Universal Management Agent 1.1

Installation Guide

IBM

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> **Note**
>
> Before using this information and the product it supports, be sure to read the information in Appendix, "Notices and Trademarks" on page 43.

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Contents

About this Guide

This guide is intended for network administrators and end users who will be installing the Universal Management Agent (UMA) program. This guide contains:

- Software Prerequisites

- Installation instructions for the UMA program

- Instructions for configuring your browser to support the UMA program

- Instructions for implementing SNMP support

- Instructions for distributing and installing UMA using SMS and Tivoli

- Instructions for uninstalling the UMA program

After installing the program, refer to the integrated help system for operating instructions.

Additional information about the UMA program is available at the UMA Web site:

    http://www.ibm.com/pc/us/desktop/uma

If, after installing and configuring UMA according to the directions in this manual, you still encounter difficulties, you will find assistance available at the above Web site.

Chapter 1. Prerequisites

Before installing the UMA program, make sure you have the following installed on your computer:

- **Operating System:** Windows 95 with OEM Service Release 2, Windows 98, Windows NT Workstation 4.0 with Service Pack 3 or later, or Windows NT server 4.0 with Service Pack 3 or later. The operating system must be set up to accept long file names.

- **Internet Browser:** Microsoft Internet Explorer 3.0 (Version 3.02 or later) or Internet Explorer 4.0 (Version 4.72.2106.8 or later). If your browser does not meet these requirements, you can download the latest Internet Explorer browser from the Microsoft Web site at `http://www.microsoft.com/ie`. The UMA program works best with Internet Explorer 4.0.

- **Network Support:** You must have TCP/IP installed.

- **Memory:** 32MB minimum.

- **Processor:** Pentium (or equivalent) 133MHz minimum

Note: Performance is affected by processor speed, the amount of memory installed, and other applications and programs that are running concurrently with UMA. Additional memory (or increased virtual memory) might be required depending on the memory requirement for other applications and programs that will run concurrently with UMA.

The UMA program is supported for installation on the following models:

- IBM PC 300GL, PC 300PL, PC 300XL models.

- Selected IBM ThinkPad, IntelliStation, and Netfinity server models.

For a detailed list of supported models, see the UMA Web site at `http://www.ibm.com/pc/us/desktop/uma`.

Note: Throughout this document, the term "client" is used to describe any computer on which the UMA program (IBM System Management Tools) has been or will be installed using the Typical Client or Custom Client installation method. For example, if the UMA program was installed on a server using the Typical Client or Custom Client installation method, that server is a UMA client. For the purpose of this document, computers on which UMA components have been or will be installed using the Enterprise Console Integration method only are not UMA clients.

Chapter 2. Installing the UMA Program

If you want to preconfigure UMA for unattended installation over a network or enable it to be installed without a user making selections or entering information, you can do so by following the instructions in "Performing an Unattended Installation" on page 7. To perform a standard installation, continue with the instructions in this chapter.

Before you Begin: During the installation procedure, you will be prompted for information and asked to make some decisions. You will need to answer the following questions before you start the installation process. In most cases, you should contact your network administrator to help you answer these questions.

Figure 1 (Page 1 of 3). UMA Installation Options	
Question	**Answer**

1. Which installation method should I use?
 	
• **Custom Client** installation lets you select which components to install or reinstall. You can select from: IBM System Management Tools (the main component of UMA), LANDesk Client Manager v3.2, Enablement for IBM Netfinity Manager, Enablement for Tivoli Framework, and SNMP. If you select the Custom installation, answer questions 2 through 10 before you begin the installation.
 	
• **Typical Client** installation automatically installs IBM System Management but lets you optionally include SNMP. If you select Typical installation, answer questions 6 through 9 before beginning the installation.
 	
• **Enterprise Console Integration** is for use at the administrator's console only. It automatically installs the necessary UMA components and provides the option of integrating the UMA functions into Tivoli Inventory, Tivoli NetView, and Microsoft SMS 1.2. The Enterprise Console Integration method installs only the relational-database-management-system (RDBMS) scripts needed by the server; it does not install the client-side UMA programs. If you select Enterprise Console Integration, answer questions 7 through 12 before beginning the installation.
 	
• **Silent/Unattended** installation lets you install UMA without being present to answer questions during installation. There are three ways to perform a silent/unattended installation:
  – SMS Software Distribution - see "Software Distribution and Installation of UMA using SMS" on page 33.
  – Tivoli Software Distribution - see "Software Distribution and Installation of UMA using Tivoli" on page 35.
  – Non-automated Distribution, which includes hand-carried disks and shared disks.
 	
Important: Enterprise Console Integration and Typical or Custom Client installations can be done on the same computer. For example, if you want to integrate UMA with a Microsoft SMS server, you can use the Enterprise Console Integration method; if you also want that server to be an UMA client, you can install UMA again on that server using the Typical or Custom Client installation method.	

2. Should I install the LANDesk Client Manager (LDCM) interface? (LDCM is used by the UMA program to gather and display certain information. The LDCM interface provides an optional method of viewing a subset of the UMA information outside of the Internet/Intranet environment, and as such, is an optionally installed component.)	

Figure 1 (Page 2 of 3). UMA Installation Options	
Question	**Answer**
3. Should I install Enablement for IBM Netfinity Manager? (In most cases, you will install Enablement for IBM Netfinity Manager if IBM Netfinity Manager is already installed on the network and will be used to manage your computer.)	
Note: If you already have Netfinity installed on your computer, you must uninstall it before installing UMA, and then reinstall it by checking the **Enablement for IBM Netfinity Manager** box during the UMA Custom installation. If you decide to install Netfinity after the initial UMA installation, you must install it by running the UMA Custom installation again, and check only the **Enablement for IBM Netfinity Manager** box.	
4. If I install Enablement for IBM Netfinity Manager, do I want to choose the default Passive Client Operation Mode? (You can choose the client operation mode from the following): • **Passive Client Operation** is designed for remote access and management through Netfinity Manager only. • **Active Client Operation** is designed for local access from the client on which Netfinity Services is installed *and* remote access and management through Netfinity Manager. • **Stand-alone Operation** is designed for local access only through the client on which Netfinity Services is installed. To change from the default Passive mode to either Active or Stand Alone Client mode, see Chapter 3, "Configuring Client Operation Mode for IBM Netfinity Manager" on page 15.	
5. Should I install Enablement for Tivoli Framework? (The Tivoli Framework enhances the scalability of Tivoli Management Agent while simultaneously reducing the resource requirements placed on the managed systems.)	
6. Should I create my own User ID and password for UMA or does the network administrator want to assign one? (If the network administrator assigns a User ID and password, write them down. After the UMA installation is complete, store the User ID and password in a safe place where no one else has easy access.)	
7. Should I install the Simple Network Management Protocol (SNMP)? (SNMP allows your computer to send alerts and other information as SNMP traps, which can be logged by the Microsoft Server Management Software (SMS). In most cases, you will install SNMP. **Note:**You will need your operating system CD for the SNMP installation.)	
8. What email addresses and pager numbers should I use so UMA can alert the administrator? (In addition to the pager number, you will also need the PIN for each pager if the paging system requires it. You can enter up to two alphanumeric pager numbers, two numeric pager numbers, and two email addresses.)	
9. Do I want to enable the DMI remote RPC interface? (Enabling the RPC (Remote Procedure Call) interface will allow remote systems to access DMI (Desktop Management Interface) information on the machine on which you are installing UMA. Disabling the RPC interface will prevent remote systems from accessing DMI information.)	
10. If my computer is part of a Tivoli Management Region, what is the Tivoli database user password and policy region? (Required for Windows NT clients only.)	
11. If any of the following network management programs are being used on the network, into which one do I integrate the UMA functions? • Tivoli Inventory (includes Tivoli Inventory and Software Distribution) • Tivoli NetView • SMS 1.2 **Note:** If Tivoli Inventory and Tivoli NetView are installed on the same server, you must perform the **Enterprise Console Integration** twice. Select the **Tivoli Inventory** option on the first installation, and then select the **Tivoli NetView** option on the second installation.	

Figure 1 (Page 3 of 3). UMA Installation Options	
Question	**Answer**
12. If UMA functions will be integrated into SMS 1.2, which method will be used? • Adding information to the SMS database • Sending SNMP traps that can be logged by SMS • Enabling additional features on the SMS Tools menu when a UMA client is selected at the SMS Console.	

Once you have collected the above information, you are ready to start the UMA installation.

Note: If you have SMART Reaction already installed on your computer, you must uninstall it before installing UMA. Your database of SMART Reaction information will not be affected by the uninstall procedure.

Some IBM Personal Computer models come with the UMA Program on the *Software Selections* CD and in a ready-to-install format on the hard disk. Not all IBM Personal Computer models that support UMA come with UMA.

The UMA program is updated periodically. The version on the World Wide Web is always the latest version and might be later than the version that comes with your computer.

If UMA did not come with your computer, use the procedure for "Installing the UMA Program from the World Wide Web." If UMA comes with your computer, you can use any of the installation procedures.

