# HP Network Node Manager i Software

For the Windows<sup>®</sup>, HP-UX, Linux, and Solaris operating systems Software Version: 9.10

**Reference Pages** 



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#### Acknowledgements

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nmscatgets - Get localized catalog strings for NNMi

# **SYNOPSIS**

nmscatgets [ -f CATFILE -S SETNUM -m MSGNUM -d DEFAULT ]

# **DESCRIPTION**

The nmscatgets command is used to query a message catalog and retrieve a localized (non-English) string from that catalog file. This string can then be displayed, for example, from a perl script. The caller must know the message catalog containing the desired localized strings, as well as the set-number and message-number within that file. If the specified message is not found, the default (English) value is returned.

The nmscatgets command is mostly used internally by other NNMi or HP-provided scripts. It doesn't provide much value for other uses.

#### **Parameters**

The nmscatgets command recognizes the following options.

-f *FILE* 

The file name containing the localized strings to query.

-s SETNUM

The set number within the catalog file, generally "1".

-m MSGNUM

The message number within the catalog file.

```
-d DEFAULT
```

The default (English) string to be printed if one or more of the *FILE*, *SETNUM*, or *MSGNUM* values are not available.

## **RETURN VALUE**

The nmscatgets command returns the localized string when the *FILE*, *SETNUM*, and *MSGNUM* values are all valid. Otherwise the nmscatgets command returns the DEFAULT (English) string provided to the command.

# AUTHOR

nmscatgets was developed by Hewlett-Packard Company.

nnmcluster — start NNMi cluster services

# **SYNOPSIS**

nnmcluster [-disable|-enable] [-display] [-startnnm|-stopnnm] [-acquire|-relinquish] [-shutdown [-force]]
[-dbsync] [-halt] [-node nodename] [ [-daemon]]

# DESCRIPTION

nnmcluster starts the NNMi cluster process. The NNMi cluster command permits an administrator to set up two systems for ensuring the availability of NNMi services if one system fails. After you run the nnmcluster command on each node, each one will detect the other and form a cluster. The first node to join the cluster comes up in the active state, and starts the NNMi services (using the ovstart command). The second node detects that there is already an active node, and assumes the standby state. If the standby node loses connectivity with the active node, (due to system shutdown or failure), then the standby node assumes the active state and starts the NNMi services.

If the nnmcluster is called with no command-line parameters, it starts the cluster in interactive mode. The interactive mode permits the system administrator to view and modify cluster settings in an interactive session. These settings include the ability to enable or disable automatic failover, shutdown a node in the cluster, transfer NNMi services from active to standby, and other settings.

If nnmcluster is called with the -daemon parameter, the NNMi cluster starts up as a background daemon process or Windows service.

If the nnmcluster command is called with other command-line parameters, it will initiate the actions specified on the command-line. These actions typically affect the NNMi cluster daemon process on the local node. However, if the -node *nodename* option is used, it affects the NNMi cluster daemon process on the specified node.

Most of the options available from the command-line are also available in interactive mode. For example, using the -shutdown option from the command line is the same as using the shutdown command in interactive mode. The interactive mode has some additional commands, such as help, to display a list of available commands, and quit, to exit the interactive mode. The -node nodename command is also available interactively.

Note that only NNMi cluster daemon processes are capable of starting NNMi services. The interactive mode and specifying actions on the command-line are methods for affecting the behavior of a daemon process on one of the nodes in the cluster. For example, using the -acquire option causes the daemon process on the local node (or the specified node if used with the -node option), to acquire the active state and start NNMi services. After an NNMi cluster daemon process is started, the only way of interacting with that daemon process is by using the command line or interactive mode settings. For example, if you want to terminate that daemon process, use the nnmcluster -shutdown command.

When NNMi is using the embedded database, the NNMi cluster application synchronizes the database between the active and standby nodes. This is achieved by sending a complete database backup to the

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March 2011 standby, followed by periodic incremental database transaction logs. The time intervals for the frequency of full backups and transaction logs, along with other cluster parameters, are defined in the nmscluster.properties file.

For the embedded database scenario, the NNMi cluster application has a startup period that must occur before permitting the active node to send the database to the standby node. During this startup period, command options that would transfer the active state to the standby node are disabled. These options include shutdown, acquire, relinquish, and other available options, as they can leave the standby node in a state where it only has a portions of the database and is unable to run NNMi. However, after the standby node has received the entire database, there should be no critical times from that point forward, assuming both systems stay running (a restart causes the standby node to verify that it is still in-sync with the active node).

