Nways Deployment Manager

User's Guide

GA27-4246-00

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Note
Before using this information and the product it supports, be sure to read the general information in “Appendix. Notices” on page 199.

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Contents

Preface

This manual provides information about installing and using Nways Deployment Manager.

This release of Nways Deployment Manager supports these network devices:
- 2210 Nways® Multiprotocol Router
- 2212 Access Utility
- 2216 Nways Multiaccess Connector
- 8275 Ethernet Desktop Switch

Who Should Read this Manual

This manual is intended for Network Administrator who are responsible for managing and maintaining network device configurations.

How this Manual is Organized

This manual contains these chapters:

- "Chapter 1. Getting Started with Deployment Manager" on page 1 explains how to install and customize Deployment Manager for your organization. It includes information for setting up the Deployment Manager database and troubleshooting installation problems.
- "Chapter 2. Using Deployment Manager" on page 7 provides task-based scenarios for the most commonly used functions in Deployment Manager. It includes step-by-step procedures and screen captures to help you get up and running quickly.
- "Chapter 3. Understanding Deployment Manager Task Panels and Dialogs" on page 43 lists each of the Deployment Manager task panels and menus. It provides a description for each of the fields (both display and entry) and explains the format requirements for entry fields.
- "Chapter 4. Understanding 2210 Task Panels and Dialogs" on page 67 lists each of the Deployment Manager task panels and menus related to the 2210. It provides a description for each of the fields (both display and entry) and explains the format requirements for entry fields.
- "Chapter 5. Understanding 2212 Task Panels and Dialogs" on page 107 lists each of the Deployment Manager task panels and menus related to the 2212. It provides a description for each of the fields (both display and entry) and explains the format requirements for entry fields.
- "Chapter 6. Understanding 2216 Task Panels and Dialogs" on page 139 lists each of the Deployment Manager task panels and menus related to the 2216. It provides a description for each of the fields (both display and entry) and explains the format requirements for entry fields.
- "Chapter 7. Understanding 8275-416 Task Panels and Dialogs" on page 171 lists each of the Deployment Manager task panels and menus related to the 8275. It provides a description for each of the fields (both display and entry) and explains the format requirements for entry fields.

Related Publications

In addition to this manual, you may find the following publications useful as reference when using Deployment Manager.

Nways Publications

These documents apply to Nways:

- ATM User's Guide, SH11-3068
- Element Manager User's Guide, GA27-4221
- Installation Guide
- Nways Manager Remote Monitor User's Guide, SA33-0367
- Nways Remote Monitor for Windows NT User's Guide, SA27-4195
- LAN Network Manager/Intelligent HUB Management Program User's Guide, GA27-4232

2210 Publications

These documents apply to the 2210:

- *Introduction and Planning Guide*, GA27-4068
- *Installation and Initial Configuration Guide*, GC30-3867
- *Router Description and Configuration Scenarios*, GG24-4446
- *Configuration Program User's Guide*, GC30-3830
- *Service and Maintenance Manual*, SY27-0345
- *Software User's Guide*, SC30-3681
- *Using and Configuring Features*, SC30-3992
- *Protocol Configuration and Monitoring Reference Volume 1*, SC30-3680
- *Protocol Configuration and Monitoring Reference Volume 2*, SC30-3865
- *Event Logging System Messages Guide*, SC30-3682

2212 Publications

These documents apply to the 2212:

- *Introduction and Planning Guide*, GA27-4215
- *Installation and Initial Configuration Guide*, GA27-4216
- *Hardware Configuration Quick Reference*, GX27-4048
- *Configuration Program User's Guide*, GC30-3830
- *Service and Maintenance Manual*, GY27-0362
- *Software User's Guide*, SC30-3988
- *Using and Configuring Features*, SC30-3989
- *Protocol Configuration and Monitoring Reference Volume 1*, SC30-3990
- *Protocol Configuration and Monitoring Reference Volume 2*, SC30-3991
- *Event Logging System Messages Guide*, SC30-3682
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2216 Publications

These documents apply to the 2216:

- *Introduction and Planning Guide*, GA27-4105
- *Installation and Initial Configuration Guide*, GA27-4106
- *Hardware Configuration Quick Reference*, GX27-3988
- *Service and Maintenance Manual*, SY27-0350
- *Configuration Program User's Guide*, GC30-3830
- *Software User's Guide*, SC30-3886

- *Using and Configuring Features*, SC30-3993
- *Protocol Configuration and Monitoring Reference Volume 1*, SC30-3884
- *Protocol Configuration and Monitoring Reference Volume 2*, SC30-3885
- *Event Logging System Messages Guide*, SC30-3682

8275 Publications

These documents apply to the 8275:

- *Electronic Emission and Safety Notices*
- *Quick Installation Guide*
- *Quick Reference Card*
- *Installation and Planning Guide*
- *User's Guide*, GC30-4026
- *4-Port 100BASE-FX Feature Module Remove/Replace Instructions*

Chapter 1. Getting Started with Deployment Manager

Keeping track of the device configurations in your network can be a challenging and time-consuming task. Just trying to determine what level of operational code or boot code is running in a device is extremely difficult, much less trying to ensure all devices are running the proper level of code.

Nways Deployment Manager (NwDM) is designed to make tracking and updating device configurations easier and more efficient. It allows you to:

- Manage the operational code (load images) and boot code (PROM images) for devices, obtaining the latest levels from IBM web sites when needed.
- Synchronize the Nways database with the NwDM database to keep the NwDM database updated with the latest changes.
- Manage the upgrade and deployment of device configurations (including configuration files). You can maintain multiple configurations for a specific device.
- Determine the current configuration for a specific device, and manage the loading of new configurations into a specific device (or multiple devices) on a scheduled basis.

This release of Nways Deployment Manager supports these network devices:

- 2210 Nways Multiprotocol Router
- 2212 Access Utility
- 2216 Nways Multiaccess Connector and Network Utility
- 8275 Model 416 Ethernet Desktop Switch

Nways Deployment Manager is installed automatically when you install Nways Manager.

Customizing Deployment Manager

You can customize some of the operational parameters of Deployment Manager using the properties file. The Properties file for NwDM on Windows NT is:

nways\java\properties\CfgManProperties.txt

where *nways* is the directory on the server where NwDM is installed.

The Properties file for NwDM on AIX is:

/usr/CML/JMA/java/properties/CfgManProperties.txt

Syntax Rules for Editing the Properties File

Follow these syntax rules when editing the Properties files:

- Comment lines begin with the pound sign (#) as the first non-blank character on a line.
- Parameters can be entered on multiple lines. To logically continue a line on the next line, use the backslash character (\) as the last character on the line to be continued.
- The backslash character is a special character that gives the character following it special meaning. Therefore, if you need to use the backslash as a literal character, you must type two of them together (\\).

- To specify directories in NwDM (for both Windows NT and AIX), you can use the forward slash character. For example, you can specify mydir as a subdirectory of the dir on the c: drive using this syntax:
- `c:/thedir/mydir`

Property File Contents

You can configure these operational aspects of Deployment Manager:

- Database
- Working Directories
- TFTP
- Telnet
- GUI Configuration Tools
- Job Dispatching

Database Parameters

You should have installed DB2 when you installed Nways Manager. In addition, you should have created a DB2 database for Deployment Manager. Refer to the *Nways Manager Installation Guide* (AIX or NT, depending upon your operating system) for more information about installing and setting up DB2.

Use these parameters to specify the database information to be used by NwDM:

- **JDBC Driver name**. Specify the JDBC driver to be used.
- **CfgManUrl**. Used to specify the name of the NwDM database. The default database name shipped with NwDM is CfgMan.
- **Database User ID**. Specify the user ID used for the Nways topology database or leave the user ID blank.
- **User Password**. Specify the user password to be used. If you left the user ID blank, leave this parameter blank as well.

Working Directories Parameters

Deployment Manager uses the parameters to control where files are stored during operation. Use these parameters to specify the working directories used by Nways Deployment Manager:

- **tempDirectory**. Specify the location where NwDM can store temporary files during operation. The directory specified for this parameter must be a directory that exists. NwDM will control the deletion of files in this directory when the files are no longer needed.
- **logDirectory**. Specify the directory where NwDM can store job logs (which provide details of job execution). The directory specified for this parameter must point to a directory that exists. The logs are stored in this directory using this file naming convention:

  Job *jobnumber*.log. For example, job147.log

TFTP Parameters

Nways Deployment Manager uses a trivial file transfer protocol (TFTP) server to communicate with network devices. The TFTP server is used as a staging area for load images. For example, assume that you have fifteen 2210 devices located in South Carolina. You might have one TFTP server that connects with these devices. The TFTP server would contain the Load images and PROM code used in the servers or network devices (routers and switches). That way, you could always ensure that you have access to the appropriate load image and PROM code in the event a 2210 device experiences a problem.

NwDM is shipped with its own TFTP server for performing these functions. However, you can choose to use your own TFTP server instead.

The TFTP server can be used to:

- Store device configurations (load images, configuration files, and PROM images)
- Send device configurations to the device.
- Receive device configurations from the device (or from another location).

TFTP functions are controlled by these parameters:

- **startTftpServer**. Specify yes if you want to use the TFTP server shipped with NwDM, or no if you want to use your own TFTP server.
- **tftpMaxRetries**. Specify the number of times the TFTP server retries a transfer before failing. This parameter is valid only for the TFTP server shipped with NwDM.
- **tftpTimeout**. Specify the number of seconds that the TFTP server is to wait for an acknowledgment before retrying a transfer. This parameter is valid only for the TFTP server shipped with NwDM.
- **tftpInboundDir**. Specify the directory on the TFTP server to be used by clients for operation put files. The directory you specify for this parameter will typically be the same as the directory you specify for **tftpOutboundDir**. If you do not use the TFTP server provided with Nways Deployment Manager, configure your TFTP server to put files into this directory by default.
- **tftpOutboundDir**. Specify the directory on the TFTP server to be used by clients for get operation files. The directory you specify will typically be the same as the directory you specify for **tftpInboundDir**. If you do not use the TFTP server provided with NwDM, configure your TFTP server to send files from this directory by default.
- **localTftpClientAddr**. Specify the local IP address that NwDM will use. If this parameter is blank, NwDM uses the first available IP address. If you have multiple network interface cards and your network routing prevents TFTP servers from reaching the IP addresses for all of them, specify an IP address that can be reached from TFTP servers.

Telnet Parameters

NwDM operates as a Telnet client for some operations performed on network devices. These parameters control the operation of NwDM when it serves as a Telnet client:

- **devCtl.NormalTimeout**. Specify the number of seconds that NwDM will wait for a “quick” response from a client. If the NwDM job logs contain Telnet timeout errors for commands that normally execute very quickly, increase the value of this parameter.
- **devCtl.EraseTimeout**. Specify the number of seconds that NwDM will wait for an erase command to complete. Remember that the completion of an erase command can take a log time. If the NwDM job logs contain Telnet timeout errors for erase commands, increase the value of this parameter.
- **devCtl.tftpGetTimeout**. Specify the number of seconds that NwDM will wait for a device to receive a file from a TFTP server. If the NwDM job logs contain Telnet timeout errors for TFTP get or put commands, increase the value of this parameter.
- **dummyCdb**. Reserved.

GUI Configuration Tool Parameters

Nways Deployment Manager allows you to upgrade configurations, which requires both the configuration tool for the existing configuration as well as the configuration tool for the new configuration. If you are using configuration tools that were originally shipped prior to July, 1998, you will need to run the Nways Manager Config Tool Locator to tell Deployment Manager where the older configuration tools are located. For more information about running the Config Tool Locator and working with device configuration programs, refer to the *Nways Manager Installation Guide*(AIX or NT, depending upon your operating system).

NwDM launches the GUI Configuration Tools with command-line arguments to perform version or release upgrades and to convert configuration files between ASCII and SRAM file formats. NwDM uses information from the GUI Configuration Tool installation to determine where the GUI Configuration Tools are located. Therefore, you should always use the installation program for a GUI Configuration Tool when you install it.

This parameter controls the operation of GUI Configuration Tools by Nways Deployment Manager:

- **cfgToolTimeToLive**. Specify the number of seconds that you want NwDM to wait before halting the execution of a GUI Configuration Tool. When NwDM launches a GUI Configuration Tool, it sets a timer to determine how long the GUI Configuration Tool can process. If a GUI Configuration Tool has not completed processing before the timer expires, NwDM stops the processing.

Job Dispatching Parameters

You can use NwDM to schedule jobs for managing device configurations at times that are convenient for you. There is no limit on the number of jobs that you can schedule. However, if too many jobs are actually running at the same time, you risk overloading server or network resources.

This parameter controls the number of jobs that can be actually running at the same time.

- **maxJobsRunning**. Specify the number of jobs that can be running at any given point in time. You can use this parameter to ensure that NwDM does not overload the server or the network with too much activity from the jobs that are running.

Sample Properties File

This is a sample of the Properties file as it is shipped:

```
# This is the CfgMan properties file

#The following are for DB/2 only
JdbcDriverName=COM.ibm.db2.jdbc.app.DB2Driver
CfgManUrl=jdbc:db2:CfgMan


CfgManUserId=admin

CfgManPassword=admin

CfgManSchema=CFGMAN

logDirectory=CfgMan/Logs
tempDirectory=CfgMan/Temp

useOwnWindowsCfgTool=yes
```

```
#-----------------------------------------------
# TFTP Client and Server Properties
#-----------------------------------------------

startTftpServer=yes
tftpMaxRetries=20
tftpTimeout=4

localTftpClientAddr=
tftpInboundDir=CfgMan/TftpSvrRoot
tftpOutboundDir=CfgMan/TftpSvrRoot

#-----------------------------------------------
devCtl.NormalTimeout = 20
devCtl.EraseTimeout = 480
devCtl.tftpGetTimeout = 1800

dummyCdb=./dummy.cdb

cfgToolTimeToLive = 1800

maxJobsRunning = 10
```

Troubleshooting the Deployment Manager Installation

If, when you initially start Deployment Manager, you receive error messages about accessing the database, you should check the log file for errors. The log file is:

nways\java\properties\log\NwaysManager*x*.log

where:

- *nways* is the directory where you installed the product.
- *x* is the log number from 1 to 10. Each time the JMAintegrator server starts, a new log file is opened (NwaysManager1.log through NwaysManager10.log). After 10 log files have been opened, the file name wraps to 1 again.

When choosing the log file to edit, make sure you look at the modification dates; the most recently modified log file is the one you should open in the editor. After you open the log file, search for the line that begins **STARTING CfgManService**, which begins the Deployment Manager initialization. Initialization is ended with the line **STARTED CfgManService**.

Look for one of these errors during initialization:

- **java.lang.ClassNotFoundException: COM.ibm.db2.jdbc.app.DB2Driver**

  This is caused by not having unzipped the db2java.zip file into the Nways either after installing Nways, or after installing a DB2 fixpak. To resolve this error:

  1. Locate the db2java.zip file in the DB2 product directory. On windows NT, the zip file is located in *drive*:\sqllib\java\. On AIX, the zip file is located in /usr/lpp/db2_05_00/java/.
  2. Unzip the db2java.zip file into the appropriate directory. On Windows NT, the directory is *nways*\java\websvr\code. On AIX, the directory is /usr/CML/JMA/java/websvr/code.
  3. Stop and restart the JMAintegrator process.
     a. **>ovstop JMAintegrator**
     b. **>ovstart JMAintegrator**

- **COM.ibm.db2.jdbc.app.DB2Exception: [IBM][CLI Driver] SQL1031N The database directory cannot be found on the indicated file system. SQLSTATE=58031**

  The CFGMAN database does not exist for Deployment Manager. Use the DB2 Control Center to create the database or issue this command from a DB2 command line:

  create database CFGMAN

- **COM.ibm.db2.jdbc.app.DB2Exception: [IBM][CLI Driver] SQL1403N The username and/or password supplied is incorrect. SQLSTATE=08004**

  The values for the Deployment Manager database user ID and/or password are incorrect. Edit the Properties file (see “Database Parameters” on page 2 for the user ID and password parameters). Then stop and restart the JMAintegrator process:

  1. **>ovstop JMAintegrator**
  2. **>ovstart JMAintegrator**

- **COM.ibm.db2.jdbc.app.DB2Exception: [IBM][CLI Driver][DB2/NT] SQL0973N Not enough storage is available in the ″QUERY_HEAP″ heap to process the statement. SQLSTATE=57011**

  The DB2 performance parameter QUERY_HEAP_SZ for the instance needs to be increased to 10000. On Windows NT:

  1. Select the database instance, e.g. DB2.
  2. Right click and select **Configure...**
  3. Select the Performance tab from the Configure Instance dialog.
  4. Select **Query heap size parameter** and enter the new value

  On AIX:

  1. Enter the command **UPDATE DATABASE MANAGER CONFIGURATION USING QUERY_HEAP_SZ 10000**.

  Then:

  1. Stop the JMAintegrator process.**>ovstop JMAintegrator**.
  2. Stop DB2. **>db2stop**.
  3. Restart DB2. **>db2start**.
  4. Restart the JMAintegrator process.**>ovstart JMAintegrator**

- **COM.ibm.db2.jdbc.app.DB2Exception: [IBM][CLI Driver] SQL1402N Unable to authenticate user due to unexpected system error.**

  The DB2 Security Manager has not been started (for NT) or has incorrect permission bits set for db2ckpw (for AIX). On Windows NT:

  1. Open the Services applet in the NT Control Panel.
  2. Select the DB2 Security Server item in the services list.
  3. Click **Start**.

  On AIX, have the system administrator ensure the correct access permissions are set for db2ckpw, and that there is enough swap/paging space allocated.

Chapter 2. Using Deployment Manager

After you have successfully installed and customized Nways Deployment Manager, you are ready to begin using the product. To start Deployment Manager:

- From the NetView main menu, click **Tools→IBM Nways Java...→Open Deployment Manager.**
- From the OpenView main menu, click **Start→IBM Nways Manager→Launch Deployment Manager**.

The Nways Deployment Manager main screen appears.

Understanding the Configuration Change Management Process

Large networks can contain literally thousands of routers and switches. Each of these devices has a device configuration consisting of a load image and configuration file. For some devices, such as the 2210, the configuration also consists of a PROM image.

Nways Deployment Manager is designed to help you track and maintain device configurations for the devices in your network. Specifically, Deployment Manager supports the 2210, 2212, 2216, and 8275 Model 416 devices.

The general tasks for using Deployment Manager to work with devices are:

1. Create inventory records in the Deployment Manager database for each device type using the Update Software Inventory task. Typically, you will perform this task to obtain a list of all Load images (and PROM images if needed) from IBM web sites. These records contain information about the Load images (such as version and release) available for each device type.
2. After creating the inventory records, you will need to create device records for each of the supported devices in your network. These device records contain information about the network device, such as the IP address, SNMP read and write community names, and operator ID and password.

   When you first install Deployment Manager or when there are significant changes to your network, you can create device records by performing the Synchronize database tasks, which synchronizes the Deployment Manager database with the Nways topology database.

   You can also create a device record for a single device using the Create device task.
3. After creating device records for each device, you perform a Learn Configuration task to create a current configuration record for each device record. The configuration record that results from a Learn Configuration task has a configuration status of Active. It includes information about the configuration actually loaded in device (such as the Load Image version and release, the device ID for the device to which the configuration applies, and the status of the configuration).
4. Over time, you will want to modify configurations in a device to incorporate additional features and functions or move to a new version/release of the software. To do so, you first perform an Upgrade device task, which creates a new configuration record for the device. You can have multiple configuration records for a device (but only one configuration record with a status of Active).

5. Finally, after you have created a new configuration record for a device, you can apply it to a network device using an Update device task. When you Update a device, you actually load a new configuration into the device.

   Before, you can update the configuration in a device, you must first add the Load image, configuration files, and PROM image (if applicable) to the Deployment Manager database. You can choose to add these files to the database when you perform a Learn Configuration task or by using an Import task.

Deployment Manager provides the ability to perform many of these tasks as scheduled jobs, which allows you to determine when they will execute. In addition, Deployment Manager allows you to manage these jobs, audit network devices to verify configurations, and export configurations as needed.

Navigating the Deployment Manager Menus

Figure 1 shows the Deployment Manager main menu.

Figure 1. NwDM Main Menu

Deployment Manager menus are divided into these areas:

1	**Navigation Tree** The navigation tree provides a hierarchical listing of the functions available with Deployment Manager. Folders represent categories of functions. For example, the highest level folder is the application itself (Nways Deployment Manager). Lower level folders include the 2210, 2212, 2216, and 8275–416 folders, each of which contains the functions available for managing device configurations. In addition the Software Inventory folder includes the functions available for managing base code components, such as load images or PROM images. You can open the contents of a folder by clicking on the plus (+) next to the folder. A list of pages is displayed. To close a folder, click on the minus (-) next to it, which collapses the list of pages for this folder. However, the folder itself remains visible. Pages are displayed within folders; they represent the specific functions that can be performed. To perform a task, click on the page icon or the text to the right of the icon. The task panel is updated with information related to that task. For example, to add a 2210 device record to the NwDM database, click on Create Device in the 2210 folder. The Create Device task panel is displayed in the task panel area.
2	**Task Panel** The task panel shows specific panels related to the functions available within NwDM. The left side of the task panel displays specific tasks that can be performed, and the right side of the displays task panes associated with each of the specific tasks. For example, when you click Set User, the left side of the Set User task panel displays Current User and Set User. The right side displays task panes associated with the Current User and Set User.
3	**Draggable Axis** The Draggable Axis allows you to change the width of the navigation tree and the task panel in relation to the size of the Nways Deployment Manager interface. To have the Navigation Tree fill the entire interface, click the right arrow at the top of the Draggable Axis. Clicking the left arrow returns the interface to the default layout. For example, to have the task panel fill the entire screen, click the left arrow at the top of the Draggable Axis. Clicking the right arrow returns the interface to the default layout.
4	**Tear-Off Bar** You can use the Tear-Off Bar to drag the task panel to another location on your desktop. To move the task panel, click and hold the Tear-Off Bar while dragging the panel to another location with your mouse. If you tear-off the Task Panel, it continues to work. Clicking an item on the navigation tree will create a new task panel in the Nways Deployment Manager interface.

Working with Deployment Manager Filters and Tables

Nways Deployment Manager serves as a database for information about the devices in your network. Therefore, Nways Deployment Manager can potentially have information about thousands of devices. Filters provide a way for you to search for specific information rather than having to scroll through the entire contents of the database to find what you are looking for.

Most task panels contain a filter pane that you can use to search the database. You fill in the fields for a filter and then click **Apply Filter**. The results are returned in the form of a Filtered List. From this list, you can select records to be added to the Custom List, which allows you to store the results from several different database queries, add them all to a single list, and perform operations against that list.

Filters are tables that contain three columns:

- Property column. The Property column displays all of the properties available for you to search.
- Comparison Operator column. The Comparison Operator column displays the comparison operator used for searching.
- The Expression column displays the value for the property. When you apply a filter, Nways Deployment Manager compares this value (using the Comparison Operator) to the values of the property for all records in the database.

Comparison Operators

Nways Deployment Manager uses standard SQL comparison operators. The In comparison operator is the default operator. To select a different comparison operator, click on a cell in the Comparison Operator column. Then click on the box to the right of the operator and select the operator that you want to use.