- If you are going to download and install the UMA program from the World Wide Web, see "Installing the UMA Program from the World Wide Web."

- If you are installing the UMA program from the *Software Selections* CD, see "Installing the UMA Program from CD-ROM" on page 6.

- If you are going to install the UMA program from your computer's collection of uninstalled programs, see "Installing the UMA Program from the Hard Disk" on page 7.

If you would like to automatically install the UMA program on a computer without an operator having to be present to answer the questions during setup, you can choose to perform an unattended installation. For further details, see "Performing an Unattended Installation" on page 7.

Installing the UMA Program from the World Wide Web

1. Download the UMA self-extracting file from the following World Wide Web address and place it in its own folder. If you intend to install UMA support on enterprise systems management servers (Tivoli Framework, Tivoli NetView, or Microsoft SMS), download the file EPRISE.Z. If you intend to integrate UMA with Tivoli Framework or Inventory, download the file TIVOLI.Z. If you intend to install Netfinity services with UMA, download the file NETFIN.Z.

   ```
   http://www.ibm.com/pc/us/desktop/uma
   ```

2. Run the self-extracting file, UMAW32.EXE, to unpack the files. When prompted, enter the path to the folder where you want the installation files to reside. This step creates the installation files, including SETUP.EXE, which you will use in a later step.

3. Move any additional files you downloaded (EPRISE.Z, TIVOLI.Z, and/or NETFIN.Z) to the same folder where the UMA installation files reside. You do not need to unpack these additional files.

4. If you intend to perform a **Custom Client Installation** with the **Enablement for IBM Netfinity Manager** option, and would like to change the default Passive Client Operation mode to either Active

Client or Stand Alone Client mode, see Chapter 3, "Configuring Client Operation Mode for IBM Netfinity Manager" on page 15 before continuing.

5. Close all open windows and programs.

6. From the Windows Desktop, click on **Start** and then click on **Run**.

7. Type the path to the SETUP.EXE file you unpacked earlier, and then click on **OK**.

8. The installation wizard is displayed. Follow the instructions on the screen to select a folder where the UMA program will be installed.

9. Using the information you gathered earlier, follow the instructions on the screen to select your installation method and complete the installation.

10. When the installation is complete, shut down and restart the operating system. The UMA programs are ready to run. However, before starting the UMA program do the following:

    - See Chapter 4, "Configuring Internet Explorer" on page 17 to ensure your browser is configured correctly for use with UMA.

    - If you installed UMA to be used with Microsoft SMS, see "Configuring SNMP for UMA" on page 21 for additional configuration information.

    - If you installed UMA to be used with Tivoli Inventory, see "Configuring Tivoli Inventory for UMA Integration" on page 24 for additional configuration information.

    - If you installed UMA to be used with Tivoli NetView, see "Configuring Tivoli NetView for UMA Integration" on page 27 for additional configuration information.

Installing the UMA Program from CD-ROM

To install the IBM Universal Management Agent Program from the *Software Selections* CD:

1. Insert the *Software Selections* CD into the CD-ROM drive.

2. From the Windows desktop, click on the **Start** button.

3. Click on **Run**.

4. Type *g:*\SOFTSEL (where *g* is the letter assigned to your CD-ROM drive.) Then click on **OK**. The title screen appears.

5. Click on **Install Software**. The install window appears.

6. Scroll down the install window until Universal Management Agent appears, then click on the check box next to it.

7. Click on the **Install** button at the bottom-right corner of the screen. The Software Selections Install Progress window appears.

8. Check to make sure that Universal Management Agent is the only program to be installed, then click on **Install**. The program installation screen appears.

9. Using the information you gathered earlier, follow the instructions on the screen to select your installation method and complete the installation.

10. When the installation is complete, shut down and restart the operating system. The UMA programs are ready to run. However, before starting the UMA program do the following:

    - See Chapter 4, "Configuring Internet Explorer" on page 17 to ensure your browser is configured correctly for use with UMA.

    - If you installed UMA to be used with Microsoft SMS, see "Configuring SNMP for UMA" on page 21 for additional configuration information.

- If you installed UMA to be used with Tivoli Inventory, see "Configuring Tivoli Inventory for UMA Integration" on page 24 for additional configuration information.

- If you installed UMA to be used with Tivoli NetView, see "Configuring Tivoli NetView for UMA Integration" on page 27 for additional configuration information.

Installing the UMA Program from the Hard Disk

To install the IBM Universal Management Agent Program from your computer's hard disk, use the preinstalled utility program:

1. Double-click on the **Start IBM Welcome** icon.

2. In the IBM Welcome Center window, click on **Customize your system software** in the left frame.

3. In the screen that appears to the right, scroll down the window to the bottom. Then, click on **Run the Software Selection program from the hard drive**.

4. Click on **Install Software**. The install window appears.

5. Scroll down the install window until Universal Management Agent 1.1 appears, then click on the check box next to it.

6. Click on the **Install** button at the bottom-right corner of the screen. The Software Selections Install Progress window appears.

7. Check to make sure that Universal Management Agent 1.1 is the only program to be installed, then click on **Install**. The program installation screen appears.

8. Using the information you gathered earlier, follow the instructions on the screen to select your installation method and complete the installation.

9. When the installation is complete, shut down and restart the operating system. The UMA programs are ready to run. However, before starting the UMA program do the following:

   - See Chapter 4, "Configuring Internet Explorer" on page 17 to ensure your browser is configured correctly for use with UMA.

   - If you installed UMA to be used with Microsoft SMS, see "Configuring SNMP for UMA" on page 21 for additional configuration information.

   - If you installed UMA to be used with Tivoli Inventory, see "Configuring Tivoli Inventory for UMA Integration" on page 24 for additional configuration information.

   - If you installed UMA to be used with Tivoli NetView, see "Configuring Tivoli NetView for UMA Integration" on page 27 for additional configuration information.

Performing an Unattended Installation

You can install UMA without being present to answer questions during the installation. By modifying the SETUP.ISS file, you can install UMA onto a computer with the preferences already set.

Important: You will not be able to add SNMP or configure Windows email as part of the unattended installation. You must perform a standard installation to configure these features.

You can perform an unattended installation by one of two methods:

- Modify the SETUP.ISS file manually, and then install UMA using the Silent Installation method. See "Modifying the UMA SETUP.ISS File Manually" on page 8 and "Performing a Silent Installation" on page 12.

- Install UMA using the Recorded Installation method, where UMA will record your answers to the setup questions during installation and save them as a modified SETUP.ISS file. Then, use the silent installation method on another computer, using the modified SETUP.ISS. See "Modifying the SETUP.ISS File Using the -r Option" on page 11 and "Performing a Silent Installation" on page 12.

Note: You cannot perform an unattended installation from a CD. You must copy all UMA files from the CD onto the hard disk of the local computer or onto a shared drive on the network.

Modifying the UMA SETUP.ISS File Manually

The following provides a description of each acceptable value for the parameters that can be modified in the SETUP.ISS file. Modify only the parameters that are listed in the following table. Do not modify any other parameters. Use a text editor such as Notepad to modify the file. Save the file as SETUP.ISS. Then, move the file to the same folder where the UMA installation files reside and proceed with "Performing a Silent Installation" on page 12.

Note: A sample SETUP.ISS file with the default settings can be found at "Sample SETUP.ISS files" on page 12.

Figure 2 (Page 1 of 4). UMA SETUP.ISS Values

Section	Parameter	Value
[SdComponentDialogAdv2-0]	IBMDMICOMPONENTS-0=IBM System Management Tools	This entry installs the main components of UMA, including the underlying LANDesk Client Manager code . Do not comment out this line unless you need to *reinstall* one of the optional components.
	IBMDMICOMPONENTS-1=IBM LANDesk Client Manager	This entry installs the LANDesk Client Manager interface. This entry has no effect on installing the underlying LANDesk Client Manager code as part of IBM System Management Tools.
	IBMDMICOMPONENTS-2=Enablement for IBM Netfinity Manager	This entry installs the IBM Netfinity Services component. Remove the comment tag (;) if you want to include Netfinity Services as part of the installation.
	IBMDMICOMPONENTS-3=Enablement for Tivoli Framework	This entry installs the client code required for UMA to integrate into the Tivoli Framework product. Remove the comment tag (;) if you want to include this as part of the installation.
[AskSecurInfo-0]	svUser=	This parameter defines the user ID that will be used to log in to the UMA program. The default value is Admin. You can change this value to any value up to 32 characters.
	svPassword=	This parameter defines the user password assigned to the user ID that will be used to log in to the UMA program. The default value is password. You can change this value to any value up to 32 characters. Passwords are case-sensitive.
	svConfirm=	This parameter confirms the user password. This value must match the value in svPassword.