If NNMi is using the Oracle database, then no database replication is performed, as the Oracle database instance is on a third machine outside of NNMi control. In this scenario, the NNMi nnmcluster command still monitors the active NNMi management server and starts NNMi on the standby server if the active fails.

#### **Parameters**

The nnmcluster command recognizes the following options. Any unrecognized options are reported by a usage message. Options are always processed in the specified order. For example, using -display disable is different from using -disable -display. All of the parameters refer to the NNMi cluster daemon process on the local node, unless the -node nodename option is used.

-disable

Disables the automatic failover capability (automatic failover is enabled by default). The system administrator might choose to shutdown the active node briefly to perform some administrative tasks. The -disable parameter permits the active node to be shut down without the standby node becoming active and starting the NNMi services. You can restart the same node in the active state by using the -acquire option followed by the -enable option.

-enable

Re-enable automatic failover capability after being disabled as described above.

-display

Connect to the cluster, query the current cluster state, then display that state to the administrator.

-startnnm

The active node may not be running NNMi services. For example, suppose you stopped the NNMi services earlier using the -stopnnm option. You can start up the NNMi services on the active node by using the -startnnm option.

#### -stopnnm

Shut down the NNMi services on the active node, but do not release the active state. If you use this option, NNMi does not generate a failover event. For example, the standby node does not assume the active state.

#### -acquire

The system administrator might want to transfer NNMi services from a node which is currently in the

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active state to another node which is currently in the standby state. Without using the -node option, the local system becomes the new active node. If the administrator uses the -node *nodename* option, the specified node becomes the new active node.

#### -relinquish

Permits the system administrator to give up the active state on the local (currently active) node and causes the NNMi services to transfer control to the current standby node. The node being relinquished stops NNMi services and assumes the standby state.

#### -dbsync

Permits the system administrator to trigger an immediate database synchronization on active node. This option is only applicable when NNMi is using the embedded database (not using an Oracle database).

#### -shutdown [-force]

Shuts down the NNMi cluster daemon process on the local node. If the -node option is provided, then shut down the NNMi cluster daemon process on the specified node. The NNMi cluster program tries to prevent you from shutting down the cluster during times when doing so might compromise the data integrity on the standby server. For example, if the standby server is receiving a full database backup from the active server, it would be bad to have a failover event during that time. If you try to shut down the NNMi daemon process, you might get a message stating that the cluster is in a transition state, as in the standby node is receiving important data, so you need to permit it to complete before attempting ot shut down the cluster daemon process. If you want to force a shutdown anyway, use the "-force" option. This disables failover to the standby (since it is in an incomplete state), then shuts down the local (or specified) node.

#### -halt

Shuts down the NNMi cluster daemon process on all nodes in the cluster. This disables failover, shuts down all standby nodes, then shuts down the active node.

#### -node *nodename*

Causes one or more actions specified on the command line to affect the NNMi cluster daemon process on the specified nodename. Without specifying this option, the actions specified on the command line to apply to the local NNMi cluster daemon.

#### -daemon

Starts the NNMi cluster as a daemon. The command is immediately launched in the background. No other command line parameters can be specified in daemon mode.

### **RETURN VALUE**

If running the nnmcluster command with command line options results in success, the command exits with the 0 (zero) status (there are no errors). However, if running the nnmcluster command with command line options results in failure, the command exits with the 1 status (there are errors). In interactive mode, the exit status is always 0.

In daemon mode the nnmcluster command launches as a background process and the shell prompt is immediately returned. After you start a daemon process, you can monitor cluster status by using the nnmcluster -display or ovstatus commands: the NNMi cluster determines if or when to start NNMi

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services, depending on the active or standby status of the node in relation to other nodes in the cluster; ovstatus displays a not running status on the standby node, but running the nnmcluster -display command tells you that the node is in the standby state.

# DIAGNOSTICS

nnmcluster logs output to the NNMi log directory (/var/opt/OV/log/nnm on Unix, and %NnmDataDir%\log\nnm on Windows). Each actively-running instance of the nnmcluster process, such as a daemon running in parallel with either or both the interactive or command-line mode, has a separate log file. The most-recent running threads will always be nnmcluster.0.\*.log.

The NNMi cluster internally uses an open-source technology called *JGroups*. The log files for JGroups are in the same directory shown above, and are named jgroups.log.

