AVAYA communication

Enterprise Directory Gateway

Release 1.1

Installation and Implementation

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Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

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This document was prepared by the Avaya Product Documentation Development, Holmel, NJ.

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About This Document

Purpose

This document describes how to install and configure the Enterprise Directory Gateway. This document consists of the following chapters:

- **About This Document**

  This chapter describes the intended audience for this document and how to get support when installing and/or administering the Enterprise Directory Gateway.

- **Chapter 1: Introduction**

  This chapter provides a brief introduction to the Enterprise Directory Gateway.

- **Chapter 2: Installing the Enterprise Directory Gateway**

  This chapter describes how to install the Enterprise Directory Gateway.

- **Chapter 3: Configuring the Enterprise Directory Gateway**

  This chapter describes how to configure the Enterprise Directory Gateway.

- **Chapter 4: Troubleshooting**

  This chapter provides information about possible error conditions and how to respond to them when you install and configure the Enterprise Directory Gateway.

Intended Audience

This document is written for technicians who are installing the Enterprise Directory Gateway at a customer location. It is assumed that the technician is experienced with the following subjects:

- One of the following operating systems
  - — Microsoft® Windows NT® Server 4.0 with Service Pack 4 or later
  - — Microsoft Windows® Server 2000
- One of the following LDAP services:
  - — Novell® NDS® eDirectory™ 8.5
  - — Netscape® Directory Server Version 4.12
- local area networks (LANs)
- DEFINITY® system installation and implementation
- INTUITY™ AUDIX® system administration

Professional services are available through your authorized Avaya dealer to support these requirements.

Related Documentation/Training

The following user documentation and training materials are available for installing and administering the Enterprise Directory Gateway:

- **Enterprise Directory Gateway Online Training Course**

  This online training course is available at *http://www.avaya.com/support*.

- **Enterprise Directory Gateway Administration**

  This Portable Document Format (PDF) document is located in the Docs folder on the Enterprise Directory Gateway CD. To view this document, you will need Adobe Acrobat® Reader 4.0 or later. You can install Adobe Acrobat Reader 4.0 from the Enterprise Directory Gateway CD or download it from the Internet at *http://www.adobe.com/*.

Conventions Used

The following conventions are used in this document:

- Commands and text you should enter appear ***in this style of type***.
- Components of dialog boxes (such as boxes and buttons) and prompts that appear on the screen appear **in this style of type**.
- The terms *option buttons* and *radio buttons* refer to the same object.

Getting Help

For the most up-to-date troubleshooting information, go to *http://www.avaya.com/support*.

If you have questions about or problems with the Enterprise Directory Gateway that this document does not resolve, call Avaya technical support at 1800-242-2121 (USA only) or your local authorized Avaya dealer.

Introduction

1

Overview

This chapter describes the Enterprise Directory Gateway and its components.

Overview of the Enterprise Directory Gateway

The Enterprise Directory Gateway is software that “LDAP-enables” DEFINITY system data and Intuity system data, providing real-time, integrated, directory-based read/write access to DEFINITY data, Intuity data, and data derived from enterprise sources (such as corporate databases). The Enterprise Directory Gateway interfaces with the DEFINITY system, the Intuity system, PCs running DEFINITY Network Administration, a company’s LDAP server, the Gateway Administration application, and Gateway client applications (which are LDAP-based applications that enable users to view and modify the Gateway data).

The Enterprise Directory Gateway consists of the following components:

- DataStore Managers (DSMs)
- Synchronization Engine
- LDAP Data Store
- Gateway Administration
- Gateway Client

Figure 1-1 shows the structure of the Enterprise Directory Gateway.

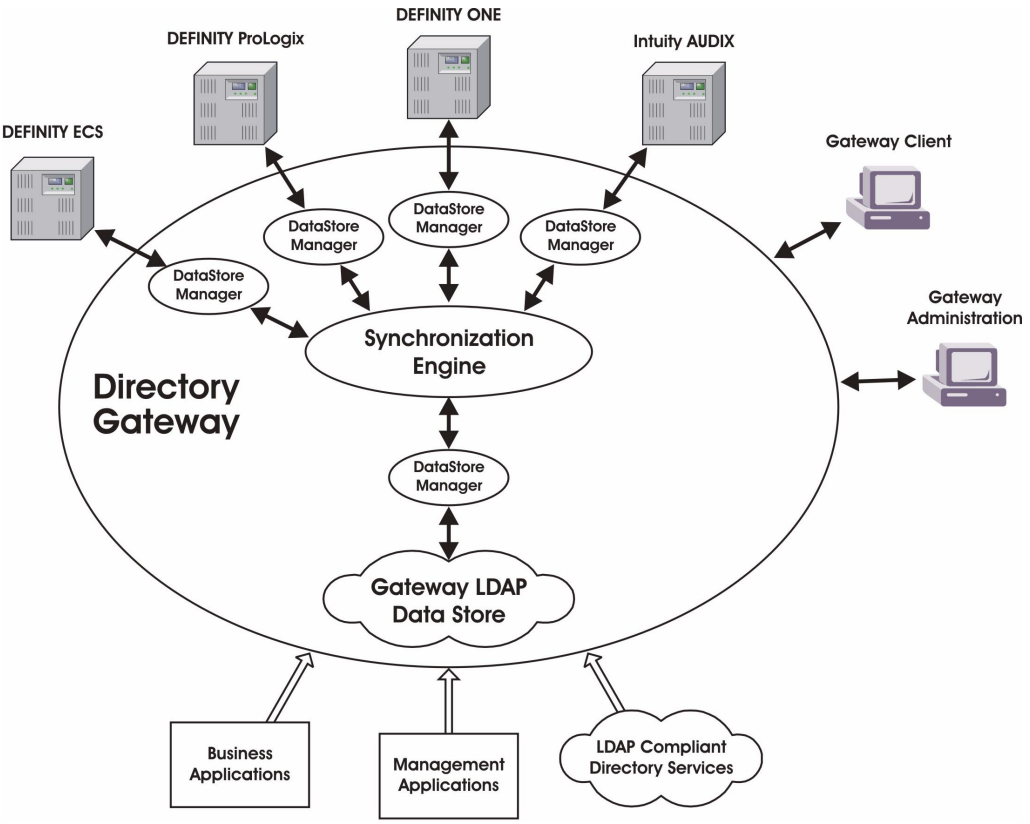

Figure 1-1. Enterprise Directory Gateway

DataStore Managers

DataStore Managers are software processes that interface with each device type that connects to the Enterprise Directory Gateway. A DataStore Manager is the "connector technology" for the Enterprise Directory Gateway, enabling different Gateway devices (such as DEFINITY systems, Intuity systems, PCs running DEFINITY Network Administration, and LDAP servers) to communicate with each other. Each DataStore Manager contains low-level mapping information that converts device-specific data types to Gateway data types (also known as *Gateway virtual objects*). The Gateway virtual objects are composed of the "common data representation language" of the Enterprise Directory Gateway, enabling all Gateway devices to communicate with one another. For example, when a change is made to the DEFINITY data, the DEFINITY DataStore Manager takes the changed data from the DEFINITY system, converts it into a Gateway schema object (which can be understood by every other DataStore Manager on the Gateway), and sends this data change (packaged in a *ChangeDescriptor*) to the Synchronization Engine. A ChangeDescriptor is the transport vehicle for a

package of data (that is, a data change) through the Gateway. The Gateway uses the ChangeDescriptor to keep track of the device supplying the data change and the transaction number.

Each device on the Gateway must have its own DataStore Manager. For example, the DEFINITY system has its own DataStore Manager, and your company's LDAP server has its own DataStore Manager. As the Gateway Administrator, it is your responsibility to define, activate, and monitor the DataStore Managers for each Gateway device.

Each DataStore Manager monitors its associated device. Every time a data change is made on the device, the DataStore Manager creates a ChangeDescriptor that describes the data change, and then sends the ChangeDescriptor to the Synchronization Engine, which is the hub of the Gateway. The ChangeDescriptor is propagated to the rest of the system by the Synchronization Engine based on the routing and mapping rules you define for the Synchronization Engine.

Each DataStore Manager receives ChangeDescriptors from the Synchronization Engine for Gateway types to which it subscribes.

Synchronization Engine

The Synchronization Engine, the heart of the Enterprise Directory Gateway, is a software process that synchronizes changes between native device data (for example, data from a DEFINITY system) and data from enterprise directories according to rules that you define.

When a change is made in a device (such as the DEFINITY system), the DataStore Manager creates a ChangeDescriptor and sends that ChangeDescriptor to the Synchronization Engine. The Synchronization Engine then applies its rules to the ChangeDescriptor and determines whether that data change affects data used by other devices on the Gateway. Depending on its rules, the Synchronization Engine routes the ChangeDescriptor to the appropriate DataStore Managers in the system. Those DataStore Managers then convert the virtual object in the ChangeDescriptor to the native data type of the device, and the appropriate data is changed in the device, thereby synchronizing the data across the system.