Figure 2 (Page 2 of 4). UMA SETUP.ISS Values

Section	Parameter	Value
[AskDestPath-0]	szPath=	This parameter defines the path to the folder where the UMA program will be installed.
[AddAdminInfo-0]	szAlphanumericPager=	This parameter defines the telephone number to be used by the Events, Alarms, and Responses program to access the primary pager. Include any numbers required for an outside line. If the number is outside of your local calling area, you must also include the area code and country code, if required. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szPINAlphanumericPager=	This parameter defines the PIN number to be used by the Events, Alarms, and Responses program to access the primary pager. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szAlternateAlphanumericPager=	This parameter defines the telephone number to be used by the Events, Alarms, and Responses program to access the alternate alphanumeric pager. Include any numbers required for an outside line. If the number is outside of your local calling area, you must also include the area code and country code, if required. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szPINAlternateAlphanumericPager=	This parameter defines the PIN number to be used by the Events, Alarms, and Responses program to access the alternate alphanumeric pager. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szNumericPager=	This parameter defines the telephone number to be used by the Events, Alarms, and Responses program to access the primary numeric pager. Include any numbers required for an outside line. If the number is outside of your local calling area, you must also include the area code and country code, if required. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.

Figure 2 (Page 3 of 4). UMA SETUP.ISS Values

Section	Parameter	Value
	szPINNumericPager=	This parameter defines the PIN number to be used by the Events, Alarms, and Responses program to access the primary numeric pager. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szAlternateNumericPager=	This parameter defines the telephone number to be used by the Events, Alarms, and Responses program to access the alternate numeric pager. Include any numbers required for an outside line. If the number is outside of your local calling area, you must also include the area code and country code, if required. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szPINAlternateNumericPager=	This parameter defines the PIN number to be used by the Events, Alarms, and Responses program to access the alternate numeric pager. Only numeric characters, commas, dashes, the asterisk (*), and the pound symbol (#) are valid. Spaces and other characters are not allowed.
	szEmail=	This parameter defines the E-mail address to be used by the Events, Alarms, and Responses program to send messages. Separate multiple e-mail addresses with commas, spaces, or semicolons. You can use up to 128 characters.
	szAlternateEmail=	This parameter defines the alternate E-mail address to be used by the Events, Alarms, and Responses program to send messages. Separate multiple e-mail addresses with commas, spaces, or semicolons. You can use up to 128 characters.

Figure 2 (Page 4 of 4). UMA SETUP.ISS Values

Section	Parameter	Value
[SdShowUserAndPassword-0]	szUserID=	This parameter is used for Windows NT only. Type in user ID used to log in to Windows NT. This value must match an user ID that is defined for that specific computer or for the domain. The value can be in the form `DOMAIN\UserID`, where `UserID` is a user on `DOMAIN`. It can also be in the form of `.\UserID`, where `UserID` is a user on the local NT machine instead of a domain. If you install UMA and you're simply logged into the local machine, and not to a domain, then you'll see `MACHINENAME\UserID`. This is equivalent to `.\UserID`. It is preferable to use either `.\UserID` or `DOMAIN\UserID` in SETUP.ISS so you can use one SETUP.ISS file for multiple machine rather than a custom file for each machine.
	szPassword	This parameter is used for Windows NT only. Type in password assigned to the User ID used to log in to Windows NT. This value must match a password for a user ID that is defined for that specific computer or for the domain.
	szConfirmation	This parameter confirms the Windows NT log in password. This value must match the value in szPassword.

Modifying the SETUP.ISS File Using the -r Option

A record feature is provided with UMA that allows you to automatically record your responses in the SETUP.ISS file as you perform an installation. The modified SETUP.ISS file can then be distributed to other computers to be used as part of a silent installation.

To perform a recorded (-r) installation:

1. Download the UMA self-extracting file from the following World Wide Web address and place it in its own folder.

   `http://www.ibm.com/pc/us/desktop/uma`

2. Run the self-extracting file, UMAW32.EXE, to unpack the files. When prompted, enter the path to the folder where you want the installation files to reside. This step creates the installation files, including SETUP.EXE, which you will use in a later step.

3. Type the path to the SETUP.EXE file, and add "[space]-r" to the end. For example, type `C:\UMA\SETUP.EXE -r`.

4. Answer the questions during installation. UMA will save your answers as new settings in a new SETUP.ISS file.

5. Copy this file (with the other installation files) to a new computer to install UMA using your preferences.

Performing a Silent Installation

To perform a silent (-s) installation:

1. Download the UMA self-extracting file from the following World Wide Web address and place it in its own folder.

   ```
   http://www.ibm.com/pc/us/desktop/uma
   ```

2. Run the self-extracting file, UMAW32.EXE, to unpack the files. When prompted, enter the path to the folder where you want the installation files to reside. This step creates the installation files, including SETUP.EXE, which you will use in a later step.

3. Type the path to the SETUP.EXE file , and add "[space]reboot[space] -s[space]-SMS" to the end. For example, type `C:\UMA\SETUP.EXE REBOOT -s -SMS`. UMA will use the modified SETUP.ISS file to install UMA without any need for user input. After UMA is installed, your computer will automatically reboot.

Sample SETUP.ISS files

The following is an example of the SETUP.ISS file, with the default settings:

Figure 3 (Page 1 of 2). SETUP.ISS

```
[InstallShield Silent]
Version=v3.00.000
File=Response File

[DlgOrder]
Dlg0=Welcome-0
Count=10
Dlg1=SdOptionsButtons-0
Dlg2=SdComponentDialogAdv2-0
Dlg3=AskSecurInfo-0
Dlg4=AskDestPath-0
Dlg5=AskYesNo-0
Dlg6=AdAdminInfo-0
Dlg7=AskYesNo-1
Dlg8=SdShowUserAndPassword-0 (Windows NT only)
Dlg9=SdFinishReboot-0

[Welcome-0]
Result=1

[SdOptionsButtons-0]
Result=102

[SdComponentDialogAdv2-0]
szDir=C:\
IBMDMICOMPONENTS-type=string
IBMDMICOMPONENTS-count=1
IBMDMICOMPONENTS-0=IBM System Management Tools
;IBMDMICOMPONENTS-1=LANDesk Client Manager
;IBMDMICOMPONENTS-2=Enablement for IBM Netfinity Manager
;IBMDMICOMPONENTS-3=Enablement for Tivoli Framework
Result=1

[Application]
Name=Universal Management Agent
Version=3.2
Company=Intel\LANDesk
```

Figure 3 (Page 2 of 2). SETUP.ISS

```
[AskSecurInfo-0]
svUser=admin
svPassword=password
svConfirm=password
Result=1

[AskDestPath-0]
szPath=C:\Program Files\IBM\UMA
Result=1

[AskYesNo-0]
Result=0

[AdAdminInfo-0]
szAlphanumericPager=111-1111
szPINAlphanumericPager=1111
szAlternateAlphanumericPager=222-2222
szPINAlternateAlphanumericPager=2222
szNumericPager=333-3333
szPINNumericPager=3333
szAlternateNumericPager=444-4444
szPINAlternateNumericPager=4444
szEmail=admin@company.com
szAlternateEmail=alt@company.com
Result=1

[AskYesNo-1]
Result=0

[SdShowUserAndPassword-0] (Windows NT only)
szUserID=Administrator  (Windows NT only)
szPassword=password   (Windows NT only)
szConfirmation=password   (Windows NT only)
Result=1   (Windows NT only)

[SdFinishReboot-0]
Result=1
BootOption=3
```

Chapter 3. Configuring Client Operation Mode for IBM Netfinity Manager

Use this chapter only if you intend to perform a **Custom Installation** with the **Enablement for IBM Netfinity Manager** option and want to change the default Passive Client Operation mode to either Active Client or Stand Alone Client mode.

1. Copy the file named `netfbase.rsp` from the Netfinity software package. (You can get this file from your network administrator.)

2. Open the file using a text editor, such as Notepad. The first eleven lines of text appear as follows:

```
; sample response file for remote install of Netfinity
;
;  Package - which package will be selected from the main menu.
;    For Services, Package can be:
;      Active
;      Passive
;      StandAlone
;    For Manager, Package can be:
;      Manager
Package = Passive
```

3. Change the last line to either `Package = Active` or `Package = StandAlone` (see question 4 on page 3 for a description of each). Type the value exactly as it appears here, as the program is case sensitive.

4. Save the changes, and close the file.

   Note: You must perform steps 5 and 6 of this procedure on the client after running the UMA self-extracting file UMAW32.EXE, and before running the SETUP.EXE file. See Chapter 2, "Installing the UMA Program" on page 3 for details.

5. Create a folder labeled `custom`, and place it in the same folder where the UMA installation files reside.

6. Move the `netfbase.rsp` file you changed into the `custom` folder.

7. Proceed with the UMA installation, step 5 on page 4.

Chapter 4. Configuring Internet Explorer

The UMA program uses Java, ActiveX, and JavaScript to present interactive Web pages. Use the following procedures to verify that ActiveX, Java, and JavaScript are enabled.