The comparison operators are:

- **in**. Determines if the value of the property in the database is in the set of values specified in the Expression column of the filter.
- **not in**. Determines if the value of the property in the database is not the set of values specified in the Expression column of the filter.
- **like**. Determines if the value of the property in the database matches the string pattern specified in the Expression column of the filter. When using the Like comparison operator, you can specify the percent symbol (%) in place of zero or more characters in the Expression column. You can also specify the underscore symbol (_) in place of a single character.

  Note: You cannot use the Like comparison operator with numbers.

  For example, if you are searching for a property value of ″abc def″ using Like, and in the Expression column you specify:

  – **a%**. The record will be found.
  – **a%f**. The record will be found.
  – **a_c def**. The record will be found.
  – **abc def_**. The record will not be found. In this case, the underscore symbol represents a character that must be present in the property value. There is no character left after ″abc def″ is compared with the property value.
  – **abc def%**. The record is found. The percent symbol represents zero or more characters.

- **between**. Determines if the value of the property in the database is within the range of values (including endpoints) specified in the Expression column of the filter. To specify a range in the Expression column, use *value1* and *value2*, where *value1* is less than *value2*.

  For example, if you are searching for a property value of ″42″ using between, and in the Expression column you specify:

  – **1 and 100**. The record will be found.
  – **1 and 42**. The record will be found.
  – **42 and 1**. The record will not be found. The first value specified must be less than the second value specified.

  You can also specify Between to compare strings. When comparing strings, you must enclose both strings in single quotes. For example, if you are searching for a property value of ″pqr″ using Between, and in the Expression column you specify:

  – **'a' and 'z'**. The record will be found.
  – **'a' and 's'**. The record will be found.
  – **'a' and 'p'**. The record will not be found. The string ″pqr″ is greater than the character ″p″.
- **is null**. Determines if the value of the property in the database is missing. If you specify Is Null, you do not specify a value in the Expression column.
- **is not null**. Determines if the value of the property exists. If you specify Is Not Null, you do not specify a value in the Expression column.
- **=**. Determines if the value of a property is equal to the value you specified in the Expression column.
- **<>**. Determines if the value of a property is not equal to the value you specified in the Expression column.
- **>**. Determines if the value of a property is greater than the value you specified in the Expression column.
- **>=**. Determines if the value of a property is greater than or equal to the value you specified in the Expression column.
- **<**. Determines if the value of a property is less than the value you specified in the Expression column.
- **<=**. Determines if the value of a property is less than or equal to the value you specified in the Expression column.

Entering Data in the Expression Column

To enter data in the Expression column:

1. Click on the cell to be changed in the Expression column. The cell changes color and an I-beam cursor appears in the cell.
2. Type data into the cell.
3. Press **Enter** or move the cursor out of the table cell.

You can cut data from cells, copy data between cells, and paste data into cells. If you are using Windows NT:

- To cut data from a cell, highlight the data to be cut and press **Ctrl-x**.
- To copy data to a cell, highlight the data to be copied press **Ctrl-c**.
- To paste data into a cell, place the cursor into the cell where the data is to be pasted and press **Ctrl-v**. You must first cut or copy data before you can paste it.

You can also use expressions in this column, or you can specify multiple values by separating each value with a comma (,).

Setting the User ID

When you start Deployment Manager, the Set User panel is displayed in the Task panel.

NwDM uses the user ID to track who is performing a task. For example, the user ID is displayed in audit records and job logs. Therefore, you should set the user ID each time you use Deployment Manager.

To set the user ID:

1. Click in the User id field to edit the user ID. Type in the desired user ID.
2. Click **Apply** to change the user ID. The user ID you selected will be in effect until you close Deployment Manager (or set a new user ID).
3. A confirmation dialog is displayed. Click **OK** to close the dialog.
4. The user ID you entered is displayed in the Current user id field.

Managing Software Inventory

IBM provides updates for the operational code for network devices. These load images can be new base releases, program temporary fixes (PTFs), or emergency program temporary fixes (EPTFs). In addition, IBM updates the Boot and Diagnostic Code (PROM images) for devices such as the 2210.

You can use Deployment Manager to maintain these different images. In fact, Deployment Manager needs access to these images to upgrade and update device configurations.

Two steps are required to update the software inventory in the NwDM database:

1. Edit software inventory properties to specify where the load images and PROM images are located.
2. Launch the inventory update process to actually update the NwDM database. Deployment Manager uses the software inventory properties to obtain the inventory file and update the database.

The process of updating software inventory loads information about load images and PROM images into the Deployment Manager database, but it does not actually put the load images and PROM images into the database. Before using these images to update configurations in network devices, you must first import them into the database.

Updating Software Inventory Properties

Follow these steps to update the software inventory properties:

1. From the navigation tree, click **Edit software inventory properties** to display the Edit Software Inventory Properties panel.
2. Click the down arrow in the Inventory file source field to choose the appropriate download site. Click **IBM-North America**. Notice that the other fields are automatically updated to reflect your choice.
3. In the Products pane, make sure the appropriate devices are selected. You can update the properties for 2210, 2212, 2216, and 8275 Model 416 (8275-416).
4. Click **Apply** to save these properties.
5. A Save confirmation dialog is displayed. Click **OK** to close the dialog.

When you invoke Update Software Inventory, Deployment Manager uses these properties to obtain the inventory file.

Updating the Software Inventory

Follow these steps to update the software inventory in the NwDM database:

1. From the navigation tree, click **Update software inventory** to display the Inventory Update panel.
2. Enter a valid user ID and password to access the site you specified as the Inventory file source in the Edit Software Inventory Properties task panel. In this case, a user ID of anonymous is valid for the IBM-North America site. Enter your e-mail address as the password.
3. Click **Apply** to begin the update process.
4. The Update software inventory task starts immediately. The Progress window displays messages reflecting the current status.

   The process may take a while, especially if this is the first time you have updated software inventory. When the task is completes successfully, the Progress window displays:

   ```
   Updates for all requested products complete
   ```

Viewing the List of Load Images

After the Update Software Inventory task completes, you can view a list of all load images found by Deployment Manager for each device. Follow these steps to see the list of load images available for the 2210:

1. From the navigation tree, click **Load Images** from the 2210 folder to display the Load Images task panel for the device. You may need to expand the 2210 folder first.
2. Use the Filter task pane to define the criteria used to search for load images. In this case, simply leave each of the fields in the Filter task pane blank and click **Apply Filter**.

   Clicking **Apply Filter** without refining the search criteria will return all load images defined in the NwDM database for that product. Keep in mind that this list can be extremely large. Therefore you typically want to refine your search criteria.
3. The results of the search are displayed in the Filtered List task pane. In addition to the load image name, the Filtered List task pane displays the software version and release to which the load image applies, the PTF to which the load image applies, and the length of the load image.

   Notice that the length of all load images is 0. This means that the load image is defined to Deployment Manager, but it is not actually loaded in the NwDM database. You will need to import the load image (or upload it during the Learn 2210 task) before it can be used to update a network device.

Populating the Deployment Manager Database

When you initially install NwDM, or when your network changes significantly, the NwDM database needs to be updated to reflect the changes in your network. Adding specific devices individually may take a significant amount of time. Therefore, you can use the Synchronize Databases task to synchronize the NwDM database with the Nways topology database.

Follow these steps to synchronize the Nways NetView topology database with the NwDM database:

1. From the navigation tree, click **Synchronize databases**.
2. Click **Start now** to begin the synchronization process immediately after you click Apply.
3. Click **Apply** to begin database synchronization.
4. When the Confirmation dialog is displayed, click **OK** to close the dialog.

During database synchronization, any new devices are automatically created, and all SNMP read and write community names are updated. In addition, recommendations for handling discrepancies between databases are listed in the job log.

The Synchronize Database task may take quite a while to complete, depending on the size of your network. While the job is processing, you can view the status of the job.

Viewing Job Status

Most Deployment Manager tasks are performed as scheduled jobs. Jobs provide you with the flexibility of deciding when a task is performed as well as deciding what tasks are required to complete successfully before other tasks are performed.

When NwDM processes a job, the results of that processing are stored in a job log, which is a file that resides on the NwDM server. The directory where NwDM stores job logs is determined by the logDirectory property in the NwDM Properties file. For more information about the Properties file, see “Customizing Deployment Manager” on page 1.

As discussed, the Synchronize Databases task can take a significant amount of time to complete. Follow these steps to view the status of the Synchronize Database task:

1. From the navigation tree, click **Jobs** to display the Managing Jobs task panel.
2. In the Job Filter pane, click on the empty cell in the Job Type row to edit it.
3. The Synchronize Databases job has a job type of SYNCHDB. Therefore, type **SYNCHDB** in the cell and press **Enter**.
4. Click **Apply Filter** to search the NwDM database for all jobs that have a job type of SYNCHDB.

   Note: To view all jobs currently stored in the NwDM database in the Jobs List pane, click **Apply Filter** on a blank Job Filter pane.
5. The results of the search are displayed in the Jobs List pane. You may need to click **Jobs List** to display the pane.

   Notice the Status column for the Synchronize databases job. A status of Running means the job is still processing. If the Synchronize Databases job completes with no errors, the status will be Finished.

6. Select the Synchronize Databases job by clicking on any cell in the row.
7. Click **Job Details** to see the details of the Synchronize Databases job. The Job Details pane provides information about the scheduling of the job and includes remarks about the job processing.
8. Click **View Log** to display the job log, which provides specific details about the processing.
9. Click **OK** to close the job log.

Learning about Device Configurations

The Learn Configuration task enables NwDM to store information about the configuration that is currently loaded in a device. After the Synchronize Databases task completes, you will need to perform the Learn Configuration task for all devices (2210, 2212, 2216, and 8275-416).

Follow these steps to perform the Learn Configuration task for 2210 devices:

1. From the navigation tree, click **Learn configurations** from the 2210 folder (you may need to expand the 2210 folder first). The Learn Configuration task panel is displayed.
2. In the Options pane, click **Start now** to immediately schedule the job (when you click Apply).
3. Make sure all 2210 devices are selected in the Candidates pane.
4. Click **Apply** to begin the Learn Configurations task for 2210 devices.
5. The Learn Configurations dialog is displayed with the number of jobs scheduled from the Learn Configurations task. NwDM schedules a separate job for each device selected in the Candidates pane. Click **OK** to close the dialog.
6. You can view the status of each of the jobs from the Managing Jobs task panel. To view the status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of LEARN2210 instead of a job type of SYNCHDB).

Working with 2210 Devices

Typical tasks that you can perform with 2210 devices include:

- Adding a 2210 record to the Deployment Manager database (see “Adding a 2210 Device Record to the Deployment Manager Database”).
- Auditing a 2210 configuration (see “Auditing a 2210 Configuration” on page 20).
- Upgrading a 2210 configuration (see “Upgrading a 2210 Configuration” on page 22).
- Updating a 2210 configuration (see “Updating a 2210 Configuration” on page 24).
- Updating the PROM code in a 2210 (see “Updating the PROM Code in a 2210” on page 25).

Adding a 2210 Device Record to the Deployment Manager Database

The Synchronize Databases task creates device records in the NwDM database for all 2210 devices in the network. The disadvantage of using the Synchronize Database task is that it can take quite a while to complete processing. Therefore, use the 2210 Create Device task to add a single 2210 device record to the NwDM database.

Follow these steps to add a single 2210 device record to the database:

1. From the navigation tree, click **Create Device** from the 2210 folder to display the Create 2210 Device task panel.
2. Fill in these fields on the Create Device task panel (click the empty box next to the field to enter information for the field):

   Device Name
   Enter a name by which you want this device to be known within NwDM.

   Note: NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name. Using your own naming convention can make it easy to filter devices when you search the NwDM database.

   IP Address
   Enter a valid IP address or host name for this device.

   Operator ID
   Enter the operator ID defined for the 2210, if it exists.

   Password
   Enter the password associated with the operator ID.

   SNMP Read Community Name
   Enter the SNMP read community name to which the 2210 belongs. The default is public.

   SNMP Write Community Name
   Enter the SNMP write community name to which the 2210 belongs.

   TFTP server IP address
   Enter the IP address for the TFTP server with which the 2210 can communicate.
3. Click **Apply** to create the device in the NwDM database.

Updating the NwDM Database with the Device Configuration

After adding the 2210 device record to the NwDM database, you need to update the database with the configuration information for the device.

Follow these steps to perform the Learn Configuration task for this 2210, which adds a configuration record (with a status of Active) to the NwDM database:

1. From the navigation tree, click **Learn configurations** from the 2210 folder. The Learn Configuration task panel is displayed.
2. In the Options pane:
   a. Click **Start now** to immediately schedule the job (when you click Apply)
   b. Click **Upload load image if needed** to add the load image to the database. Uploading the load image to the database makes it available for use in other 2210 devices. You must upload the image into the Deployment Manager database before you can use it to update network device load images.
3. In the Candidates pane:
   a. Click **Reset All** to deselect all 2210 devices. You only want to learn the configuration for the device you just added.
   b. Click the Learn checkbox for the device that you just created.
4. Click **Apply** to begin the Learn Configuration task for the 2210 devices.
5. The Learn Configurations dialog is displayed. Click **OK** to close the dialog.
6. You can view the status of each of the jobs from the Jobs from the Managing Jobs task panel. To view the status, follow the steps described in “Viewing Job Status” on page 15 (instead of searching on job type, search for the Device ID of the device you created).

Auditing a 2210 Configuration

When you add a 2210 device to the Deployment Manager database and perform a Learn Configuration for that task (see “Learning about Device Configurations” on page 17), information about that configuration is added to the database. However, configurations can change over time. Auditing a 2210 configuration ensures that the configuration stored in the NwDM database as the Active configuration for the device matches the configuration that is actually loaded in the device.

Note: Audits can only be performed on configurations that have a version status of Active.

Deployment Manager compares these properties to audit a 2210:

- Model
- Amount of memory
- TFTP server
- Load image
- PROM image level

Follow these steps to audit a 2210 configuration:

1. From the navigation tree, click **Configurations** from the 2210 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2210 devices currently stored in the NwDM database.

   Remember that you can also use the Filter pane to refine your search. For example, you could choose 3 for Image Version field, 2 for Image Release field, and prom_2.37 for the PROM field to display only those devices that meet that criteria.
3. In the Filtered List pane, click the row of each device to be audited to select the device. To select multiple rows, press and hold **Ctrl** while clicking the rows.
4. Click **Process selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Audit selected...** to display the Audit 2210 Configuration task panel.
6. Click **Start now** and then click **Submit** to begin the audit process.
7. Click **OK** to close the Job Scheduled dialog.

Viewing Audit Records

While the Audit 2210 job is processing, you can view the status of the job from the Managing Jobs task pane. To view the job status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of AUDIT2210 instead of SYNCHDB).

After the Audit 2210 job is complete, you can view the audit record, which provides details about whether the audit succeeded or failed. Follow these steps to view an audit record.

1. From the navigation tree, click **Audit Records** to display the Audit Records task panel.
2. Click **Apply Filter** from the Filter pane to display all audit records. Remember, you can choose to refine your search based on the Filter pane.
3. In the Filtered List pane, click the audit record that you want to view. The Result field displays whether the audit was successful or failed.
4. Click **Process selected...** to display the Pop-up menu.

5. Click **View Details for selected...** to view details about the audit. If the audit failed, the audit details describe where the failure occurred.
6. Click **OK** to close the dialog.

Upgrading a 2210 Configuration

From time to time, the configuration in a 2210 device needs to be upgraded to a new version. For example, assume that a 2210 device in your network is currently running Multiprotocol Routing Services Version 3.2 and a PROM Version 2.37. You want to create a new configuration for this device, upgrading the operational code to MRS Version 3.3 and the PROM to version 2.40.

Note: Upgrading a 2210 configuration creates a new configuration version **only** in the Deployment Manager database. This way you can ensure the configuration is correct before you actually load it in a 2210 device. To load a configuration into a 2210 device, you must update a 2210 configuration. For more information about loading a configuration into a 2210 device, see "Updating a 2210 Configuration" on page 24.

Deployment Manager can maintain multiple configurations for a device. Each of these configurations has a different status. The configuration that matches the one actually loaded in the 2210 device has a status of Active. The NwDM database can only have one Active configuration for a 2210. Other configurations will typically have a status of:

- **Inactive**. Inactive versions are complete and can be loaded in the 2210 device.
- **Incomplete**. Incomplete versions are missing some data. They cannot be loaded in the 2210 device.

In addition, Deployment Manager uses a status of **nascent** for configurations that are in the process of becoming the Active configuration and **obsolescent** for configurations that are in the process of becoming inactive.

Follow these steps to upgrade a configuration:

1. From the navigation tree, click **Configurations** from the 2210 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2210 devices currently stored in the NwDM database.
3. In the Filtered List pane, click the row for each device for which you want to upgrade the configuration.
4. Click **Process Selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Upgrade selected...** to display the Upgrade 2210 Configuration Dialog.
6. From the Upgrade 2210 Configurations dialog, click **Start Now**.
7. If the configuration that you chose to upgrade is the Active configuration for the device, you must click **Create New Version**. The upgraded configuration will have a status of Inactive.
8. Click **Use Selected Load Image** to choose the load image used for this upgraded configuration.
9. Click **Select Image...** to choose the appropriate load image from a list of available load images.
10. From the Filter pane of the Select 2210 Load Image dialog, enter a 3 for the Version property and a 3 for the Release property.

    To enter data on the Filter pane, click the blank cell in the row for the appropriate property, type information in the cell, and press **Enter** or click another cell.
11. Click **Apply Filter** to display the load images.

12. In the Filtered List pane, click the row for the Version 3 Release 3 load image (MRS.F00) to select it.

    To use this Load Image, it must be uploaded into the NwDM database. You can add a Load Image to a database using either the Create Device task (see “Adding a 2210 Device Record to the Deployment Manager Database” on page 18) or from the Load Images task panel.
13. Click **Apply** to use that load image in the upgrade process.
14. From the Upgrade 2210 Configuration Dialog, click **Upgrade PROM**.
15. For the PROM name, type **prom_2.40**.

    To use this PROM level, it must be loaded in the NwDM database. For more information about loading the PROM image into the database, see “Uploading a PROM Image into the NwDM Database” on page 25.
16. Click **Submit** to start the Upgrade 2210 task. For more information about view the status of a job, see “Viewing Job Status” on page 15. The job type for an upgrade 2210 tasks is UPGCFG2210.

Viewing the Upgraded Configuration

When the Upgrade 2210 Configuration task is complete, the device will have multiple configurations listed in the NwDM database. Follow these steps to view all of the configurations for a device:

1. From the navigation tree, click **Configurations** from the 2210 folder to display the Configurations task panel.
2. From the Filter pane, enter either the device ID or the device name of the 2210 for which you just upgraded the configuration.
3. Click **Apply Filter** to display all configuration for that 2210 in the Filtered List pane.
4. Notice that two configurations are displayed. Remember, however, that only one configuration is the Active configuration (the configuration actually loaded in the 2210). The upgraded configuration is listed as the Inactive configuration. To make it the Active configuration, perform the Update 2210 Configuration task.

Updating a 2210 Configuration

Updating a 2210 configuration actually loads the configuration into a 2210 device. In addition, the Load Image and PROM Images are updated, if necessary. When you update a 2210 configuration, the configuration you choose must have a configuration status of Inactive.

Follow these steps to update a 2210 configuration:

1. From the navigation tree, click **Configurations** from the 2210 folder to display the Process Configs task panel.
2. In the Filter task pane, click **Apply Filter** to display all 2210 configurations in the Filter List pane.
3. In the Filtered task pane, click the 2210 configuration to be updated. Remember that to update the 2210, the configuration you select must have a status of Inactive.
4. Click **Process Selected...** display the configurations pop-up menu and click **Update selected...** to display the Update 2210 Dialog.
5. Click **Start now** to begin the update job immediately when you click Submit.
6. Click the down arrow for the Reload option and click **Reload Immediately** to restart the 2210 device immediately after the new configuration has been loaded.

   Note: The 2210 must be restarted for the new configuration to take effect. Therefore, you will typically select Timed Load for this field, and enter an off-peak time in the Timed Load field to minimize any disruptions that may be caused by the 2210 restarting.

   Be careful when entering the time for the 2210 to restart. The time you enter is based on the time zone of the server where the NwDM database is located (which may not be the same time zone where the 2210 or you are located).

   If you choose No Reload, you must restart the 2210 manually.
7. Click the down arrow for the Bank Option and click **Erase inactive if needed**. Deployment Manager will erase files (except for the Active load image) stored in the 2210 IBD only if space is needed to store the new configuration.
8. Click **Submit** to begin the Update 2210 Configuration task. To view the status of the job use the Managing Jobs task panel. For information about the Managing Jobs task panel, see “Viewing Job Status” on page 15 (an Update 2210 Configuration job has a job status of UPDATE2210).

Updating the PROM Code in a 2210

You can use Deployment Manager to update just the PROM code (boot and diagnostic code) that is currently loaded in a 2210 to a new version and release level. Before updating to a more recent PROM level, however, the PROM image for that level must be stored in the NwDM database.

Uploading a PROM Image into the NwDM Database

Follow these steps to load a PROM image into the NwDM database:

1. From the navigation tree, click **PROM Images** from the 2210 folder to display the PROM Images task panel.
2. In the Filter pane, click **Apply Filter** to display all PROM Images available to Deployment Manager in the Filtered List pane. Information about these images was added to the NwDM database when software inventory was updated. See “Updating the Software Inventory” on page 14 for information on updating software inventory.

   Notice that the length of the PROM images is 0. This means that a copy of the PROM image does not currently exist in the NwDM database. Before you can update a 2210 device with a new PROM image, the new image must have been previously imported into the database.
3. Assume the PROM image you want to upload is version 2.40. Click **prom_2.40** in the Filtered List pane to select it.
4. Click **Process Selected...** to display the Filtered List pop-up menu.
5. Click **Import Selected PROM Image files...** to import the PROM image into the NwDM database. The Import 2210 PROM Images dialog, consisting of several tabs, is displayed. For more information about the importing PROM images, see “2210 PROM Images” on page 95.
6. Use the Method tab to specify how the PROM image is accessed. Click **Use specified download URL** and then click **Next**.
7. Use the Download URL tab to specify the URL where the PROM image is located. Click **IBM-North America** and then click **Next**.
8. Use the FTP tab to specify how to access the URL. Because you selected IBM-North America in the Download URL tab, defaults for FTP host and user ID are displayed. If you require the use of a socks server, click **Use socks server** and fill in the server host name and port. Enter your e-mail address for the password and then click **Next**.
9. Use the Results tab to start the import process and view the status. Click **Import**. The Messages box displays information about the import process.
10. When the import process is complete, click **Apply Filter** from the Filter pane to refresh the list of PROM images. Notice that the PROM image you just imported now has a length other than 0.

Loading the PROM Image into the 2210

After uploading the PROM image into the NwDM database, you can update a 2210 device to use that PROM image. Follow these steps to update the PROM image in a 2210:

1. From the navigation tree, click **Configurations** from the 2210 folder to display the Process Configs task panel.
2. Assume that the 2210 device for which you want to update the PROM level is currently using PROM level 2.37 and you want to update the PROM level to 2.40. Scroll down the Filter list until you see the PROM Level property.

3. Click in the empty cell to edit it and type **prom_2.37**.
4. Click **Apply Filter** to display in the Filtered List all devices that have a PROM level of 2.37.
5. Click a 2210 device in the Filtered List to select the device. You could also choose to update the PROM level for more than one device displayed in the Filtered List. To select multiple devices, press the **Ctrl** key while clicking the devices. Clicking **Select All** will select all of the devices in the Filtered List.