LDAP Data Store

The Enterprise Directory Gateway provides an LDAP server that stores all of the Gateway data. However, the Gateway can be configured to store its data in an existing LDAP directory service on your LAN. As changes are made to data in the Gateway devices, the LDAP data store is continuously updated with these changes.

Gateway Administration

Gateway Administration is a software application that enables you to configure, monitor and control the Enterprise Directory Gateway. Some of the tasks you can perform via Gateway Administration include:

- synchronize the Gateway data
- create, manage, and control DataStore Managers
- create, manage, and control Synchronization Engines
- monitor messages generated by DataStore Managers and/or the Synchronization Engine
- manage Gateway Administration users

Gateway Client

Gateway Client is a web-based application that enables users to view and modify data in the Enterprise Directory Gateway LDAP data store. Using the Gateway Client, users can perform the following tasks in the LDAP data store:

- view LDAP objects
- search for LDAP objects
- add LDAP objects
- modify LDAP objects
- delete LDAP objects

New Features in This Release

Enterprise Directory Gateway Release 1.1 has the following new features:

- **Support for Intuity AUDIX**

  Enterprise Directory Gateway now supports Intuity AUDIX systems. For the Enterprise Directory Gateway to interface with an Intuity system, you must create an Intuity DataStore Manager for each Intuity system connected to the Enterprise Directory Gateway.

- **Support for DEFINITY Network Administration**

  Enterprise Directory Gateway now supports DEFINITY Network Administration, a PC application that enables multiple system administrators to manage DEFINITY systems simultaneously from different remote locations. For the Enterprise Directory Gateway to interface with DEFINITY Network Administration, you must create a DEFINITY Network Administration DataStore Manager for each DEFINITY Network Administration connected to the Enterprise Directory Gateway.

Installing the Enterprise Directory Gateway

2

Overview

This chapter describes how to install the Enterprise Directory Gateway.

Requirements

The Enterprise Directory Gateway requires the hardware and software listed below.

NOTE:
Note that system performance may be adversely affected by lower system speeds and lower memory capacities.

- An IBM-compatible PC with the following hardware:
  - — a Pentium® III 500 MHz or higher processor
  - — a hard disk with at least 8 GB of space available (13 GB recommended)
  - — 128 MB of RAM (256 MB recommended)
  - — a network interface card to connect the PC to the company's local area network (LAN)
  - — a 56Kbps or higher modem (for required remote support)
  - — a CD-ROM drive, a Windows compatible VGA (or better) adapter, and a pointing device

- one of the following operating systems:
  - — Microsoft Windows NT Server 4.0 with Service Pack 4 or later
  - — Microsoft Windows 2000 Server
- one of the following LDAP services:
  - — Novell NDS eDirectory 8.5
  - — Netscape Directory Server Version 4.12
- pcANYWHERE® Version 9.0 or later (for required remote support)
- A DEFINITY system with software release 9.1 or later or an IP600 system that is connected to the company's LAN
- Sun Java® Runtime Environment (JRE), Standard Edition Version 1.2.2
- Allaire® JRun™ 3.0

The Enterprise Directory Gateway supports INTUITY AUDIX messaging Release 5.1 or later systems that are connected to the company's LAN.

NOTE:
To support the Gateway Client application, the PC accessing the Gateway Client must have Microsoft Internet Explorer 5.0 or later installed.

For the most up-to-date requirements for the Enterprise Directory Gateway, go to *http://www.avaya.com/support*.

Upgrading from Release 1.0

If you are upgrading an Enterprise Directory Gateway Release 1.0 system, perform the following steps:

1. Gather the Intuity system information described in the “Before You Begin” section of this chapter.
2. Shut down all of the DataStore Managers running on the Enterprise Directory Gateway.
3. Shut down the Synchronization Engine running on the Enterprise Directory Gateway.
4. Shut down the Gateway Administration application.
5. Back up the Enterprise Directory Gateway installation by copying the Gateway folder to another directory.
6. Restart the PC.
7. Perform the procedures in the “Install the Software” section of this chapter.

Before You Begin

Before installing the Enterprise Directory Gateway software, make sure you have the following information:

- **LDAP information**
  - LDAP root
  - LDAP user ID (and its corresponding password) with administrative privileges
  - LDAP server port (usually 389)
  - name of the PC hosting the LDAP service
- **DEFINITY system information**
  - an appropriate IP address of the network connection to the SAT server on the DEFINITY system
  - IP port number that is associated with the SAT server on that IP address

    If you are using a DEFINITY One or IP600 system, perform the following steps:

    a. Use the IP address of the DEFINITY processor.

    b. Verify that the port number is 23 for that IP address by entering the telnet command and the IP address from the SAT. For example, if the IP address is 123.45.67.89, you would enter ***telnet 123.45.67.89***.

    If you receive a login prompt after entering the telnet command and the IP address, the IP address is correct.

    If you do not receive a login prompt after entering the telnet command and the IP address, contact your System Administrator for additional help.

    If you are using a DEFINITY ProLogix, G3csi, G3i, or G3r system, use the IP address of a C-LAN board where the SAT server access is configured and the IP port that is configured on that board for the SAT server. To determine this information, perform the following steps:

    a. From the SAT, use the command **display ip services** to determine the internal name of the C-LAN board that provides access to the SAT service and the IP port that is associated with it.

    b. Now that you know the internal name of the C-LAN board, use the **display nodes ip** command to identify the IP address of the C-LAN board.

- login (and its corresponding password) on the DEFINITY system that the Enterprise Directory Gateway will use. This login must have the following settings:
  - login type set to “Service”
  - service level set to “inads”

  It is recommended that you create this login before the Enterprise Directory Gateway software is installed.

- **Intuity system information**
  - IP address of the Intuity system
  - login (and its corresponding password) on the Intuity system that the Enterprise Directory Gateway will use. This login must have administration privileges (for example, craft login).

    It is recommended that you create this login before the Enterprise Directory Gateway software is installed.

- **completed Enterprise Directory Gateway planning form** (See “Planning Form” on page 2-6.)

NOTE:
If you are using Novell NDS eDirectory, you must enable “Cleartext” passwords.

Planning Form

Before installing the software, you must know the following information. A blank copy of this form is located at the end of this chapter. You should fill out the planning form before installing the software.

LDAP Information

1. LDAP Root: _____

2. LDAP User ID: _____

3. LDAP User ID password: _____

4. LDAP Server Port (usually 389): _____

5. Name of the PC hosting LDAP: _____

DEFINITY Information

1. Type of DEFINITY system:

G3csi	G3si	G3r
DEFINITY One	ProLogix	IP600

2. Switch ID of the DEFINITY system: _____

3. IP address of the DEFINITY system: _____

4. Port for the DEFINITY system: _____

5. DEFINITY login the Enterprise Directory Gateway will use: _____

6. DEFINITY login password: _____

Intuity Information

1. Messaging server ID of the Intuity system: _____

2. IP address of the Intuity system: _____

3. Intuity login the Enterprise Directory Gateway will use: _____

4. Intuity login password: _____

Install the Software

To install the Enterprise Directory Gateway:

1. Log into the PC using an account that has administrative privileges.
2. Insert the Enterprise Directory Gateway CD into the CD drive.
3. Double-click on the **My Computer** icon on the desktop.
4. Double-click on the **CD-ROM** icon, and then double-click on **setup.exe**.

   The Welcome dialog box appears.
5. Click the **Next** button.

   The License Agreement dialog box appears.
6. Read the software license agreement.
7. To accept the software license agreement, click the **Yes** button.

   The Customer Information dialog box appears.
8. In the **User Name** box, enter your name.
9. In the **Company Name** box, enter the company name.
10. Click the **Next** button.

    The Choose Destination Location dialog box appears. The default folder is **C:\Gateway**.

    NOTE:
    If you are upgrading from Release 1.0, the Warning message box appears, indicating that a previous version of the Enterprise Directory Gateway is installed. Perform the following steps:

    a. Click the **OK** button.

       The Previous Installation Detected dialog box appears. By default, the **UPGRADE previous installation** option button is selected.

    b. Click the **Next** button.

       The Configure Intuity Servers dialog box appears. This dialog box enables you to specify each Intuity system that will be connected to the Gateway.

    c. Go to Step 31.

11. Click the **Next** button.

    The Setup Type dialog box appears. You can select one of the following installation options.

    - **Typical**

      This option installs all of the Enterprise Directory Gateway software. *This is the suggested installation option*.

    - **Compact**

      This option installs the minimum required components of the Enterprise Directory Gateway software.

    - **Custom**

      This option enables you to specify which components of the Enterprise Directory Gateway software you want to install.

12. Select the **Typical** option button, and click the **Next** button.

    The LDAP Configuration dialog box appears.

13. Verify that the information displayed in the **Host** box and **Port** box is correct for your installed LDAP server.

    The default values for Host and Port are based on the following assumptions:

    — The LDAP server is running on the same PC as the Enterprise Directory Gateway.

    — The LDAP server port is 389.