Internet Explorer 3.x

1. Open Internet Explorer 3.x.

2. Click on **View**, then **Options**, and then **Security**.

3. Verify that the following options are checked:

Figure 4. Internet Explorer 3.0 Security Option Settings

Option	Setting
Allow downloading of active content	√
Enable ActiveX controls and Plug-ins	√
Run ActiveX scripts	√
Enable Java programs	√

Internet Explorer 3.x Safety Level Setting

If you are running Internet Explorer 3.02 with the Authenticode update, you can leave the browser safety level set to High. However, for versions of Internet Explorer prior to 3.02, and version 3.02 without the Authenticode update, you will get an error about a "Potential Safety Violation" when you attempt to load UMA pages. Versions of Internet Explorer prior to 3.02 are incompatible with the new Authenticode security used by digital certificates. To view UMA pages on these older versions of Internet Explorer, set the safety level to medium. To change the safety level:

1. Open Internet Explorer 3.x.

2. Click on **View**, then **Options**, then **Security**, and then **Safety Level**.

3. Verify that the security level is set at either **Medium** or **Low**.

For more information about the Authenticode Update for Internet Explorer 3.02, visit the Microsoft web site at:

`http://www.microsoft.com/ie/security/?/ie/security/authentint1.htm`

A version of IE3.02 with the Authenticode update can be downloaded from:

`http://www.microsoft.com/ie_intl/th/security/?/ie_intl/th/security/iefaq.htm`

Internet Explorer 4.x.

1. Open Internet Explorer 4.x

2. Click on **View**, and then click on **Internet Options**.

3. In the **Temporary Internet Files** field, click on **Settings**. Under **Check for newer versions of stored pages**, click on **Every time you start Internet Explorer**, and then click on **OK**. This ensures that the login-password prompt works correctly.

4. Click on **Security**.

5. Verify that the security level is set at either Medium, Low, or Custom for the Internet and Internet zones that you will be using to access remote computers. If Custom is selected, click on **Settings** and verify that the following options are set correctly:

Figure 5. Internet Explorer 4.0 Security Option Settings

Option	Setting
Script ActiveX controls marked safe for scripting	Enable
Run ActiveX controls and plug-ins	Enable
Download signed ActiveX controls	Prompt
Java Permissions	High Safety
Scripting of Java applets	Enable

6. Click on **Connection**.

7. If a check is in the **Access the Internet using a proxy server** check box, make sure a check is also in the **Bypass proxy server for local (Intranet) addresses** check box.

Additional Troubleshooting Information

For further assistance on configuring Internet Explorer, TCP/IP, and other Internet-related settings, see the *UMA Troubleshooting Guide*. To access the guide:

1. From the Windows Desktop, click on **Start**.

2. Select **Programs**.

3. Select **IBM System Management Tools**.

4. Click on **UMA Troubleshooting Guide**.

Chapter 5. Integrating UMA with Other Network Management Programs

The UMA program is a product of the work being done through the IBM/Intel Advanced Manageability Alliance. As such, it integrates seamlessly into the Intel LANDesk family of products. UMA components, such as AssetCare, appear as items on the LANDesk menus.

You can also configure the UMA program to forward SNMP traps to workgroup- and enterprise-level network-management applications, such as Microsoft SMS, Tivoli NetView, and Computer Associates Unicenter. For details about configuring SNMP for use with UMA, see "Configuring SNMP for UMA" on page 21.

The UMA program also integrates into the following network-management software:

- **Microsoft Systems Management Server:** The UMA components also integrate into the Microsoft Systems Management Server (SMS) in the following ways:

  - You can add data collected by the UMA Inventory Data feature to the native SMS inventory by creating static MIF files, which are then scanned by SMS. You can create the MIF files in one of two ways: Click on the **Update SMS Inventory** icon at the client, or click on **Update Client Inventory** from the Tools menu on the SMS Console. Either method initiates the scan required to get the information to SMS.
  - You can use the simple network management protocol (SNMP) to forward UMA events to the SMS Console as SNMP traps (see "Configuring SNMP for UMA" on page 21).
  - Additional features are enabled on the SMS Tools menu when a UMA client workstation is selected at the SMS Console (see "Configuring SMS for UMA").

- **IBM Netfinity Software Products:** You can view and manipulate some of the UMA components with Netfinity Manager if you installed the Netfinity agent during the UMA installation. No further configuration is required.

  Note: If you already have Netfinity installed on your computer, you must uninstall it before installing UMA, and then reinstall it by checking the **Enablement for IBM Netfinity Manager** box during the UMA Custom Installation. If you decide to install Netfinity after the initial UMA installation, you must install it by running the UMA Custom installation again, and check only the **Enablement for IBM Netfinity Manager** box. You cannot use the Netfinity CD to install Netfinity.

- **Microsoft Management Console:** You can view and manipulate the UMA program by using Internet Explorer as a stand-alone browser or by using Internet Explorer within the Microsoft Management Console (MMC). The UMA setup program provides a sample file, UMA. MSC, which enables you to view the local client from within the MMC. MMC integration allows the UMA program to be used with other network-management tools. The MMC also allows network administrators to create their own MSC files, which can be used to route information from the UMA program across multiple workstations on the network.

- **Tivoli Framework and Tivoli NetView:** You can integrate UMA components into the Tivoli Framework and Tivoli NetView products. Integration with Tivoli Framework requires that you install the Tivoli Management Agent during the UMA installation and configure the program correctly (see "Configuring Tivoli Inventory for UMA Integration" on page 24 for details).

Configuring SMS for UMA

Use this information to ensure that SMS is configured correctly for use with UMA.

Installing UMA Tools on an SMS Server

Before you configure SNMP to forward UMA events as traps to a Microsoft SMS server, the tools provided by UMA must be installed on the SMS server. These tools are automatically installed as part of the UMA Enterprise installation for SMS, but can be installed manually using the following procedure.

Note: In the following procedure, the *UMA_install_directory* is the directory where you installed the UMA program. The actual name of the directory will be different.

1. After installing the UMA program on a client, copy the contents of the client's *UMA_install_directory*\Enterprise\SMS directory onto your SMS server.

2. If you copied the files using any of the Windows graphical user interface (GUI) mechanisms, verify that all of the files were copied. (For example, if you used Internet Explorer 4.0 to copy the files, use the following procedure: From the Active Desktop, click on **View**, click on **Folder Options**, click on **View**, and then click on **Show All Files**.)

3. Close the SMS Administrator window.

4. From the SMS server, run the SETUP.BAT file (one of the files you copied).

Updating the UMA Inventory Data Information

The UMA Inventory Data information is not automatically updated in SMS for the client workstations. You can update the Inventory Data information by using one of the following methods:

- Click on the **Update SMS Inventory** icon at the client.

- From the Tools menu on the SMS Console, click on **UMA Update Client Inventory**.

Alternatively, you can schedule the Inventory Data update using the Events, Alarms, and Responses feature at the UMA client. For example, to schedule a weekly update:

1. Create a batch file with "**%UMA_HOME%\inventory\DMI2SMS @file.lst**" as the only entry.

2. Start UMA for the selected client.

3. Click on the **Systems Monitors** icon.

4. Click on **Events, Alarms, and Responses**.

5. Create a User Command Profile that points to the batch file you created earlier. (Detailed instructions on creating a User Command Profile are in the Events, Alarms, and Responses help system.)

6. In the tree, click on the **User Alarms** category to highlight it.

7. Click on the **Tree Control** tab.

8. Click on **Add Event.**

9. Type an event name and a short description in the fields provided, and then click on **OK**. The event name appears in the tree.

10. In the tree, click on the event name to highlight it.

11. Click on **Add Response**. The **Select a response from the list** field appears.

12. Use the drop-down list to select **User Command**, and then click on **OK. User Command** appears under the event in the tree.

13. In the tree, click on **User Command** to highlight it.

14. Click on **Add Profile**. The **Select a profile from the list** field appears.

15. Use the drop-down list to select the User Command Profile you created earlier, and then click on **OK**. The User Command profile name appears under the event in the tree.

16. In the tree, click on the User Command Profile you just added.

17. Click on **View Scheduler**. The Scheduler appears.

18. In the **Frequency** field, use the drop-down list to select the frequency at which you want the Inventory Data information updated.

19. In the other fields, use the drop-down lists to select the applicable settings for your schedule.

20. Click on **Save**.

The inventory Data information will be updated automatically as scheduled.

Forwarding UMA Events to SMS Using SNMP

The UMA program forwards SNMP traps in response to events that occur at the client. To view the events in the SMS Administrator, you must configure the SMS Administrator to receive the UMA traps as follows:

1. From the SMS Administrator, click on the site with which you want to work.

2. In the menu bar, click on **File**, and then click on **Properties**.

3. Click on **SNMP Traps**.

4. Click on the **Proposed Site Properties** radio button.

5. Click on **Create**.

6. In the **Description** field, type a short description, such as UMA Traps.

7. Click on the **OID** radio button, and then type **1.3.6.1.4.1.343.2.5.1.2** in the field.

8. Click on **OK**, click on **OK** again, and then click on **OK** once more.

9. When the prompt appears asking if you are sure you want to update the site, click on **Yes**. SMS is now configured to receive SNMP traps sent by UMA.

Important: SNMP Traps are forwarded only if the SNMP Agent is installed on both the client and the SMS server. See "Configuring SNMP for UMA" for information about installing and configuring SNMP.

