the *INFORMIX-Universal Server Administrator's Guide*.

Installing INFORMIX-Universal Server **Root DBSPACE Storage Location** By default, the Select the primary data location where you want Universal Server Primary Data Location to store data. is the current drive. The amount of Select the mirror location where you want a copy of the data stored. The mirror location serves as the data-backup area should the primary available disk space is storage device fail. shown here. Primary Data Location (NTFS only): 250 MB Free • • Mirror Location (NTFS only): None If a second NTFS drive Maximum Size: 250 MB (with at least 10 Suggested Size: 125 MB megabytes available) is found, this text box 📥 MB Current Size: 125 shows the default drive letter and available disk space. If < Back Next > Cancel a second local drive formatted with NTFS cannot be found, the The Maximum Size is the The Suggested Size is The Current Size defaults to Mirror Location smaller of the available half of the disk space the Suggested Size, but you displays None. disk spaces shown for the amount shown for the can change it to as little as Primary Data Location and Maximum Size. 20 megabytes.

Figure 3 The Root dbspace Storage Location Page

## You can select a new drive from the **Primary Data Location** or **Mirror Location** list boxes.

the Mirror Location.

#### Specifying the Default sbspace

Use the **Default sbspace Storage Location** page, as Figure 4 illustrates, to specify a primary and a mirrored data-storage location for smart large objects. An sbspace is the unit of disk-space allocation that the database server uses to store smart large objects (that is, CLOB and BLOB data). The mirrored location serves as the backup area if the primary storage device fails. For more information about sbspaces, see the *INFORMIX-Universal Server Administrator's Guide*.

Installing INFORMIX-Universal Server Default SBSPACE Storage Location By default, the Primary Data Location Enter the location, the page size, and size of the default sbspace. of the sbspace is the Select the mirror location to store a copy of the sbspace. current drive. The The mirror location serves as the data backup area should the primary amount of available storage device fail. disk space is shown here. Primary Data Location (NTFS only): 250 MB Free ▼ Mirror Location (NTFS only): None • If a second NTES drive SBSPACE Size (with at least 10 Maximum Size: 1050 megabytes available) Suggested Size: 525 is found, this text box Page Size shows the default \$ (in pages) Current Size: 10 🗢 MB 1 drive letter and available disk space. If a second local drive formatted with NTFS < Back Next > Cancel cannot be found, the Mirror Location displays None. The Maximum Size is the The size of the sbpage The Suggested The Current Size should approximate the size smaller of the available Size is half of the defaults to 10, but you of the most frequently disk spaces shown for the disk space amount can change it to as little

shown for the

Maximum Size.

occurring smart large object

that the sbspace holds. The default is 1 page.

Primary Data Location

and the Mirror Location.

#### Figure 4 shspace Storage Location Page

The Default sbspace Storage Location Page

## You can select a new drive from the **Primary Data Location** or **Mirror Location** list boxes.

as 5 megabytes.

#### Specifying Tape Devices

Use the **Tape Device** page to specify a tape device or the pathname of a file on a hard disk that the **ontape** utility can use to archive dbspaces and back up logical-log files. Figure 5 illustrates the **Tape Device** page.

*Figure 5 The Tape Device Page* 

Installing INFORMIX-Universal Server	
Tape Device	
Please specify the tape device information for backup and restore of dbspaces and logical logs. If no backup or logging is required, enter "NUL."	
Tape Device for dbspaces	<ul> <li>The first tape device that is</li> </ul>
Path:	in this text box.
Block Size: 16 🖨 KB Capacity: 10 🖨 MB	
Tape device for logical logs (can be same as above)	The maximum amount of data that can be written to a tape device.
Path:	
Block Size: 16 🖨 KB Capacity: 10 🖨 MB	
<pre></pre>	
	-

The largest block size permitted by your tape device.

The second tape device that is found is displayed in this text box.

If a tape device is not found, NUL is the default in the **Path** text box. NUL indicates to Universal Server that you do not want to create archives or back up the logical-log files. If the tape device is specified as NUL, block size and capacity are ignored.

To create archives on a hard disk, specify the pathname of a file. However, you must verify that you have enough disk space to create an archive.

You can choose to keep the default name (tape device or NUL), type a new pathname or tape device name, or click **Browse** to select another tape device name from the Select Tape Devices dialog box. For more information about how to set tape devices, see the *INFORMIX-Universal Server Administrator's Supplement for Windows NT, Version 9.12x.* 

#### Establishing the Informix User Password

To launch Universal Server as a service, you must supply a password for the **informix** user account. On the **Informix User Password** page, type a password in the **Password** and **Confirm Password** text boxes.