14. In the **Root** box, enter the LDAP root (for example, ***o=company.com***).

    NOTE:
    If you are using Novell NDS, you must also enter the “context” in the **Root** box.

15. In the **User** box, enter an LDAP user who has administrative privileges (for example, ***cn=Admin***).

    NOTE:
    If you are using Novell NDS, you must also enter that user’s “context” in the **User** box (for example, ***cn=Admin,o=edg,*** where ***o=edg*** is the context).

16. In the **Password** box, enter the password for the LDAP user you entered.

17. In the **Confirm Password** box, reenter the password for the LDAP user you entered.

18. Click the **Next** button.

    The Configure DEFINITY Servers dialog box appears. This dialog box enables you to specify each DEFINITY system that will be connected to the Gateway.

19. Click the **Add** button.

    The DEFINITY Configuration dialog box appears.

20. In the **DSM Name** box, enter the name of the DEFINITY system that will interface with the Enterprise Directory Gateway.

21. If the DEFINITY system is a DEFINITY One system or an IP600 system, click the **DEFINITY ONE** check box. Otherwise, do not select this check box.

22. In the **Host IP** box, enter the IP address of the DEFINITY system.

23. In the **Port** box, enter the port of the DEFINITY system.

24. In the **Login** box, enter the DEFINITY login that the Enterprise Directory Gateway will use. *This login must be a "service" type login with the service level set to "inads*."

25. In the **Password** box, enter the password for the DEFINITY login.

26. In the **Confirm Password** box, reenter the password for the DEFINITY login.

27. Perform one of the following steps:

    - If you are using ASG Key, perform the following steps:

      a. In the **ASG Key** box, enter the ASG Key password.

      b. In the **Confirm ASG Key** box, reenter the ASG Key password.

      c. Proceed to Step 28.

    - If you are not using ASG Key, proceed to Step 28.

28. Click the **OK** button.

    The Configure DEFINITY Servers dialog box appears, showing the switch ID, host IP, and port you entered for the DEFINITY system.

29. Repeat Steps 19 to 28 for each additional DEFINITY system that will be connected to the Gateway.

30. When finished configuring the DEFINITY system(s) that will be connected to the Gateway, click the **Next** button.

    The Configure Intuity Servers dialog box appears. This dialog box enables you to specify each Intuity system that will be connected to the Gateway.

31. Click the **Add** button.

    The Intuity Configuration dialog box appears.

32. In the **DSM Name** box, enter the name of the Intuity system that will interface with the Enterprise Directory Gateway.
33. In the **Host IP** box, enter the IP address of the Intuity system.
34. In the **Login** box, enter the Intuity login that the Enterprise Directory Gateway will use. *This login must have administration privileges (for example, craft login).* In the **Password** box, enter the password for the DEFINITY login.
35. In the **Confirm Password** box, reenter the password for the DEFINITY login.
36. Click the **OK** button.

    The Configure Intuity Servers dialog box appears, showing the system ID and host IP you entered for the Intuity system.
37. Repeat Steps 31 to 36 for each additional Intuity system that will be connected to the Gateway.
38. When finished configuring the Intuity system(s) that will be connected to the Gateway, click the **Next** button.

    The Select Program Folder dialog box appears.

    This dialog box lists the program folder to which the Enterprise Directory Gateway will be installed. The default program folder is **Enterprise Directory Gateway**.
39. Specify the program folder, and then click the **Next** button.

    The Begin Installation dialog box appears, displaying the installation information. If necessary, use the **Back** button to make any changes.
40. Click the **Next** button.

    The software is installed.

    When the installation is complete, the Setup Complete dialog box appears. By default, the **Yes, I want to restart my computer now** option button is selected.
41. Click the **Finish** button to reboot the PC.

    After the PC reboots, go to Chapter 3, “Configuring the Enterprise Directory Gateway’’ to configure the Enterprise Directory Gateway initially.

Planning Form

Before installing the software, enter the following information:

LDAP Information

1. LDAP Root: _____

2. LDAP User ID: _____

3. LDAP User ID password: _____

4. LDAP Server Port (usually 389): _____

5. Name of the PC hosting LDAP: _____

DEFINITY Information

1. Type of DEFINITY system:

G3csi	G3si	G3r
DEFINITY One	ProLogix	IP600

2. Switch ID of the DEFINITY system: _____

3. IP address of the DEFINITY system: _____

4. Port for the DEFINITY system: _____

5. DEFINITY login the Enterprise Directory Gateway will use: _____

6. DEFINITY login password: _____

Intuity Information

1. Messaging server ID of the Intuity system: _____

2. IP address of the Intuity system: _____

3. Intuity login the Enterprise Directory Gateway will use: _____

4. Intuity login password: _____

Configuring the Enterprise Directory Gateway

3

Overview

This chapter describes how to configure the Enterprise Directory Gateway. To configure the Enterprise Directory Gateway, you must perform the following procedures:

1. Configure the LDAP schema (“Procedure 1: Configure the LDAP Schema’’ on page 3-3).
2. Start the Gateway Administration application, and log in as Administrator (“Procedure 2: Start the Gateway Administration Application’’ on page 3-4).
3. Configure GWAgent (“Procedure 3: Configure GWAgent’’ on page 3-5).
4. Activate the Synchronization Engine (“Procedure 4: Activate the Synchronization Engine’’ on page 3-7).
5. Activate and attach the Gateway DataStore Manager (“Procedure 5: Activate and Attach the Gateway DataStore Manager’’ on page 3-8).
6. Configure additional Gateway DataStore Managers (“Procedure 6: Configure Additional Gateway DataStore Managers’’ on page 3-9).

   NOTE:
   Perform this procedure only if the customer has requested an additional Gateway DataStore Manager.

7. Activate and attach the DEFINITY DataStore Manager (“Procedure 7: Activate and Attach the DEFINITY DataStore Manager’’ on page 3-12).

8. Configure additional DEFINITY DataStore Managers (“Procedure 8: Configure Additional DEFINITY DataStore Managers’’ on page 3-13).

   NOTE:
   Perform this procedure only if you did not configure additional DEFINITY systems during the software installation, or you want to add additional DEFINITY systems after the Gateway is installed.

9. Activate and attach the Intuity DataStore Manager (“Procedure 9: Activate and Attach the Intuity DataStore Manager’’ on page 3-16).

10. Configure additional Intuity DataStore Managers (“Procedure 10: Configure Additional Intuity DataStore Managers’’ on page 3-17).

    NOTE:
    Perform this procedure only if you did not configure additional Intuity systems during the software installation, or you want to add additional Intuity systems after the Gateway is installed.

11. Configure DEFINITY DNA DataStore Managers (“Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers’’ on page 3-20).

12. Create a new Gateway Administration login, and delete the default login (“Procedure 12: Create a New Gateway Administration Login’’ on page 3-24).

13. Administer the Gateway (“Procedure 13: Administer the Gateway’’ on page 3-25).

Procedure 1: Configure the LDAP Schema

In this section, you will apply schema updates to the LDAP server so that the Enterprise Directory Gateway data will populate the LDAP server.

To update the Netscape Directory Servers LDAP schema:

1. Copy the schema files “slapd.user_at.conf” and “slapd.user_oc.conf” from the directory **\Gateway\ldap\Netscape** to the directory **\Netscape\Server4\slapd-*server name*\config** (where *server name* is the name of the computer hosting LDAP directory).

   The file “slapd.user_at.conf” contains the EDG attributes for Netscape. The file “slapd.user_oc.conf” contains the object classes.

2. From the Start menu, select **Settings>Control Panel**.

   The Control Panel window appears.

3. Double-click the **Services** icon.

   The Services window appears.

4. Stop and restart Netscape Directory Server.

5. Go to “Procedure 2: Start the Gateway Administration Application” on page 3-4.

To update the Novell Directory Servers LDAP schema:

1. From the Start menu, select **Programs>Command Prompt**.

   The Command Prompt window appears.

2. Type ***cd \Gateway\ldap\Nds*** and press ENTER.

3. Type ***ndslu ndsattr.ldif*** and press ENTER.

4. Type ***ndslu ndsclass.ldif*** and press ENTER.

5. Close the Command Prompt window.

6. From the Start menu, select **Settings>Control Panel**.

   The Control Panel window appears.

7. Double-click the **Services** icon.

   The Services window appears.

8. Stop and restart Novell Directory Servers.

9. Go to “Procedure 2: Start the Gateway Administration Application” on page 3-4.

Procedure 2: Start the Gateway Administration Application

To start the Gateway Administration application:

1. Log into the network.
2. From the Start menu, select **Programs>Enterprise Directory Gateway>Gateway Admin**.

   The Gateway Administration Login dialog box appears.
3. In the **Username** box, enter ***Administrator***.
4. In the **Password** box, enter ***password***.
5. Click the **OK** button.

   The Gateway Administration window appears. The **Synchronization Engines** tab is displayed.

Go to “Procedure 3: Configure GWAgent’’ on page 3-5.

Procedure 3: Configure GWAgent

In this procedure, you will configure GWAgent. GWAgent monitors the LDAP datastore and notifies the Gateway when changes are made.