Configuring SNMP for UMA

Note: Before you configure SNMP to forward UMA events as traps to a Microsoft SMS server, you must first install the tools provided by UMA on the SMS server. See "Configuring SMS for UMA" on page 19 for details.

You can configure the Universal Management Agent (UMA) program to forward SNMP traps in response to events that occur on the client. The UMA program sends SNMP traps with OID 1.3.6.1.4.1.343.2.5.1.2. The OID and trap data are common with the Intel LANDesk Client Manager product. The UMA program provides a UMA.MIB file on each client in the *UMA_install_directory*\Enterprise\SNMP directory. You can use this MIB file with certain SNMP utilities or Enterprise consoles.

UMA forwards the SNMP traps only if the SNMP Agent is installed on both the server and the client workstation. You can install and configure the SNMP Agent as part of the UMA installation process or afterwards by using the Windows 95 CD, Windows 98 CD or Windows NT CD. However, if you install the SNMP Agent for Windows 95 or Windows 98 after UMA has been installed, you must manually add the trap destinations to the registry using either the SNMP Trap Configuration program provided with UMA or

the Windows REGEDIT program. See "Windows 95 and 98 Registry Entries for SNMP" on page 23 for details. In Windows NT, you can configure trap destinations and other SNMP parameters at any time using the the SNMP Trap Configuration program or through the Network Control Panel. See "Configuring SNMP Trap Destinations in Windows NT" on page 22 for details.

Installing the SNMP Agent in Windows NT

Use this procedure to install the SNMP Agent *after* the UMA program has been installed. This procedure is not required if the SNMP Agent was installed as part of the UMA program installation.

1. From the Windows Desktop, click on **Start**, select **Settings**, and then click on **Control Panel**.

2. Double–click on the **Network** icon.

3. Click on **Services**, and then click on **SNMP**.

4. Click on **Add**.

5. Click on **SNMP Service**, and then click on **OK**.

6. If you are prompted for the location of the Windows NT files, insert your Windows NT CD, type **X:\i386** (where x is your CD-ROM drive letter), and then click on **Continue**. The SNMP Properties window appears.

7. Click on the **Agent** tab. Type any optional Contact and Location information required for this computer.

8. Verify that **Application** is selected.

9. Click on the **Traps** tab.

10. In the **Community Name** field, type a community name (if you do not know what name to use, type **public**). Then, click on **Add**.

11. In the Trap Destinations field, click on **Add**.

12. Type the IP address or host name of the computer that will receive the SNMP traps (for example, a Microsoft SMS server or a Tivoli NetView console), and then click on **Add**.

13. Repeat steps 11 and 12 to add more trap destinations, if required.

14. Click on **OK**.

15. Click on **Close** to complete the network setup, and then restart your computer.

Configuring SNMP Trap Destinations in Windows NT

You can add new or modify existing SNMP trap destinations using either the SNMP Trap Configuration program provided in UMA or the Windows Network Control Panel.

To add or modify SNMP trap destinations using SNMP Trap Configuration program, do the following:

1. Start the UMA program.

2. Click on **Configuration and Diagnostics** icon.

3. In the yellow bar, click on **SNMP Trap Configuration**.

4. In the **Community Name** field, type a community name (if you do not know what name to use, type **public**). Then, click on **Add**.

5. In the SNMP Trap Destination field, click on **Add**.

6. When the window appears prompting you to enter the new trap destination, type **192.168.0.1**, and then, click on **OK**.

7. Click on **Restart SNMP** to restart the SNMP service so the changes take effect immediately.

To add or modify SNMP trap destinations using the Windows Control Panel, do the following:

1. From the Windows Desktop, click on **Start**, select **Settings**, and then click on **Control Panel**.

2. Double click on the **Network** icon.

3. Click on **Services**, and then double-click on **SNMP**.

4. Click on the **Traps** tab. Make your modifications and save them.

5. For the new settings to take effect, either click on the **Restart SNMP** button in the SNMP GUI interface, or reboot your system.

Installing the SNMP Agent in Windows 95 and Windows 98

Use this procedure to install the SNMP Agent *after* the UMA program has been installed. This procedure is not required if the SNMP Agent was installed as part of the UMA program installation.

1. From the Windows Desktop, click on **Start**, select **Settings**, and then click on **Control Panel**.

2. Double click on the **Network** icon.

3. Click on **Add**.

4. Click on Service, and then click on **Add**.

5. Click on **Have Disk**.

6. Insert the Windows 95 or Windows 98 CD into the CD-ROM drive.

7. Click on **Browse**.

8. Use the following information to locate the SNMP directory on your Windows 95 or Windows 98 CD.

   - For Windows 95, the directory is Admin\NetTools\SNMP.

   - For Windows 98, the directory is Tools\ResKit\NetAdmin\SNMP.

9. Click on **snmp.inf**.

10. Click on **OK**. The Install From Disk window appears.

11. Click on **OK**. The Select Network Service window appears.

12. Click on **OK** to complete the network setup, and then close the Network window.

The SNMP Agent is now installed. You must now manually add the trap destinations and community names to the registry. See "Windows 95 and 98 Registry Entries for SNMP" later in this section for details.

Windows 95 and 98 Registry Entries for SNMP

If you installed the SNMP Agent for Windows 95 or Windows 98 after installing the UMA program, you must add the trap destinations and community names to the registry using either the SNMP Trap Configuration program provided with UMA or the Windows REGEDIT program.

To add or modify SNMP trap destinations using the SNMP Trap Configuration program, do the following:

1. Start the UMA program.

2. Click on the **Configuration and Diagnostics** icon.

3. In the yellow bar, click on **SNMP Trap Configuration**.

4. In the Community Name field, type a community name (if you do not know what name to use, type **public**). Then, click on **Add**.

5. In the SNMP Trap Destination field, click on **Add**.

6. When the window appears prompting you to enter the new trap destination, type **192.168.0.1**, and then, click on **OK**.

7. Click on **Restart SNMP** to restart the SNMP service so the changes take effect immediately.

To add the SNMP trap destinations using the Windows REGEDIT program, add the following registry values to setup a trap destination of 192.168.0.1:

```
[HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\SNMP\Parameters\TrapConfiguration\public]

"1"="192.168.0.1"

[HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\SNMP\Parameters\ValidCommunities]

"1"="public"
```

Configuring Tivoli Inventory for UMA Integration

The UMA program provides the following Tivoli-integration features:

- You can use the UMA Custom installation to install the Tivoli Management Agent (TMA) version 3.6 on the client, thereby making the client a Tivoli Endpoint.

- You can add the UMA inventory data to the native Tivoli inventory. The UMA program creates a static MIF file named UMATIVOLI.MIF. When the UMA profile is distributed to subscribers of the Tivoli Inventory server, the UMATIVOLI.MIF file is automatically created on each client workstation and scanned into the Tivoli inventory database. See "Installing UMA Support on the Tivoli Inventory Server" on page 25.

- The UMA program provides ready-made queries for all of the UMA inventory data. The queries appear as icons under the Policy Region on the Tivoli Inventory Server.

Prerequisites

Before you can access the UMA inventory data through the Tivoli tools, you must have the following:

- TME 10 Framework, version 3.6 or higher (with Desktop).

- TME 10 Inventory, version 3.6 or higher.

- A Policy Region must exist in the TME Desktop.

- QueryLibrary, ProfileManager, and InventoryProfile must be listed as current resources. To verify:

  1. From the Policy Region window, click on **Properties**

  2. Click on **Managed Resources**.

  3. In the **Current Resources** field, verify that **QueryLibrary**, **ProfileManager**, and **InventoryProfile** are listed. If **InventoryProfile** is not listed, you need to install TME 10 Inventory (see the version requirements above). If **QueryLibrary** and **ProfileManager** are not listed, you must add them. Refer to the TME 10 documentation for instructions.

- The client workstations must be running either TMA Version 3.6 or PC Agent Version 3.6. Use TMA to work with the clients as Tivoli Endpoints and PC Agent to work with the clients as PC-Managed Nodes. Using TMA is preferred over using the TMA Agent.

Using the UMA Inventory Data Feature with Tivoli Endpoints

In order to use the UMA Inventory Data feature with the TMA on Endpoints, the TME 10 Inventory Gateway, version 3.6 or higher, must be installed on one of the PC-Managed nodes. To install the gateway, do the following:

1. Insert the Tivoli Inventory CD into the CD-ROM drive.

2. From the TME Desktop, click on **Desktop**.

3. Click on **Install** and then click on **Install Product**.

4. Click on **Select Media**. The File Browser window appears.

5. Select the appropriate drive letter and directory for the Inventory CD. (For most releases, TME 10 Inventory Gateway is installed from the Inventory directory; however, the directory name might be different based on the release and language.)