# **EXAMPLES**

nnmcluster -daemon nnmcluster -display

The first command starts the NNMi cluster as a daemon process, and immediately returns a shell prompt, leaving a background daemon process. You can query, shut down, or apply other actions to this daemon process using interactive or command-line modes. You can repeatedly use the second command to monitor the status of the cluster, specifically the local daemon process, to determine if it comes up in the active or standby state.

nnmcluster -shutdown -node xyz.mycompany.com

Causes the NNMi cluster daemon process on the specified node to shut down. If that node is the current active node, and if automatic failover is enabled, then the NNMi services will transfer to the standby node.

nnmcluster

Enter the interactive mode of the NNMi cluster command to view or modify cluster parameters. To exit this program, use the exit or quit commands.

nnmcluster -acquire

Cause the daemon-mode NNMi cluster process on the local system to become the active node. The current active is set to standby mode then NNMi services start on the local node.

The following is a common system administration sequence to permit the administrator to temporarily shut down the NNMi cluster on the active node, then bring it back up later as active, without causing a failover event to the standby node.

Step 1: Run the **nnmcluster -disable -shutdown** command.

Step 2: Perform some system administration tasks.

- Step 3: Run the **nnmcluster -daemon** command.
- Step 4: Run the **nnmcluster -display** command. Use this command to determine when the daemon is up.

The command shown in step 1 disables failover first, then shuts down the local daemon process. In step 2, the system administrator performs some administration tasks without the risk of triggering a failover. The command shown in step 3 restarts the daemon NNMi cluster process. You can repeatedly use the command shown in step 4, to determine when the local daemon process is up and NNMi is running. The command shown in step 5 re-enables automatic failover after NNMi is running on the active node.

# AUTHOR

nnmcluster was developed by Hewlett-Packard Company.

# **FILES**

Windows: \$%NNM\_PROPS%\nms-cluster.properties

UNIX: \$NNM\_PROPS/nms-cluster.properties

This file defines the cluster parameters; specifically, you must uniquely name the cluster to differentiate it from other NNMi clusters that might be on the same network. You can optionally set other parameters such as timeouts.

# **SEE ALSO**

ovstart(1M), ovstop(1M).

nnm.envvars — A script to define the environment variables for universal paths in NNMi.

# **SYNOPSIS**

Windows operating systems:

nnm.envvars.bat

UNIX operating systems:

nnm.envvars.sh

nnm.envvars.csh

# DESCRIPTION

The nnm.envvars script defines the NNMi environment variables for universal paths. Universal paths simplify the use of NNMi and other HP Software products by providing paths and filenames common to all operating system platforms. Universal paths are provided for the Windows command interpreter and UNIX shells.

On UNIX operating systems, you can modify the .profile or the .login file, so that the shell script is sourced (activated) each time you log on to your system. Alternatively, you can activate the file for an individual terminal, user, and session by sourcing the file into the current environment.

To view the universal paths that are defined, read the nnm.envvars.sh file, which resides in /opt/OV/bin on UNIX operating systems or %NnmInstallDir%\bin on Windows operating systems.

#### EXAMPLES

To modify the .profile or .login file, add the appropriate line from the following examples to the file.

To source the nnm.envvars script, use one of the following commands.

• From a Windows command line:

#### %NnmInstallDir%\bin\nnm.envvars.bat

Where: %NnmInstallDir% is the directory where NNMi is installed. Note that the NNMi installer creates this variable as a system environment variable.

• From a Windows operating system with UNIX-style shells installed (for example, MKS Toolkit or CygWin):

Using sh, ksh, or bash:

\$NnmInstallDir/bin/nnm.envvars.sh

NNMi Reference Pages Where: *\$NnmInstallDir* is the directory where NNMi is installed.

Using csh:

source \$NnmInstallDir/bin/nnm.envvars.csh

Where: *\$NnmInstallDir* is the directory where NNMi is installed.

• From UNIX operating systems:

Using sh, ksh, or bash:

. /opt/OV/bin/nnm.envvars.sh

Using csh:

source /opt/OV/bin/nnm.envvars.csh

# **AUTHOR**

nnm.envvars was developed by Hewlett-Packard Company.

# **FILES**

Windows operating systems:

%NnmInstallDir%\bin\nnm.envvars.bat (for Windows command line)

%NnmInstallDir%\bin\nnm.envvars.sh (for sh, ksh, or bash)

%NnmInstallDir%\bin\nnm.envvars.csh (for csh)

UNIX operating systems:

/opt/OV/bin/nnm.envvars.sh (for sh, ksh, or bash)

/opt/OV/bin/nnm.envvars.csh (for csh)

# **EXTERNAL INFLUENCES**

International Code Set Support: Supports single-byte and multi-byte character code sets.

nnmprops — Query values of NNMi properties.