   Note: PROM Level updates can only be performed on 2210 devices that have an Active configuration (Active is displayed in the Version Status field).
6. Click **Process Selected** to display the pop-up menu and click **Update PROM Level on selected...** to display the Update 2210 PROM Levels dialog.
7. Click **PROM Level** to specify the PROM level.
8. Click **Select PROM...** to display the Select 2210 PROM Image dialog.
9. From the Select 2210 PROM Image dialog, click the empty cell for Name and enter **prom_2.40**.
10. Click **Apply Filter** to display the PROM in the Filtered List.
11. From the Filtered List, click the PROM to select it and then click **Apply**.
12. From the Update 2210 PROM Level dialog, click **Start now**, which will start the Update 2210 PROM Level task when you click Submit.

    Note: Typically, you will want to click **Schedule job** and choose a start time for the job that is during a slow period (such as early in the morning). Updating the PROM level will force the 2210 device to automatically be restarted.
13. Click the **Erase IBD** pull down. The Erase IBD controls the disposition of PROM Images that are currently stored in the IBD.
14. Click **Erase Inactive if needed** to erase Inactive PROM images from the IBD only if there is not enough space in the IBD to store this PROM image.
15. Click **Submit** to begin the Update PROM Image task.

Working with 2212 Devices

Typical tasks that you can perform with 2212 devices include:

- Adding a 2212 record to the Deployment Manager database (see “Adding a 2212 Device Record to the Deployment Manager Database” on page 28).
- Auditing a 2212 configuration (see “Auditing a 2212 Configuration” on page 29).
- Upgrading a 2212 configuration (see “Upgrading a 2212 Configuration” on page 30).
- Updating a 2212 configuration (see “Updating a 2212 Configuration” on page 31).

Adding a 2212 Device Record to the Deployment Manager Database

The Synchronize Databases task creates device records in the NwDM database for all 2212 devices in the network. The disadvantage of using the Synchronize Databases task is that it can take quite a while to complete processing. Therefore, use the 2212 Create Device task to add a single 2212 device record to the NwDM database.

Follow these steps to add a single 2212 device record to the database:

1. From the navigation tree, click **Create Device** from the 2212 folder to display the Create Device task panel.
2. Fill in these fields on the Create Device task panel (click the empty box next to the field to enter information for the field):

   Device Name
   Enter a name by which you want this device to be known within NwDM.

   Note: NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name. Using your own naming convention can make it easy to filter devices when you search the database.

   IP Address
   Enter a valid IP address or host name for this device.

   Operator ID
   Enter the operator ID defined for the 2212, if it exists.

   Password
   Enter the password associated with the operator ID.

   SNMP Read Community Name
   Enter the SNMP write community name to which the 2212 belongs. The default is public.

   SNMP Write Community Name
   Enter the SNMP read community name to which the 2212 belongs.

   TFTP server IP address
   Enter the IP address for the TFTP server with which the 2212 can communicate.
3. Click **Apply** to create the device in the NwDM database.

Updating NwDM with the Device Configuration

After adding the 2212 to the NwDM database, you need to update the database with the configuration information for the device.

Follow these steps to perform the Learn Configuration task for this 2212:

1. From the navigation tree, click **Learn configurations** from the 2212 folder. The Learn Configuration task panel is displayed.
2. In the Options pane:
   a. Click **Start now** to immediately schedule the job (when you click Apply)
   b. Click **Upload load image if needed** to add the load image to the database. Uploading the load image to the database makes it available for use in other 2212 devices. You must upload the load image into the Deployment Manager database before you can use it to update 2212 device load images.
3. In the Candidates pane:

a. Click **Reset All** to deselect all 2212 devices. You only want to learn the configuration for the device you just added.
b. Click the Learn checkbox for the device that you just created.

4. Click **Apply** to begin the Learn Configuration task for the 2212 devices.
5. The Learn Configurations dialog is displayed. Click **OK** to close the dialog.
6. You can view the status of each of the jobs from the Jobs from the Managing Jobs task panel. To view the status, follow the steps described in “Viewing Job Status” on page 15 (instead of searching on job type, search for the Device ID of the device you created).

Auditing a 2212 Configuration

When you add a 2212 device to the Deployment Manager database and perform a Learn Configuration for that task, information about that configuration is added to the database. However, configurations can change over time. Auditing a 2212 configuration ensures that the configuration stored in the NwDM database as the Active configuration for the device matches the configuration that is actually loaded in the device.

Note: Audits can only be performed on configurations that have a version status of Active.

Deployment Manager compares these properties to audit a 2212:

- Model
- Amount of memory
- TFTP server
- Load image

Follow these steps to audit a 2212 configuration:

1. From the navigation tree, click **Configurations** from the 2212 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2212 devices currently stored in the NwDM database.

   Remember that you can also use the Filter pane to refine your search.
3. In the Filtered List pane, click the row of each device to be audited to select the device. To select multiple rows, press and hold **Ctrl** while clicking the rows.
4. Click **Process selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Audit selected...** to display the Audit 2212 Configuration task panel.
6. Click **Start now** and then click **Submit** to begin the audit process.
7. Click **OK** to close the Job Scheduled dialog.

Viewing Audit Records

While the Audit 2212 job is processing, you can view the status of the job from the Managing Jobs task pane. To view the job status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of AUDIT2212 instead of SYNCHDB).

After the Audit 2212 job is complete, you can view the audit record, which provides details about whether the audit succeeded or failed. Follow these steps to view an audit record.

1. From the navigation tree, click **Audit Records** to display the Audit Records task panel.

2. Click **Apply Filter** from the Filter pane to display all audit records. Remember, you can choose to refine your search based on the Filter pane.
3. In the Filtered List pane, click the audit record that you want to view. The Result field displays whether the audit was successful or failed.
4. Click **Process selected...** to display the Pop-up menu.
5. Click **View Details for selected...** to view details about the audit. If the audit failed, the audit details describe where the failure occurred.
6. Click **OK** to close the dialog.

Upgrading a 2212 Configuration

From time to time, the configuration in a 2212 device needs to be upgraded to a new version. For example, assume that a 2212 device in your network is currently running Access Integration Services (AIS) Version 3.2 and you want to create a new configuration for this device, upgrading the operational code to AIS Version 3.3.

Note: Upgrading a 2212 configuration creates a new configuration version **only** in the Deployment Manager database. This way you can ensure the configuration is correct before you actually load it in a 2212 device. To load a configuration into a 2212 device, you must update a 2212 configuration. For more information about loading a configuration into a 2212 device, see “Updating a 2212 Configuration” on page 31.

Deployment Manager can maintain multiple configurations for a device. Each of these configurations has a different status. The configuration that matches the one actually loaded in the 2212 device has a status of Active. The NwDM database can only have one Active configuration for a 2212. Other configurations will typically have a status of:

- **Inactive**. Inactive versions are complete and can be loaded in the 2212 device.
- **Incomplete**. Incomplete versions are missing some data. They cannot be loaded in the 2212 device.

In addition, Deployment Manager uses a status of **nascent** for configurations that are in the process of becoming the Active configuration and **obsolescent** for configurations that are in the process of becoming inactive.

Follow these steps to upgrade a configuration:

1. From the navigation tree, click **Configurations** from the 2212 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2212 devices currently stored in the NwDM database.
3. In the Filtered List pane, click the row for each device for which you want to upgrade the configuration.
4. Click **Process Selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Upgrade selected...** to display the Upgrade 2212 Configuration Dialog.
6. From the Upgrade 2212 Configurations dialog, click **Start Now**.
7. If the configuration that you chose to upgrade is the Active configuration for the device, you must click **Create New Version**. The upgraded configuration will have a status of Inactive.
8. Click **Use Selected Load Image** to choose the load image used for this upgraded configuration.

9. Click **Select Image...** to choose the load image from a list of available load images.
10. From the Filter pane of the Select 2210 Load Image Dialog, enter a 3 for the Version and a 2 for the Release.

    To enter data on the Filter pane, click the blank cell in the row for the appropriate property, type information in the cell, and press **Enter** or click another cell.
11. Click **Apply Filter** to display the load images.
12. In the Filtered List pane, click the row for the Version 3 Release 3 load image (AIS_EH1.zip) to select it.

    To use this Load Image, it must be uploaded into the NwDM database. You can add a Load Image to a database using either the Create Device task (see “Adding a 2212 Device Record to the Deployment Manager Database” on page 28) or from the Load Images task panel.
13. Click **Apply** to use that load image in the upgrade process.
14. Click **Submit** to start the Upgrade 2212 task. For more information about view the status of a job, see “Viewing Job Status” on page 15. The job type for an upgrade 2212 tasks is UPGCFG2212.

Viewing the Upgraded Configuration

When the Upgrade 2212 Configurations task is complete, the device will have multiple configurations listed in the NwDM database. Follow these steps to view all of the configurations for a device:

1. From the navigation tree, click **Configurations** in the 2212 folder to display the Configurations task panel.
2. From the Filter pane, enter either the device ID or the device name of the 2212 for which you just upgraded the configuration.
3. Click **Apply Filter** to display all configuration for that 2212 in the Filtered List pane.
4. Notice that two configurations are displayed. Remember, however, that only one configuration is the Active configuration (the configuration actually loaded in the 2212). The upgraded configuration is listed as the Inactive configuration. To make it the Active configuration, perform the Update 2212 Configuration task.

Updating a 2212 Configuration

Updating a 2212 configuration actually loads the configuration into a 2212 device. In addition, the Load Image is updated, if necessary. When you update a 2212 configuration, the configuration you choose must have a configuration status of Inactive.

Follow these steps to update a 2212 configuration:

1. From the navigation tree, click **Configurations** from the 2212 folder to display the Process Configs task panel.
2. In the Filter task pane, click **Apply Filter** to display all 2212 configurations in the Filter List pane.
3. In the Filtered task pane, click the 2212 configuration to be updated. Remember that to update the 2212, the configuration you select must have a status of Inactive.
4. Click **Process Selected...** display the configurations pop-up menu and click **Update selected...** to display the Update 2212 Dialog.
5. Click **Start now** to begin the update job immediately when you click Submit.

6. Click the down arrow for the Reload option and click **Reload Immediately** to restart the 2210 device immediately after the new configuration has been loaded.

   Note: The 2212 must be restarted for the new configuration to take effect. Therefore, you will typically select Timed Load for this field, and enter an off-peak time in the Timed Load field to minimize any disruptions that may be caused by the 2212 restarting.

   Be careful when entering the time for the 2212 to restart. The time you enter is based on the time zone of the server where the NwDM database is located (which may not be the same time zone where the 2212 or you are located).

   If you choose No Reload, you must restart the 2212 manually.
7. Click the down arrow for the Bank Option and click **Erase inactive if needed**. Deployment Manager will erase files (except for the Active load image) stored in the 2210 IBD only if space is needed to store the new configuration.
8. Click **Submit** to begin the Update 2212 Configuration task. To view the status of the job use the Managing Jobs task panel. For information about the Managing Jobs task panel, see “Viewing Job Status” on page 15 (an Update 2212 Configuration job has a job status of UPDATE2212).

Working with 2216 Devices

Typical tasks that you can perform with 2216 devices include:

- Adding a 2216 record to the Deployment Manager database (see “Adding a 2216 Device Record to the Deployment Manager Database” on page 34).
- Auditing a 2216 configuration (see “Auditing a 2216 Configuration” on page 35).
- Upgrading a 2216 configuration (see “Upgrading a 2216 Configuration” on page 36).
- Updating a 2216 configuration (see “Updating a 2216 Configuration” on page 37).

Adding a 2216 Device Record to the Deployment Manager Database

The Synchronize Databases task creates device records in the NwDM database for all 2216 devices in the network. The disadvantage of using the Synchronize Databases task is that it can take quite a while to complete processing. Therefore, use the 2216 Create Device task to add a single 2216 device record to the NwDM database.

Follow these steps to add a single 2216 device record to the database:

1. From the navigation tree, click **Create Device** from the 2216 folder to display the Create Device task panel.
2. Fill in these fields on the Create Device task panel (click in the empty box next to the field to enter information for that field):

   Device Name
   Enter a name by which you want this device to be known within NwDM.

   Note: NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name. Using your own naming conventions makes it easy to filter devices when you search the NwDM database.

   IP Address
   Enter a valid IP address or host name for this device.

   Operator ID
   Enter the operator ID defined for the 2216, if it exists.

   Password
   Enter the password associated with the operator ID.

   SNMP Read Community Name
   Enter the SNMP write community name to which the 2216 belongs. The default is public.

   SNMP Write Community Name
   Enter the SNMP read community name to which the 2216 belongs.

   TFTP server IP address
   Enter the IP address for the TFTP server with which the 2216 can communicate.
3. Click **Apply** to create the device in the NwDM database.

Updating NwDM with the Device Configuration

After adding the 2216 to the NwDM database, you need to update the database with the configuration information for the device.

Follow these steps to perform the Learn Configuration task for this 2216:

1. From the navigation tree, click **Learn configurations** from the 2216 folder. The Learn Configuration task panel is displayed.
2. In the Options pane:
   a. Click **Start now** to immediately schedule the job (when you click Apply)
   b. Click **Upload load image if needed** to add the load image to the database. Uploading the load image to the database makes it available for use in other 2216 devices. You must upload the load image into the database before using it to update a 2216 device load images.
3. In the Candidates pane:

a. Click **Reset All** to deselect all 2216 devices. You only want to learn the configuration for the device you just added.
b. Click the Learn checkbox for the device that you just created.

4. Click **Apply** to begin the Learn Configuration task for the 2216 devices.
5. The Learn Configurations dialog is displayed. Click **OK** to close the dialog.
6. You can view the status of each of the jobs from the Jobs from the Managing Jobs task pane. To view the status, follow the steps described in “Viewing Job Status” on page 15 (instead of searching on job type, search for the Device ID of the device you created).

Auditing a 2216 Configuration

When you add a 2216 device to the Deployment Manager database and perform a Learn Configuration for that task, information about that configuration is added to the database. However, configurations can change over time. Auditing a 2216 configuration ensures that the configuration stored in the NwDM database as the Active configuration for the device matches the configuration that is actually loaded in the device.

Note: Audits can only be performed on configurations that have a version status of Active.

Deployment Manager compares these properties to audit a 2216:

- Model
- Amount of memory
- TFTP server
- Load image

Follow these steps to audit a 2216 configuration:

1. From the navigation tree, click **Configurations** from the 2216 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2216 devices currently stored in the NwDM database.

   Remember that you can also use the Filter pane to refine your search.
3. In the Filtered List pane, click the row of each device to be audited to select the device. To select multiple rows, press and hold **Ctrl** while clicking the rows.
4. Click **Process selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Audit selected...** to display the Audit 2216 Configuration task panel.
6. Click **Start now** and then click **Submit** to begin the audit process.
7. Click **OK** to close the Job Scheduled dialog.

Viewing Audit Records

While the Audit 2216 job is processing, you can view the status of the job from the Managing Jobs task pane. To view the job status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of AUDIT2216 instead of SYNCHDB).

After the Audit 2216 job is complete, you can view the audit record, which provides details about whether the audit succeeded or failed. Follow these steps to view an audit record.

1. From the navigation tree, click **Audit Records** to display the Audit Records task panel.

2. Click **Apply Filter** from the Filter pane to display all audit records. Remember, you can choose to refine your search based on the Filter pane.
3. In the Filtered List pane, click the audit record that you want to view. The Result field displays whether the audit was successful or failed.
4. Click **Process selected...** to display the Pop-up menu.
5. Click **View Details for selected...** to view details about the audit. If the audit failed, the audit details describe where the failure occurred.
6. Click **OK** to close the dialog.

Upgrading a 2216 Configuration

From time to time, the configuration in a 2216 device needs to be upgraded to a new version. For example, assume that a 2216 device in your network is currently running Multiprotocol Access Services (MAS) Version 3.2 and you want to create a new configuration for this device, upgrading the operational code to MAS Version 3.3.

Note: Upgrading a 2216 configuration creates a new configuration version **only** in the Deployment Manager database. This way you can ensure the configuration is correct before you actually load it in a 2216 device. To load a configuration into a 2216 device, you must update a 2216 configuration. For more information about loading a configuration into a 2216 device, see “Update 2216 Configuration” on page 167.

Deployment Manager can maintain multiple configurations for a device. Each of these configurations has a different status. The configuration that matches the one actually loaded in the 2216 device has a status of Active. The NwDM database can only have one Active configuration for a 2216. Other configurations will typically have a status of:

- **Inactive**. Inactive versions are complete and can be loaded in the 2216 device.
- **Incomplete**. Incomplete versions are missing some data. They cannot be loaded in the 2216 device.

In addition, Deployment Manager uses a status of **nascent** for configurations that are in the process of becoming the Active configuration and **obsolescent** for configurations that are in the process of becoming inactive.

Follow these steps to upgrade a configuration:

1. From the navigation tree, click **Configurations** from the 2216 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 2216 devices currently stored in the NwDM database.
3. In the Filtered List pane, click the row for each device for which you want to upgrade the configuration.
4. Click **Process Selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Upgrade selected...** to display the Upgrade 2216 Configuration Dialog.
6. From the Upgrade 2216 Configuration Dialog, click **Start Now**.
7. If the configuration that you chose to upgrade is the Active configuration for the device, you must click **Create New Version**. The upgraded configuration will have a status of Inactive.
8. Click **Use Selected Load Image** to choose the load image used for this configuration.

9. Click **Select Image...** to choose a load image from a list of load images.
10. From the Filter pane of the Select 2216 Load Image Dialog, enter a 3 for the Version and a 3 for the Release.

    Remember, to enter data on the Filter pane, click the blank cell in the row for the appropriate field. Then type information in the cell and press **Enter** or click another cell.
11. Click **Apply Filter** to display the load image.
12. In the Filtered List pane, click the row for the Version 3 Release 3 load image (MAS_CF1.zip) to select it.

    To use this Load Image, it must be loaded in the NwDM database. You can add a Load Image to a database using either the Create Device task (see “Adding a 2216 Device Record to the Deployment Manager Database” on page 34) or from the Load Images task panel.
13. Click **Apply** to use that load image in the upgrade process.
14. Click **Submit** to start the Upgrade 2216 task. For more information about view the status of a job, see “Viewing Job Status” on page 15. The job type for an upgrade 2216 tasks is UPGCFG2216.

Viewing the Upgraded Configuration

When the Upgrade 2216 Configuration task is complete, the device will have multiple configurations listed in the NwDM database. Follow these steps to view all of the configurations for a device.

1. From the navigation tree, click **Configurations** from the 2216 folder to display the Configurations task panel.
2. From the Filter pane, enter either the device ID or the device name of the 2216 for which you just upgraded the configuration.
3. Click **Apply Filter** to display all configuration for that 2216 in the Filtered List pane.
4. Notice that two configurations are displayed. Remember, however, that only one configuration is the Active configuration (the configuration actually loaded in the 2216). The upgraded configuration is listed as the Inactive configuration. To make it the Active configuration, perform the Update 2216 Configuration task.

Updating a 2216 Configuration

Updating a 2216 configuration actually loads the configuration into a 2216 device. In addition, the Load Image is updated, if necessary. When you update a 2216 configuration, the configuration you choose must have a configuration status of Inactive.

Follow these steps to update a 2216 configuration:

1. From the navigation tree, click **Configurations** from the 2216 folder to display the Process Configs task panel.
2. In the Filter task pane, click **Apply Filter** to display all 2216 configurations in the Filter List pane.
3. In the Filtered task pane, click the 2216 configuration to be updated. Remember that to update the 2216, the configuration you select must have a status of Inactive.
4. Click **Process Selected...** display the configurations pop-up menu and click **Update selected...** to display the Update 2216 Dialog.
5. Click **Start now** to begin the update job immediately when you click Submit.

6. Click the down arrow for the Reload option and click **Reload Immediately** to restart the 2216 device immediately after the new configuration has been loaded.

   Note: The 2216 must be restarted for the new configuration to take effect. Therefore, you will typically select Timed Load for this field, and enter an off-peak time in the Timed Load field to minimize any disruptions that may be caused by the 2216 restarting.

   Be careful when entering the time for the 2216 to restart. The time you enter is based on the time zone of the server where the NwDM database is located (which may not be the same time zone where the 2216 or you are located).

   If you choose No Reload, you must restart the 2216 manually.
7. Click the down arrow for the Bank Option and click **Erase inactive if needed**. Deployment Manager will erase files (except for the Active load image) stored in the 2216 only if space is needed to store the new configuration.
8. Click **Submit** to begin the Update 2216 Configuration task. To view the status of the job use the Managing Jobs task panel. For information about the Managing Jobs task panel, see “Viewing Job Status” on page 15 (an Update 2216 Configuration job has a job status of UPDATE2216).

Working with 8275 Model 416 Devices

Typical tasks that you can perform with 8275 Model 416 devices include:

- Adding an 8275-416 record to the Deployment Manager database (see “Adding an 8275 Model 416 Device Record to the Deployment Manager Database” on page 40).
- Auditing an 8275-416 configuration (see “Auditing an 8275-416 Configuration” on page 41).
- Updating an 8275-416 configuration (see “Updating an 8275-416 Configuration” on page 42).

Adding an 8275 Model 416 Device Record to the Deployment Manager Database

The Synchronize Databases task creates device records in the NwDM database for all 8275-416 devices in the network. The disadvantage of using the Synchronize Databases task is that it can take quite a while to complete processing. Therefore, use the 8275-416 Create Device task to add a single 8275-416 device record to the NwDM database.

Follow these steps to add a single 8275-416 device record to the database:

1. From the navigation tree, click **Create Device** from the 8275-416 folder to display the Create 8275-416 Device task panel.
2. Fill in these fields on the Create Device task panel (click the empty box next to the field to enter information for the field):

   Device Name
   Enter a name by which you want this device to be known within NwDM.

   Note: NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name. Using your own naming conventions makes it easy to filter devices when you search the NwDM database.

   IP Address
   Enter a valid IP address or host name for this device.

   Operator ID
   Enter the operator ID defined for the 8275-416, if it exists.

   Password
   Enter the password associated with the operator ID.

   SNMP Read Community Name
   Enter the SNMP write community name to which the 8275-416 belongs. The default is public.

   SNMP Write Community Name
   Enter the SNMP read community name to which the 8275-416 belongs.

   TFTP server IP address
   Enter the IP address for the TFTP server with which the 8275-416 can communicate.
3. Click **Apply** to create the device in the NwDM database.

Updating NwDM with the Device Configuration

After adding the 8275-416 to the NwDM database, you need to update the database with the configuration information for the device.

Follow these steps to perform the Learn Configuration task for this 8275-416:

1. From the navigation tree, click **Learn configurations** from the 8275-416 folder. The Learn Configurations task panel is displayed.
2. In the Options pane:
   a. Click **Start now** to immediately schedule the job (when you click Apply)
3. In the Candidates pane:
   a. Click **Reset All** to deselect all 8275-416 devices. You only want to learn the configuration for the device you just created.
   b. Click the Learn checkbox for the device that you just created.

4. Click **Apply** to begin the Learn Configuration task for the 8275-416 devices.
5. The Learn Configurations dialog is displayed. Click **OK** to close the dialog.
6. You can view the status of each of the jobs from the Jobs from the Managing Jobs task pane. To view the status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of LEARN8275m416).