6. Click on **Set Media & Close**. The Install Product window appears.

7. Click on **TME 10 Inventory Gateway, Version 3.6**.

8. In the **Available Clients** field, double-click on one or more of the clients listed.

9. Click on **Install & Close**.

Using the UMA Inventory Data Feature with Tivoli PC-Managed Nodes

If your clients are already configured with PC Agent Version 3.6 or later instead of TMA, do the following:

1. Use the TME Agent Setup utility on the Tivoli Framework CD to install the PC Agent on each client.

2. Use the Tivoli Inventory Server to add each client as a PC Managed Node. (From the TME Desktop, click on the Policy Region, then click on **Create**, and then click on **PCManagedNode**. Follow the instructions on the screen. If you need assistance use the Tivoli help system.)

3. Install the PC Scanning Program. To do this:

   a. Insert the Tivoli Inventory CD into the CD-ROM drive. From the TME Desktop, click on **Desktop**.

   b. Click on **Install**, and then click on **Install Product**.

   c. Click on **Select Media**.

   d. When the File Browser window appears, select the appropriate drive and directory from the Inventory CD. For most releases, the PC Scanning Program is installed from the Inventory\Scan directory; however, the directory name might be different based on the release and language.

   e. Click on **Set Media & Close**.

   f. When the Install Product window appears, click on **TME 10 Inventory PC Scanning Program, Version 3.6**.

   g. Double click on the client name, and then click on **Install & Close**.

Installing UMA Support on the Tivoli Inventory Server

Before the UMA Inventory can be added to the Tivoli Inventory Server, you must configure the Tivoli database for UMA Inventory Data. You can accomplish this through either of the following methods:

- Run the UMA setup program on the Tivoli Inventory Server and select the Enterprise installation method with the Tivoli Framework option. The Enterprise Console Integration installation method runs a Bourne shell script to create SQL tables, views, and queries. Ensure the Tivoli environment variables are setup correctly before running the Enterprise Console Integration method. The

Enterprise Console Integration method installs only the relational-database-management-system (RDBMS) scripts needed by the Tivoli Inventory Server and creates an UMA profile manager and UMA profile to simplify configuration on the Tivoli Inventory Server; it does not install the actual UMA program.

- If you have installed additional plug–in modules (extended functions) to the UMA program, you might want to use the update method of setting up the Tivoli Database. To do this:

    1. Add any new .SCRIPT.INV files to the UMA\INVENTORY\SCRIPT directory.

    2. Enumerate the new script files in the UMA\INVENTORY\FILE.LST file.

    3. Change to the UMA\INVENTORY directory and run DMI2TIV @FILE.LST. This method generates the UMATIVOLI.MIF file, the RDBMS scripts , and the Bourne shell script for setting up the Tivoli database. The output of the DMI2TIV is placed in the UMA\INVENTORY\TIVOLI directory.

    4. Copy the .SH and .SQL files to the Tivoli Inventory Server.

    5. Run the UMAINVSETUP.SH shell script. The UMAINVSETUP.SH script removes any old UMA tables and views from the Tivoli Inventory Server and creates new tables, views, and queries for the UMA inventory data.

Viewing UMA Inventory Data on the Tivoli Inventory Server

UMA Inventory Data is added to the native Tivoli Inventory by using a .MIF file. The static .MIF file is created on the client by the DMI2TIV.EXE program. After the .MIF file is created, it must be scanned into the Tivoli database by using the TME Desktop to distribute a customized inventory profile, UMA_PROFILE, to the clients.

To update the UMA Inventory Data in the Tivoli database:

1. From the TME Desktop, double-click on the Policy Region.

2. Double-click on **UMA**.

3. Click on **Profile Manager**.

4. Click on **Subscribers**.

5. In the **Available to become Subscribers** field, click on the nodes to be inventoried, and then click on the left arrow to move the selected nodes to the **Current Subscribers** field.

6. Click on Set **Subscriptions & Close**.

7. Drag and drop the UMA_PROFILE (under the UMA Profile Manager) onto the subscriber (the UMA client).

To create your own profile and profile manager that scan for UMA Inventory Data, do the following:

1. From the TME Desktop, double-click on the Policy Region to be scanned.

2. In the Policy Region, create a Profile Manager. (Click on **Create** and then click on **ProfileManager**. See the TME 10 Framework documentation for details).

3. Add subscribers to the Profile Manager. (Using the right mouse button, click on the **Profile Manager** icon. Click on **Subscribers**, double-click on **Profile Manager**, and then create and save the profile.)

4. Using the right mouse button, click on the newly created profile, and then click on **Customize**. A pop-up window appears.

5. In the **Execute at Target** field, place a check mark in the **Script** check box, and then click on the **Script** button.

6. When a window appears requesting the script name, type "**%UMA_HOME%\INVENTORY\DMI2TIV.BAT**", and then click on **Save and Close**.

7. In the **Read Results** field, place a check mark in the **Custom MIF File** check box.

8. In the field below the **Custom MIF Files to be Read** field, type **c:umativoli.mif**(this must be typed in lowercase), and then click on **Add**.

9. Click on **Save & Close**.

10. To distribute the profile, double-click on the profile (or use the right mouse button to click on the profile and then click on **Discover**). Then, move the **Available Targets** to the **Selected Targets** and click on **Distribute & Close**.

To run the queries:

1. From the TME Desktop, double-click on the Policy Region icon, and then double-click on **UMA_Queries**. A window appears with the name and icon for each UMA-related query.

2. Using the right mouse button, click on any of the icons, and then click on **Run Query**.

Configuring Tivoli NetView for UMA Integration

The Universal Management Agent (UMA) program provides the following integration with Tivoli NetView:

- You can view UMA Inventory data from the NetView Console by selecting UMA Inventory from the Tools menu.

- Two new SmartSets are created on the NetView Console for UMA clients: UMASystems and EARSystems. In the current implementation, you have access to the five major components of UMA (System Monitors, Advanced Management Tools, Inventory Data, Resource Utilization, and Configuration and Diagnostics) plus a shortcut to the AssetCare program through the computers contained in the UMASystems SmartSet. In the EARSystems SmartSet, you have access to the same components and program as the UMASystems SmartSet plus a shortcut to the Events, Alarms, and Responses program.

- You can access UMA from the NetView Console in two ways: (1) Select a client node in the NetView Console, open the Tools menu, and then click on one of the options under Universal Management; or, (2) Within the client node at the NetView Console, double-click on the one of the UMA icons (AdvMgmtTools, Config-Diagnostics, InventoryData, ResourceUtilization, SystemMonitors, AssetCare, or Events and Alarms).

- You can set up UMA to forward all events on the UMA clients and the system status of the UMA client as SNMP traps to the NetView server.

Installing UMA Support on the NetView Server

When you install UMA on the NetView server using the Enterprise option, the installation program automatically installs the files necessary for UMA support in NetView. The following is a list of the events associated with UMA Enterprise installation for NetView:

1. Install \usr\ov\snmp_mibs*.mib (SNMP MIB files for UMA clients).

2. Install \usr\ov\filters\IBM*.flt (useful filters for SNMP traps from UMA clients).

3. Add lines to \usr\ov\conf\nvsniffer.conf (adds support to detect UMA systems).

4. Install \usr\ov\registration\c\uma*.reg (adds map and tools menu options).

5. Install \usr\ov\bin* (adds map and nvsniffer support for UMA). Note that the original nvsniffer.exe and nvsetservicestatus.exe a re replaced during the UMA Enterprise installation if the original files are older than the files provided with UMA.

6. Install \usr\ov\bitmaps\c* (bitmaps for UMA icons in NetView Console).

7. Install \usr\ov\uma\inventory* (program and files used to gather UMA inventory).

In addition to these events, the Enterprise installation allows you to choose the "SNMP Automation Control" option for NetView.

Note: If UMA is not installed on the NetView server, the "SNMP Automation Control" option installs a very basic subset of UMA that contains the following:

- Events, Alarms, and Responses (EAR)
- Enterprise SNMP Automation
- Event Log Viewer
- DMI Information
- User Manager

You will be prompted to restart the computer after the basic subset of UMA is installed. After restarting the computer, you must run the Enterprise installation again to add the rest of the support for NetView.

Adding UMA Clients to the UMASystems SmartSet

The nvsniffer.exe program detects client workstations that have UMA installed. You can run the nvsniffer.exe program from the command line. Once you have run nvsniffer.exe:

- UMA clients become members of the UMASystems and EARSystems SmartSets with icons that give you direct access to UMA.
- The NetView Console Tools menu is expanded to include items that let you access Universal Management and UMA Inventory options.

Updating the Tools Menu

You must update the UMA Inventory menu for each type of client before you can view the inventory data. This procedure creates the necessary .reg files to create submenus under UMA Inventory in the Tools menu.

Note: Before you attempt to update the Tools menu, you must first have a Java Runtime Environment (JRE) installed. If you do not already have a JRE installed, you can download and install the JRE from:

```
http://www.javasoft.com/products/jdk/1.1/jre
```

To update the Tools menu:

1. From the NetView Console, click on **Tools**.

2. Select **UMA Inventory**, and then click on **Update Menu**.

Viewing UMA Inventory Information

1. From the NetView Console, select a UMA client.

2. Click on **Tools**.

3. Select **UMA Inventory**, and then click on one of the UMA Inventory items.

NetView gathers the data from the DMI information stored at the client.