#### Specifying the sqlhosts Registry Machine

Use the **sqlhosts Registry Machine** page to specify the location of the **sqlhosts** table. The **sqlhosts** table contains information that enables a client application to connect to the database server. It specifies the name of the database server, the type of connection, the name of the host computer, and the service name. You can choose to keep the default computer name or type a new name to select a new computer name. For more information about the **sqlhosts** table, see the *INFORMIX-Universal Server Administrator's Supplement for Windows NT, Version 9.12x.* 

When you click **Finish**, the installation program configures the database server. When the program finishes the configuration, the message box that indicates that Universal Server is ready for initialization appears, as Figure 6 illustrates.

I				
INFORMIX-Unive	ersal Server has no	ow been fully cor	nfigured.	
Would you like	to initialize it now	? That might tak	e a few minutes.	
	Yes	No	]	

Ready for Initialization Message Box

Figure 6

To initialize the database server and root dbspace, click **Yes**. If you click **No**, you must manually initialize the database server. For more information, see "Starting Universal Server" on page 19.

## The INFORMIX-Universal Server Program Group

When Universal Server is successfully installed, the Universal Server program group window is displayed in the Windows NT Program Manager window. The following table describes the program items in the program group.

Program Group Item	Description
Command-Line Utilities	This item opens an MS-DOS command-line window that enables you to run command-line utilities such as <b>onstat</b> , <b>oncheck</b> , and <b>onspaces</b> . For more information about command-line utilities, refer to the <i>INFORMIX-Universal Server Administrator's Guide</i> .
DB-Access	This item starts DB-Access, which enables you to access Universal Server databases. For more information, refer to the <i>DB-Access User Manual</i> .
Documentation Notes	This item describes features that are not covered in Universal Server manuals or that have been modified since publication. Read the contents of this file before you use Universal Server.
Find Error	This item starts the Find Error help file, which provides detailed explanations of Universal Server error codes.
Release Notes	This item describes feature differences from earlier versions of Informix products and how these differ- ences might affect current products. This file also contains information about any known problems and their workarounds. Read the contents of this file before you use Universal Server.
Uninstall	This item allows you to remove Universal Server from your system.

## Starting and Stopping Universal Server

This section describes how to start Universal Server and set up Universal Server to start automatically when Windows NT is launched. In addition, this section describes how to stop Universal Server.

## **Starting Universal Server**

Refer to the following steps to start Universal Server as a service. Universal Server automatically starts the INFORMIX-Universal Server Message Server service to write to the Windows NT event log.



**Warning:** If you start Universal Server with the -**i**y parameters after you have already initialized it, Universal Server overwrites the existing root dbspace unless you have first changed the ROOTPATH parameter in the ONCONFIG file. If Universal Server overwrites the existing root dbspace, it destroys the information that the root dbspace contains, including information about any databases that you have created. Consequently, you must then restore information from archive and backup tapes.

#### To start Universal Server

- 1. From the Windows NT Main program group, double-click the **Control Panel** icon.
- 2. Double-click the **Services** icon.
- 3. Select INFORMIX-Universal Server from the **Service** list box.
- 4. Click Start.

If you did not initialize the database server and the root dbspace when you installed Universal Server, you must use the following steps.

#### To initialize and start Universal Server

- 1. From the Windows NT Main program group, double-click the **Control Panel** icon.
- 2. Double-click the **Services** icon.
- 3. Select INFORMIX-Universal Server from the **Service** list box.

- In the Startup Parameters text box, enter -iy.
   When you specify these parameters, Universal Server creates and initializes the root dbspace.
- 5. Click Start.

#### Automatically Starting Universal Server

You can also set up Universal Server to start automatically when Windows NT is launched.

#### To set up Universal Server to start automatically

- 1. From the Windows NT Main program group, double-click the **Control Panel** icon.
- 2. Double-click the **Services** icon.
- 3. Select INFORMIX-Universal Server from **Service** list box.
- 4. Click **Startup**, and click **Automatic** in the Service dialog box.
- 5. Click OK.
- 6. Verify that the **Startup Parameters** text box is empty.
- 7. Click Start.