To configure GWAgent:

1. Click the **GWAgent** tab in the Gateway Administration window.

   The **GWAgent** tab appears.

2. Click the **Startup** button.

   The GWAgent StartUp Parameters dialog box appears.

3. Click the **Browse** button.

   The Browse for Folder dialog box appears.

4. Select the folder where GWAgent is located. The default location is **c:\gateway\bin**.

5. Click the **OK** button.

   The GWAgent settings are displayed in the GWAgent StartUp Parameters dialog box.

6. Verify that the information displayed in the **Host** box and the **Port** box is correct.

7. Click the **OK** button.

8. Click the **Connect** button.

   The Connect to GWAgent dialog box appears.

9. In the **Server** box, enter the LDAP server.

10. In the **User** box, enter an LDAP user who has administrative privileges.

11. In the **Password** box, enter the password for the LDAP user you entered.

12. Click the **Save these settings as default** check box.

    A check mark appears in the check box.

13. Click the **OK** button.

    You are connected to the Gateway Agent.

14. Click the **Populate** button.

    The General Settings dialog box appears.

15. Click the **Add** button.

    The Add New Trigger dialog box appears.

16. Enter ***ou=Gateway Users,o=LDAP root***, where ***LDAP root*** is the root you specified in Step 14 of the software installation. See “Install the Software” on page 2-7.

17. Make sure the **Active** option button is selected. (It is selected by default.)
18. Click the **OK** button.

    Information is displayed.
19. Click the **Add** button.

    The Add New Trigger dialog box appears.
20. Enter ***ou=DEFINITY Servers,o=LDAP root***, where ***LDAP root*** is the root you specified in Step 14 of the software installation. See “Install the Software’’ on page 2-7.
21. Click the **OK** button.

    Information is displayed.
22. Click the **Add** button.

    The Add New Trigger dialog box appears.
23. Enter ***ou=Messaging Servers,o=LDAP root***, where ***LDAP root*** is the root you specified in Step 14 of the software installation. See “Install the Software’’ on page 2-7.
24. Click the **OK** button.

    Information is displayed.
25. Select the **Save these settings as default** check box.

    A check mark appears in the check box.
26. Click the **OK** button to close the General Settings dialog box.
27. Click the **Commit** button.

Go to “Procedure 4: Activate the Synchronization Engine’’ on page 3-7.

Procedure 4: Activate the Synchronization Engine

In this section, you will activate the default Synchronization Engine “GWSE.” During the software installation, GWSE was installed. GWSE has already been defined and registered in the Gateway Administration application.

To activate the Synchronization Engine:

1. Click the **Synchronization Engines** tab (if it is not already selected).

   The Synchronization Engine GWSE appears in the Synchronization Engines list box. Its status is **Offline**.

2. Select **GWSE**.

3. Click the **Activate** button.

   A green light appears next to GWSE, and the status changes to **Active**.

Go to “Procedure 5: Activate and Attach the Gateway DataStore Manager” on page 3-8.

Procedure 5: Activate and Attach the Gateway DataStore Manager

In this section, you will activate and “attach” the DataStore Manager for the Gateway (GWDSM). GWDSM connects Enterprise Directory Gateway to its internal LDAP datastore, which will contain all of the Gateway data. (GWDSM was created, defined, and registered during the software installation.)

After GWDSM is “attached,” the Gateway LDAP datastore will be able to receive data from the Gateway via GWDSM. However, before GWDSM can be attached, it must be activated.

To activate and attach the GWDSM:

1. Click the **DataStore Managers** tab.

   The **DataStore Managers** tab appears.

   The GWDSM DataStore Manager appears in the DataStore Managers list box. Its status is **Offline**.

2. Select **GWDSM**.

3. Click the **Activate** button.

   A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.

4. Click the **Attach** button.

   The status changes to **Ready**. GWDSM can now pass Gateway data from the Synchronization Engine to the LDAP datastore.

If the customer wants additional Gateway DataStore Managers, go to “Procedure 6: Configure Additional Gateway DataStore Managers’’ on page 3-9.

Otherwise, go to “Procedure 7: Activate and Attach the DEFINITY DataStore Manager’’ on page 3-12.

Procedure 6: Configure Additional Gateway DataStore Managers

NOTE:
Perform this procedure if the customer has requested additional Gateway DataStore Managers.

The software installation created, defined, and registered a DataStore Manager for the Gateway. If you want to attach additional Gateway DataStore Managers to the Enterprise Directory Gateway, you must create, define, register, activate, and attach a DataStore Manager.

To create, define, register, activate, and attach additional Gateway DataStore Managers:

1. Click the **Device Configurations** button on the toolbar.

   The Configuration Editor dialog box appears.

2. In the **Device Class** area, click the **DataStore Manager** option button.

3. Click the **Add** button.

   A dialog box appears, prompting you to enter the name of the configuration file.

4. Enter a name that can be easily associated with the Gateway DataStore Manager you are configuring, and click the **OK** button.

   The name you entered for the new configuration file is displayed and selected in the **Defined Configurations** list box.

5. In the **Defined Configurations** list box, select the Gateway DataStore Manager that was created during the software installation (_PrimaryLDAP).

   The information for the selected file appears in the **Configuration Details** box.

6. Select all of the information in the **Configuration Details** box, and copy it to the Windows Clipboard.

7. In the **Defined Configurations** list box, select the Gateway DataStore Manager configuration you added in Step 4 of this procedure.

   The **Configuration Details** box is empty.

8. Click the mouse inside the **Configuration Details** box, and paste the information from the Windows Clipboard.

9. Make the following changes to the information in this file:
    a. In the **[_connection_]** section, enter the LDAP base (**o=**).
    b. In the **[_connection_]** section, enter the port (**port=**) for the LDAP server you want to use.
    c. In the **[_connection_]** section, enter the IP address (**Server=**) for the LDAP server you want to use.
    d. In the **[_connection_]** section, enter an LDAP user (**cn=**) who has administrative privileges for the LDAP server you want to use.
    e. In the **[_variables_]** section, type ***@LDAP_PW=my_password***, where ***my_password*** is the password for the LDAP server you want to use.
10. Click the **Done** button.

    The changes are saved for the new DataStore Manager configuration.
11. Click the **DataStore Managers** tab.

    The **DataStore Managers** tab appears.
12. Click the **Define DSM** button.

    The DSM Definition dialog box appears.
13. In the **DSM Name** box, enter the name for this DataStore Manager.
14. In the **DSM Type** box, enter ***GWDSM***.
15. In the **CORBA Server** box, enter the name of the LDAP server that will use this DataStore Manager. You can enter only alphanumeric characters without spaces.
16. In the **Host PC** box, enter the name of the PC on which the Enterprise Directory Gateway was installed.
17. From the **Configuration ID** drop-down list box, select the Gateway DataStore Manager configuration you created in Step 4 of this procedure.
18. In the **Comment** box, you may enter notes about this DataStore Manager. The information you enter in this box is for your convenience only. The Enterprise Directory Gateway does not use this information.
19. Make sure the **Register with Daemon** check box is enabled. (It is enabled by default.)
20. Click the **OK** button.

    The new DataStore Manager appears in the DataStore Managers list box. Its status is **Offline**.

    The new DataStore Manager is registered with the Gateway.
21. On the **DataStore Managers** tab, select the new Gateway DataStore Manager you created.

22. Click the **Activate** button.

    A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.

23. Click the **Attach** button.

    The status changes to **Ready**. The Gateway DataStore Manager you created can now pass Gateway data from the Synchronization Engine to the LDAP server.

Repeat Steps 1 through 23 for each Gateway DataStore Manager you want to configure. When finished, go to “Procedure 7: Activate and Attach the DEFINITY DataStore Manager’’ on page 3-12.

Procedure 7: Activate and Attach the DEFINITY DataStore Manager

In this section, you will activate and “attach” the DataStore Manager for each DEFINITY system. The DEFINITY DataStore Manager connects the DEFINITY system to the Gateway. (The DEFINITY DataStore Manager was created, defined, and registered during the software installation.)

After the DEFINITY DataStore Manager is “attached,” the DEFINITY system will be able to receive data from the Gateway via the DEFINITY DataStore Manager. However, before the DEFINITY DataStore Manager can be attached, it must be activated.

To activate and attach the DEFINITY DataStore Manager:

1. On the **DataStore Managers** tab, select the DEFINITY DataStore Manager. The DEFINITY DataStore Manager is named for the DEFINITY system that will interface with the Enterprise Directory Gateway. (See Step 20 in Chapter 2.)
2. Click the **Activate** button.

   A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.
3. Click the **Attach** button.

   The status changes to **Ready**. The selected DEFINITY DataStore Manager can now pass Gateway data from the Synchronization Engine to the DEFINITY system.
4. Repeat Steps 1 to 4 for each DEFINITY DataStore Manager (that is, if there is more than one DEFINITY system connected to the Gateway).