Note: Some of the data is in table format (such as the system slot information). Only the first row of the table is viewable through NetView. To view all of the table information, you must access UMA on the client data directly.

Accessing UMA from the NetView Console

You can access UMA from the NetView server by using either Microsoft Internet Explorer 3.0 (Version 3.02 or later) or Internet Explorer 4.0 (version 4.72.2106.8 or later). The UMA program works best with Internet Explorer 4.0.

1. From the NetView Console, select a client node.

2. Click on **Tools**.

3. Select **Universal Management**, and then click on one of the Universal Management items.

-OR-

1. From the NetView Console, select a client node.

2. Double-click on one of the UMA icons (AdvMgmtTools, Config-Diagnostics, InventoryData, ResourceUtilization, SystemMonitors, AssetCare, or Events and Alarms).

Forwarding UMA Events to NetView Using SNMP Traps

UMA forwards the SNMP traps only if the SNMP Agent is installed on both the server and the client workstation. You can install and configure the SNMP Agent as part of the UMA installation process or afterwards by using the Windows 95 CD, Windows 98 CD, or Windows NT CD. However, if you install the SNMP Agent for Windows 95 or Windows 98 after UMA has been installed, you must manually add the trap destinations to the registry using the SNMP Trap Configuration program provided as part of UMA. In Windows NT, you can configure trap destinations and other SNMP parameters at any time through the Windows NT Control Panel or through the SNMP Trap Configuration program. See "Configuring SNMP for UMA" on page 21 for details.

The UMA Enterprise installation option installs filters for SNMP in NetView. The NetView Event Browser displays UMA SNMP Traps and categorizes them as OK, WARNING, and CRITICAL traps.

SNMP Trap Automation Control

If SNMP Automation Control is installed during a UMA Enterprise installation, the Enterprise SNMP Automation is installed at the administrator console. Enterprise SNMP Automation provides a set of filters that enables NetView to perform certain actions in response to SNMP traps by using the UMA Events, Alarms, and Responses (EAR) program. (For information about using the EAR program to assign responses and profiles to system events, see the online help system that is accessible from the EAR program). If SNMP Automation Control is not installed, the network administrator can still set up custom responses.

Setting Up Responses with SNMP Automation Control Installed

When an SNMP Trap is sent by a client, it is received at the administrator console using NetView rules and is then matched against each line in the ear_snmp.dat file to find the corresponding response. If there is no match, no response takes place. If there is a match, even a partial match, a response is generated by the Events, Alarms, & Responses (EAR) program that resides on the administrators console, assuming that a valid response and response profile has been assigned to the SNMP even on the EAR Tree Control page (see the EAR help system for details). There is a specific order to matching: an SNMP

```
 1.    System:SEVERITY:SNMPType:SNMPDescription
 2.    System:SEVERITY:SNMPType:
 3.    System:SEVERITY:        :SNMPDescription
 4.    System:        :SNMPType:SNMPDescription
 5.    System:        :SNMPType:
 6.    System:        :        :SNMPDescription
 7.    System:SEVERITY:        :
 8.    System:        :        :
 9.          :SEVERITY:SNMPType:SNMPDescription
10.          :SEVERITY:SNMPType:
11.          :SEVERITY:        :SNMPDescription
12.          :SEVERITY:        :
13.          :        :SNMPType:SNMPDescription
14.          :        :SNMPType:
15.          :        :        :SNMPDescription
16.                   Default
```

Any entry in the ear_snmp.dat file that specifies a system name takes precedence over other entries. A complete match (severity, SNMP type, and description) takes precedence over partial matches.

If you want to modify how SNMP traps are handled, use the Enterprise SNMP Automation program provided by UMA to edit the ear_snmp.dat file. The Enterprise SNMP Automation program is accessible from the administrator console only. It is a good idea to use the Enterprise SNMP Automation program to review the responses and other information in the ear_snmp.dat file and make modifications, if needed. Do not use any other tools to edit the ear_snmp.dat file.

You can modify the following information:

- Event Type: The name assigned to an event.

- Response:, The type of response assigned to the event. This is an EAR response.

- Severity: The severity level (OK, Warning, Critical) assigned to the event.

- Description:A description of the event or other information pertinent to the event.

After making modifications, you can modify or add responses and profiles to the Enterprise SNMP Automation category in EAR.

To edit the ear_snmp.dat file, do the following:

1. From the administrator console, start the UMA program (Universal Management Browser).

2. Click on the **System Monitors** icon.

3. In the yellow bar, click on **Enterprise SNMP Automation**. When the program opens, you can view, sort, modify, add, and delete events. For details, see the Enterprise SNMP Automation help system.

Setting Up Responses without SNMP Automation Control Installed

Without SNMP Automation Control installed, the network administrator can set up custom responses to SNMP traps. Use the following procedure to setup custom responses to SNMP traps in NetView:

1. From the NetView Console, click on **Options**, then double-click on **Trap Settings**.

2. Select the Enterprise **IBM_Universal_Management**.

3. Select one of the Traps and edit its properties.

4. Into the box labeled **Run this command when the trap is received**, enter your own command.

Note that you have access to information from the SNMP trap. This information is specified as $1, $2, and so on.

Chapter 6. Software Distribution and Installation of UMA

This chapter describes how to distribute and install UMA using either Microsoft SMS or Tivoli TME 10.

Software Distribution and Installation of UMA using SMS

An SMS 1.2 site server distributes and installs UMA to client systems running Win95, Win98 or Window NT. Package Command Manager is used on client systems for installations.

Download the UMA Installation Files

Use the following procedure to download two files on the SMS 1.2 site server to be used for UMA distribution and installation:

1. Download the self-extracting file UMAW32UN.EXE from the following World Wide Web address and place it in the SMS/SWDistribution/Distrib directory.

   ```
   http://www.pc.ibm.com/us/desktop/uma
   ```

2. Run the self-extracting file UMAW32UN.EXE. This will unpack and install the files.

UMAW32UN.EXE is used to install IBM System Management Tools, LANDesk Client Manager, Enablement for IBM Netfinity Manager and Enablement for Tivoli Framework. Please refer to "Advanced Configuration" on page 34 for installing particular segments of the whole package.

Setting Up a Workstation Package on the SMS 1.2 Site Server

You can use the SMS Administrator on your SMS 1.2 site server to create a package for the UMA installation file that is distributed to the client systems. Use the following procedure:

1. From the Windows Desktop, click on **Start** → **Programs** → **Systems Management Server** → **SMS Administrator**

2. Open the Packages window.

3. From the File menu, click **New**.

4. At the Package Properties dialog box, click on **Import**.

5. Select UMA.PDF stored on the server and then click **OK**. UMA.PDF can be found at \SMS\UMA directory.

6. At the Package Properties dialog box, click on **Workstations**.

7. Type the entire path to the UMAW32UN.EXE file in the Source Directory box. The file should have been downloaded to the SMS/SWDistribution/Distrib directory.

8. Click on **Close**.

9. Click on **OK** on the message dialog box.

10. Click on **OK** on the Package Properties dialog box.

11. Click on **OK** on the message dialog box.

The new package will display in the Package window.

Distribute a Workstation Package to the Client Machines

You can use the SMS Administrator on the SMS 1.2 site server to create a job to distribute to UMA installation file to the client machines.

To distribute the UMA installation file to a single client:

1. Select the UMA package created in "Setting Up a Workstation Package on the SMS 1.2 Site Server" on page 33 and then drag it to the client computer shown in the SMS Sites window.

2. Verify the information on the Job Details dialog box and then click on **OK**.

3. Type any comments in the Comment box on the Job Properties dialog box and then click on **OK**.

The new package will be distributed to the client machines according to the schedule defined in the Job Details dialog box.

To distribute the UMA installation file to multiple clients:

1. Create a query to identify the client computers. Refer to Microsoft Systems Management Server documentation for details.

2. Select the UMA package created in "Setting Up a Workstation Package on the SMS 1.2 Site Server" on page 33 and then drag it to the query.

3. Verify the information on the Job Details dialog box and then click on **OK**.

4. Type any comments in the Comment box on the Job Properties dialog box and then click on **OK**.

The new package will be distributed to the client machines identified in the query.

To check the job status:

1. Double click the UMA installation job.

2. Click **Status** on the Job Properties dialog box.

3. Click on **Refresh**. For more information, click on **Details**.

The Job Status dialog box is displayed on the screen.

Advanced Configuration

You can use the following procedure to create a new UMA installation executable file. You can configure the installation files to
 install particular segments of the installation package. WinZip 7.0 can be used to unzip/zip the installation package. WinZip Self-Extractor 2.1 is used to make a new UMAW32UN.EXE that is distributed and installed on clients.

Note: The following procedures use WinZip as the archive utility. You can use other archive programs, but the directions will be different than those listed below.

1. Download WinZip 7.0 from `http://www.WinZip.com` and install it.

2. Download WinZip Self-Extractor 2.1 (has to be registered before
    use) from `http://www.WinZip.com/WinZipse.htm` and install it.