# **SYNOPSIS**

nnmprops [-1] [-q prop] [-m match] [-e expand]

## DESCRIPTION

nnmprops is used to query the property values that run NNMi processes. The nnmprops command consolidates and displays these properties, which are stored in several locations in the file system. This command can be used in other scripts that need to query and act on the values of NNMi system properties.

#### **Parameters**

nnmprops recognizes the following options.

-1

Lists the value of all properties.

-q PROP

Queries the specified property. This option can be repeated to query multiple properties.

-m STRING

Queries all properties that start with the prefix STRING.

-e *STRING* 

Expand any properties in the STRING with their corresponding value.

# **RETURN VALUE**

nnmprops always exits with the status 0 (zero) if no errors were encountered; 1 otherwise.

# **EXAMPLES**

nnmprops -1

Lists all properties and their values.

nnmprops -q com.hp.nms.ui.sso.isEnabled -q com.hp.nms.ui.sso.domain

Queries the property values of the *com.hp.nms.ui.sso.isEnabled* and *com.hp.nms.ui.sso.domain* properties. Page 14 nnmprops -m com.hp.nms.ui.sso

Queries all properties that start with com.hp.nms.ui.sso. For example, the values for .protectedDomains, .domain, .initString, and .isEnabled would be returned.

nnmprops -e "The values for com.hp.nms.ui.sso are \${com.hp.nms.ui.sso}."

Displays the string with the value of \${com.hp.nms.ui.sso} expanded. Note that the "\${" and "}" are required to delineate the property name.

#### AUTHOR

nnmprops was developed by Hewlett-Packard Company.

#### FILES

There are several properties files used by the nnmprops program. These files are separated into two categories: HP-provided default (out-of-the-box) values and user-modified override values. The intention is that HP can change the default properties values in future NNMi releases; however, user-modified values always override the HP-provided default.

The files found in the directory hierarchy below <code>%NnmInstallDir%/misc/nnm/props</code> (Windows) or <code>\$NnmInstallDir/misc/nnm/props</code> (UNIX) define the HP-provided default values.

#### Note

You should never modify any file below this location since future NNMi versions could overwrite any modifications.

The files in the %NnmDataDir%\shared\nnm\conf\props (Windows), %NnmDataDir%\conf\nnm\props (Windows), %NnmDataDir/shared/nnm/conf/props (UNIX), and %NnmDataDir/conf/nnm/props (UNIX) define modified values or values changed programmatically at installation or runtime. These values are initially commented-out copies of the HP-provided values. To edit these files, remove the comment and change a value. The new value overrides the default value.

The difference between the two directories is as follows:

- %NnmDataDir%\shared\nnm\conf\props (Windows) and \$NnmDataDir/shared/nnm/conf/props (UNIX) contain properties that are shared in a cluster (HA cluster or NNMi Application Failover cluster, for example).
- %NnmDataDir%\shared\nnm\conf\props (Windows) and \$NnmDataDir/shared/nnm/conf/props (UNIX) defines values which are not shared. For instance, each node in the cluster may have different values for the same property.

nnmsetcmduserpw.ovpl — set the account credentials to be used in place of the -u/-p options when executing scripts as this user.

# SYNOPSIS

nnmsetcmduserpw.ovpl

# DESCRIPTION

You can use nnmsetcmduserpw.ovpl to set the NNM account credentials to be used when executing any scripts normally requiring the -u/-p option. The user and password values will be used when scripts are executed by this user without the -u/-p command line arguments. NOTE: The UNIX user root should never run this command. The "root" user does not need to provide -u/-p by default.

To run this command, make sure you are logged into the system as the user that will be executing the command line scripts. These values are set on a per user basis.

### **Parameters**

No supported parameters.

## **EXAMPLES**

You may want to set up account username and password values to be used when executing command line scripts normally requiring the -u/-p option. This can be done to avoid specifying password information on the command line.