Auditing an 8275-416 Configuration

When you add an 8275-416 device to the Deployment Manager database and perform a Learn Configuration for that task (see 17), information about that configuration is added to the database. However, configurations can change over time. Auditing an 8275-416 configuration ensures that the configuration stored in the NwDM database as the Active configuration for the device matches the configuration that is actually loaded in the device.

Note: Audits can only be performed on configurations that have a version status of Active.

Deployment Manager compares these properties to audit an 8275-416:

- Model
- Amount of memory
- TFTP server
- Load image

Follow these steps to audit an 8275-416 configuration:

1. From the navigation tree, click **Configurations** from the 8275-416 folder to display the Configurations task panel.
2. Click **Apply Filter** in the Filter pane to display all of the 8275-416 devices currently stored in the NwDM database.

   Remember that you can also use the Filter pane to refine your search.
3. In the Filtered List pane, click the row of each device to be audited to select the device.
4. Click **Process selected...** to display the pop-up menu for the Filtered List pane.
5. Click **Audit selected...** to display the Audit 8275-416 Configuration task panel.
6. Click **Start now** and then click **Submit** to begin the audit process.
7. Click **OK** to close the Job Scheduled dialog.

Viewing Audit Records

While the Audit 8275-16 job is processing, you can view the status of the job from the Managing Jobs task panel. To view the job status, follow the steps described in “Viewing Job Status” on page 15 (search for jobs with a job type of AUDIT8275m416 instead of SYNCHDB).

After the Audit 8275-416 job is complete, you can view the audit record, which provides details about whether the audit succeeded or failed. Follow these steps to view an audit record.

1. From the navigation tree, click **Audit Records** to display the Audit Records task panel.
2. Click **Apply Filter** from the Filter pane to display all audit records. Remember, you can choose to refine your search based on the Filter pane.
3. In the Filtered List pane, click the audit record that you want to view. The Result field displays whether the audit was successful or failed.

4. Click **Process selected...** to display the Pop-up menu.
5. Click **View Details for selected...** to view details about the audit. If the audit failed, the audit details describe where the failure occurred.
6. Click **OK** to close the dialog.

Updating an 8275-416 Configuration

Updating an 8275-416 configuration actually loads the configuration into the 8275-416 device. In addition, the Load Image are updated, if necessary. When you update an 8275-416 configuration, the configuration you choose must have a configuration status of Inactive.

Follow these steps to update an 8275-416 configuration:

1. From the navigation tree, click **Configurations** to display the Process Configs task panel.
2. In the Filter task pane, click **Apply Filter** to display all 8275-416 configurations in the Filter List pane.
3. In the Filtered task pane, click the 8275-416 configuration to be updated. Remember that to update the 8275-416, the configuration you select must have a status of Inactive.
4. Click **Process Selected...** display the configurations pop-up menu and click **Update selected...** to display the Update 8275-416 Dialog.
5. Click **Start now** to begin the update job immediately when you click Submit.
6. Click the down arrow for the Reset option and click **Reload Immediately** to restart the 8275-416 device immediately after the new configuration has been loaded.

   Note: The 8275-416 must be restarted for the new configuration to take effect.
7. Click the down arrow for the Bank Option and click **Erase inactive if needed**. Deployment Manager will erase files (except for the Active load image) stored in the 8275-416 only if space is needed to store the new configuration.
8. Click **Submit** to begin the Update 8275-416 Configuration task. To view the status of the job use the Managing Jobs task panel. For information about the Managing Jobs task panel, see “Viewing Job Status” on page 15 (an Update 8275-416 Configuration job has a job status of UPDATE8275m416).

Chapter 3. Understanding Deployment Manager Task Panels and Dialogs

This chapter describes each of the task panels and dialogs provided with Nways Deployment Manager. For each task panel or dialog, this chapter provides:

- Screen capture showing the task panel or dialog
- Description of the task panel or dialog
- Table listing each field, the purpose of the field, and valid values.
- Description of the available pop-up menu selections.
- Description of the available action buttons.

Set User

Use the Set User task panel to set the user for the current Deployment Manager session. To display the Set User task panel, click **Set User** from the navigation tree.

This field...	Is used to...	It can contain...
Current user id	Display the user ID currently signed on to this Deployment Manager session.	Blank when you initially sign on, this field displays the value you enter for User ID when you click Apply.
User id	Specify the user ID to be used for this Deployment Manager session. The user ID is displayed in audit records and job logs.	Up to 32 text characters representing the user ID. The default is the logon user ID.

These action buttons are available for the Set User task panel:

Apply Sets the current user ID to the specified user ID. Exiting the Set User task panel without clicking Apply will cause any changes you entered on this task panel to be lost.

Clicking **Apply** displays a confirmation dialog. Click **OK** to clear the dialog.

Refresh
Clears any information entered on the Set User task panel.

Help Displays help for this task panel.

Jobs

Many of the tasks performed with Deployment Manager are performed as jobs. The Jobs task panel provides a way for you to manage these jobs.

To display the Jobs task panel, click **Jobs** from the navigation tree.

The Jobs task panel is divided into these panes:

- Job Filter
- Jobs List
- Job Details

You can display the help panel for the Jobs task panel by clicking **Help**.

Job Filter Pane

The Job Filter pane provides a way to search the Deployment Manager database for jobs. The Filter pane is a table containing these columns:

- Properties. The Properties column is a list of job properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists all of the ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Job records found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Jobs List pane.

Job Filter Properties

You can search on these job properties:

This property...	Is used to describe...
Job ID	The identifier for a job. Jobs are numbered sequentially within the NwDM database.

This property...	Is used to describe...
Job Type	How the job was scheduled. Job Type can have one of these values: • LEARN2210 - jobs scheduled as Learn 2210 tasks • LEARN2212 - jobs scheduled as Learn 2212 tasks • LEARN2216 - jobs scheduled as Learn 2216 tasks • LEARN8275m416 - jobs scheduled as Learn 8275 Model 416 tasks • AUDIT2210 - jobs scheduled as Audit 2210 tasks • AUDIT2212 - jobs scheduled as Audit 2212 tasks • AUDIT2216 - jobs scheduled as Audit 2216 tasks • AUDIT8275m416 - jobs scheduled as Audit 8275 Model 416 tasks • SYNCHDB - jobs scheduled as Synchronize Databases tasks • UPDATE2210 - jobs scheduled as Update 2210 tasks • UPDATE2212 - jobs scheduled as Update 2212 tasks • UPDATE2216 - jobs scheduled as Update 2216 tasks • UPDATE8275m416 - jobs scheduled as Update 8275 Model 416 tasks • UPGCFG2210 - jobs scheduled as Upgrade 2210 configuration task • UPGCFG2212 - jobs scheduled as Upgrade 2212 configuration task • UPGCFG2216 - jobs scheduled as Upgrade 2216 configuration tasks
Earliest Start	The earliest date and time that the job can be started. The date and time are based on the time zone of the server where the NwDM database is stored. The Earliest Start property has the format *yy/mm/dd:hh/mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest Start	The Latest Start property is the latest date and time that the job can be started. If the job is not started by this date and time, it will not start at all. The date and time are based on the time zone of the server where the NwDM database is stored. The Latest Start property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This property...	Is used to describe...
Status	The status of the job, which can be: • Scheduled - the job is scheduled, but has not started • Running - the job has started and is currently running • Stopped - the job has stopped due to an error. The Job Log displays the details about the error. • Finished - the job completed successfully. For jobs that have a status of Stopped or Finished, the Job Log contains additional information about the Job Log.
Started At	The date and time that the job actually started. The date and time are based on the time zone of the server where the NwDM database is stored. The Started At property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Finished At	The date and time that the job completed (either stopped or finished). The date and time are based on the time zone of the server where the NwDM database is stored. The Finished At property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Created At	The date and time that the job was scheduled. The date and time are based on the time zone of the server where the NwDM database is stored. The Created At property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Created By	The user ID that scheduled the job. The user ID is based on the ID entered on the Set User task panel.
Predecessor	The Job ID of the job that is scheduled to run before this job runs. The predecessor job must complete successfully (have a status of finished) before this job can start.
Results	A summary of events that occurred while the job ran. The job log provides detailed information about the job.

Job Filter Comparison Operators

Over time the number of job records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only job records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Job Record filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Jobs List Pane

The results of the search from the Job Filter are displayed in the Jobs List task pane.

The Jobs List task pane displays each job as a separate row. To select a job, click in anywhere in the row, which highlights the row. Use one of these methods to select multiple jobs:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the job is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Jobs List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Jobs List Action Buttons

Use the Jobs List action button to perform actions on one or more selected jobs. These action buttons are displayed for the Jobs List task pane:

Clicking this button...	Performs this action...
Select All	Selects all jobs listed in the Jobs List task pane.
Unselect All	Deselects all selected jobs listed in the Jobs List task pane.
Delete Selected...	Delete job records from the NwDM database. The Confirm Job Delete dialog is displayed. Click **Yes** to delete the jobs.
Delete Log of selected...	Delete job logs from the NwDM database. The Confirm Job Log Delete dialog is displayed. Click **Yes** to delete job logs.
Kill selected...	Stop jobs that are currently processing. The Confirm Killing Jobs dialog is displayed. Click **Yes** to stop processing.
Restart selected...	Restart stopped jobs. The Confirm Restarting Jobs dialog is displayed. Click **Yes** to restart the job.

Jobs List Pop-Up Menu

To display the Jobs List pop-up menu, select one or more rows and right click.

In addition to the actions available from the action buttons, these actions are available from the Jobs List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Jobs List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Jobs List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**. For example, these columns are hidden by default in the Jobs List task pane: • Latest start • Created by • Created at • Predecessor
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Jobs List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Jobs List task pane.
Print...	Displays the Print dialog, which allows you to print selected job records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected job records will print. Click **Close** to return to the Jobs List task pane.

Job Details Pane

The Job Details task pane displays specific properties about a selected job. The properties displayed in the Job Details task pane for a job are determined by the type of job. For example, the Reload Option property specifies when a device is restarted after a new configuration has been loaded into the device. This property is maintained only for Update Configuration job types. It has no meaning for any other job types.

In addition to the fields listed in the Job Filter task pane, these fields are displayed for AUDIT2210, AUDIT2212, AUDIT2216, and AUDIT8275m416 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
Version	The version number of the configuration. You can have multiple versions of a configuration stored in NwDM for each device. Configuration versions are numbered sequentially starting with zero (0).

In addition to the fields listed in the Job Filter task pane, these fields are displayed for LEARN8275m416 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
Version	The version number of the configuration. You can have multiple versions of a configuration stored in NwDM for each device. Configuration versions are numbered sequentially starting with zero (0).

In addition to the fields listed in the Job Filter task pane, these fields are displayed for LEARN2210, LEARN2212, and LEARN2216 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
Version	The version number of the configuration. You can have multiple versions of a configuration stored in NwDM for each device. Configuration versions are numbered sequentially starting with zero (0).
Upload Image	Used to specify whether or not the load image for the device is loaded in the NwDM database. The Upload Image can be: • **True**. The load image is loaded into the database • **False**. The load image is not loaded into the database

These fields are displayed for the UPGCFG2210 job type:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
Version	The version number of the configuration. You can have multiple versions of a configuration stored in NwDM for each device. Configuration versions are numbered sequentially starting with zero (0).
Create New Version	Whether or not a New version should be created in the NwDM database when the configuration version is upgraded. The Create New Version can be: • **True**. NwDM creates a new version in the database. • **False**. NwDM does not create a new version.
Load Image	The name of the load image associated with a configuration.
Image Version	The software version to which the load image applies.
Image Release	The software release to which the load image applies.
Use Latest PROM	Whether or not the latest PROM level that is compatible with the 2210 device is to be used when the configuration is upgraded. The Use Latest PROM property can be: • **True**. Use the latest PROM level when the configuration is upgraded. • **False**. Do not use the latest PROM level.
PROM Level	The PROM level to be used when the configuration is upgraded.

These fields are displayed for the UPGCFG2212 and UPGCFG2216 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
Version	The version number of the configuration. You can have multiple versions of a configuration stored in NwDM for each device. Configuration versions are numbered sequentially starting with zero (0).

This property...	Is used to describe...
Create New Version	Whether or not a New version should be created in the NwDM database when the configuration version is upgraded. The Create New Version can be: • **True**. NwDM creates a new version in the database. • **False**. NwDM does not create a new version.
Load Image	The name of the load image associated with a configuration.
Image Version	The software version to which the load image applies.
Image Release	The software release to which the load image applies.

These fields are displayed for the UPDATE2210, UPDATE2212, and UPDATE2216 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
From Version	The version number of the configuration that is listed as the Active configuration for the 2210, 2212, or 2216 device.
To Version	The version number of the configuration to which the 2210, 2212, or 2216 is going to be updated.
Reload Option	When the 2210, 2212, or 2216 is restarted after the configuration has been loaded into the device. The Reload Option can be: • **No Reload**. Do not restart the device. However, the configuration will not take effect until the device has been restarted. • **Reload Immediately**. Restart the device as soon as the configuration has been downloaded into the device. • **Timed Load**. Restart the device at the date and time specified by the Timed Load property.
Timed Load	If the Reload Option property is set to Timed Load, the date and time that the device is to be restarted. The date and time are based on the time zone of the server where the NwDM database is stored. The Timed Load property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Bank Option	The disposition of load images that are currently loaded in the 2210, 2212, or 2216. The Bank Option can be: • **Erase None**. Do not erase any files that are currently stored in the device. • **Erase Inactive if Needed**. Erase any files stored in the device (except the active image file), if necessary, to make run for the new configuration. • **Erase Any**. Erase all files stored in the device.

This property...	Is used to describe...
State	Indicates the current state of the update job. The State can be: • **Init**. The initial phase. • **Prepare**. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Erases IDB banks (based on option in Erase IBD property). – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • **Perform**. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the contents of the IBD. – Verifies the 2210, 2212, or 2216 boot entries. – Reloads or restarts the device depending on the Reload option. • **Verify**. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image (for the 2210), the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database of the ″from″ configuration to Inactive and the ″to″ configuration to Active.
Configuration File Name	The actual filename of the configuration file as it will be stored in the IBD and on the TFTP server.
Configuration File Checking	How NwDM checks the configuration file loaded in the device against the configuration file in the NwDM database. The Configuration File Checking can be: • **Disallow mismatches**. If the two files do not match, the Update configuration job stops with an error. • **Allow mismatches**. Even if the two files do not match, the Update configuration job continues.

This property...	Is used to describe...
Stop At State	The state at which the update configuration should stop processing. The Stop At State can be: • **Init**. The initial phase. • **Prepare**. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Erases IDB banks (based on option in Erase IBD property). – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • **Perform**. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the contents of the IBD. – Verifies the 2210, 2212, or 2216 boot entries. – Reloads or restarts the device. • **Verify**. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image (for the 2210), the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.

These fields are displayed for the UPDATE8275m416 job types:

This property...	Is used to describe...
Device ID	The identifier of the device for which this job applies.
From Version	The version number of the configuration that is listed as the Active configuration for the 8275-416 device.
To Version	The version number of the configuration to which the 8275-416 is going to be updated.
Reset Option	When the 8275-416 is restarted after the configuration has been loaded into the device. The Reload Option can be: • **No Reload**. Do not restart the device. However, the configuration will not take effect until the device has been restarted. • **Reload Immediately**. Restart the device as soon as the configuration has been downloaded into the device. • **Timed Load**. Restart the device at the date and time specified by the Timed Load property.
Reset Started At	The Reset Started At property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This property...	Is used to describe...
State	Indicates the current state of the update job. The State can be: • **Init**. The initial phase. • **Prepare**. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • **Perform**. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the 8275-416 boot entries. – Reloads or restarts the device depending on the Reload option. • **Verify**. The Verify phase. During the Verify phase, NwDM modifies the status of the configuration loaded in the NwDM database of the ″from″ configuration to Inactive and the ″to″ configuration to Active.
Configuration File Name	The actual filename of the configuration file as it will be stored in the device and on the TFTP server.
Download Option	How NwDM checks the configuration file loaded in the device against the configuration file in the NwDM database. The Download Option can be: • **Disallow mismatches**. If the two files do not match, the Update configuration job stops with an error. • **Allow mismatches**. Even if the two files do not match, the Update configuration job continues.
Upload Option	The Upload Option can be • **Init**. The initial phase. • **Prepare**. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • **Perform**. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the 2210 or 2212 boot entries. – Reloads or restarts the device. • **Verify**. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image (for the 2210), the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.

This property...	Is used to describe...
Stop At State	The state at which the update configuration should stop processing. The Stop At State can be: • **Init**. The initial phase. • **Prepare**. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • **Perform**. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the 2210, 2212, or 2216 boot entries. – Reloads or restarts the device. • **Verify**. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the load image and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.

Editing Job Details

From the Job Details task pane, you can make changes to job properties and run the job again. To edit the properties for a job, click in the cell containing the property value, and type in the new information. Then, press **Enter** or move the cursor to another property value. When all changes are complete, click **Apply Changes**.

The editable properties for jobs of type SYNCHDB are:

- Earliest start
- Latest start
- Predecessor

The editable properties for jobs of type LEARN2210, LEARN2212, or LEARN2216 are:

- Earliest start
- Latest start
- Predecessor
- Device ID
- Version
- Upload image

The editable properties for jobs of type AUDIT2210 or AUDIT2212 are:

- Earliest start
- Latest start
- Predecessor
- Device ID

- Version

The editable properties for jobs of type UPDATE2210, UPDATE2212, or UPDATE2216 are:

- Earliest start
- Latest start
- Predecessor
- From version
- To version
- Reload option
- Timed load
- Bank option
- Configuration file name
- Configuration file checking
- Stop at state

The editable properties for jobs of type UPDATE9285m416 are:

- Earliest start
- Latest start
- Predecessor
- From version
- To version
- Reset option
- Download option
- Upload option
- Stop at state

The editable properties for jobs of type UPGCFG2210, UPGCFG2212, or UPGCFG2216 are:

- Earliest start
- Latest start
- Predecessor
- Device ID
- Version
- Create new version
- Load image
- Version
- Release

Job Details Action Buttons

Use the Jobs Details action button to perform actions on one or more selected jobs. These action buttons are displayed for the Job Details task pane:

Clicking this button...	**Performs this action...**
Apply Changes	Applies the changes made when you edited the job details.
Delete job	Deletes the job record from the NwDM database.

Clicking this button...	Performs this action...
Restart job	Restarts a stopped job. Typically, you will click **Restart job** after editing the job details.
View log	Displays the job log for this job. The job log provides specific information about job processing.
Delete log	Deletes the job log from the NwDM database.
Kill job	Stops a job from processing.

Audit Records

To find out whether the configuration actually loaded in a device matches the configuration listed as active in the Deployment Manager database, you perform an Audit task. Deployment Manager maintains a list of all audits performed for each device. You can use the Audit Records task panel to manage audit records.

To display the Audit Records task panel, click **Audit Records** from the navigation tree.

The Audit Records task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Audit Records task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for audit records. The Filter pane is a table containing these columns:

- Properties. The Properties column is a list of audit record properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists all of the ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Job records found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Audit Record Filter Properties

You can search on these audit record properties:

This property...	Is used to describe ...
Job ID	The identifier for a job. Jobs are numbered sequentially within the NwDM database.
Version	The configuration version in the NwDM database for which the audit is being performed.
Device ID	The identifier for the device for which the audit is being performed.
Performed At	The date and time that the audit task completed. The date and time are based on the time zone of the server where the NwDM database is stored. The Performed At property has the format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This property...	Is used to describe ...
Result	A determination of whether or not the audit was successful. The Result property can have a value of either successful or failed.
Details	A summary of the details regarding audit processing. The specific details are stored in the job log for the Audit task.

Audit Record Filter Comparison Operators

Over time the number of audit records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only audit records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Audit Record filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each audit record as a separate row. To select an audit record, click in anywhere in the row, which highlights the row. Use one of these methods to select multiple audit records:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the audit record is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected audit records. These action buttons are displayed for the Jobs List task pane:

Clicking this button...	Performs this action...
Select All	Selects all audit record listed in the Filtered List task pane.
Unselect All	Deselects all selected audit records listed in the Filtered List task pane.
Process Selected...	Displays the pop-up menu for the Filtered List task pane.
Add Selected to custom list...	Add the selected audit records to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Filtered List and click **Ok**.
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected audit records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected audit records will print. Click **Close** to return to the Filtered List task pane.
View details for selected...	Displays details about the selected audit records.
View job logs for selected...	Displays job logs for the selected audit records.
Delete selected...	Deletes the selected audit record from the NwDM database.
Delete job logs for selected...	Deletes all jobs logs for the selected audit records.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of audit records based on the results of applying multiple filters. For example, assume you want to work with all audit records for two 2210 devices. First, you would generate a list of audit records for a specific device ID in the Filtered List pane (using the = comparison operator to specify Device ID = devicename). Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of audit records for a different device ID. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Synchronize Databases

When NwDM is initially installed or when your network has significant changes, you can also synchronize the NwDM database with the NetView or OpenView topology database. Depending on the size of the topology database, database synchronization may take a significant amount of time to complete.

Database synchronization runs as a scheduled job. Therefore you can use the Jobs task panel to view the status of the job.

During synchronization, NwDM compares the list of devices in its database that have configurations with a configuration status of Active with the list of devices in the topology database. NwDM:

- Adds the device to its database if the device exists in the topology database but not in the NwDM database. After synchronization is complete, perform a Learn task for the device to add configuration information for the device to the NwDM database.
- Updates configuration information for any devices in the NwDM database for which the SNMP read or write community names are changed.
- Records in the job log any devices that exist in the NwDM database but do not exist in the topology database. You can delete these devices from the NwDM database.
- Records in the job log any devices for which the device type has changed. Typically, a change in the device type is a result of an IP address reassignment. Perform a Learn task for the device to update configuration information for the device in the NwDM database.

To display the Synchronize Databases task panel, click **Synchronize Databases** from the navigation tree.

This field...	Is used to...	It can contain...
Earliest start	Enter the earliest date and time that the Synchronize Databases task can start.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This field...	Is used to...	It can contain...
Latest start	Enter the latest date and time that the Synchronize Databases task can start.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Start the Synchronize Databases task immediately (when you click **Apply**).	Check mark if the box is selected.

These action buttons are available for the Synchronize Databases task panel:

Apply Schedules the Synchronize Databases task as a job..

Help Displays help for this task panel.

Software Inventory-Edit Software Inventory Properties

Use the Edit Software Inventory Properties task panel to specify where the software components inventory file is located. Deployment Manager uses the information you specify for Edit Software Inventory Properties to perform the Update Software Inventory task (see “Software Inventory-Update Software Inventory” on page 65).

To display the Edit Software Inventory task panel, click **Edit software inventory properties** from the Software Inventory folder of the navigation tree.

The Edit Software Inventory Properties task panel is divided into these panes:

- Inventory Source
- Products

After updating the information on the Edit Software Inventory Properties task panel, click **Apply** to save your changes. You can display the help panel for this task panel by clicking **Help**.

Inventory Source Pane

Use the Inventory Source pane to specify the location where the software components are located.