3. Using the right mouse button, click on the UMAW32UN.EXE and then click on **Extract to...** This launches the extract feature of the WinZip program. When the Extract window appears:

4. In the **Extract to** field, type the path and directory into which you wan to extract the files.

5. In the **Files** field, click on the **All Files** radio button.

6. Ensure that the **Use Folder Names** check box is checked.

7. Click on **Extract**

8. From the File Menu bar in WinZip, select **Close Archive**.

9. Modify the SETUP.ISS file in the temporary directory according to the instructions in "Modifying the UMA SETUP.ISS File Manually" on page 8.

10. You can delete Tivoli.z or Netfin.z from the temporary directory if these are not required for downloads.   This will reduce the size of the new package and reduce the distribution time.

11. Select all the installation files and drag and drop them to the open window in WinZip 7.0. The Drag and Drop dialog box appears.

12. In the **Add to Archive** window in the Drag and Drop dialog box, type a path and file name for the zip file. The file name must be UMAW32UN.ZIP. Then, click on **Add**.

13. Exit WinZip 7.0.

14. Open WinZip Self-Extractor.

15. Click on the **Self-Extractor for Software Installation** option and then click on **next**.

16. Enter or Browse to the zip file created in step 12 and then click on **next**.

17. Click the **32-bit header** and **Unzip automatically** check boxes and then click on **next**. Click Yes if a pop-up dialog box appears.

18. In the **Command to issue when unzip operation completes** field, type SETUP.EXE -S -SMS. In the **Wait for** field, type _ISDEL, and then, click on **next**.

19. Under Dialog text filename, browse to the SETUP.TXT file in the temporary directory and then click on **next**.

20. Click on **next**. Click **Yes** if a pop-up dialog box appears.

21. Click on **Close**.

You have now created a new UMA installation executable file. It is recommended to test this installation file before you distribute and install on clients.

Software Distribution and Installation of UMA using Tivoli

Use Tivoli TME 10 desktop to distribute and install UMA to client machines running Windows 95, Windows 98 or Windows NT.

Prerequisites

The following are prerequisites for distributing and installing UMA using Tivoli.

- TME 10 Framework 3.6 or above (with Desktop)

- TME 10 Software Distribution 3.6 or above

- A Policy Region must exist in the TME Desktop

- The client systems have to be a Managed Note, PC Managed Node or Endpoint. The Endpoint client must be running TMA (Lightweight Client Framework, or LCF)

Download UMA installation files

In the following procedure, you download two files on the TME site server. These files are used for UMA distribution and installation.

1. Download the self-extracting file UMAW32.EXE from the following World Wide Web address and place it in the subdirectory under the Tivoli home directory, (for example, c:\Tivoli\UMA\SWDistribution\distrib). If you intend to install UMA support on enterprise systems management servers (Tivoli Framework, Tivoli NetView, or Microsoft SMS), download the file EPRISE.Z. If you intend to integrate UMA with Tivoli Framework or Inventory, download the file TIVOLI.Z. If you intend to install Netfinity services with UMA, download the file NETFIN.Z. Place them in the same folder (for example, c:\Tivoli\UMA\SWDistribution\distrib) as the UMAW32.EXE file.

   ```
   http://www.pc.ibm.com/us/desktop/uma
   ```

2. Run the self-extracting file, UMAW32.EXE, to unpack the files. When prompted, enter the path to the folder where you want the installation files to reside.

Note: It is important to have all the installation files in UMA\SWDistribution\distrib under the directory where Tivoli is installed.

If you copy the TIVOLI.Z, NETFIN.Z, or EPRISE.Z files from a CD, or copy them to a writeable CD for distribution, make sure the Read-only check box is unchecked in the Properties dialog box for each file. To do this, use the following procedure:

1. Using the right mouse button, click on the TIVOLI.Z, NETFIN.Z, or EPRISE.Z icon, and select **Properties**.

2. Click in the box next to **Read-only** so that the box no longer contains a check mark.

3. Click on **OK**.

Install Distribution Software on Tivoli

Use the following procedure to install the Software Distribution software on the server:

1. From the Windows Desktop, click on **Start** → **Programs** → **Tivoli** → **Tivoli**.

2. Click on **OK** to start TME Desktop.

3. Click on **Desktop** →**Install** → **Install Product**.

4. Click on TME 10 Software Distribution, Version 3.6,

5. Click on the **Install** button.

6. Click on TME 10 Software Distribution Gateway, version 3.6.

7. Click on the **Install & Close** button.

Creating a UMA_SoftwareDistribution profile

Use one of the following procedures to create the UMA_SoftwareDistribution profile that is used to distribute and install UMA to the client systems.

Option A: Creating the UMA_SoftwareDistribution profile from

the UMA setup program

1. Run the UMA installation program, SETUP.EXE

2. Select **Enterprise Console Integration (server only)** option and click on **next**.

3. Select Tivoli Framework (Inventory & Software Distribution), and click on **next**.

This will create UMA_SoftwareDistribution profile under UMA Policy Region.

Option B: Creating the UMA_SoftwareDistribution profile from the

Command Prompt

1. Run \WINNT40\SYSTEM32\DRIVERS\ETC\TIVOLI\SETUP_ENV

2. Manually install UMA on a client computer, then copy the file UMADistrsetup.sh from the UMA\Enterprise\Tivoli\SWDistribution directory on the client to the Tivoli Software Distribution Gateway system.

This will create UMA_SoftwareDistribution profile under UMA Policy Region.

Distribute and Install UMA on the Client Systems

In the Profile Manager, drag and drop **UMA_SoftwareDistribution profile** to Subscribers. UMA will now be distributed and installed on the Tivoli client systems.

Advanced Configuration

Use the following procedure to configure the installation files to install particular segments of the installation package.

1. Modify the SETUP.ISS file in Tivoli\UMA\SWDistribution\distrib directory according to the directions in "Modifying the UMA SETUP.ISS File Manually" on page 8.   This will define different installation components to be installed.

2. Follow the steps in "Creating a UMA_SoftwareDistribution profile" on page 36 to install the UMA on the client systems.

Use the following procedure to configure the UMADistribution profile to save distribution time if Enablement for IBM Netfinity Manager and Enablement for Tivoli Framework are not required for installations.

1. Double–click on **UMADistribution profile** to see the File Package Properties.

2. Under **Source Directories & Files**, select Netfin.z or Tivoli.z and remove them depending on the needs.

3. Click **Save & Close**.

4. In the Profile Manager, drag and drop **UMA_SoftwareDistribution profile** to Subscribers.

UMA will now be distributed and installed on the Tivoli client systems.

Uninstall UMA on the Client Systems

In the Profile Manager, drag and drop **UMA_Uninstallation** to the client icon in the Subscribers field where you want to uninstall UMA. Answer the questions that follow. UMA is now uninstalled on the client.

Chapter 7. Starting the UMA Program

You can start the UMA program using any of three methods: local access, remote access, and dial-up access. Minimum requirements for remote access and dial-up access are:

- **Operating System:** Windows 95, Windows 98, Windows NT Workstation 4.0, or Windows NT server 4.0.

- **Internet Browser:** Microsoft Internet Explorer 3.0 (Version 3.02 or later) or Internet Explorer 4.0 (Version 4.72.2106.8 or later). If your browser does not meet these requirements, you can download the latest Internet Explorer browser from the Microsoft Web site at `http://www.microsoft.com/ie`. The UMA program works best with Internet Explorer 4.0.

- **Network Support:** You must have TCP/IP installed.

- **Memory:** 32MB minimum.

- **Processor:** Pentium (or equivalent) 133MHz minimum.

Note: Performance is affected by a number of factors, including processor speed, the amount of memory installed, and other application programs that are running concurrently with UMA. Additional memory (or increased virtual memory) might be required, depending on the memory requirement of other application programs that will run concurrently with UMA.

Local Access

If you are using a computer that has UMA installed, start the UMA program using the following procedure:

1. From the Windows Desktop, click on the **Start** button.

2. Select **Programs**, then select **IBM System Management**, and then, click on **Universal Management Browser**.

Note: You can also access the UMA components by clicking on the **DMI MIF Browser**.

Remote Access

If you are using a computer that does not have the UMA program installed, you can access the program remotely through your Intranet by doing the following:

1. Start Internet Explorer.

2. In the **Address** field, type the computer name and IP port number where the UMA program resides (for example, http://client6:6500).

3. Press **Enter**.

Dial-Up Access

If you are using a computer that has a modem, you can dial into another computer that has the UMA program installed.

1. Dial into your Internet access provider to establish a TCP/IP connection.

2. Start Internet Explorer.

3. In the **Address** field, type the computer name and IP port number where the UMA program resides (for example, http://client6:6500).

4. Press **Enter**.

Chapter 8. Uninstalling UMA and Its Components

To uninstall UMA:

1. Close all open windows and programs.

2. From the Windows Desktop, click on **Start**.

3. Select **Settings**, and then click on **Control Panel**.

4. Double-click on **Add/Remove Programs**.

5. Click on **IBM Universal Management Agent**.

6. Click on **OK**.

7. Follow the directions on the screen.

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