If additional DEFINITY systems will be connected to the Gateway and you did not configure these systems during the software installation or you want to add additional DEFINITY systems after the Gateway is installed, go to “Procedure 8: Configure Additional DEFINITY DataStore Managers” on page 3-13.

Otherwise, perform one of the following steps:

- If you are using an Intuity system, go to “Procedure 9: Activate and Attach the Intuity DataStore Manager” on page 3-16.
- If you are using DEFINITY Network Administration (and you are not using an Intuity system), go to “Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers” on page 3-20.
- If you are not using an Intuity system and DEFINITY Network Administration, go to “Procedure 12: Create a New Gateway Administration Login” on page 3-24.

Procedure 8: Configure Additional DEFINITY DataStore Managers

NOTE:
Perform this procedure if additional DEFINITY systems will be connected to the Gateway and you did not configure these systems during the software installation or you want to add additional DEFINITY systems after the Gateway is installed.

The software installation created, defined, and registered a DataStore Manager for each DEFINITY system you specified. If you want to attach additional DEFINITY systems to the Enterprise Directory Gateway, you must create, define, register, activate, and attach a DataStore Manager for each DEFINITY system.

To create, define, register, activate, and attach a DataStore Manager for each additional DEFINITY system:

1. Click the **Device Configurations** button on the toolbar.

   The Configuration Editor dialog box appears.

2. In the **Device Class** area, click the **DataStore Manager** option button.

3. Click the **Add** button.

   A dialog box appears, prompting you to enter the name of the configuration file.

4. Enter a name that can be easily associated with the specific DEFINITY system you are configuring, and click the **OK** button.

   The name you entered for the new configuration file is displayed and selected in the **Defined Configurations** list box.

5. In the **Defined Configurations** list box, select the DEFINITY DataStore Manager that was created during the software installation.

   The information for the selected file appears in the **Configuration Details** box. The DEFINITY DataStore Manager contains the common information that all DEFINITY DataStore Managers share.

6. Select all of the information in the **Configuration Details** box, and copy it to the Windows Clipboard.

7. In the **Defined Configurations** list box, select the DEFINITY DataStore Manager configuration you added in Step 4 of this procedure.

   The **Configuration Details** box is empty.

8. Click the mouse inside the **Configuration Details** box, and paste the information from the Windows Clipboard.

9. Make the following changes to the information in this file:
    a. In the **[_connection_]** section, enter the login (**login=**) for the DEFINITY system you want to use.
    b. In the **[_connection_]** section, enter the C-LAN port (**port=**) for the DEFINITY system you want to use.
    c. In the **[_connection_]** section, enter the IP address (**Server=**) for the DEFINITY system you want to use.
    d. If you are using ASG Key, type ***yek=@ASG_KEY*** at the bottom of the **[_connection_]** section.
    e. In the **[_variables_]** section, enter the switch name (**dsid=**) for the DEFINITY system you want to use to identify this DEFINITY system in LDAP.
    f. At the bottom of the **[_variables_]** section, type ***@DEFTY_PW=my_password***, where ***my_password*** is the password for the DEFINITY system you want to use.
    g. If you are using ASG Key, type ***ASG_KEY=key_password*** at the bottom of the **[_variables_]** section, where ***key_password*** is the password for the ASG Key.
10. Perform one of the following steps:
    — If you are creating a DataStore Manager for a DEFINITY One system, change each occurrence of **G3** (if present) to ***CONTRY*** in the [_variables_] section.
    — If you are creating a DataStore Manager for a DEFINITY system other than DEFINITY One, change each occurrence of **CONTRY** (if present) to ***G3*** in the [_variables_] section.
11. Click the **Save** button.
12. Click the **Done** button.

    The changes are saved for the new DataStore Manager configuration.
13. Click the **DataStore Managers** tab.

    The **DataStore Managers** tab appears.
14. Click the **Define DSM** button.

    The DSM Definition dialog box appears.
15. In the **DSM Name** box, enter the name (that is, switch ID) of the DEFINITY system that will use this DataStore Manager.
16. In the **DSM Type** box, enter ***DEFINITY***.
17. In the **CORBA Server** box, enter the name (that is, switch ID) of the DEFINITY system that will use this DataStore Manager. You can enter only alphanumeric characters without spaces.

18. In the **Host PC** box, enter the name of the PC on which the Enterprise Directory Gateway was installed.
19. From the **Configuration ID** drop-down list box, select the DEFINITY DataStore Manager configuration you created in Step 4 of this procedure.
20. In the **Comment** box, you may enter notes about this DataStore Manager. The information you enter in this box is for your convenience only. The Enterprise Directory Gateway does not use this information.
21. Make sure the **Register with Daemon** check box is enabled. (It is enabled by default.)
22. Click the **OK** button.

    The new DataStore Manager appears in the DataStore Managers list box. Its status is **Offline**.

    The new DataStore Manager is registered with the Gateway.
23. On the **DataStore Managers** tab, select the new DEFINITY DataStore Manager you created.
24. Click the **Activate** button.

    A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.
25. Click the **Attach** button.

    The status changes to **Ready**. The DEFINITY DataStore Manager you created can now pass Gateway data from the Synchronization Engine to the DEFINITY system.

Repeat Steps 1 through 24 for each DEFINITY system you want to configure.

When finished, perform one of the following steps:

- If you are using an Intuity system, go to “Procedure 9: Activate and Attach the Intuity DataStore Manager” on page 3-16.
- If you are using DEFINITY Network Administration (and you are not using an Intuity system), go to “Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers” on page 3-20.
- If you are not using an Intuity system and DEFINITY Network Administration, go to “Procedure 12: Create a New Gateway Administration Login” on page 3-24.

Procedure 9: Activate and Attach the Intuity DataStore Manager

In this section, you will activate and "attach" the DataStore Manager for each Intuity system. The Intuity DataStore Manager connects the Intuity system to the Gateway. (The Intuity DataStore Manager was created, defined, and registered during the software installation.)

After the Intuity DataStore Manager is "attached," the Intuity system will be able to receive data from the Gateway via the Intuity DataStore Manager. However, before the Intuity DataStore Manager can be attached, it must be activated.

To activate and attach the Intuity DataStore Manager:

1. On the **DataStore Managers** tab, select the Intuity DataStore Manager. The Intuity DataStore Manager is named for the Intuity system that will interface with the Enterprise Directory Gateway. (See Step 19 in Chapter 2.)
2. Click the **Activate** button.

   A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.
3. Click the **Attach** button.

   The status changes to **Ready**. The selected Intuity DataStore Manager can now pass Gateway data from the Synchronization Engine to the Intuity system.
4. Repeat Steps 1 to 4 for each Intuity DataStore Manager (that is, if there is more than one Intuity system connected to the Gateway).

If additional Intuity systems will be connected to the Gateway and you did not configure these systems during the software installation or you want to add additional Intuity systems after the Gateway is installed, go to "Procedure 10: Configure Additional Intuity DataStore Managers" on page 3-17.

Otherwise, perform one of the following steps:

- If you are using DEFINITY Network Administration, go to "Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers" on page 3-20.
- If you are not using DEFINITY Network Administration, go to "Procedure 12: Create a New Gateway Administration Login" on page 3-24.

Procedure 10: Configure Additional Intuity DataStore Managers

NOTE:
Perform this procedure if additional Intuity systems will be connected to the Gateway and you did not configure these systems during the software installation or you want to add additional Intuity systems after the Gateway is installed.

The software installation created, defined, and registered a DataStore Manager for each Intuity system you specified. If you want to attach additional Intuity systems to the Enterprise Directory Gateway, you must create, define, register, activate, and attach a DataStore Manager for each Intuity system.

To create, define, register, activate, and attach a DataStore Manager for each additional Intuity system:

1. Click the **Device Configurations** button on the toolbar.

   The Configuration Editor dialog box appears.

2. In the **Device Class** area, click the **DataStore Manager** option button.

3. Click the **Add** button.

   A dialog box appears, prompting you to enter the name of the configuration file.

4. Enter a name that can be easily associated with the specific Intuity system you are configuring, and click the **OK** button.

   The name you entered for the new configuration file is displayed and selected in the **Defined Configurations** list box.

5. In the **Defined Configurations** list box, select the Intuity DataStore Manager that was created during the software installation.

   The information for the selected file appears in the **Configuration Details** box. The Intuity DataStore Manager contains the common information that all Intuity DataStore Managers share.

6. Select all of the information in the **Configuration Details** box, and copy it to the Windows Clipboard.

7. In the **Defined Configurations** list box, select the Intuity DataStore Manager configuration you added in Step 4 of this procedure.

   The **Configuration Details** box is empty.

8. Click the mouse inside the **Configuration Details** box, and paste the information from the Windows Clipboard.

9. Make the following changes to the information in this file:
    a. In the **[_connection_]** section, enter the login (**login=**) for the Intuity system you want to use.
    b. In the **[_connection_]** section, enter the IP address (**Server=**) for the Intuity system you want to use.
    c. In the **[_variables_]** section, enter the messaging server name (**dsid=**) for the Intuity system you want to use to identify this Intuity system in LDAP.
    d. At the bottom of the **[_variables_]** section, type ***@INTUITY_PW=my_password***, where ***my_password*** is the password for the Intuity system you want to use.
10. Click the **Save** button.
11. Click the **Done** button.