This field...	Is used to...	It can contain...
Inventory file source	Select the source site used to obtain the software inventory file.	IBM-North America IBM-Europe Other FTP server Existing files
FTP host name	Specify the host name of the location where the software inventory file is located.	A valid FTP host name or IP address where the software inventory file is located. If you selected IBM-North America or IBM-Europe this field is automatically set to the appropriate FTP host name.
Socks host name	Specify the server name of the Socks server.	A valid host name or IP address of the Socks server.
Socks host port	Specify the port to be used for accessing the Socks server.	A valid port number between 1 and 65535 inclusive. The default is 1080.
Remote directory	Specify the directory on the server where the software inventory file is located.	A valid directory on the server. If you selected IBM-North America or IBM-Europe this field is automatically set to the appropriate directory.
Local server directory	Specify the directory on the Deployment Manager server where the software inventory file is located.	A valid directory on the NwDM server. Fill in this field only if you selected Existing Files as the Inventory File Source.

Products Pane

The Products task pane lists the network device types. Click the devices for which you want to obtain software component information. You can obtain software component information for these network devices:

- 2210
- 2212
- 2216
- 8275-416

Software Inventory-Update Software Inventory

Deployment Manager maintains an inventory of software components that are available for network devices. These software components include:

- Operational Code. Deployment Manager maintains load images for network devices. These load images can be base releases of the operational code, program temporary fixes (PTFs), or emergency program temporary fixes (EPTFs).
- Boot and Diagnostic Code. For the 2210, Deployment Manager maintains an inventory of all PROM code images available for network devices.

When you initially install Deployment Manager and as new software components become available, you need to update the NwDM database to reflect all available components. When you perform the Update Software Inventory task Deployment Manager uses the properties defined in the Edit Software Inventory Properties task (see page xx) to obtain an XML file that contains information about the software components.

Updating the software inventory provides information to Deployment Manager about the load images and PROM images (for the 2210) available for a network device. It does not actually upload load images or PROM images into the NwDM database. Before using load images or PROM images to update a network device, you must first import the image into the database.

Note: If you are updating the software inventory from an IBM networking web site, the inventory loaded reflects what is on the site. There may be slight delays before images are available for download as the images are actually put on the web site and mirrored to other sites.

To display the Update Software Inventory task panel, click **Update software inventory** from the Software Inventory folder of the navigation tree.

Click **Apply** to update software inventory. To display the help panel for this task panel by clicking **Help**.

Inventory Update Pane

Use the Inventory Update pane to specify the user ID and password for the web site you specified in the Update Software Inventory Properties task.

This field...	Is used to...	It can contain...
User ID	Specify the user ID for accessing the web site where the software inventory file is located.	A valid user ID. The default is anonymous (which is acceptable as the password for the IBM sites).
Password	Specify the password associated with the user ID.	A valid password. If you specified an IBM site as the location of the software inventory file, enter your e-mail address as the password.

The Update Software Inventory task is an interactive task. When you click **Apply**, the Progress window displays the current status of the task.

Chapter 4. Understanding 2210 Task Panels and Dialogs

This chapter describes each of the task panels and dialogs provided with Nways Deployment Manager for managing 2210 configurations. For each task panel or dialog, this chapter provides:

- Description of the task panel or dialog
- Table listing each field, the purpose of the field, and valid values.
- Description of the available pop-up menu selections.
- Description of the available action buttons.

Create 2210 Device

Use the 2210 Create Device task panel to create a 2210 in the Deployment Manager database. After creating the device, you will typically perform a 2210 Learn Configuration task to update the database with information about the device configuration.

To display the 2210 Create Device task panel, click **Create device** from the 2210 folder of the navigation tree.

After updating the information in the 2210 Create Device task panel, click **Apply** to start the job. Deployment Manager creates a device in the database based on the information you entered in the Main pane. In addition, an initial configuration is created for the device (version 0) and set to a status of Incomplete. Schedule a 2210 Learn Configuration task to create an Active configuration version based on the 2210 device.

You can display the help panel for this task panel by clicking **Help**.

Main Pane

Use the Main pane to specify information about the device to be created.

This field...	Is used to...	It can contain...
Device Name	Specify the name of this device in the NwDM database.	Up to 254 characters denoting the device name. NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name.
IP Address	The IP address for this device.	A valid IP address or host name.
Operator ID	The operator ID used for accessing this device, if the device has been configured for login protection.	A valid operator ID.
Password	The password that corresponds to the operator ID.	A valid password.
SNMP read community name	The SNMP read community to which this device belongs.	The SNMP read community name. The default is public.
SNMP write community name	The SNMP write community to which this device belongs.	The SNMP write community name.
TFTP Server IP Address	The IP address of an TFTP server with which this device can communicate.	A valid IP address of a TFTP server.

2210 Configurations

The 2210 Configurations task panel provides a way to manage device configurations. You can store multiple configurations for a 2210 device. Each configuration has a unique version associated with it and a configuration version status, which can be one of these values:

- **Active**. The active configuration is the configuration that is currently loaded in, and operational for, the 2210 device.
- **Inactive**. An inactive configuration is a configuration that can be loaded into the 2210 device. It contains all the components (load image, PROM image, and configuration file) necessary to become the active configuration.
- **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2210 device.

Note: There are actually two additional states for a configuration. A configuration can be in the state of **nascent**, which means the configuration is in the process of becoming the active configuration, or the state of **obsolescent**, which means the configuration is in the process of becoming an inactive configuration.

To display the 2210 Configuration task panel, click **Configurations** from the 2210 folder of the navigation tree.

The Configurations task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Configurations task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for configurations. The Filter pane contains these columns:

- Properties. The Properties column is a list of configuration properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Configurations found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Configuration Filter List Properties

You can search on these configuration properties:

This property...	Is used to describe...
Device ID	The identifier of the device. NwDM creates the Device ID when the device is added to the NwDM database (using either the 2210 Create Device task or Synchronize Databases task).
Device Name	The name of the device. You specified the device name when you added the device to the NwDM database using the 2210 Create Device task.
Model	The model number of the 2210, such as 12T, 12E, or 1U4.
Flash (MB)	The amount of flash memory installed in the device (in megabytes).
DRAM (MB)	The amount of dynamic memory installed in the device (in megabytes).
Version	The configuration version. NwDM can maintain multiple version of a configuration. Different configuration versions for a device are numbered sequentially beginning with 0.
Address	The IP address or host name for the device.
Version status	The status of the configuration version. Version status can be one of these values: • **Active**. The active configuration is the configuration considered by NwDM to be actually loaded in the 2210. • **Inactive**. An inactive configuration is a configuration that can be loaded into the 2210 device. It contains all of the components (load image, PROM image, and updated configuration file) necessary to become an active configuration. • **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2210 device. • **Nascent**. A nascent configuration is a configuration that is in the process of moving from an inactive status to an active status. • **Obsolescent**. An obsolescent configuration is a configuration that is in the process of moving from an active status to an inactive status.
Approval status	The approval status of the configuration version. Approval status can be one of these values: • **Approved**. • **Unapproved**. • **Rejected**.
Commit status	The commit status of the configuration version. Approval status can be one of these values: • **Committed**. When the configuration version has been committed, the configuration is locked (no changes can be made to the configuration). • **Uncommitted**. When the configuration version is uncommitted, changes can be made to the configuration.
Remarks	Text data that has been entered for this configuration.
Modified by	The user ID of the person who last changed the configuration. For new configurations, the Modified by property contains the user ID of the person who created the configuration.
Modified at	Date and time this configuration was added to the database.
SNMP read community name	The SNMP read community to which the device belongs.

This property...	Is used to describe...
SNMP write community name	The SNMP write community to which the device belongs.
Operator ID	The operator ID used to access the device if it has been configured for login protection.
Operator password	The password associated with the operator ID.
TFTP server	The IP address or host name of the TFTP server that can communicate with the 2210.
PROM level	The PROM level used with this configuration.
Config format	The format used for the configuration file. It can have one of these values: • **SRAM**. • **ASCII**.
Config Modified at	The date and time the configuration was last changed.
Config length	The amount of memory (in bytes) used in the NwDM database for storing the configuration Load image. If the Load image is not stored in the NwDM database (it may reside on a TFTP server for example), the value of this property is 0
Load image	The name of the load image.
Image version	The software version corresponding to the load image.
Image release	The software release corresponding to the load image.
Image PTF	The PTF corresponding to the load image.

Configuration Comparison Operators

Over time the number of configurations stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only configurations that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Configuration filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each configuration as a separate row. To select a configuration, click in anywhere in the row, which highlights the row. Use one of these methods to select multiple configurations:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the configuration is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected configurations. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all configurations listed in the Filtered List task pane.
Unselect All	Deselects all selected configurations listed in the Filtered List task pane.
Select active	Selects all active configurations listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected configurations to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**. For example, these columns are hidden by default in the Configurations Filtered List task pane: • Approval status • Commit status • Flash (MB) • DRAM (MB) • Remarks
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected job records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected job records will print. Click **Close** to return to the Jobs List task pane.

Clicking...	Performs this action...
Clone selected...	Makes a new copy of selected configurations so you can create new configurations without having to reenter each of the fields. When you click **Clone selected...**, the Confirm Configuration Cloning dialog is displayed. Click **Yes** to continue. The cloned configuration contains the same configuration properties as the original configuration with these exceptions: • Version status. If you clone an active configuration, the cloned configuration will have a status of inactive. Otherwise, the cloned configuration will have the same status as the original configuration. • Approval status. The Approval status of a cloned configuration is set to Unapproved. • Commit status. The Commit status is set to Uncommitted. • Modified by. The Modified by property is set to the current user ID. • Modified at. The Modified at property is set to the current date and time.
Approve selected...	Sets the Approval status property to Approved. When the Confirm Approve Configurations dialog is displayed, click **Yes** to approve selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Reject selected...	Sets the Approval status property to Rejected. When the Confirm Reject Configurations dialog is displayed, click **Yes** to reject selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Commit selected...	Sets the Commit status to Committed. When the Confirm Configuration Commit dialog is displayed, click **Yes** to commit the configuration. Committed configurations are locked; they cannot be modified. You can only commit configurations with a status of Active or Inactive.
Modify selected...	Displays the Modify Properties dialog, which you can use to modify properties for configurations.
Delete selected...	Deletes the configuration from the NwDM database. When the Confirm Configuration Delete dialog is displayed, click **Yes** to delete configurations. **Note:** If a device has no configurations listed in the NwDM database, the device is also deleted from the database.
Learn selected...	Displays the Learn 2210 Configuration task panel, which you can use to create active configurations based on configuration currently loaded in the device. See “Learn 2210 Configurations” on page 75 for more information about the Learn 2210 Configuration Dialog.
Upgrade selected...	Displays the Upgrade 2210 Configuration dialog, which you can use to create upgraded configurations in the NwDM database. See “Upgrade 2210 Configurations” on page 77 for information about the Upgrade 2210 Configuration dialog.
Import selected...	Displays the Import 2210 Configuration dialog, which you can use to import configurations into the NwDM database. See “Import 2210 Configurations” on page 79 for information about importing configurations.
Export selected...	Displays the Export 2210 Configuration dialog, which you can use to export configurations from the NwDM database. See “Export 2210 Configurations” on page 82 for information about exporting configurations.

Clicking...	Performs this action...
Update selected...	Displays the Update 2210 Configuration dialog, which you can use to load active configurations from the NwDM database into a device. See “Update 2210 Configuration” on page 104 for information about updating a configuration.
Update PROM level on selected...	Displays the Update PROM Levels dialog, which you can use to load a new PROM image into a device.
Audit selected...	Displays the Audit 2210 Configuration dialog, which you can use to audit 2210 configurations to ensure the configuration version with a status of Active in the NwDM database matches the configuration actually loaded in the device.
View audit records of selected...	Displays the View 2210 Audit Records dialog, which you can use to view audit records for a device.
View latest audit records of selected...	Displays the View Latest 2210 Audit Records dialog, which you can use to view the latest audit records for a device.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of Configuration records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of Configuration records with a version status of active for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of Configuration records with an approval status of Approved. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Learn 2210 Configurations

Use the 2210 Learn Configurations task panel to discover the current state of a 2210 and to set a configuration version for the device that reflects that state. You can also choose to upload the load image for this configuration into the Nways Deployment Manager database.

The 2210 Learn Configurations task is a scheduled job. If it completes successfully, any previously active configuration defined for this device becomes inactive, and the learned configuration becomes the active configuration for the device.

Use one of these methods to display the 2210 Learn Configurations task panel:

- Click **Learn configurations** from the 2210 folder of the navigation tree.
- Select a configuration from the Filtered List or Custom List of the Configurations task panel, click **Process selected...**, and then click **Learn selected...**. See “2210 Configurations” on page 69 for more information about the Configurations task panel.

The 2210 Learn Configurations task panel is divided into these panes:

- Options
- Candidates

After updating the information on the 2210 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 2210 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to schedule when the learn task will occur.

This field...	Is used to...	It can contain...
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This field...	Is used to...	It can contain...
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2210 Learn Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Upload load image if needed	Specify that a copy of the load image in the 2210 should be uploaded to the NwDM database. NwDM will not upload the PROM image.	A check mark if the box is selected.

Candidates Pane

The Candidates pane displays a list of 2210 devices for which the Learn Configurations task can be performed. The list of 2210 devices displayed depends on how you arrived at the 2210 Learn Configurations task panel:

- If you selected **Learn Configurations** from the 2210 folder of the navigation tree, the list of 2210 devices will include all 2210 devices for which the current configuration version number in the Nways Deployment Manager database is 0.
- If you selected **Learn Selected...** from the Filtered List pane or Custom List pane of the Configurations panel, the list of 2210 devices will include all 2210 devices selected on that pane.

Candidates Action Buttons

Use the Candidates action button to perform actions from the Candidates pane. These action buttons are displayed for the Candidates pane:

Clicking this button...	Performs this action...
Set all	Selects all candidates listed in the Candidates pane.
Reset all	Deselects all candidates listed in the Candidates pane.

Upgrade 2210 Configurations

Use the Upgrade 2210 Configurations dialog to create an upgraded configuration file for either a new or existing configuration. The upgraded configuration is added only to the NwDM database. To actually load the upgraded configuration in a device, you must perform an Update 2210 configuration task.

To display the Upgrade 2210 Configurations dialog, select a configuration from the Filter List pane or the Custom List pane of the Configurations task panel, click **Process selected...**, and then click **Upgrade selected...**.

Fill in these fields for the Upgrade 2210 Configurations dialog:

This field...	Is used to...	It can contain...
Start now	Specify that the Upgrade 2210 Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Create new version	Specify whether NwDM is to create a new configuration version on which to perform the upgrade. If you are upgrading an active configuration, you must click this box.	A check mark if the box is selected.
Use selected load image	Specify the load image that is to be used for the upgraded configuration.	A dot if the radio button is selected.

This field...	Is used to...	It can contain...
Image name	Specify the name of the load image to use for the upgraded configuration. If you do not know the image name, you can click **Select image** to display the Select Image dialog.	A valid path name and load image name.
Use latest load image matching version/release	Specify that the latest load image that matches the Version number and Release number should be used.	A dot if the radio button is selected.
Version	Specify the version number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image version.
Release	Specify the release number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image release.
Upgrade PROM	Specify whether the PROM should also be upgraded.	A check mark if the box is selected.
Use latest available PROM image	Specify that the latest available PROM image corresponding to the device should be used for the upgraded configuration.	A check mark if the box is selected.
PROM level	Specify the PROM level to be used for the upgraded configuration. You can choose a PROM level by clicking **Select PROM image** to display the Select PROM Image dialog.	The name of a valid PROM image.

Use these action buttons from the Upgrade 2210 Configurations dialog:

Clicking this button...	Performs this action...
Submit	Schedules the Upgrade 2210 Configurations task as a job.
Cancel	Exits the Upgrade 2210 Configurations dialog without scheduling the task as a job.
Help	Displays help for the Upgrade 2210 Configurations dialog.

Import 2210 Configurations

The Import 2210 Configuration dialog allows you to import a configuration file into the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Import 2210 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2210 Configurations panel, click **Process selected...**, and then click **Import selected...**.

The Import 2210 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to import the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Import from Server File	Import the configuration from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the configuration from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the configuration from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the configuration file.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the configuration file.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID.
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the file name to be used for importing the configuration file and the directory where the configuration file is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are importing only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are importing more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The imported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the configuration file is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the import method you chose on the Method tab.	A valid directory (and filename if you chose not to use a naming convention).

After entering information for the FTP tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be imported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Source format	The format currently used for the source configuration file.	ASCII SRAM
Target format for database	The format to be used when storing the configuration file in the NwDM database.	SRAM
Version	The software version to which this configuration file applies.	A valid version number.
Release	The software release to which this configuration file applies.	A valid release number.

After entering information for the FTP tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the configuration file.

Click **Import** to begin importing the configuration file. The Import Configuration task is an interactive task. The current status of the import task is displayed in the Message window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2210 Configurations

The Export 2210 Configurations dialog allows you to export a configuration file from the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Export 2210 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2210 Configurations panel, click **Process selected...**, and then click **Export selected...**.

The Export 2210 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to export the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the configuration to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the configuration to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the configuration to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the configuration file will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported configuration file will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the configuration file will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the file name to be used for exporting the configuration file and the directory where the configuration file will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are exporting only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are exporting more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The exported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the exported configuration file will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory (and filename if you chose not to use a file naming convention).

After entering information for the File tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be exported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Target format	The format currently used for the exported configuration file. If you choose to export the file in a format that differs from the current format of the file as it is stored in the NwDM database, NwDM uses the GUI Configuration Tool to convert the file to the requested format.	ASCII SRAM
Version	The software version to which the exported configuration file applies.	A valid version number.
Release	The software release to which the exported configuration file applies.	A valid release number.

After entering information for the Misc tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the configuration file.

Click **Export** to begin exporting the configuration file. The Export Configuration task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

2210 Load Images

Load images contain the operational code that runs in a 2210. Information about specific load images is initially loaded into the NwDM database when you update software inventory for the 2210 (you also have the option of loading the actual Load Image into the database at that time). These load images correspond to the operational code releases of the 2210 software.

Use the Load Images task panel to manage 2210 load images. To display the 2210 Load Images task panel, click **Load images** from the 2210 folder in the navigation tree.

The Load Images task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Load Images task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for load images. The Filter pane contains these columns:

- Properties. The Properties column is a list of load image properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the load images found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Load Image Filter List Properties

You can search on these load image properties:

This property...	Is used to describe...
Name	The name of the load image.
Version	The MRS software version to which this load image applies.
Release	The MRS software release to which this load image applies.
PTF	The program temporary fix (PTF) to which this load image applies.
Flash bytes	The amount of flash memory (in bytes) required for this load image.
Modified at	Date and time this load image was added to the database.
Download URL	The URL where the load image can be found.
Information URL	The URL where information about this load image can be found.
Image length	The number of bytes in the NwDM database taken up by this load image. If the load image is not stored in the database, this value is 0.
Build name	An identifier used by NwDM to identify this load image.

This property...	Is used to describe...
Minimum PROM level	The minimum PROM level required to support this load image.

Configuration Comparison Operators

Over time the number of load images stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only load images that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Load Images filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each load image as a separate row. To select a load image, click anywhere in the row, which highlights the row. Use one of these methods to select multiple load images:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the load image is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected load images. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all load images listed in the Filtered List task pane.
Unselect All	Deselects all selected load images listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected load images to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**.
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected load image records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected load image records will print. Click **Close** to return to the Jobs List task pane.
Delete selected image files...	Deletes selected load images from the NwDM database. When the Confirm Load Image File Delete dialog is displayed, click **Yes** to delete the load image.
Import selected image files...	Displays the Import 2210 Load Images dialog, which you can use to import a load image into the NwDM database. See “Import 2210 Load Images” on page 89 for information about importing a load image.
Export selected image files...	Displays the Export 2210 Load Images dialog, which you can use to export a load image from the NwDM database. See “Export 2210 Load Images” on page 92 for information about exporting a load image.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of load image records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of load image records with a length of 0 for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of load image records that apply to MRS Version 3. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Import 2210 Load Images

The Import 2210 Load Images dialog allows you to import a load image into the NwDM database. To display the Import 2210 Load Images dialog, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2210 Load Images task panel, click **Process selected**, and then click **Import selected image files...**.

The Import 2210 Load Images dialog contains these tabs:

- Method
- TFTP
- Download URL
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Use specified download URL	Import the load image from an FTP server. You can use this option to import the load image from an IBM web site. When you click **Next**, the Download URL tab is displayed.
Import from Server File	Import the load image from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the load image from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the load image from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the load image.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

Download URL Tab

Use the Download URL tab to provide the URL information for importing the load image.

Enter this information on the Download URL tab:

This field...	Is used to specify...	It can contain...
Override download URL host with	The download host to use. If you choose IBM-North America or IBM-Europe, the FTP tab is updated to with the appropriate information.	No override - use download URL host IBM-North America IBM-Europe Other FTP Host

After entering information for the Download URL tab, click **Next** to display the FTP tab or **Back** to return to the previous tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the load image.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the load image is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Host Directory, or FTP Host Directory, depending on the import method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the load image.

Click **Import** to begin importing the load image. The Import Load Images task is an interactive task. The current status of the import task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2210 Load Images

The Export 2210 Load Images dialog allows you to export a load image from the NwDM database.

To display the Export 2210 Load Images, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2210 Load Images panel, click **Process selected...**, and then click **Export selected image files...**.

The Export 2210 Load Images dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the load image to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the load image to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the load image to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the load image will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported load image will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the load image will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the exported load image will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the load image.

Click **Export** to begin exporting the load image. The Export Load Image task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

2210 PROM Images

PROM images contain the boot and diagnostic code that run in a 2210. Information about specific PROM images is initially loaded into the NwDM database when you update software inventory for the 2210.

Use the PROM Images task panel to manage 2210 PROM images. To display the 2210 PROM Images task panel, click **PROM images** from the 2210 folder of the navigation tree.

The PROM Images task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the PROM Images task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for PROM images. The Filter pane contains these columns:

- Properties. The Properties column is a list of PROM image properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the PROM images found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

PROM Image Filter List Properties

You can search on these PROM image properties:

This property...	Is used to describe...
Name	The name of the PROM image.
Modified at	Date and time this PROM image was added to the database.
Download URL	The URL where the PROM image can be found.
Information URL	The URL where information about this PROM image can be found.
Image length	The number of bytes in the NwDM database taken up by this PROM image. If the PROM image is not stored in the database, this value is 0.

Configuration Comparison Operators

Over time the number of PROM image records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only PROM image records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the PROM images filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each PROM image as a separate row. To select a PROM image, click anywhere in the row, which highlights the row. Use one of these methods to select multiple PROM images:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the PROM image is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected PROM images. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all PROM images listed in the Filtered List task pane.
Unselect All	Deselects all selected PROM images listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected PROM images to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**.
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected PROM image records. From the Print dialog, verify the print information is correct and click **Print**.

Clicking...	Performs this action...
Print Preview...	Displays a preview of how the selected PROM image records will print. Click **Close** to return to the Jobs List task pane.
Delete selected PROM image files...	Deletes selected PROM image files from the NwDM database. When the Confirm PROM Image File Delete dialog is displayed, click **Yes** to delete the PROM image.
Import selected PROM image files...	Displays the Import 2210 PROM Images dialog, which you can use to import a PROM image into the NwDM database. See “Import 2210 PROM Images” on page 98 for information about importing a load image.
Export selected PROM image files...	Displays the Export 2210 PROM Images dialog, which you can use to export a PROM image from the NwDM database. See “Export 2210 PROM Images” on page 101 for information about exporting a load image.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of PROM image records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of PROM image records with a length of 0 for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of PROM image records that apply were modified at a specific date and time. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Import 2210 PROM Images

The Import 2210 PROM Images dialog allows you to import a PROM image into the NwDM database. To display the Import 2210 PROM Images dialog, select one or more PROM images from either the Filtered List task pane or the Custom List task pane of the 2210 PROM Images task panel, click **Process selected...**, and then click **Import selected PROM image files...**.