Usage is:

```
# nnmsetcmduserpw.ovpl
WARNING: This change will affect the credentials to be used in place
        of the -u/-p command line options whenever this user executes
        a script requiring these. Please ensure you are logged in as
        the desired user before executing this script.
        Executing this script will create/edit the .nnm/nnm.properties
        file in the users home directory.
Would you like to continue? [n] y
Thank you!
Please provide the user name for the account.
user: myuser
Please provide a password for the user account.
password: mypass
enter password again: mypass
User/Password values stored successfully in /home/user/.nnm/nnm.properties
```

### **AUTHOR**

nnmsetcmduserpw.ovpl was developed by Hewlett-Packard Company.

# **FILES**

<code>nnmsetcmduserpw.ovpl resides in \$NNM\_BIN directory.</code>

# **SEE ALSO**

nnm.properties(4).

nnmtrapdump.ovpl — Print traps logged in the binary trap store to the console

# **SYNOPSIS**

nnmtrapdump.ovpl [-u user] [-p password] [-t] [-from date] [-to date] [-source IP address] [-trapid Trap OID] [-last minutes] [-short] [-nodns] [-hexDump]

# DESCRIPTION

All incoming traps are logged in a binary trap store by the HP NNM Trap Service. nnmtrapdump.ovpl can be used to see the traps that have been logged. It can also be used to watch new incoming traps. When using trap tool any log or error messages are printed to the standard error. By redirecting the standard error to a different file, you can prevent these messages from getting mixed with the actual trap dump output.

#### **Parameters**

nnmtrapdump.ovpl supports the following parameters:

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-t

```
Use -t to continuously print incoming traps. This option cannot be used with the -to option
```

-from date

Specifies the date from which traps are printed. The date is specified in ISO 8601 standard format: yyyy-mm-ddThh:mm:ss[+ or -]hh:mm. This option can be used to drill down from the analytics entries in the trapanalytics.0.0.log file. This option cannot be used with the -last option

#### -to date

Specifies the date till which traps are printed. The date is specified in ISO 8601 standard format: *yyyy-mm-ddThh:mm:ss[+ or -]hh:mm*. This option can be used to drill down from the analytics entries in the trapanalytics.0.0.log file.

```
-source IP address
```

Specifies the source IP address of the traps that should be printed. Only traps from the given source

-trapid Trap OID

Specifies the trap OID of the traps that should be printed. Only traps with the given OID will be printed.

-last minutes

Specifies the age of the traps to be printed. The value is in minutes. Only traps are at the most this old will be printed. This option cannot be used along with the -from option.

-short

Use *-short* to print a short format of incoming traps. Only the trap OID, arrival time and source address are printed

-nodns

Use -nodns to prevent resolution of IP addresses to node names. This speeds up the printing of traps

-hexDump

Use -hexDump to print traps in hexadecimal format

### **EXAMPLES**

To print all the traps in the binary trap store to the console:

nnmtrapdump.ovpl

To wait in a loop and print all incoming traps:

nnmtrapdump.ovpl -t

To print traps within the 5 minute window from 9:00AM to 9:05AM MDT on July 31 2008:

nnmtrapdump.ovpl -from 2008-07-31T09:00:00-06:00 -to 2008-07-31T09:05:00-06:00

To print traps that came within the last 5 minutes and then wait for incoming traps:

nnmtrapdump.ovpl -last 5 -t

To print traps from IP address 192.168.0.1:

nnmtrapdump.ovpl -source 192.168.0.1

## FILES

<code>\$NNM\_DB/traps</code> is the directory that contains the files that constitute the trap database.

\$NNM\_LOG/trapanalytics.0.0.log is the analytics log file containing information about the most frequent trapids and sources sending traps.

#### nnmtrapdump.ovpl was developed by Hewlett-Packard Company.

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AUTHOR

nnmversion.ovpl --- display the version of Network Node Manager

# **SYNOPSIS**

nnmversion.ovpl

# DESCRIPTION

nnmversion.ovpl can be used to display the version of Network Node Manager that is installed. It also displays the patch number of the NNM patch that is installed. If no patches are installed, it displays a message indicating that no patches are listed.

### **Parameters**

nnmversion.ovpl does not have any options.

# **EXAMPLES**

Print out the version of NNM and any installed patches.

nnmversion.ovpl

# AUTHOR

nnmversion.ovpl was developed by Hewlett-Packard Company.