    The changes are saved for the new DataStore Manager configuration.
12. Click the **DataStore Managers** tab.

    The **DataStore Managers** tab appears.
13. Click the **Define DSM** button.

    The DSM Definition dialog box appears.
14. In the **DSM Name** box, enter the name (that is, messaging server ID) of the Intuity system that will use this DataStore Manager.
15. In the **DSM Type** box, enter ***Intuity***.
16. In the **CORBA Server** box, enter the name (that is, messaging server ID) of the Intuity system that will use this DataStore Manager. You can enter only alphanumeric characters without spaces.
17. In the **Host PC** box, enter the name of the PC on which the Enterprise Directory Gateway was installed.
18. From the **Configuration ID** drop-down list box, select the Intuity DataStore Manager configuration you created in Step 4 of this procedure.
19. In the **Comment** box, you may enter notes about this DataStore Manager. The information you enter in this box is for your convenience only. The Enterprise Directory Gateway does not use this information.
20. Make sure the **Register with Daemon** check box is enabled. (It is enabled by default.)
21. Click the **OK** button.

    The new DataStore Manager appears in the DataStore Managers list box. Its status is **Offline**.

    The new DataStore Manager is registered with the Gateway.
22. On the **DataStore Managers** tab, select the new Intuity DataStore Manager you created.

23. Click the **Activate** button.

    A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.

24. Click the **Attach** button.

    The status changes to **Ready**. The Intuity DataStore Manager you created can now pass Gateway data from the Synchronization Engine to the Intuity system.

Repeat Steps 1 through 24 for each Intuity system you want to configure.

When finished, perform one of the following steps:

- If you are using DEFINITY Network Administration, go to “Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers” on page 3-20.
- If you are not using DEFINITY Network Administration, go to “Procedure 12: Create a New Gateway Administration Login” on page 3-24.

Procedure 11: Configure DEFINITY Network Administration (DNA) DataStore Managers

Enterprise Directory Gateway supports DEFINITY Network Administration, a PC application that enables multiple system administrators to manage DEFINITY systems simultaneously from different locations. For the Enterprise Directory Gateway to interface with DEFINITY Network Administration, you must create, define, register, activate, and attach a DataStore Manager for each DEFINITY Network Administration connected to the Enterprise Directory Gateway.

A DEFINITY Network Administration DataStore Manager can communicate with only one DEFINITY Network Administration. If you have more than one DEFINITY Network Administration, you must create a DataStore Manager for each DEFINITY Network Administration in the Enterprise Directory Gateway. (Each DEFINITY Network Administration DataStore Manager communicates with its corresponding DEFINITY Network Administration.)

To create, define, register, activate, and attach a DataStore Manager for each DEFINITY Network Administration:

1. Click the **Device Configurations** button on the toolbar.

   The Configuration Editor dialog box appears.

2. In the **Device Class** area, click the **DataStore Manager** option button.

3. Click the **Add** button.

   A dialog box appears, prompting you to enter the name of the configuration file.

4. Enter a name that can be easily associated with the specific DEFINITY Network Administration you are configuring, and click the **OK** button.

   The name you entered for the new configuration file is displayed and selected in the **Defined Configurations** list box.

5. In the **Defined Configurations** list box, select the file **_DNAconfig.ini**. This is the DEFINITY Network Administration DataStore Manager configuration that was created during the software installation.

   The information for the selected file appears in the **Configuration Details** box. The DEFINITY Network Administration DataStore Manager contains the common information that all DEFINITY Network Administration DataStore Managers share.

6. Select all of the information in the **Configuration Details** box, and copy it to the Windows Clipboard.

7. In the **Defined Configurations** list box, select the DEFINITY Network Administration DataStore Manager configuration you added in Step 4 of this procedure.

   The **Configuration Details** box is empty.

8. Click the mouse inside the **Configuration Details** box, and paste the information from the Windows Clipboard.

9. Make the following changes to the information in this file:

   a. In the **[_connection_]** section, enter the IP port (**port=**) for the DEFINITY Network Administration process (referred to as "DNA DS") that listens for the DEFINITY Network Administration DataStore Manager connection. The IP port the DEFINITY Network Administration DataStore Manager/DEFINITY Network Administration service is usually **8057**.

   b. In the **[_connection_]** section, enter the IP address (**Server=**) of the DEFINITY DNA.

   c. In the **[_connection_]** section, enter the acceptable time frame in milliseconds for DEFINITY Network Administration to acknowledge the receipt of a message from the DEFINITY Network Administration DataStore Manager (**responseTimeout=**). The failure of DEFINITY Network Administration to respond to the DEFINITY Network Administration DataStore Manager within the specified time frame will cause the DEFINITY Network Administration DataStore Manager to report a connection problem and then try to reestablish the network socket connection. If the network socket connection is not reestablished, the DEFINITY Network Administration DataStore Manager reports a connection error to the Enterprise Directory Gateway.

   d. In the **[_switches_]** section, enter the name (**Switch1=, Switch2=, Switch3=, SwitchN=**) of each DEFINITY system for which this DEFINITY Network Administration DataStore Manager forwards notifications to the DEFINITY Network Administration.

      NOTE:
      Usually, the DEFINITY Network Administration name of the DEFINITY system is the same as the Enterprise Directory Gateway name of the DEFINITY system. If the DEFINITY Network Administration name of the DEFINITY system is different from the Enterprise Directory Gateway name of the DEFINITY system, type ***SwitchN=EDG_name_of_DEFINITY_switch[DNA_name_of_DEFINITY_switch]***, where ***N*** is the switch number (for example, 1), ***EDG_name_of_DEFINITY_switch*** is the Enterprise Directory Gateway name of the DEFINITY system, and ***DNA_name_of_DEFINITY_switch*** is the DEFINITY Network Administration name of the DEFINITY system.

e. In the **[_switches_]** section, enter the number of DEFINITY systems (**SwitchCount=**) you specified in Step d.

10. Click the **Save** button.
11. Click the **Done** button.

    The changes are saved for the new DataStore Manager configuration.

12. Click the **DataStore Managers** tab.

    The **DataStore Managers** tab appears.

13. Click the **Define DSM** button.

    The DSM Definition dialog box appears.

14. In the **DSM Name** box, enter the name of the DEFINITY Network Administration that will use this DataStore Manager.
15. In the **DSM Type** box, enter ***DNA DSM***.
16. In the **CORBA Server** box, enter the name of the DEFINITY DNA that will use this DataStore Manager. You can enter only alphanumeric characters without spaces.
17. In the **Host PC** box, enter the name of the PC on which the Enterprise Directory Gateway was installed.
18. From the **Configuration ID** drop-down list box, select the DEFINITY Network Administration DataStore Manager configuration you created in Step 4 of this procedure.
19. In the **Comment** box, you may enter notes about this DataStore Manager. The information you enter in this box is for your convenience only. The Enterprise Directory Gateway does not use this information.
20. Make sure the **Register with Daemon** check box is enabled. (It is enabled by default.)
21. Click the **OK** button.

    The new DataStore Manager appears in the DataStore Managers list box. Its status is **Offline**.

    The new DataStore Manager is registered with the Gateway.

22. On the **DataStore Managers** tab, select the new DEFINITY Network Administration DataStore Manager you created.
23. Click the **Activate** button.

    A yellow light appears next to the DataStore Manager, and the status changes to **Detached**.

24. Click the **Attach** button.

    The status changes to **Ready**. The DEFINITY Network Administration DataStore Manager you created can now pass Gateway data from the Synchronization Engine to the DEFINITY Network Administration.

Repeat Steps 1 through 24 for each DEFINITY Network Administration you want to configure. When finished, go to “Procedure 12: Create a New Gateway Administration Login” on page 3-24.

Procedure 12: Create a New Gateway Administration Login

In this section, you will create a new Gateway Administration login and delete the default login. This new Gateway Administration login will be used by the Gateway Administrator.

To create a new Gateway Administration login and delete the default login:

1. Click the **User Profiles** button on the toolbar.

   The User Profiles dialog box appears.

2. Click the **Add** button.

   The Add User dialog box appears.

3. In the **Username** box, enter the new login.
4. In the **Password** box, enter the password.
5. Click the **Superuser** check box.

   NOTE:
   The **Superuser** check box must be enabled.

6. Click the **OK** button.

   The new login appears in the **Users** box.

7. In the **Users** box, select **Administrator**.

   The settings for the selected account appear in the **Security Profile** box.

8. Click the **Delete** button.

   The Confirm dialog box appears.

9. Click the **Yes** button.

   The selected account is removed from the **Users** box.

10. Click the **OK** button to close the User Profiles dialog box.

Go to “Procedure 13: Administer the Gateway” on page 3-25.