The Import 2210 PROM Images dialog contains these tabs:

- Method
- TFTP
- Download URL
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the PROM image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Use specified download URL	Import the PROM image from an FTP server. You can use this option to import the PROM image from an IBM web site. When you click **Next**, the Download URL tab is displayed.
Import from Server File	Import the PROM image from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the PROM image from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the PROM image from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the load image.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the PROM image is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

Download URL Tab

Use the Download URL tab to provide the URL information for importing the PROM image.

Enter this information on the Download URL tab:

This field...	Is used to specify...	It can contain...
Override download URL host with	The download host to use. If you choose IBM-North America or IBM-Europe, the FTP tab is updated to with the appropriate information.	No override - use download URL host IBM-North America IBM-Europe Other FTP Host

After entering information for the Download URL tab, click **Next** to display the FTP tab or **Back** to return to the previous tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the PROM image.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the PROM image is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID.
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the PROM image is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the PROM image is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Host Directory, or FTP Host Directory, depending on the import method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the PROM image.

Click **Import** to begin importing the PROM image. The Import PROM Images task is an interactive task. The current status of the import task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2210 PROM Images

The Export 2210 PROM Images dialog allows you to export a PROM image from the NwDM database.

To display the Export 2210 PROM Images, select one or more PROM images from either the Filtered List task pane or the Custom List task pane of the 2210 PROM Images panel, **click Process selected...**, and then click **Export selected PROM image files...**.

The Export 2210 PROM Images dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the PROM image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the PROM image to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the PROM image to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the PROM image to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the PROM image will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported PROM image will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the PROM image will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the PROM image will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the PROM image will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the exported PROM image will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the PROM image.

Click **Export** to begin exporting the PROM image. The Export PROM Image task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Update 2210 Configuration

When you update a 2210 configuration, you are changing the configuration that is currently loaded in a 2210 (the active configuration) to another configuration that you select. The configuration that you select must have a configuration status of inactive. Configuration updates are scheduled as jobs (you can use the Managing Jobs panel to view the status of an update job.

After updating the information on the 2210 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 2210 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to specify this information about the update task:

This field...	Is used to...	It can contain...
Earliest start	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2210 Update Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.

This field...	Is used to...	It can contain...
Reload Option	Determine when the 2210 device is to be restarted after the configuration has been applied. These options are available: • No Reload. The 2210 device is not restarted. However, the new configuration will not take effect in the 2210 until a reload is performed. • Reload immediately. Restart the 2210 to load the new configuration immediately after NwDM downloads it to the 2210. • Timed load. Restart the 2210 to load the new configuration at the time specified in the Timed Load field.	No reload Reload immediately Timed load
Timed load	Specify the date and time that the reload should begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Bank Option	Specify how configurations currently loaded into the IBD should be handled. These options are available: • Erase none. Do not erase any configurations that are currently in the IBD. • Erase available if needed. Erase any available configurations that are currently in the IBD, if necessary. • Erase any. Erase any configurations that are currently in the IBD.	Erase none Erase available if needed Erase any
Configuration file checking	Determines whether or not mismatches are allowed when the device configuration file is checked with the configuration file in the NwDM database.	Disallow mismatches Allow mismatches

This field...	Is used to...	It can contain...
Stop at state	Specify when processing for this update job will stop. These options are available: • None. Do not stop processing. • Next state. Stop processing when the current state is complete. • Init. The initial phase. • Prepare.The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Erases IDB banks (based on option in Erase IBD property). – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • Perform. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the contents of the IBD. – Verifies the 2210 boot entries. – Reloads or restarts the device. • Verify. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image, the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.	None Next state Init Prepare Perform Verify

Chapter 5. Understanding 2212 Task Panels and Dialogs

This chapter describes each of the task panels and dialogs provided with Nways Deployment Manager for managing 2212 configurations. For each task panel or dialog, this chapter provides:

- Description of the task panel or dialog
- Table listing each field, the purpose of the field, and valid values.
- Description of the available pop-up menu selections.
- Description of the available action buttons.

Create 2212 Device

Use the 2212 Create Device task panel to create a 2212 in the Deployment Manager database. After creating the device, you will typically perform a 2212 Learn Configuration task to update the database with information about the device configuration.

To display the 2212 Create Device task panel, click **Create device** from the 2212 folder of the navigation tree.

After updating the information in the 2212 Create Device task panel, click **Apply** to start the job. Deployment Manager creates a device in the database based on the information you entered in the Main pane. In addition, an initial configuration is created for the device (version 0) and set to a status of Incomplete. Schedule a 2212 Learn Configuration task to create an Active configuration version based on the 2212 device.

You can display the help panel for this task panel by clicking **Help**.

Main Pane

Use the Main pane to specify information about the device to be created.

This field...	Is used to...	It can contain...
Device Name	Specify the name of this device in the NwDM database.	Up to 254 characters denoting the device name. NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name.
IP Address	The IP address for this device.	A valid IP address or host name.
Operator ID	The operator ID used for accessing this device, if the device has been configured for login protection.	A valid operator ID.
Password	The password that corresponds to the operator ID.	A valid password.
SNMP read community name	The SNMP read community to which this device belongs.	The SNMP read community name. The default is public.
SNMP write community name	The SNMP write community to which this device belongs.	The SNMP write community name.
TFTP Server IP Address	The IP address of an TFTP server to which this device can communicate.	A valid IP address of a TFTP server.

2212 Configurations

The 2212 Configurations task panel provides a way to manage device configurations.You can store multiple configurations for a 2212 device. Each configuration has a unique version associated with it and a configuration version status, which can be one of these values:

- **Active**. The active configuration is the configuration that is currently loaded in, and operational for, the 2212 device.
- **Inactive**. An inactive configuration is a configuration that can be loaded into the 2212 device. It contains all the components (load image and configuration file) necessary to become the active configuration.
- **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2212 device.

Note: There are actually two additional states for a configuration. A configuration can be in the state of **nascent**, which means the configuration is in the process of becoming the active configuration, or the state of **obsolescent**, which means the configuration is in the process of becoming an inactive configuration.

To display the 2212 Configuration task panel, click **Configurations** from the 2212 folder of the navigation tree.

The Configurations task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Configurations task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for configurations. The Filter pane contains these columns:

- Properties. The Properties column is a list of configuration properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Configurations found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Configuration Filter List Properties

You can search on these job properties:

This property...	Is used to describe...
Device ID	The identifier of the device. NwDM creates the Device ID when the device is added to the NwDM database (using either the 2212 Create Device task or Synchronize Databases task).
Device Name	The name of the device. You specified the device name when you added the device to the NwDM database using the 2212 Create Device task.
Model	The model number of the 2212.
Version	The configuration version. NwDM can maintain multiple version of a configuration. Different configuration versions for a device are numbered sequentially beginning with 0.
Address	The IP address or host name for the device.
Version status	The status of the configuration version. Version status can be one of these values: • **Active**. The active configuration is the configuration considered by NwDM to be actually loaded in the 2212. • **Inactive**. An inactive configuration is a configuration that can be loaded into the 2212 device. It contains all of the components (load image, PROM image, and updated configuration file) necessary to become an active configuration. • **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2212 device. • **Nascent**. A nascent configuration is a configuration that is in the process of moving from an inactive status to an active status. • **Obsolescent**. An obsolescent configuration is a configuration that is in the process of moving from an active status to an inactive status.
Approval status	The approval status of the configuration version. Approval status can be one of these values: • **Approved**. • **Unapproved**. • **Rejected**.
Commit status	The commit status of the configuration version. Approval status can be one of these values: • **Committed**. When the configuration version has been committed, the configuration is locked (no changes can be made to the configuration). • **Uncommitted**. When the configuration version is uncommitted, changes can be made to the configuration.
Remarks	Text data that has been entered for this configuration.
Modified by	The user ID of the person who last changed the configuration. For new configurations, the Modified by property contains the user ID of the person who created the configuration.
Modified at	Date and time this configuration was added to the database.
SNMP read community name	The SNMP read community to which the device belongs.
SNMP write community name	The SNMP write community to which the device belongs.

This property...	Is used to describe...
Operator ID	The operator ID used to access the device if it has been configured for login protection.
Operator password	The password associated with the operator ID.
TFTP server	The IP address or host name of the TFTP server that can communicate with the 2212.
Config format	The format used for the configuration file. It can have one of these values: • **SRAM**. • **ASCII**.
Config Modified at	The date and time the configuration was last changed.
Config length	The amount of memory (in bytes) used in the NwDM database for storing the configuration Load image. If the Load image is not stored in the NwDM database (it may reside on a TFTP server for example), the value of this property is 0
Load image	The name of the load image.
Image version	The software version corresponding to the load image.
Image release	The software release corresponding to the load image.
Image PTF	The PTF corresponding to the load image.
Config Date	The date the configuration was added to the database.
Image Date	The date the load image was added to the database.

Configuration Comparison Operators

Over time the number of configuration records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only configuration records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Configuration filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each configuration as a separate row. To select a configuration, click anywhere in the row, which highlights the row. Use one of these methods to select multiple configurations:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the configuration is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected configurations. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all configurations listed in the Filtered List task pane.
Unselect All	Deselects all selected configurations listed in the Filtered List task pane.
Select active	Selects all active configurations listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected configurations to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**. For example, these columns are hidden by default in the Configurations Filtered List task pane: • Approval status • Commit status • Flash (MB) • DRAM (MB) • Remarks
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected job records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected job records will print. Click **Close** to return to the Jobs List task pane.

Clicking...	Performs this action...
Clone selected...	Makes a new copy of selected configurations so you can create new configurations without having to reenter each of the fields. When you click **Clone selected...**, the Confirm Configuration Cloning dialog is displayed. Click **Yes** to continue. The cloned configuration contains the same configuration properties as the original configuration with these exceptions: • Version status. If you clone an active configuration, the cloned configuration will have a status of inactive. Otherwise, the cloned configuration will have the same status as the original configuration. • Approval status. The Approval status of a cloned configuration is set to Unapproved. • Commit status. The Commit status is set to Uncommitted. • Modified by. The Modified by property is set to the current user ID. • Modified at. The Modified at property is set to the current date and time.
Approve selected...	Sets the Approval status property to Approved. When the Confirm Approve Configurations dialog is displayed, click **Yes** to approve selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Reject selected...	Sets the Approval status property to Rejected. When the Confirm Reject Configurations dialog is displayed, click **Yes** to reject selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Commit selected...	Sets the Commit status to Committed. When the Confirm Configuration Commit dialog is displayed, click **Yes** to commit the configuration. Committed configurations are locked; they cannot be modified. You can only commit a configuration with a status of active or inactive.
Modify selected...	Displays the Modify Properties dialog, which you can use to modify properties for configurations.
Delete selected...	Deletes the configuration from the NwDM database. When the Confirm Configuration Delete dialog is displayed, click **Yes** to delete selected configurations. **Note:** If a device has no configurations listed in the NwDM database, the device is also deleted from the database.
Learn selected...	Displays the Learn 2212 Configuration task panel, which you can use to create active configurations based on configuration currently loaded in the device. See “Learn 2212 Configurations” on page 115 for more information about the Learn 2212 Configuration Dialog.
Upgrade selected...	Displays the Upgrade 2212 Configuration dialog, which you can use to create upgraded configurations in the NwDM database. See “Upgrade 2212 Configurations” on page 117 for information about the Upgrade 2212 Configuration dialog.
Import selected...	Displays the Import 2212 Configuration dialog, which you can use to import configurations into the NwDM database. See “Import 2212 Configurations” on page 119 for information about importing configurations.

Clicking...	Performs this action...
Export selected...	Displays the Export 2212 Configuration dialog, which you can use to export configurations from the NwDM database. See “Export 2212 Configurations” on page 122 for information about exporting configurations.
Update selected...	Displays the Update 2212 Configuration dialog, which you can use to load the active configuration from the NwDM database into a device. See “Update 2212 Configuration” on page 135 for information about updating configurations.
Audit selected...	Displays the Audit 2212 Configuration dialog, which you can use to audit 2212 configurations to ensure the configuration version with a status of Active in the NwDM database matches the configuration actually loaded in the device.
View audit records of selected...	Displays the View 2212 Audit Records dialog, which you can use to view audit records for a device.
View latest audit records of selected...	Displays the View Latest 2212 Audit Records dialog, which you can use to view the latest audit records for a device.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of Configuration records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of Configuration records with a version status of active for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of Configuration records with an approval status of Approved. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Learn 2212 Configurations

Use the 2212 Learn Configurations task panel to discover the current state of a 2212 and to set a configuration version for the device that reflects that state. You can also choose to upload the load image for this configuration into the Nways Deployment Manager database if it does not already exist.

The 2212 Learn Configurations task is a scheduled job. If it completes successfully, any previously active configuration defined for this device becomes inactive, and the learned configuration becomes the active configuration for the device.

Use one of these methods to display the 2212 Learn Configurations task panel:

- Click **Learn configurations** from the 2212 folder of the navigation tree.
- Select a configuration from the Filtered List or Custom List of the Configurations task panel, **click Process selected...**, and then click **Learn selected...**. See “2212 Configurations” on page 109 for more information about the 2212 Configurations task panel.

The 2212 Learn Configurations task panel is divided into these panes:

- Options
- Candidates

After updating the information on the 2212 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 2212 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to schedule when the learn task will occur.

This field...	Is used to...	It can contain...
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This field...	Is used to...	It can contain...
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *hh* is the hour of the day (1-24) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2212 Learn Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Upload load image if needed	Specify that a copy of the load image in the 2212 should be uploaded to the NwDM database.	A check mark if the box is selected.

Candidates Pane

The Candidates pane displays a list of 2212 devices for which the Learn Configurations task can be performed. The list of 2212 devices displayed depends on how you arrived at the 2212 Learn Configurations task panel:

- If you selected **Learn Configurations** from the 2212 folder of the navigation tree, the list of 2212 devices will include all 2212 devices for which the current configuration version number in the Nways Deployment Manager database is 0.
- If you selected **Learn Selected...** from the Filtered List pane or Custom List pane of the Configurations panel, the list of 2212 devices will include all 2212 devices selected on that pane.

Candidates Action Buttons

Use the Candidates action button to perform actions from the Candidates pane. These action buttons are displayed for the Candidates pane:

Clicking this button...	Performs this action...
Set all	Selects all candidates listed in the Candidates pane.
Reset all	Deselects all candidates listed in the Candidates pane.

Upgrade 2212 Configurations

Use the Upgrade 2212 Configurations dialog to create an upgraded configuration file for either a new or existing configuration. The upgraded configuration is added only to the NwDM database. To actually load the upgraded configuration in a device, you must perform an Update 2212 configuration task.

To display the Upgrade 2212 Configurations dialog, select a configuration from the Filter List pane or the Custom List pane of the 2212 Configurations task panel, click **Process selected...**, and then click **Upgrade selected...**.

Fill in these fields for the Upgrade 2212 Configurations dialog:

This field...	Is used to...	It can contain...
Start now	Specify that the Upgrade 2212 Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Create new version	Specify whether NwDM is to create a new configuration version on which to perform the upgrade. If you are upgrading an active configuration, you must click this box.	A check mark if the box is selected.
Use selected load image	Specify the load image that is to be used for the upgraded configuration.	A dot if the radio button is selected.

This field...	Is used to...	It can contain...
Image name	Specify the name of the load image to use for the upgraded configuration. If you do not know the image name, you can click **Select image** to display the Select Image dialog. See xxx for information about the Select Image dialog.	A valid path name and load image name.
Use latest load image matching version/release	Specify that the latest load image that matches the Version number and Release number should be used.	A dot if the radio button is selected.
Version	Specify the version number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image version.
Release	Specify the release number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image release.

Use these action buttons from the Upgrade 2212 Configurations dialog:

Clicking this button...	Performs this action...
Submit	Schedules the Upgrade 2212 Configurations task as a job.
Cancel	Exits the Upgrade 2212 Configurations dialog without scheduling the task as a job.
Help	Displays help for the Upgrade 2212 Configurations dialog.

Import 2212 Configurations

The Import 2212 Configuration dialog allows you to import a configuration file into the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Import 2212 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2212 Configurations panel, click **Process selected...**, and then click **Import selected...**.

The Import 2212 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to import the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Import from Server File	Import the configuration from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the configuration from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the configuration from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the configuration file.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the configuration file.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID.
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the FTP tab to specify information about the file name to be used for importing the configuration and the directory where the configuration file is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are importing only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are importing more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The imported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the configuration file is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the import method you chose on the Method tab.	A valid directory (and filename if you chose not to use a naming convention).

After entering information for the FTP tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be imported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Source format	The format currently used for the source configuration file.	ASCII SRAM
Target format for database	The format to be used when storing the configuration file in the NwDM database.	SRAM
Version	The software version to which this configuration file applies.	A valid version number.
Release	The software release to which this configuration file applies.	A valid release number.

After entering information for the FTP tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the configuration file.

Click **Import** to begin importing the configuration file. The Import Configuration task is an interactive task. The current status of the import task is displayed in the Message window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2212 Configurations

The Export 2212 Configurations dialog allows you to export a configuration file from the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Export 2212 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2212 Configurations panel, click **Process selected...**, and then click **Export selected...**.

The Export 2212 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to export the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the configuration to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the configuration to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the configuration to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the configuration file will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported configuration file will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the configuration file will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the file name to be used for exporting the configuration file and the directory where the configuration file will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are exporting only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are exporting more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The exported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the exported configuration file will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory (and filename if you chose not to use a file naming convention).

After entering information for the File tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be exported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Target format	The format currently used for the exported configuration file. If you choose to export the file in a format that differs from the current format of the file as it is stored in the NwDM database, NwDM uses the GUI Configuration Tool to convert the file to the requested format.	ASCII SRAM
Version	The software version to which the exported configuration file applies.	A valid version number.
Release	The software release to which the exported configuration file applies.	A valid release number.

After entering information for the Misc tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the configuration file.

Click **Export** to begin exporting the configuration file. The Export Configuration task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

2212 Load Images

Load images contain the operational code that runs in a 2212. Information about specific load images is initially loaded into the NwDM database when you update software inventory for the 2212 (you also have the option of loading the actual Load Image into the database at that time). These load images correspond to the operational code releases of the 2212 software.

Use the Load Images task panel to manage 2212 load images. To display the 2212 Load Images task panel, click **Load images** from the 2212 folder of the navigation tree.

The Load Images task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Load Images task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for load images. The Filter pane contains these columns:

- Properties. The Properties column is a list of load image properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the load images found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Load Image Filter List Properties

You can search on these load image properties:

This property...	Is used to describe...
Name	The name of the load image.
Version	The software version to which this load image applies.
Release	The software release to which this load image applies.
PTF	The program temporary fix (PTF) to which this load image applies.
Modified at	Date and time this load image was added to the database.
Download URL	The URL where the load image can be found.
Information URL	The URL where information about this load image can be found.
Image length	The number of bytes in the NwDM database taken up by this load image. If the load image is not stored in the database, this value is 0.
Build name	An identifier used by NwDM to identify this load image.

Configuration Comparison Operators

Over time the number of load image records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only load image records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Load images filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each load image as a separate row. To select a load image, click anywhere in the row, which highlights the row. Use one of these methods to select multiple load images:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the load image is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected load images. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all load images listed in the Filtered List task pane.
Unselect All	Deselects all selected load images listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected load images to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**.

Clicking...	Performs this action...
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected load image records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected load image records will print. Click **Close** to return to the Jobs List task pane.
Delete selected image files...	Deletes selected load images from the NwDM database. When the Confirm Load Image File Delete dialog is displayed, click **Yes** to delete the load image.
Import selected image files...	Displays the Import 2212 Load Images dialog, which you can use to import a load image into the NwDM database. See “Import 2212 Load Images” on page 129 for information about importing a load image.
Export selected image files...	Displays the Export 2212 Load Images dialog, which you can use to export a load image from the NwDM database. See “Export 2212 Load Images” on page 132 for information about exporting a load image.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of load image records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of load image records with a length of 0 for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of load image records that apply to MRS Version 3. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Import 2212 Load Images

The Import 2212 Load Images dialog allows you to import a load image into the NwDM database. To display the Import 2212 Load Images dialog, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2212 Load Images task panel, click **Process selected...**, and then click **Import selected image files...**.

The Import 2212 Load Images dialog contains these tabs:

- Method
- TFTP
- Download URL
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Use specified download URL	Import the load image from an FTP server. You can use this option to import the load image from an IBM web site. When you click **Next**, the Download URL tab is displayed.
Import from Server File	Import the load image from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the load image from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the load image from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the load image.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

Download URL Tab

Use the Download URL tab to provide the URL information for importing the load image.

Enter this information on the Download URL tab:

This field...	Is used to specify...	It can contain...
Override download URL host with	The download host to use. If you choose IBM-North America or IBM-Europe, the FTP tab is updated to with the appropriate information.	No override - use download URL host IBM-North America IBM-Europe Other FTP Host

After entering information for the Download URL tab, click **Next** to display the FTP tab or **Back** to return to the previous tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the load image.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the load image is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Host Directory, or FTP Host Directory, depending on the import method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the load image.

Click **Import** to begin importing the load image. The Import Load Images task is an interactive task. The current status of the import task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2212 Load Images

The Export 2212 Load Images dialog allows you to export a load image from the NwDM database.

To display the Export 2212 Load Images, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2212 Load Images panel, click **Process selected...**, and then click **Export selected image files...**.

The Export 2212 Load Images dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the load image to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the load image to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the load image to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the load image will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported load image will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the load image will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the exported load image will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the load image.

Click **Export** to begin exporting the load image. The Export Load Image task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Update 2212 Configuration

When you update a 2212 configuration, you are changing the configuration that is currently loaded in a 2212 (the active configuration) to another configuration that you select. The configuration that you select must have a configuration status of inactive. Configuration updates are scheduled as jobs (you can use the Managing Jobs panel to view the status of an update job.

After updating the information on the 2212 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 2212 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to specify this information about the update task:

This field...	Is used to...	It can contain...
Earliest start	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2212 Update Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.

This field...	Is used to...	It can contain...
Reload Option	Determine when the 2212 device is to be restarted after the configuration has been applied. These options are available: • No Reload. The 2212 device is not restarted. However, the new configuration will not take effect in the 2212 until a reload is performed. • Reload immediately. Restart the 2212 to load the new configuration immediately after NwDM downloads it to the 2212. • Timed load. Restart the 2212 to load the new configuration at the time specified in the Timed Load field.	No reload Reload immediately Timed load
Timed load	Specify the date and time that the reload should begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Bank Option	Specify how configurations currently loaded into the IBD should be handled. These options are available: • Erase none. Do not erase any configurations that are currently in the IBD. • Erase available if needed. Erase any available configurations that are currently in the IBD, if necessary. • Erase any. Erase any configurations that are currently in the IBD.	Erase none Erase available if needed Erase any
Configuration file checking	Determines whether or not mismatches are allowed when the device configuration file is checked with the configuration file in the NwDM database.	Disallow mismatches Allow mismatches

This field...	Is used to...	It can contain...
Stop at state	Specify when processing for this update job will stop. These options are available: • None. Do not stop processing. • Next state. Stop processing when the current state is complete. • Init. The initial phase. • Prepare.The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Erases IDB banks (based on option in Erase IBD property). – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • Perform. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the contents of the IBD. – Verifies the 2212 boot entries. – Reloads or restarts the device. • Verify. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image, the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.	None Next state Init Prepare Perform Verify

Chapter 6. Understanding 2216 Task Panels and Dialogs

This chapter describes each of the task panels and dialogs provided with Nways Deployment Manager for managing 2216 configurations. For each task panel or dialog, this chapter provides:

- Description of the task panel or dialog
- Table listing each field, the purpose of the field, and valid values.
- Description of the available pop-up menu selections.
- Description of the available action buttons.