## **Stopping Universal Server**

To stop Universal Server, you can use one of the following options:

- Services in the Windows NT Control Panel
- The **onmode** utility

#### To stop Universal Server using Services in the Windows NT Control Panel

- 1. From the Windows NT Main program group, double-click the **Control Panel** icon.
- 2. Double-click the **Services** icon to display the **Service** list box.
- 3. Select INFORMIX-Universal Server from the **Service** list box.
- 4. Click **Stop**.

To stop Universal Server with the onmode utility

- 1. From the INFORMIX-Universal Server program group, double-click **Command Shell** to display the command shell window.
- 2. At the command-line prompt, type:

```
onmode -ky
```

## **Removing Universal Server**

You can remove Universal Server from your system with the Uninstallation program. To launch the Uninstallation program, double-click the **Uninstall** icon in the INFORMIX-Universal Server program group window. The dialog box that appears allows you to specify whether you want to remove everything or just the program files.

To remove the program files and preserve the configuration of the database server, leave the check box unchecked. This option is the default. When you click **OK**, the Uninstallation program removes all product files, empty directories, and product icons except the **Uninstall** icon.

To remove everything, check the **Remove configuration** check box. When you click **OK**, the Uninstallation program removes the program files and all server configuration files, such as root dbspace, the **onconfig** file, and the **sqlhosts** table.

## **Error Messages**

This section presents an alphabetical list of common installation error messages and warnings.

```
TCP/IP, required by Universal Server, cannot be found on your system. You must install TCP/IP before installing Universal Server.
```

If TCP/IP is not installed, this error is displayed. Install TCP/IP.

```
The database server name you entered is not valid. Please note
the following limitations: a database server name cannot
exceed 18 characters; it can only contain letters, numbers,
and underscores; and it must begin with a letter.
```

If the **Database Server Name** is not valid, this warning is displayed. Enter a different name and note the limitations stated in the message.

```
The serial number and key you entered is not valid. Verify and re-enter your serial number and key.
```

If the **Serial Number** or **Key** is not valid, this warning is displayed. Re-enter the serial number and key.

```
The specified drive is not formatted with NTFS. Please enter a new path.
```

If the drive specified in the **Installation-Setup Options** page is not formatted with NTFS and **Next** is clicked, this warning is displayed. Select a drive that is formatted with NTFS.

There is not enough disk space on the destination disk drive *drive\_letter*. It has *number KBytes* free while the product requires *number KBytes*. Clear up some space or try another destination drive.

If the drive specified in the **Installation-Setup Options** page does not have enough free disk space and **Next** is clicked, this warning is displayed. Either specify a different drive or delete unnecessary directories and files from the original drive before you resume the installation process.

```
The supplied path is not valid. Please enter a new path.
```

If an invalid path is entered in the **Installation-Setup Options** page and **Next** is clicked, this warning is displayed. Enter a different path.

```
This installation of Universal Server requires number MB of free page file space. After you install this product, increase your page file size to properly use your virtual memory with this product.
```

If sufficient page file space (virtual memory) is not available for the installation, this warning is displayed. For information about how to increase the size of your page file, refer to your Windows NT documentation.

```
This installation of Universal Server requires number MB of RAM. More memory must be available before you can install Universal Server.
```

If sufficient random access memory (RAM) is not available, this error is displayed. Close all other open applications. If you still receive this message, check that your system has at least 16 megabytes of RAM.

```
This product requires version 4.0 or greater of the Windows NT operating system. You must update your operating system before installation.
```

This product requires Windows NT, Version 4.0, or later. Update your operating system if this error is displayed.

You are not the domain administrator. In order to run this program, you must belong to the local Administrators group on *domain\_controller\_name*.

If you are not a member of the Administrators group for the domain, this error is displayed. Use the domain administrator account to log on or contact your system administrator to add your user account to the Administrators group for the domain.

You do not appear to be an administrator. In order to run this program, you must belong to the Administrators group on  $\mathit{local}$  machine.

If you are not a member of the Administrators group on the local computer, this error is displayed. Use the administrator account to log on or contact your system administrator to add your user account to the Administrators group.

```
Your password entries do not match. Please verify that your password matches in the Password and Confirm Password text boxes.
```

The password you entered in the **Password** text box and the **Confirm** text box do not match. Re-enter the password in both text boxes.

```
Your password is not valid. Please verify and re-enter your password.
```

When the user account exists and the user clicks **Next**, the password is verified. If the password is incorrect, this message is displayed. Re-enter the password.

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