## FILES

The following files store product version and patch information:

Windows: data\_dir\NNMVersionInfo

UNIX: /var/opt/OV/NNMVersionInfo

ovjbosspath.ovpl — script to determine where jboss is installed

# **SYNOPSIS**

ovjbosspath.ovpl

# DESCRIPTION

ovjbosspath.ovpl is a command used by scripts to determine where jboss is used. jboss is the underlying application architecture used by ovjboss. Although ovjboss knows where jboss resides, jboss requires that certain program files (jar files) be located in underlying directories of jboss. Because other Java applications require access to these files, this provides a standard method for retrieving the base directory path.

ovjbosspath.ovpl is used to eliminate hard-coded paths in other applications.

# **Parameters**

None.

# EXAMPLES

On Windows with the installation in the directory C:\Program Files(x86)\HP OpenView, running C:\Program Files(x86)\HP OpenView\bin\ovjbosspath.ovpl returns the following:

C:/Program Files(x86)/HP OpenView/nonOV/jboss/nms

This enables other applications to find jar files that exist under this directory structure, such as the following:

C:/Program Files(x86)/HP OpenView/nonOV/jboss/nms/server/nms/lib/nms-licensing-api.jar

# AUTHOR

ovjbosspath.ovpl was developed by Hewlett-Packard Company.

ovjrepath.ovpl — script to determine the version of JDK to use

# **SYNOPSIS**

ovjrepath.ovpl

# DESCRIPTION

ovjrepath.ovpl is a command used by scripts to determine the version of the JDK to use. Given multiple products being installed on the system, there can be multiple JDK versions installed. These versions are not guaranteed to be compatible with Network Node Manager (NNM). This script encapsulates this problem by ensuring the correct JDK is being used.

NOTE: NNM replaces JDKs from time to time. This script enables other scripts to use the new JDK without being changed.

## **Parameters**

None.

# EXAMPLES

On Windows with the installation in the directory C:\Program Files\HP OpenView, running C:\Program Files\HP

C:/Program Files/HP OpenView/nonOV/jdk/b

This enables scripts that others are writing to use the correct JDK.

# AUTHOR

ovjrepath.ovpl was developed by Hewlett-Packard Company.

# **FILES**

\$InstallDir/nonOV/jdk

Directory where JDKs are installed.

ovstatus - report status of NNM managed processes

# **SYNOPSIS**

ovstatus [ [-c] [-d] [-v] [managed\_process\_names...]]

## **DESCRIPTION**

ovstatus reports the current status of the NNM managed processes. ovstatus sends a status request (OVS\_REQ\_STATUS) to the process management process (UNIX operating system) or service (Windows operating system), ovspmd. If called with one or more managed\_process\_name arguments, it reports the status for the designated managed processes. If called with no arguments, it reports the status of all managed processes that have been added to the NNM startup file (SUF), including ovspmd itself.

Unlike ovstart, ovstatus does not start ovspmd if it is not already running.

The managed processes are configured by ovaddobj from information in Local Registration Files (see lrf(4)). A managed process is named by the first field in the LRF describing it.

#### **Parameters**

ovstatus recognizes the option described below. The first argument that is not an option, and any succeeding arguments, are interpreted as names of managed processes for which to report status, and are passed to ovspmd in the status request.

-C

Output one status line for each managed process.

-d

Report the important stages in its processing, including contacting and sending the status request to ovspmd, and closing the communication channel.

-v

Print verbose messages from managed processes. In particular, this option displays the verbose message from ovuispmd describing all current ovw sessions.

## **RETURN VALUE**

ovstatus normally exits with the status 0 (zero). It returns a non-zero status only if there is a system problem, such as ovspmd not running.

#### NNMi Reference Pages DIAGNOSTICS

ovstatus reports certain command-line errors (in particular, too many arguments) and system errors. The messages are prefixed with ovstatus:, and are intended to be self-explanatory. ovstatus also outputs error messages received from ovspmd. These messages are prefixed with ovspmd:.ovstatus ignores unrecognized options.

ovstatus reports the known state of all OVs\_WELL\_BEHAVED and OVs\_NON\_WELL\_BEHAVED processes. OVs\_DAEMON processes run outside of ovspmd control. They report a PID, a state of unknown, and a final message of Does not communicate with ovspmd, as ovspmd cannot track these processes.

Note that ovspmd can process multiple requests (ovstart, ovstop, or ovstatus) at a time. If any of these commands is being handled, the new request will be queued by type until the previous command has completed.

# AUTHOR

ovstatus was developed by the Hewlett-Packard Company.