Create 2216 Device

Use the 2216 Create Device task panel to create a 2216 in the Deployment Manager database. After creating the device, you will typically perform a 2216 Learn Configuration task to update the database with information about the device configuration.

To display the 2216 Create Device task panel, click **Create device** from the 2216 folder of the navigation tree.

After updating the information in the 2216 Create Device task panel, click **Apply** to start the job. Deployment Manager creates a device in the database based on the information you entered in the Main pane. In addition, an initial configuration is created for the device (version 0) and set to a status of Incomplete. Schedule a 2216 Learn Configuration task to create an Active configuration version based on the 2216 device.

You can display the help panel for this task panel by clicking **Help**.

Main Pane

Use the Main pane to specify information about the device to be created.

This field...	Is used to...	It can contain...
Device Name	Specify the name of this device in the NwDM database.	Up to 254 characters denoting the device name. NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name.
IP Address	The IP address for this device.	A valid IP address or host name.
Operator ID	The operator ID used for accessing this device, if the device has been configured for login protection.	A valid operator ID.
Password	The password that corresponds to the operator ID.	A valid password.
SNMP read community name	The SNMP read community to which this device belongs.	The SNMP read community name. The default is public.
SNMP write community name	The SNMP write community to which this device belongs.	The SNMP write community name.
TFTP Server IP Address	The IP address of an TFTP server to which this device can communicate.	A valid IP address of a TFTP server.

2216 Configurations

The 2216 Configurations task panel provides a way to manage device configurations.You can store multiple configurations for a 2216 device. Each configuration has a unique version associated with it and a configuration version status, which can be one of these values:

- **Active**. The active configuration is the configuration that is currently loaded in, and operational for, the 2216 device.
- **Inactive**. An inactive configuration is a configuration that can be loaded into the 2216 device. It contains all the components (load image and configuration file) necessary to become the active configuration.
- **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2216 device.

Note: There are actually two additional states for a configuration. A configuration can be in the state of **nascent**, which means the configuration is in the process of becoming the active configuration, or the state of **obsolescent**, which means the configuration is in the process of becoming an inactive configuration.

To display the 2216 Configuration task panel, click **Configurations** from the 2216 folder of the navigation tree.

The Configurations task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Configurations task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for configurations. The Filter pane contains these columns:

- Properties. The Properties column is a list of configuration properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Configurations found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Configuration Filter List Properties

You can search on these job properties:

This property...	Is used to describe...
Device ID	The identifier of the device. NwDM creates the Device ID when the device is added to the NwDM database (using either the 2216 Create Device task or Synchronize Databases task).
Device Name	The name of the device. You specified the device name when you added the device to the NwDM database using the 2216 Create Device task.
Model	The model number of the 2216.
Version	The configuration version. NwDM can maintain multiple version of a configuration. Different configuration versions for a device are numbered sequentially beginning with 0.
Address	The IP address or host name for the device.
Version status	The status of the configuration version. Version status can be one of these values: • **Active**. The active configuration is the configuration considered by NwDM to be actually loaded in the 2216. • **Inactive**. An inactive configuration is a configuration that can be loaded into the 2216 device. It contains all of the components (load image, PROM image, and updated configuration file) necessary to become an active configuration. • **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 2216 device. • **Nascent**. A nascent configuration is a configuration that is in the process of moving from an inactive status to an active status. • **Obsolescent**. An obsolescent configuration is a configuration that is in the process of moving from an active status to an inactive status.
Approval status	The approval status of the configuration version. Approval status can be one of these values: • **Approved**. • **Unapproved**. • **Rejected**.
Commit status	The commit status of the configuration version. Approval status can be one of these values: • **Committed**. When the configuration version has been committed, the configuration is locked (no changes can be made to the configuration). • **Uncommitted**. When the configuration version is uncommitted, changes can be made to the configuration.
Remarks	Text data that has been entered for this configuration.
Modified by	The user ID of the person who last changed the configuration. For new configurations, the Modified by property contains the user ID of the person who created the configuration.
Modified at	Date and time this configuration was added to the database.
SNMP read community name	The SNMP read community to which the device belongs.
SNMP write community name	The SNMP write community to which the device belongs.

This property...	Is used to describe...
Operator ID	The operator ID used to access the device if it has been configured for login protection.
Operator password	The password associated with the operator ID.
TFTP server	The IP address or host name of the TFTP server that can communicate with the 2216.
Config format	The format used for the configuration file. It can have one of these values: • **SRAM**. • **ASCII**.
Config Modified at	The date and time the configuration was last changed.
Config length	The amount of memory (in bytes) used in the NwDM database for storing the configuration Load image. If the Load image is not stored in the NwDM database (it may reside on a TFTP server for example), the value of this property is 0
Load image	The name of the load image.
Image version	The software version corresponding to the load image.
Image release	The software release corresponding to the load image.
Image PTF	The PTF corresponding to the load image.
Config Format Date	The date the configuration was added to the database.
Load Image Date	The date the load image was added to the database.

Configuration Comparison Operators

Over time the number of configuration records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only configuration records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Configuration filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each configuration as a separate row. To select a configuration, click anywhere in the row, which highlights the row. Use one of these methods to select multiple configurations:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the configuration is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected configurations. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all configurations listed in the Filtered List task pane.
Unselect All	Deselects all selected configurations listed in the Filtered List task pane.
Select active	Selects all active configurations listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected configurations to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**. For example, these columns are hidden by default in the Configurations Filtered List task pane: • Approval status • Commit status • Flash (MB) • DRAM (MB) • Remarks
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected job records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected job records will print. Click **Close** to return to the Jobs List task pane.

Clicking...	Performs this action...
Clone selected...	Makes a new copy of selected configurations so you can create new configurations without having to reenter each of the fields. When you click **Clone selected...**, the Confirm Configuration Cloning dialog is displayed. Click **Yes** to continue. The cloned configuration contains the same configuration properties as the original configuration with these exceptions: • Version status. If you clone an active configuration, the cloned configuration will have a status of inactive. Otherwise, the cloned configuration will have the same status as the original configuration. • Approval status. The Approval status of a cloned configuration is set to Unapproved. • Commit status. The Commit status is set to Uncommitted. • Modified by. The Modified by property is set to the current user ID. • Modified at. The Modified at property is set to the current date and time.
Approve selected...	Sets the Approval status property to Approved. When the Confirm Approve Configurations dialog is displayed, click **Yes** to approve selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Reject selected...	Sets the Approval status property to Rejected. When the Confirm Reject Configurations dialog is displayed, click **Yes** to reject selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Commit selected...	Sets the Commit status to Committed. When the Confirm Configuration Commit dialog is displayed, click **Yes** to commit the configuration. Committed configurations are locked; they cannot be modified. You can only commit a configuration that has a status of active or inactive.
Modify selected...	Displays the Modify Properties dialog, which you can use to modify properties for configurations.
Delete selected...	Deletes the configuration from the NwDM database. When the Confirm Configuration Delete dialog is displayed, click **Yes** to delete selected configurations. **Note:** If a device has no configurations listed in the NwDM database, the device is also deleted from the database.
Learn selected...	Displays the Learn 2216 Configuration task panel, which you can use to create active configurations based on configuration currently loaded in the device. See “Learn 2216 Configurations” on page 147 for more information about the Learn 2216 Configuration Dialog.
Upgrade selected...	Displays the Upgrade 2216 Configuration dialog, which you can use to create upgraded configurations in the NwDM database. See “Upgrade 2216 Configurations” on page 149 for information about the Upgrade 2216 Configuration dialog.
Import selected...	Displays the Import 2216 Configuration dialog, which you can use to import configurations into the NwDM database. See “Import 2216 Configurations” on page 151 for information about importing configurations.

Clicking...	Performs this action...
Export selected...	Displays the Export 2216 Configuration dialog, which you can use to export configurations from the NwDM database. See “Export 2216 Configurations” on page 154 for information about exporting configurations.
Update selected...	Displays the Update 2216 Configuration dialog, which you can use to load the active configuration from the NwDM database into a device. See “Update 2216 Configuration” on page 167 for information about updating configurations.
Audit selected...	Displays the Audit 2216 Configuration dialog, which you can use to audit 2216 configurations to ensure the configuration version with a status of Active in the NwDM database matches the configuration actually loaded in the device.
View audit records of selected...	Displays the View 2216 Audit Records dialog, which you can use to view audit records for a device.
View latest audit records of selected...	Displays the View Latest 2216 Audit Records dialog, which you can use to view the latest audit records for a device.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of Configuration records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of Configuration records with a version status of active for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of Configuration records with an approval status of Approved. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Learn 2216 Configurations

Use the 2216 Learn Configurations task panel to discover the current state of a 2216 and to set a configuration version for the device that reflects that state. You can also choose to upload the load image for this configuration into the Nways Deployment Manager database if it does not already exist.

The 2216 Learn Configurations task is a scheduled job. If it completes successfully, any previously active configuration defined for this device becomes inactive, and the learned configuration becomes the active configuration for the device.

Use one of these methods to display the 2216 Learn Configurations task panel:

- Click **Learn configurations** from the 2216 folder of the navigation tree.
- Select a configuration from the Filtered List or Custom List of the Configurations task panel, click **Process selected...**, and then click **Learn selected...**. See "2216 Configurations" on page 141 for more information about the 2216 Configurations task panel.

The 2216 Learn Configurations task panel is divided into these panes:

- Options
- Candidates

After updating the information on the 2216 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 2216 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to schedule when the learn task will occur.

This field...	Is used to...	It can contain...
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This field...	Is used to...	It can contain...
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *hh* is the hour of the day (1-24) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2216 Learn Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Upload load image if needed	Specify that a copy of the load image in the 2216 should be uploaded to the NwDM database.	A check mark if the box is selected.

Candidates Pane

The Candidates pane displays a list of 2216 devices for which the Learn Configurations task can be performed. The list of 2216 devices displayed depends on how you arrived at the 2216 Learn Configurations task panel:

- If you selected **Learn Configurations** from the 2216 folder of the navigation tree, the list of 2216 devices will include all 2216 devices for which the current configuration version number in the Nways Deployment Manager database is 0.
- If you selected **Learn Selected...** from the Filtered List pane or Custom List pane of the Configurations panel, the list of 2216 devices will include all 2216 devices selected on that pane.

Candidates Action Buttons

Use the Candidates action button to perform actions from the Candidates pane. These action buttons are displayed for the Candidates pane:

Clicking this button...	Performs this action...
Set all	Selects all candidates listed in the Candidates pane.
Reset all	Deselects all candidates listed in the Candidates pane.

Upgrade 2216 Configurations

Use the Upgrade 2216 Configurations dialog to create an upgraded configuration file for either a new or existing configuration. The upgraded configuration is added only to the NwDM database. To actually load the upgraded configuration in a device, you must perform an Update 2216 configuration task.

To display the Upgrade 2216 Configurations dialog, select a configuration from the Filter List pane or the Custom List pane of the 2216 Configurations task panel, click **Process selected...**, and then click **Upgrade selected...**.

Fill in these fields for the Upgrade 2216 Configurations dialog:

This field...	Is used to...	It can contain...
Start now	Specify that the Upgrade 2216 Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Create new version	Specify whether NwDM is to create a new configuration version on which to perform the upgrade. If you are upgrading an active configuration, you must click this box.	A check mark if the box is selected.
Use selected load image	Specify the load image that is to be used for the upgraded configuration.	A dot if the radio button is selected.

This field...	Is used to...	It can contain...
Image name	Specify the name of the load image to use for the upgraded configuration. If you do not know the image name, you can click **Select image** to display the Select Image dialog.	A valid path name and load image name.
Use latest load image matching version/release	Specify that the latest load image that matches the Version number and Release number should be used.	A dot if the radio button is selected.
Version	Specify the version number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image version.
Release	Specify the release number of the load image to use for the upgraded configuration.	A number that corresponds to a valid load image release.

Use these action buttons from the Upgrade 2216 Configurations dialog:

Clicking this button...	Performs this action...
Submit	Schedules the Upgrade 2216 Configurations task as a job.
Cancel	Exits the Upgrade 2216 Configurations dialog without scheduling the task as a job.
Help	Displays help for the Upgrade 2216 Configurations dialog.

Import 2216 Configurations

The Import 2216 Configuration dialog allows you to import a configuration file into the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Import 2216 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2216 Configurations panel, click **Process selected...**, and then click **Import selected...**.

The Import 2216 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to import the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Import from Server File	Import the configuration from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the configuration from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the configuration from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the configuration file.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the configuration file.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID.
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the FTP tab to specify information about the file name to be used for importing the configuration and the directory where the configuration file is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are importing only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are importing more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The imported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the configuration file is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the import method you chose on the Method tab.	A valid directory (and filename if you chose not to use a naming convention).

After entering information for the FTP tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be imported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Source format	The format currently used for the source configuration file.	ASCII SRAM
Target format for database	The format to be used when storing the configuration file in the NwDM database.	SRAM
Version	The software version to which this configuration file applies.	A valid version number.
Release	The software release to which this configuration file applies.	A valid release number.

After entering information for the FTP tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the configuration file.

Click **Import** to begin importing the configuration file. The Import Configuration task is an interactive task. The current status of the import task is displayed in the Message window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2216 Configurations

The Export 2216 Configurations dialog allows you to export a configuration file from the NwDM database. For example, if you need to make changes to a configuration that requires the configuration tool, you would typically export the configuration, modify the configuration with the configuration tool, and import the modified version.

To display the Export 2216 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 2216 Configurations panel, click **Process selected...**, and then click **Export selected...**.

The Export 2216 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Misc
- Results

Method Tab

Use the Method tab to specify how you want to export the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the configuration to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the configuration to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the configuration to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the configuration file will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported configuration file will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the configuration file will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the file name to be used for exporting the configuration file and the directory where the configuration file will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are exporting only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are exporting more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The exported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the exported configuration file will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory (and filename if you chose not to use a file naming convention).

After entering information for the File tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Misc Tab

Use the Misc tab to provide additional information about the file to be exported.

Enter this information on the Misc tab:

This field...	Is used to specify...	It can contain...
Target format	The format currently used for the exported configuration file. If you choose to export the file in a format that differs from the current format of the file as it is stored in the NwDM database, NwDM uses the GUI Configuration Tool to convert the file to the requested format.	ASCII SRAM
Version	The software version to which the exported configuration file applies.	A valid version number.
Release	The software release to which the exported configuration file applies.	A valid release number.

After entering information for the Misc tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the configuration file.

Click **Export** to begin exporting the configuration file. The Export Configuration task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

2216 Load Images

Load images contain the operational code that runs in a 2216. Information about specific load images is initially loaded into the NwDM database when you update software inventory for the 2216 (you also have the option of loading the actual Load Image into the database at that time). These load images correspond to the operational code releases of the 2216 software.

Use the Load Images task panel to manage 2216 load images. To display the 2216 Load Images task panel, click **Load images** from the 2216 folder of the navigation tree.

The Load Images task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Load Images task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for load images. The Filter pane contains these columns:

- Properties. The Properties column is a list of load image properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the load images found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Load Image Filter List Properties

You can search on these load image properties:

This property...	Is used to describe...
Name	The name of the load image.
Version	The software version to which this load image applies.
Release	The software release to which this load image applies.
PTF	The program temporary fix (PTF) to which this load image applies.
Modified at	Date and time this load image was added to the database.
Download URL	The URL where the load image can be found.
Information URL	The URL where information about this load image can be found.
Image length	The number of bytes in the NwDM database taken up by this load image. If the load image is not stored in the database, this value is 0.
Build name	An identifier used by NwDM to identify this load image.

Configuration Comparison Operators

Over time the number of load image records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only load image records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Load images filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each load image as a separate row. To select a load image, click anywhere in the row, which highlights the row. Use one of these methods to select multiple load images:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the load image is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected load images. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all load images listed in the Filtered List task pane.
Unselect All	Deselects all selected load images listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected load images to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click the **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**.

Clicking...	Performs this action...
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected load image records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected load image records will print. Click **Close** to return to the Jobs List task pane.
Delete selected Image files...	Deletes selected load images from the NwDM database. When the Confirm Load Image File Delete dialog is displayed, click **Yes** to delete the load image.
Import selected Image files...	Displays the Import 2216 Load Images dialog, which you can use to import a load image into the NwDM database. See “Import 2216 Load Images” on page 161 for information about importing a load image.
Export selected Image files...	Displays the Export 2216 Load Images dialog, which you can use to export a load image from the NwDM database. See “Export 2216 Load Images” on page 164 for information about exporting a load image.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of load image records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of load image records with a length of 0 for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of load image records that apply to MRS Version 3. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Import 2216 Load Images

The Import 2216 Load Images dialog allows you to import a load image into the NwDM database. To display the Import 2216 Load Images dialog, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2216 Load Images task panel, click **Process selected...**, and then click **Import selected image files...**.

The Import 2216 Load Images dialog contains these tabs:

- Method
- TFTP
- Download URL
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Use specified download URL	Import the load image from an FTP server. You can use this option to import the load image from an IBM web site. When you click **Next**, the Download URL tab is displayed.
Import from Server File	Import the load image from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the load image from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the load image from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the load image.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

Download URL Tab

Use the Download URL tab to provide the URL information for importing the load image.

Enter this information on the Download URL tab:

This field...	Is used to specify...	It can contain...
Override download URL host with	The download host to use. If you choose IBM-North America or IBM-Europe, the FTP tab is updated to with the appropriate information.	No override - use download URL host IBM-North America IBM-Europe Other FTP Host

After entering information for the Download URL tab, click **Next** to display the FTP tab or **Back** to return to the previous tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the load image.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the load image is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Host Directory, or FTP Host Directory, depending on the import method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the load image.

Click **Import** to begin importing the load image. The Import Load Images task is an interactive task. The current status of the import task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 2216 Load Images

The Export 2216 Load Images dialog allows you to export a load image from the NwDM database.

To display the Export 2216 Load Images, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 2216 Load Images panel, click **Process selected...**, and then click **Export selected image files...**.

The Export 2216 Load Images dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the load image to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the load image to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the load image to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the load image will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported load image will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the load image will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the exported load image will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the load image.

Click **Export** to begin exporting the load image. The Export Load Image task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Update 2216 Configuration

When you update a 2216 configuration, you are changing the configuration that is currently loaded in a 2216 (the active configuration) to another configuration that you select. The configuration that you select must have a configuration status of inactive. Configuration updates are scheduled as jobs (you can use the Managing Jobs panel to view the status of an update job.

After updating the information on the 2216 Learn Configurations task panel, click **Apply** to save your changes or Cancel to discard all changes (the Cancel button is displayed only if you displayed the 2216 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to specify this information about the update task:

This field...	Is used to...	It can contain...
Earliest start	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 2216 Update Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.

This field...	Is used to...	It can contain...
Reload Option	Determine when the 2216 device is to be restarted after the configuration has been applied. These options are available: • No Reload. The 2216 device is not restarted. However, the new configuration will not take effect in the 2216 until a reload is performed. • Reload immediately. Restart the 2216 to load the new configuration immediately after NwDM downloads it to the 2216. • Timed load. Restart the 2216 to load the new configuration at the time specified in the Timed Load field.	No reload Reload immediately Timed load
Timed load	Specify the date and time that the reload should begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Bank Option	Specify how configurations currently loaded into the IBD should be handled. These options are available: • Erase none. Do not erase any configurations that are currently in the IBD. • Erase available if needed. Erase any available configurations that are currently in the IBD, if necessary. • Erase any. Erase any configurations that are currently in the IBD.	Erase none Erase available if needed Erase any
Configuration file checking	Determines whether or not mismatches are allowed when the device configuration file is checked with the configuration file in the NwDM database.	Disallow mismatches Allow mismatches

This field...	Is used to...	It can contain...
Stop at state	Specify when processing for this update job will stop. These options are available: • None. Do not stop processing. • Next state. Stop processing when the current state is complete. • Init. The initial phase. • Prepare.The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Erases IDB banks (based on option in Erase IBD property). – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • Perform. The Perform phase. During the Perform phase, NwDM performs these actions: – Verifies the contents of the IBD. – Verifies the 2216 boot entries. – Reloads or restarts the device. • Verify. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the PROM image, the load image, and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.	None Next state Init Prepare Perform Verify

Chapter 7. Understanding 8275-416 Task Panels and Dialogs

This chapter describes each of the task panels and dialogs provided with Nways Deployment Manager for managing 8275 Model 416 configurations. For each task panel or dialog, this chapter provides:

- Screen capture showing the task panel or dialog
- Description of the task panel or dialog
- Table listing each field, the purpose of the field, and valid values.
- Description of the available pop-up menu selections.
- Description of the available action buttons.

Create 8275-416 Device

Use the 8275-416 Create Device task panel to create a record for an 8275 Model 416 in the Deployment Manager database. After creating the device, you will typically perform a Learn Configuration task to update the database with information about the device configuration.

To display the 8275-416 Create Device task panel, click **Create device** from the 8275-416 folder of the navigation tree.

After updating the information in the 8275-416 Create Device task panel, click **Apply** to start the job. Deployment Manager creates a device in the database based on the information you entered in the Main pane. In addition, an initial configuration is created for the device (version 0) and set to a status of Incomplete. Schedule a 8275-416 Learn Configuration task to create an Active configuration version based on the device.

You can display the help panel for this task panel by clicking **Help**.

Main Pane

Use the Main pane to specify information about the device to be created.

This field...	Is used to...	It can contain...
Device Name	Specify the name of this device in the NwDM database.	Up to 254 characters denoting the device name. NwDM does not check to make sure that the device name is unique, which means that you can have multiple devices with the same device name.
IP Address	The IP address for this device.	A valid IP address or host name.
Operator ID	The operator ID used for accessing this device, if the device has been configured for login protection.	A valid operator ID.
Password	The password that corresponds to the operator ID.	A valid password.
SNMP read community name	The SNMP read community to which this device belongs.	The SNMP read community name. The default is public.
SNMP write community name	The SNMP write community to which this device belongs.	The SNMP write community name.
TFTP Server IP Address	The IP address of an TFTP server to which this device can communicate.	A valid IP address of a TFTP server.

8275-416 Configurations

The 8275-416 Configurations task panel provides a way to manage device configurations. You can store multiple configurations for a 8275-416 device. Each configuration has a unique version associated with it and a configuration version status, which can be one of these values:

- **Active**. The active configuration is the configuration that is currently loaded in, and operational for, the 8275-416 device.
- **Inactive**. An inactive configuration is a configuration that can be loaded into the 8275-416 device. It contains all the components (load image and configuration file) necessary to become the active configuration.
- **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a 8275-416 device.

To display the 8275-416 Configuration task panel, click **Configurations** from the 8275-416 folder in the navigation tree.