Procedure 13: Administer the Gateway

After you have completed Procedures 1 through 12, the Synchronization Engine, the DEFINITY DataStore Manager(s) and Intuity DataStore Manager(s) are in the ready state, and the LDAP Data Store is configured. You are ready to start running the Synchronization Engine, the DEFINITY DataStore Manager(s), and Intuity DataStore Manager(s), and to administer the Gateway. Refer to *Enterprise Directory Gateway Administration*, which is a PDF that is located in the Docs folder on the Enterprise Directory Gateway CD. This document describes how to manage the Enterprise Directory Gateway using the Gateway Administration application.

Troubleshooting

4

Overview

This chapter provides information that can assist you in solving problems you might encounter when you install and configure the Enterprise Directory Gateway initially. This chapter is divided into the following sections:

- Troubleshooting Installation
- Troubleshooting Gateway Administration Startup
- Troubleshooting Gateway Administration Login
- Troubleshooting the Synchronization Engine
- Troubleshooting DataStore Managers
- Troubleshooting GWAgent
- Troubleshooting the Scheduler

Refer to the appropriate section to find the information required to solve your particular problem.

Troubleshooting the Installation

This section describes problems you might encounter when trying to install the Enterprise Directory Gateway software.

Problem 1: You receive the message: "Catastrophic Error" or "Error Extracting Support Files"

Perform the following steps:

1. Open Windows Explorer and delete the folder **Program Files\Common Files\InstallShield**.

   If you are unable to delete this folder:

   a. Press CTRL+ALT+DELETE to access Task Manager.

   b. From Task Manager, stop the lkernel process.

   c. Repeat Step 1.

2. Using Windows Explorer, delete the folder **Program Files\InstallShield\Installation Information**.
3. Install the Enterprise Directory Gateway software.

Problem 2: You receive the message: "The InstallShield engine (iKernel.exe) could not be installed."

Perform the following steps:

1. Press CTRL+ALT+DELETE to access Task Manager.
2. From Task Manager, stop the lkernel process.

Troubleshooting Gateway Administration Startup

This section describes problems you might encounter when trying to start Gateway Administration.

Problem 1: Gateway Administration will not start

The mdb file that is used for validating database access is not in the correct location.

Make sure the mdb file is in the \gateway\bin directory.

Problem 2: Gateway Administration attempts to create the DSN

The system DSN is missing.

Manually install a system DSN named GWADMIN from the ODBC32 icon in the Windows Control Panel. This DSN should point at the mdb file in the \gateway\bin directory.

Problem 3: After the system reboots, the gwcfg window appears and "hangs"

This problem will occur if you uninstalled Enterprise Directory Gateway and then reinstalled it in a different location.

Perform the following steps:

1. Close the gwcfg window.
2. From the Start menu, select **Programs>Command Prompt**.

   The Command Prompt window appears.
3. At the command prompt, type ***killit GWMgr*** and press the ENTER key.
4. Close the Command Prompt window.
5. From the Start menu, select **Settings>Control Panel**.

   The Control Panel window appears.
6. Double-click on the **ODBC Data Sources** icon.

   The ODBC Data Source Administrator dialog box appears.
7. Click the **System DSN** tab.

   The **System DSN** tab appears.

8. Select **GWADMIN.mdb**, and click the **Configure** button.

   The ODBC Microsoft Access Setup dialog box appears.

9. Click the **Select** button.

   The Select Database dialog box appears.

10. Select **GWADMIN.mdb** in the bin directory where Enterprise Directory Gateway was installed.
11. Click the **OK** button.
12. Click the **OK** button.
13. Click the **OK** button.

If the gwcfg window appears again, contact Avaya technical support.

Problem 4: When you try to start Gateway Administration, the application "hangs"

This problem will occur if you uninstalled Enterprise Directory Gateway and then reinstalled it in a different location.

Perform the following steps:

1. From the Start menu, select **Programs>Command Prompt**.

   The Command Prompt window appears.

2. At the command prompt, type ***killit GWMgr*** and press the ENTER key.
3. Close the Command Prompt window.
4. From the Start menu, select **Settings>Control Panel**.

   The Control Panel window appears.

5. Double-click on the **ODBC Data Sources** icon.

   The ODBC Data Source Administrator dialog box appears.

6. Click the **System DSN** tab.

   The **System DSN** tab appears.

7. Select **GWADMIN.mdb**, and click the **Configure** button.

   The ODBC Microsoft Access Setup dialog box appears.

8. Click the **Select** button.

   The Select Database dialog box appears.

9. Select **GWADMIN.mdb** in the bin directory where Enterprise Directory Gateway was installed.

10. Click the **OK** button.
11. Click the **OK** button.
12. Click the **OK** button.

Problem 5: The system is unable to reattach to the running DSMs, SE, and Gateway Administration

Manually re-attach (activate) the relevant DSMs and the SE. After reactivating the DSMs and SE, refresh them.

Problem 6: A console alert appears, indicating that the connection to the monitor failed

The monitor process may have stopped, preventing message logging.

Perform the following steps:

1. Open Windows Task Manager and verify that the monitor is running as a process.
2. If it is running as a process, shut it down. If you are unable to shut the monitor process down from the Task Manager, use the “kill” program that is available in the Windows NT Resource Kit.
3. From the Start menu, select **Programs>Command Prompt**.

   The Command Prompt window appears.
4. At the command prompt, type ***psit*** and press the ENTER key.

   This commands lists the CORBA servers that are currently running.
5. If the monitor is listed, type ***killit monitor*** and press the ENTER key.
6. Close the Command Prompt window.
7. Restart Gateway Administration.

Problem 7: You receive a message that the security host is not found

The gwadmin.ini file is not found or the host entry is missing.

Perform the following steps:

1. Open the gwadmin.ini file in \gateway\bin.
2. Verify that the “host” entry in the “Initial” section is set to the host name on which Gateway Administration is running.

Problem 8: Gateway Administration does not respond

Perform the following steps:

1. Verify the service connection parameters from the Connection menu.
2. Restart Gateway Administration.
3. If Gateway Administration will not start, type ***psit*** from the command line, and press the ENTER key.

   This command lists the services that are running.
4. If GWMgr appears in the service list, type ***killit GWMgr*** at the command line and press the ENTER key.

Problem 9: You receive a message that Gateway Administration cannot connect to a service

Perform the following steps:

1. Verify the service connection parameters from the Connection menu.
2. Restart Gateway Administration.
3. If Gateway Administration will not start, type ***psit*** from the command line and press the ENTER key.

   This command lists the services that are running.
4. If GWMgr appears in the service list, type ***killit GWMgr*** at the command line, and press the ENTER key.

Troubleshooting Gateway Administration Login

This section describes problems you might encounter when trying to log into Gateway Administration.

Problem 1: Login Unsuccessful

When you try to log into Gateway Administration, you receive an error message stating that the login value(s) are incorrect or access is denied.

Make sure you enter the default login and password correctly. The login is case-sensitive. The default login ID is **Administrator**. The default password is **password**.

If you are still unable to log into Gateway Administration, the mdb file may be corrupted or missing.

Perform the following steps:

1. Verify that the file GWADMIN.MDB is present. If this file is missing, restore it from a backup.
2. Use ODBC32 manager in Windows Control Panel to repair the GWADMIN.MDB database file.

Problem 2: Gateway Administration window does not appear after you log in

You enter your login and password and click the **Login** button in the Gateway Login dialog box, but the Gateway Administration window does not appear. No error messages appear.

Perform the following steps:

1. Using the Services applet in Windows Control Panel, confirm that the Orbix daemon service has started.
2. Perform one of the following steps:
   - If the Orbix daemon service has started, check whether the GWMgr CORBA service has started by typing ***psit*** from the command line, and pressing the ENTER key. (You can access the command line by selecting **Programs>Command Prompt** from the Start menu.)

     GWMgr should be displayed in the list of services.

- If the Orbix daemon service has not started, registration during installation may have failed. Reregister the required CORBA services by running the file **_RegSvrs.cmd** in the <installation-directory>\orb subdirectory, from the command-line. (The default directory is **Gateway\orb**.)

  If no error messages are displayed, restart the machine and try again.

  If errors are displayed, contact Avaya technical support.
- If the Orbix daemon service is running, contact Avaya technical support.

Problem 3: When you log in, you are prompted to enter a new password

Perform the following steps:

1. Verify the service connection parameters from the Connection menu.
2. Restart Gateway Administration.
3. If Gateway Administration will not start, type ***psit*** from the command line, and press the ENTER key.

   This command lists the services that are running.
4. If GWMgr appears in the service list, type ***killit GWMgr*** at the command line, and press the ENTER key.

Troubleshooting the Synchronization Engine

This section describes problems you might encounter with the Synchronization Engine.

Problem 1: Secondary level synchronization errors occur

The configuration data did not contain a “Maps” section.

Examine the Synchronization Engine’s active configuration. There should be a section titled “Maps,” which lists the maps that are active for the Synchronization Engine. (It can be specified in an “included” configuration.)

Problem 2: Controlled types are not found

The supplied configuration data did not contain a “Controlled Types” section.