# **FILES**

The environment variables below represent universal pathnames that are established according to your shell and platform requirements. See the nnm.envvars reference page (or the UNIX manpage) for information about using environment variables for the following files:

Windows: %NNM\_BIN%\ovstatus

Windows: %NNM\_BIN%\ovspmd

UNIX: \$NNM\_BIN/ovstatus

UNIX: \$NNM\_BIN/ovspmd

# **EXTERNAL INFLUENCES**

#### **Environmental Variables**

\$LANG provides a default value if the internationalization variables, LC\_ALL, LC\_CTYPE, and LC\_MESSAGES are unset, null, or invalid.

If \$LANG is unset, null, or invalid, the default value of C (or English\_UnitedStates.1252 on Windows) is used.

 $\tt LC\_ALL$  (or <code>\$LANG</code>) determines the locale of all other processes started by <code>ovspmd</code> .

LC\_CTYPE determines the interpretation of text as single and/or multi-byte characters, the classification of characters as printable, and the characters matched by character class expressions in regular expressions.

# **SEE ALSO**

ovstart(1M), ovstop(1M), ovaddobj(1M), ovdelobj(1M), ovspmd(1M), nnmcluster(1M).

nnmdumpevents — dump the contents of the pre-NNM Release 8.0 event database

# **SYNOPSIS**

 $\texttt{nnmdumpevents} \ [-f \ \textit{fileName}] \ [-t] \ [-l \ \textit{minutes}] \ [-d \ \textit{dbPath}] \ [-x \ \textit{fileName}] \ [-s] \ [-c]$ 

# **DESCRIPTION**

nnmdumpevents dumps the contents of the pre-NNM Release 8.0 event database. You can dump the entire event log, the contents of a particular stream log, or the contents of a particular correlation log. The format of the resulting file is that of the pre-NNM Release 6.0 trapd.log file.

The nnmdumpevents command dumps the contents of the event store associated with the legacy pmd process, and would only be used for viewing events for NNM 6.x, NNM 7.x, or both that are forwarded to the NNMi management station. The nnmdumpevents command does not dump traps. Use the nnmtrapdump.ovpl script for dumping traps. See the nnmtrapdump.ovpl(1M) reference page, or the UNIX manpage for more information.

### **Parameters**

nnmdumpevents supports the following options:

-d dbPath

Dumps the contents of the event database contained in the directory indicated by *dbPath*, as opposed to dumping the default database.

-t

Tails the output (continuously watches for new events without returning).

-l minutes

Dumps the contents of the event database, starting from the last few minutes instead of from the beginning of the database. This option is useful with the -t option.

-f fileName

Writes the output of the command to the named file. If you do not specify this option, the output of the command is written to standard output. The format of the output is in the obsoleted trapd.log format.

-x fileName

Used with the -d option, where the -d option specifies the path of the directory containing the statelog file, and the -x option specifies the statelog file name to be used for dumping the events.

Dumps the contents of the named stream log. The format of the output is in the obsoleted trapd.log format.

-c streamName

Dumps the contents of the correlation log associated with the *streamName* to be dumped. The event uuids of the parent and correlated child event are dumped, as are the contents of the child event.

If you do not specify either the -s or -c option, the entire contents of the event log is dumped in the trapd.log format.

# **RETURN VALUE**

If the dump of the database was successful, the nnmdumpevents command exits with a return value of 0 (zero). Otherwise, a non-zero value is returned.

# AUTHOR

nnmdumpevents was developed by Hewlett-Packard Company.

# **FILES**

The environment variables below represent universal pathnames that are established according to your shell and platform requirements. See the nnm.envvars(1) reference page for information on universal pathnames for your platform and shell.

The nnmdumpevents command is located in %NNM\_BIN%\nnmdumpevents (Windows) or \$NNM\_BIN/nnmdumpevents (UNIX).

# **SEE ALSO**

nnmtrapdump.ovpl(1)

nnmsnmpnotify.ovpl — issue an SNMP notification (Trap or Inform request)

# **SYNOPSIS**

nnmsnmpnotify.ovpl [-V version] [-c community] [-p port(default:162)] [-A] [-t timeout] [-r
retries] [-d] [-T] [-a agent\_addr] [-e enterprise] node trap-oid variable type value [variable
type value]...

# DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmsnmpnotify.ovpl script sends an SNMP notification request to notify another system of an event on the local system. You can use options with the nnmsnmpnotify.ovpl script to acknowledge (SNMPv2 Inform) or unacknowledge (SNMPv1 or SNMPv2 Trap) the notification. You cannot send acknowledged notifications to systems that support only SNMP Version 1.