The Configurations task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Configurations task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for configurations. The Filter pane contains these columns:

- Properties. The Properties column is a list of configuration properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the Configurations found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Configuration Filter List Properties

You can search on these job properties:

This property...	Is used to describe...
Device ID	The identifier of the device. NwDM creates the Device ID when the device is added to the NwDM database (using either the 8275-416 Create Device task or Synchronize Databases task).
Device Name	The name of the device. You specified the device name when you added the device to the NwDM database using the 8275-416 Create Device task.
Version	The configuration version. NwDM can maintain multiple version of a configuration. Different configuration versions for a device are numbered sequentially beginning with 0.

This property...	Is used to describe...
Address	The IP address or host name for the device.
Version status	The status of the configuration version. Version status can be one of these values: • **Active**. The active configuration is the configuration considered by NwDM to be actually loaded in the device. • **Inactive**. An inactive configuration is a configuration that can be loaded into the device. It contains all of the components (load image and updated configuration file) necessary to become an active configuration. • **Incomplete**. An incomplete configuration is one that contains only a portion of the components necessary to become an active configuration. It cannot be loaded into a device. • **Nascent**. A nascent configuration is a configuration that is in the process of moving from an inactive status to an active status. • **Obsolescent**. An obsolescent configuration is a configuration that is in the process of moving from an active status to an inactive status.
Approval status	The approval status of the configuration version. Approval status can be one of these values: • **Approved**. • **Unapproved**. • **Rejected**.
Commit status	The commit status of the configuration version. Approval status can be one of these values: • **Committed**. When the configuration version has been committed, the configuration is locked (no changes can be made to the configuration). • **Uncommitted**. When the configuration version is uncommitted, changes can be made to the configuration.
Remarks	Text data that has been entered for this configuration.
Modified by	The user ID of the person who last changed the configuration. For new configurations, the Modified by property contains the user ID of the person who created the configuration.
Modified at	Date and time this configuration was added to the database.
SNMP read community name	The SNMP read community to which the device belongs.
SNMP write community name	The SNMP write community to which the device belongs.
Config Modified at	The date and time the configuration was last changed.
Config Length	The amount of memory (in bytes) used in the NwDM database for storing the configuration Load image. If the Load image is not stored in the NwDM database (it may reside on a TFTP server for example), the value of this property is 0
Load image	The name of the load image.
Image version	The software version corresponding to the load image.
Image release	The software release corresponding to the load image.

This property...	Is used to describe...
Image revision	The revision number corresponding to the load image.
Hardware maintenance level	The hardware maintenance level.
Network address	The network address.
Box Serial Number	The serial number of the 8275 Model 416.

Configuration Comparison Operators

Over time the number of configuration records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only configuration records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Configuration filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each configuration as a separate row. To select a configuration, click anywhere in the row, which highlights the row. Use one of these methods to select multiple configurations:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select. You can also select multiple rows by pressing and holding the **Shift** key while clicking the rows that you want to select.

Information about the configuration is displayed in each of the columns. To reorder the columns, press the **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected configurations. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all configurations listed in the Filtered List task pane.
Unselect All	Deselects all selected configurations listed in the Filtered List task pane.
Select active	Selects all active configurations listed in the Filtered List task pane.

Clicking this button...	Performs this action...
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected configurations to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**. For example, these columns are hidden by default in the Configurations Filtered List task pane: • Approval status • Commit status • Flash (MB) • DRAM (MB) • Remarks
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected job records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected job records will print. Click **Close** to return to the Jobs List task pane.
Clone selected...	Makes a new copy of selected configurations so you can create new configurations without having to reenter each of the fields. When you click **Clone selected...**, the Confirm Configuration Cloning dialog is displayed. Click **Yes** to continue. The cloned configuration contains the same configuration properties as the original configuration with these exceptions: • Version status. If you clone an active configuration, the cloned configuration will have a status of inactive. Otherwise, the cloned configuration will have the same status as the original configuration. • Approval status. The Approval status of a cloned configuration is set to Unapproved. • Commit status. The Commit status is set to Uncommitted. • Modified by. The Modified by property is set to the current user ID. • Modified at. The Modified at property is set to the current date and time.

Clicking...	Performs this action...
Approve selected...	Sets the Approval status property to Approved. When the Confirm Approve Configurations dialog is displayed, click **Yes** to approve selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Reject selected...	Sets the Approval status property to Rejected. When the Confirm Reject Configurations dialog is displayed, click **Yes** to reject selected configurations. Deployment Manager does not use the Approval status property. However, you can use it to implement your own approval process.
Commit selected...	Sets the Commit status to Committed. When the Confirm Configuration Commit dialog is displayed, click **Yes** to commit the configuration. Committed configurations are locked; they cannot be modified. You can only commit a configuration with a status of active or inactive.
Modify selected...	Displays the Modify Properties dialog, which you can use to modify properties for configurations.
Delete selected...	Deletes the configuration from the NwDM database. When the Confirm Configuration Delete dialog is displayed, click **Yes** to delete selected configurations. **Note:** If a device has no configurations listed in the NwDM database, the device is also deleted from the database.
Learn selected...	Displays the Learn 8275-416 Configuration task panel, which you can use to create active configurations based on configuration currently loaded in the device. See “Learn 8275-416 Configurations” on page 179 for more information about the Learn 8275-416 Configuration Dialog.
Import selected...	Displays the Import 8275-416 Configuration dialog, which you can use to import configurations into the NwDM database. See “Import 8275-416 Configurations” on page 181 for information about importing configurations.
Export selected...	Displays the Export 8275-416 Configuration dialog, which you can use to export configurations from the NwDM database. See “Export 8275-416 Configurations” on page 184 for information about exporting configurations.
Update selected...	Displays the Update 8275-416 Configuration dialog, which you can use to load the active configuration from the NwDM database into a device. See “Update 8275-416 Configuration” on page 196 for information about updating configurations.
Audit selected...	Displays the Audit 8275-416 Configuration dialog, which you can use to audit 8275-416 configurations to ensure the configuration version with a status of Active in the NwDM database matches the configuration actually loaded in the device.
View audit records of selected...	Displays the View 8275-416 Audit Records dialog, which you can use to view audit records for a device.
View latest audit records of selected...	Displays the View Latest 8275-416 Audit Records dialog, which you can use to view the latest audit records for a device.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of Configuration records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of Configuration records with a version status of active for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of Configuration records with an approval status of Approved. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Learn 8275-416 Configurations

Use the 8275-416 Learn Configurations task panel to discover the current state of a 8275 Model 416 and to set a configuration version for the device that reflects that state.

The 8275-416 Learn Configurations task is a scheduled job. If it completes successfully, any previously active configuration defined for this device becomes inactive, and the learned configuration becomes the active configuration for the device.

Use one of these methods to display the 8275-416 Learn Configurations task panel:

- Click **Learn configurations** from the 8275-416 folder of the navigation tree.
- Select a configuration from the Filtered List or Custom List of the Configurations task panel, click **Process selected...**, and then click **Learn selected...**. See “8275-416 Configurations” on page 173 for more information about the 8275-416 Configurations task panel.

The 8275-416 Learn Configurations task panel is divided into these panes:

- Options
- Candidates

After updating the information on the 8275-416 Learn Configurations task panel, click **Apply** to save your changes or **Cancel** to discard all changes (the Cancel button is displayed only if you displayed the 8275-416 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to schedule when the learn task will occur.

This field...	Is used to...	It can contain...
Earliest start time	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)

This field...	Is used to...	It can contain...
Latest start time	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *hh* is the hour of the day (1-24) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 8275-416 Learn Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.
Upload load image if needed	Specify that the name of the load image in the 8275-416 should be uploaded to the NwDM database.	A check mark if the box is selected.

Candidates Pane

The Candidates pane displays a list of 8275-416 devices for which the Learn Configurations task can be performed. The list of 8275-416 devices displayed depends on how you arrived at the 8275-416 Learn Configurations task panel:

- If you selected **Learn Configurations** from the 8275-416 folder of the navigation tree, the list of 8275-416 devices will include all 8275-416 devices for which the current configuration version number in the Nways Deployment Manager database is 0.
- If you selected **Learn Selected...** from the Filtered List pane or Custom List pane of the Configurations panel, the list of 8275-416 devices will include all 8275-416 devices selected on that pane.

Candidates Action Buttons

Use the Candidates action button to perform actions from the Candidates pane. These action buttons are displayed for the Candidates pane:

Clicking this button...	Performs this action...
Set all	Selects all candidates listed in the Candidates pane.
Reset all	Deselects all candidates listed in the Candidates pane.

Import 8275-416 Configurations

The Import 8275-416 Configuration dialog allows you to import a configuration file into the NwDM database.

To display the Import 8275-416 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 8275-416 Configurations panel, click **Process selected...**, and then click **Import selected...**.

The Import 8275-416 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Import from Server File	Import the configuration from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the configuration from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the configuration from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the configuration file.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the configuration file.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file is located.	A valid host name or IP address.
Login user ID	The user ID used to log in to the FTP server	A valid user ID.
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File or **Back** to return to the Method tab.

File Tab

Use the FTP tab to specify information about the file name to be used for importing the configuration and the directory where the configuration file is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are importing only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are importing more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The imported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the configuration file is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the import method you chose on the Method tab.	A valid directory (and filename if you chose not to use a naming convention).

After entering information for the FTP tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the configuration file.

Click **Import** to begin importing the configuration file. The Import Configuration task is an interactive task. The current status of the import task is displayed in the Message window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 8275-416 Configurations

The Export 8275-416 Configurations dialog allows you to export a configuration file from the NwDM database.

To display the Export 8275-416 Configurations dialog, select one or more configurations from either the Filtered List task pane or the Custom List task pane of the 8275-416 Configurations panel, click **Process selected...**, and then click **Export selected...**.

The Export 8275-416 Configurations dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the configuration file.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the configuration to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the configuration to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the configuration to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the configuration file will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported configuration file will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the configuration file will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the configuration file will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the file name to be used for exporting the configuration file and the directory where the configuration file will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Don't use a naming convention	That no naming convention is to be used. If you are exporting only one configuration file, you can choose not to use a naming convention. However, you must still specify a file name in the Directory field. If you are exporting more than one configuration file, you will not be able to choose this option. You must use a naming convention.	A dot if the radio button is selected.

This field...	Is used to specify...	It can contain...
Use IP address for naming convention	The IP address (as it is recorded in the NwDM database). The exported file will use the IP address as the file name.	A dot if the radio button is selected.
Use device ID for naming convention	The device ID (as it is recorded in the NwDM database). The file name will be in this format: *DeviceID.VersionNumber* where *DeviceID* is the device identifier and *VersionNumber* is the number associated with this configuration version by NwDM.	A dot if the radio button is selected.
Directory	The directory where the exported configuration file will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory (and filename if you chose not to use a file naming convention).

After entering information for the File tab, click **Next** to display the Misc tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the configuration file.

Click **Export** to begin exporting the configuration file. The Export Configuration task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

8275-416 Load Images

Load images contain the operational code that runs in a 8275-416. Information about specific load images is initially loaded into the NwDM database when you update software inventory for the 8275-416 (you also have the option of loading the actual Load Image into the database at that time). These load images correspond to the operational code releases of the 8275-416 software.

Use the Load Images task panel to manage 8275-416 load images. To display the 8275-416 Load Images task panel, click **Load images** from the 8275-416 folder of the navigation tree.

The Load Images task panel is divided into these panes:

- Filter
- Filtered List
- Custom List

You can display the help panel for the Load Images task panel by clicking **Help**.

Filter Pane

The Filter pane provides a way to search the Deployment Manager database for load images. The Filter pane contains these columns:

- Properties. The Properties column is a list of load image properties on which you can search theNwDM database.
- Comparison Operator. The Comparison Operator column lists ways to refine the search of the NwDM database.
- Property Value field. When you apply the filter to the database, Deployment Manager compares the data you enter in the Property Value field with the load images found in the database using the comparison operator you specified.

After entering data in the Filter pane, click **Apply Filter** to display the results of the search in the Filtered List pane.

Load Image Filter List Properties

You can search on these load image properties:

This property...	Is used to describe...
Name	The name of the load image.
Version	The software version to which this load image applies.
Release	The software release to which this load image applies.
PTF	The program temporary fix (PTF) to which this load image applies.
Modified at	Date and time this load image was added to the database.
Download URL	The URL where the load image can be found.
Information URL	The URL where information about this load image can be found.
Image length	The number of bytes in the NwDM database taken up by this load image. If the load image is not stored in the database, this value is 0.
Build name	An identifier used by NwDM to identify this load image.

Configuration Comparison Operators

Over time the number of load image records stored in the NwDM database can grow to be quite large. Using comparison operators allow you to refine your search of the database so that only load image records that meet specific criteria are returned. For a list of the comparison operators and information about entering data into the Load images filter, see “Working with Deployment Manager Filters and Tables” on page 10.

Filtered List Pane

The results of the search from the Filter are displayed in the Filtered List task pane.

The Filtered List task pane displays each load image as a separate row. To select a load image, click anywhere in the row, which highlights the row. Use one of these methods to select multiple load images:

- Click on a single row and without releasing the mouse button, drag the mouse either up or down.
- Press and hold the **Ctrl** key; then click on the rows that you want to select.

Information about the load image is displayed in each of the columns. To reorder the columns, press **Ctrl** and **Shift** keys, and then click on the header of the column you want to move. The cursor changes to a hand. Drag the cursor to the desired location and release both keys.

You can also sort the Filtered List by the values in a column. Click the column header to sort the Jobs List in ascending order by the values in that column. Click the column header again to sort the values for that column in descending order.

Filtered List Action Buttons

Use the Filtered List action button to perform actions on one or more selected load images. These action buttons are displayed for the Filtered List task pane:

Clicking this button...	Performs this action...
Select All	Selects all load images listed in the Filtered List task pane.
Unselect All	Deselects all selected load images listed in the Filtered List task pane.
Process selected	Displays the pop-up menu for the Filtered List task pane.
Add selected to custom list	Adds the selected load images to the Custom List task pane.

Filtered List Pop-Up Menu

To display the Filtered List pop-up menu, select one or more rows, and click **Process selected...**.

In addition to the actions available from the action buttons, these actions are available from the Filtered List pop-up menu:

Clicking...	Performs this action...
Hide Column...	Displays the Visible Column dialog, which allows you to hide one or more columns in the Filtered List task pane. From the Visible Column dialog, click the columns that you want to hide and click **Ok**.
Show Column...	Displays the Hidden Column dialog, which allows you to display columns in the Filtered List task pane. From the Hidden Column dialog, click the columns that you want to appear in the Jobs List and click **Ok**.

Clicking...	Performs this action...
Go to Row...	Displays the Go to Row dialog, which allows you to go to a specified row in the Filtered List task pane. From the Go to Row dialog, type a row number and click **Ok**. The cursor is displayed at that row in the Filtered List task pane.
Print...	Displays the Print dialog, which allows you to print selected load image records. From the Print dialog, verify the print information is correct and click **Print**.
Print Preview...	Displays a preview of how the selected load image records will print. Click **Close** to return to the Jobs List task pane.
Delete selected Image files...	Deletes selected load images from the NwDM database. When the Confirm Load Image File Delete dialog is displayed, click **Yes** to delete the load image.
Import selected Image files...	Displays the Import 8275-416 Load Images dialog, which you can use to import a load image into the NwDM database. See “Import 8275-416 Load Images” on page 190 for information about importing a load image.
Export selected Image files...	Displays the Export 8275-416 Load Images dialog, which you can use to export a load image from the NwDM database. See “Export 8275-416 Load Images” on page 193 for information about exporting a load image.

Custom List Pane

The Custom List Pane is a table similar to that displayed in the Filtered List pane. In fact, the action buttons and pop-up menu are the same for the Custom List pane as for the Filtered List pane (except that the Add selected to custom list action button is replaced with Removed selected from custom list action button).

The Custom List pane provides a way to generate a list of load image records based on the results of applying multiple filters. For example, you could apply a filter to generate a list of load image records with a length of 0 for the Filtered List pane that. Next, you would select any or all of those records and click **Add selected to custom list** to add them to the Custom List pane. Then, you would apply a filter to generate a list of load image records that apply to MRS Version 3. Again, select any or all of these records and apply them to the custom list. The result is a custom list based on the results of different filters.

Import 8275-416 Load Images

The Import 8275-416 Load Images dialog allows you to import a load image into the NwDM database. To display the Import 8275-416 Load Images dialog, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 8275-416 Load Images task panel, click **Process selected...**, and then click **Import selected image files...**.

The Import 8275-416 Load Images dialog contains these tabs:

- Method
- TFTP
- Download URL
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to import the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Use specified download URL	Import the load image from an FTP server. You can use this option to import the load image from an IBM web site. When you click **Next**, the Download URL tab is displayed.
Import from server file	Import the load image from the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Import the load image from a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Import the load image from an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server from which you want to import the load image.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

Download URL Tab

Use the Download URL tab to provide the URL information for importing the load image.

Enter this information on the Download URL tab:

This field...	Is used to specify...	It can contain...
Override download URL host with	The download host to use. If you choose IBM-North America or IBM-Europe, the FTP tab is updated to with the appropriate information.	No override - use download URL host IBM-North America IBM-Europe Other FTP Host

After entering information for the Download URL tab, click **Next** to display the FTP tab or **Back** to return to the previous tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server from which you want to import the load image.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image is located.	A valid host name or IP address.
Login user ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image is currently located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the load image is located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Host Directory, or FTP Host Directory, depending on the import method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin importing the load image.

Click **Import** to begin importing the load image. The Import Load Images task is an interactive task. The current status of the import task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Export 8275-416 Load Images

The Export 8275-416 Load Images dialog allows you to export a load image from the NwDM database.

To display the Export 8275-416 Load Images, select one or more load images from either the Filtered List task pane or the Custom List task pane of the 8275-416 Load Images panel, click **Process selected...**, and then click **Export selected image files...**.

The Export 8275-416 Load Images dialog contains these tabs:

- Method
- TFTP
- FTP
- File
- Results

Method Tab

Use the Method tab to specify how you want to export the load image.

Choose one of these options on the Method tab:

Click this radio button...	If you want to...
Export to Server File	Export the load image to the NwDM server. When you click **Next**, the File tab is displayed.
Use TFTP	Export the load image to a TFTP server. When you click **Next**, the TFTP tab is displayed.
Use FTP	Export the load image to an FTP server. When you click **Next**, the FTP tab is displayed.

TFTP Tab

If you click **Use TFTP** on the Method tab, use the TFTP tab to specify information about the TFTP server to which the load image will be exported.

Enter this information on the TFTP tab:

This field...	Is used to specify...	It can contain...
TFTP host	The host name or IP address of the TFTP server where the exported load image will be located.	A valid host name or IP address.
Timeout (secs)	The length of time in seconds that a delay in communication can occur between the NwDM server and the TFTP server before the TFTP operation times out. If the job logs for importing files contain timeout errors, you may need to increase this value.	A number.

This field...	Is used to specify...	It can contain...
Max Retries	The number of attempts that will be made to resend data in the event of lost or corrupt packets. If the TFTP operation exceeds this limit, the operation fails.	A number.

After entering information for the TFTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

FTP Tab

If you clicked **Use FTP** on the Method tab, use the FTP tab to specify information about the FTP server to which the load image will be exported.

Enter this information on the FTP tab:

This field...	Is used to specify...	It can contain...
FTP host	The host name or IP address of the TFTP server where the load image will be exported.	A valid host name or IP address.
Login User ID	The user ID used to log in to the FTP server	A valid user ID
Password	The password associated with the user ID.	A valid password.
Use socks server	Whether the FTP server resides behind a firewall.	A check mark if the box is selected.
Socks server host	The host name or IP address of the socks server.	A valid host name or IP address.
Socks server port	The port to be used for the socks server.	A number between 1 and 65535 inclusive. The default is 1080.

After entering information for the FTP tab, click **Next** to display the File tab or **Back** to return to the Method tab.

File Tab

Use the File tab to specify information about the directory where the load image will be located.

Enter this information on the File tab:

This field...	Is used to specify...	It can contain...
Directory	The directory where the exported load image will be located. Use a forward slash (/) to separate directories and subdirectories. This field is called Directory/Filename, TFTP Server Directory, or FTP Server Directory, depending on the export method you chose on the Method tab.	A valid directory.

After entering information for the File tab, click **Next** to display the Results tab or **Back** to return to the previous tab.

Results Tab

Use the Results tab to begin exporting the load image.

Click **Export** to begin exporting the load image. The Export Load Image task is an interactive task. The current status of the export task is displayed in the Messages window.

From the Results tab, you can click **Back** to return to the previous tab.

Update 8275-416 Configuration

When you update an 8275-416 configuration, you are changing the configuration that is currently loaded in the device (the active configuration) to another configuration that you select. The configuration that you select must have a configuration status of inactive. Configuration updates are scheduled as jobs (you can use the Managing Jobs panel to view the status of an update job.

After updating the information on the 8275-416 Learn Configurations task panel, click **Apply** to save your changes or Cancel to discard all changes (the Cancel button is displayed only if you displayed the 8275-416 Learn Configurations task panel from the Configurations task panel). To display the help for this task panel, click **Help**.

Options Pane

Use the Options pane to specify this information about the update task:

This field...	Is used to...	It can contain...
Earliest start	Specify the earliest date and time that this task can begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Latest start	Specify the latest date and time that this task can begin. If it does not begin by this date and time, it is not started at all.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Start now	Specify that the 8275-416 Update Configuration task should begin immediately (when you click Apply).	A check mark if the box is selected.

This field...	Is used to...	It can contain...
Reset Option	Determine when the 8275-416 device is to be restarted after the configuration has been applied. These options are available: • No Reload. The 8275-416 device is not restarted. However, the new configuration will not take effect in the device until a reload is performed. • Reload immediately. Restart the 8275-416 to load the new configuration immediately after NwDM downloads it to the 8275-416.	No reload Reload immediately
Timed load	Specify the date and time that the reload should begin.	The format *yy/mm/dd hh:mn d* where: • *yy* is the year (1-99) • *mm* is the month (1-12) • *dd* is the day of the month (1-31) • *hh* is the hour of the day (1-24) • *mn* is the minute of the hour (1-60) • *d* is either AM (before noon) or PM (before midnight)
Bank Option	Specify how configurations currently loaded into the device should be handled. These options are available: • Erase none. Do not erase any configurations that are currently in the device. • Erase available if needed. Erase any available configurations that are currently in the device, if necessary. • Erase any. Erase any configurations that are currently in the device.	Erase none Erase available if needed Erase any
Configuration file checking	Determines whether or not mismatches are allowed when the device configuration file is checked with the configuration file in the NwDM database.	Disallow mismatches Allow mismatches

This field...	Is used to...	It can contain...
Stop at state	Specify when processing for this update job will stop. These options are available: • None. Do not stop processing. • Next state. Stop processing when the current state is complete. • Init. The initial phase. • Prepare. The Prepare phase. During the Prepare phase, NwDM performs these actions: – Loads the code and configuration on the TFTP server. – Deactivates timed load. – Downloads the code and configuration as needed. – Modifies the status of the ″from″ configuration loaded in the NwDM database to Obsolescent and the ″to″ configuration to Nascent. • Perform. The Perform phase. During the Perform phase, NwDM performs these actions: – Reloads or restarts the device. • Verify. The Verify phase. During the Verify phase, NwDM performs these actions: – Verifies the load image and the configuration. – Modifies the status of the configuration loaded in the NwDM database to either Inactive or Active.	None Next state Init Prepare Perform Verify

Appendix. Notices

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