Examine the Synchronization Engine’s active configuration. There should be a section titled “Controlled Types,” which lists the maps that are active for the Synchronization Engine. (It can be specified in an “included” configuration.)

Problem 3: The Lexer.cfg file is not found

The Synchronization Engine will not run without the lexer.cfg file. This file must be in the directory specified by the ROUTERHOME/home section/key pair in the current configuration. (It can be specified in an “included” configuration.)

Troubleshooting DataStore Managers

This section describes problems you might encounter with the DataStore Managers.

Problem 1: A DataStore Manager fails to activate, and the "<DSM Name> failed to launch properly" message appears

Perform the following steps:

1. In the **DataStore Managers** tab, verify that the host is correct for the DataStore Manager.
2. Perform one of the following steps:
   - If the host is incorrect, perform the following steps:
     a. Select the DataStore Manager.
     b. Click the **Modify DSM** button.

        The DSM Definition dialog box appears.
     c. In the **CORBA Server** box, enter the correct CORBA server.
     d. Click the **OK** button.
     e. Activate the DataStore Manager.
   - If the Host is correct, try to activate the DataStore Manager.

     If the DataStore Manager does not activate, perform the following steps:
     a. From the Start menu, select **Programs>Command Prompt**.

        The Command Prompt window appears.
     b. At the command prompt, type

        killit <Server Name>

        where **<Server Name>** is the CORBA Server name for the DataStore Manager.
     c. Press the ENTER key.
     d. Close the Command Prompt window.
     e. Activate the DataStore Manager.

If these steps do not solve the problem, contact Avaya technical support.

Problem 2: A DataStore Manager fails to activate, and no message appears

Perform the following steps:

1. Check that the Synchronization Engine has been activated.

   DataStore Managers will not activate when no Synchronization Engine is running.

2. Check that the “server” name for the DataStore Manager matches the CORBA registration name for the server. (This should always be the case for DataStore Managers configured during installation.) To check this information:

   a. From the Start menu, select **Programs>Command Prompt**.

      The Command Prompt window appears.

   b. At the command prompt, type ***lsit*** and press the ENTER key.

      A list of CORBA service names should appear.

   c. Check that the failing DataStore Manager’s “server” name value appears in the list.

   d. If the failing DataStore Manager’s “server” name value does not appear in the list, run the “RegisterDSM.cmd” file in the <installation-directory>\bin directory, and specify the correct server name as a parameter. (The default directory is **Gateway\bin**.)

If these steps do not solve the problem, contact Avaya technical support.

Problem 3: A DataStore Manager activates, but it fails to attach or run

Perform the following steps:

1. Make sure you can ping the IP of the DEFINITY system to which you are trying to connect. If you can ping the IP of the DEFINITY system, make sure you can telnet to the DEFINITY system using the IP and the port (for example, ***telnet 135.9.193.930 9000***, where **9000** is the port).

2. Make sure that the “host” value for the DSM specifies the correct machine-name.

3. Check the configuration values for the specified DSM. In particular, make sure that the connection parameters are correct.

4. For DEFINITY DataStore Managers, check that the configuration contains the following lines:

   [_includes_]
   Include0=_DefinityRoot

5. For the PrimaryLDAP DataStore Manager, check that the configuration contains the following lines:

   [_includes_]
   Include0=_GWDSM

6. For the Intuity DataStore Managers, check that the configuration contains the following lines:

   [_includes_]
   Include0=_IntuityRoot

If these steps do not solve the problem, contact Avaya technical support.

Problem 4: The Protocol Adapter module failed to load

When this message appears, the DataStore Manager is unusable. The following conditions can cause this error:

- The DataStore Manager configuration specified an incorrect driver file in the Protocol section.
- The DataStore Manager configuration is missing a driver key in the Protocol section.
- The driver file specified in the DataStore Manager configuration is correct, but that file is missing.

Perform the following steps:

1. Verify that the configuration specified is the correct configuration for this DataStore Manager.
2. Verify that the name of the Protocol Adapter is correct.
3. Verify that the driver key is specified in the [_Protocol_] section of the DataStore Manager. (It can be specified in the an “included” configuration.)
4. Verify that the specified driver is a dynamic link library (DLL) file and is located in \gateway\bin.

Troubleshooting GWAgent

This section describes problems you might encounter with GWAgent.

Problem 1: You cannot start GW Agent

The registry settings for GW Agent are incorrect.

Use the registry editor to examine and correct the GW Agent entries. Make sure the path to the ltap.config file is correct.

Problem 2: You cannot connect to LDAP

The entries in the ltap.config file are incorrect.

Open the ltap.configure file and verify that the entries for the host and port of the true LDAP server are correct.

Problem 3: The triggers are unavailable and/or unpopulated

This problem can be caused by the following conditions:

- The trigger database is empty.
- The path to the trigger database does not exist.

Recreate the triggers.

Problem 4: All of the triggers fail

The triggers are incorrect and must be repopulated.

Recreate the triggers.

Troubleshooting the Scheduler

This section describes problems you might encounter when scheduling tasks with Gateway Administration.

Problem 1: Scheduled events will not run

The mdb file is corrupted or missing.

Perform the following steps:

1. Verify that the file GWADMIN.MDB is present. If this file is missing, restore it from a backup.
2. Use ODBC32 manager in Windows Control Panel to repair the GWADMIN.MDB database file.

Glossary

C

CD ROM
Compact-disk read-only memory, An optical computer disk widely used for distributing and installing software and electronic documentation.

client
An application that runs on one processor while drawing on data or other resources that are on a server located elsewhere. Gateway client: a workstation capable of modifying Gateway data.

configuration file
A file that describes how a DataStore Manager (DSM) or Synchronization Engine (SE) operates at run time.

D

DataStore Manager (DSM)
A software process that interfaces with a device type (such as a DEFINITY system, an Intuity system, a PC running DEFINITY Network Administration, or an LDAP server) that connects to the Enterprise Directory Gateway (EDG). DataStore Managers enable different Gateway devices to communicate with each other.

distributed application
A computer application that runs on one or more clients and uses shared resources, such as databases. These resources reside on a common server. Distributed design lets multiple users run programs using common, centrally maintained files.

domain
An addressable location on a network, such as a group of computers, single computer, or subdirectory. See Domain Name Server (DNS).

Domain Name Server (DNS)
An Internet computer that maintains a database of domain names.

DNS
See Domain Name Server (DNS).

DSM
See DataStore Manager (DSM).

E

Enterprise Directory Gateway (EDG)
A software application that "LDAP-enables" DEFINITY system data and Intuity system data, providing real-time integrated directory-based read/write access to DEFINITY data, Intuity data, and data derived from enterprise sources (such as corporate directories).

Ethernet
A local area network (LAN) that works over short distances on twisted-pairs or coaxial cables at speeds up to 10 mbps or 100 mbps.

H

host
A server.

host name
The name of the PC on which the Enterprise Directory Gateway software is installed.

I

IP (Internet Protocol) address
A 32-bit number that uniquely identifies endpoints on the Internet, commonly specified in the form $n_1.n_2.n_3.n_4$ where each n_n is a decimal number between **0** and **255**. Part of the IP address represents the address of a local network's gateway to the Internet and part represents the host-machine address within that local network. The available bits are apportioned to the network address or local address using a system of classes. The Class A addresses used by the largest organizations on the Internet reserve the first 8 bits for the network portion of the address and remaining 24 for the host machine. Class B addresses, the most common class, assign 16 bits to the network and 16 to the host machine. The Class C addresses used by small networks reserve the first 24 bits for the network and the remaining 8 bits for the host.

L

LAN
See local area network (LAN).

LDAP
See lightweight directory access protocol.

Lightweight Directory Access Protocol (LDAP)
An open Internet standard used to manage Enterprise Directory Gateway (EDG) data.

local area network (LAN)
A short-range data communication network linking computers and peripherals, such as printers. Ethernet and Token-Ring are common LAN architectures.

N

Network Interface Card (NIC)
A circuit board that can be fitted to a personal computer (PC) to allow the PC to communicate with other machines on a network.

NIC
See Network Interface Card (NIC).

P

PBX
Private Branch Exchange: a customer-owned telephone switch that connects a company's internal telephone network with the local telephone service provider's central office. The DEFINITY system is a PBX.

S

SE
See Synchronization Engine (SE).

server
Any system that maintains and administers files that are used by independent client applications.

Synchronization Engine (SE)
A software process that synchronizes changes between native device data (for example, data from a DEFINITY system) and data from enterprise directories based on the routing and mapping rules you define.

T

TCP/IP
Transmission Control Protocol/Internet Protocol: a standard that lets different computer hardware and different operating systems (such as PCs, Apple computers, UNIX workstations, and mainframes) communicate with each other over a network. TCP/IP is the most complete, most widely accepted network protocol currently available.

W

WAN
See wide area network.

wide area network
A data network that connects local area networks (LANs) using common-carrier telephone lines, bridges, and routers.

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Enterprise Directory Gateway Installation and Implementation,
555-038-101, Issue 2, April 2001, Comcode 700155690

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