By default, the notification is unacknowledged. The nnmsnmpnotify.ovpl script sends an SNMP Version 1 or SNMP Version 2 Trap depending on the protocol version you specify. When you use the default version of the nnmsnmpnotify.ovpl script, it terminates immediately after sending the SNMP Trap request. There is no confirmation that the notification reached the destination system.

Use the -A option to send an acknowledged notification. The nnmsnmpnotify.ovpl script sends an SNMP Version 2 Inform request to the destination system. It waits for the corresponding acknowledgment, and retransmits an SNMP Version 2 Inform request if necessary. If an SNMP Version 2 Inform request retransmission occurs, the nnmsnmpnotify.ovpl script uses the *timeout* and *retry* values you specify on the command line. If the nnmsnmpnotify.ovpl script displays an acknowledgment within the time period and retry attempts you specify, you know the notification reached the destination system. If the nnmsnmpnotify.ovpl script does not display an acknowledgment within the time period and retry attempts you specify, the notification did not reach the destination system.

node can be an IP-addressable system that supports SNMP. You can identify IP nodes by Internet address or hostname. You can supply *node* in Internet address form or hostname form. If you supply an empty string ("") to the nnmsnmpnotify.ovpl script instead of a node, the script uses localhost as the destination.

Specify the trap type as an object identifier in the  $trap_oid$  command-line argument. You must identify all notifications using the object identifier form. You can supply notifications defined in the SNMPv2 MIB or in a vendor-specific SNMPv1 MIB directly to the nnmsnmpnotify.ovpl script. However, you must convert traps defined in a vendor-specific SNMPv1 MIB to the object identifier form before supplying them to the nnmsnmpnotify.ovpl script. For an SNMP Version 1 trap, if you supply an empty string ("") instead of a  $trap_oid$ , the Generic trap type value is set to 6 and the Specific trap type value is set to 0. For an SNMP Version 2 trap, if you supply an empty string ("") instead of a  $trap_oid$  the  $trap_oid$  variable binding is

When providing trap object identifiers to the nnmsnmpnotify.ovpl script, follow these guidelines:

- Use the corresponding object identifiers defined in RFC 1907 to generate a trap for any of the six generic SNMP traps: coldStart, warmStart, linkDown, linkUp, authenticationFailure, and egpNeighborLoss. For example, use the 1.3.6.1.6.3.1.1.5.1 trap OID to generate a coldStart trap. .
- To generate a trap that is not SNMP-generic but is defined in SNMPv2 form, use the NOTIFICATION-TYPE identifier from the SNMPv2-compatible MIB.
- To generate a trap that is not SNMP-generic but is defined in SNMPv1 form, determine the trap enterprise and specific numbers from the SNMPv1-compatible MIB. From these trap enterprise and specific numbers, construct an object identifier in the *enterprise.o.specific field* form. For example, consider a vendor-specific MIB for a device test. The MIB defines a trap with enterprise 1.3.6.1.4.1.11.2.17.1 and specific trap field 4. The resulting trap object identifier would be 1.3.6.1.4.1.11.2.17.1.0.4.

The nnmsnmpnotify.ovpl script passes data to the remote node as a triple of variable, type, value. Supply one or more triples to the nnmsnmpnotify.ovpl script as command-line arguments.

Each variable is an object instance identifier in either dotted decimal format or mnemonic string format. For example, you can use either the .1.3.6.1.4.1.11.2.17.2.1.0 or the openViewSourceId.0 format.

Each *type* must be one of the following types:

INTEGER
INTEGER32
IPADDRESS
COUNTER
COUNTER32
COUNTER64 (for SNMPv2c or v3 capable remote nodes)
GAUGE
GAUGE32
OBJECTIDENTIFIER
OCTETSTRING
OCTETSTRINGASCII
OCTETSTRINGHEX
OCTETSTRINGOCTAL
OPAQUE

**OPAQUEHEX** 

OPAQUEOCTAL

TIMETICKS

UNSIGNED32

For a complete description of each type, refer to RFC 1155 and RFC 1902.

The *value* parameter must be valid for the type specified. When using a type that requires a hexadecimal or octal value, you must fully define each byte of the value. For example, if you specify fff (or 17377), it is missing a byte, and will not work. Use 0fff (or 017377) instead. You must specify a *value* on the command line. *value* must not be larger than 512 bytes.

### **Parameters**

#### -v version

Requests the nnmsnmpnotify.ovpl script to use a specific version of SNMP to communicate with the remote node. Valid choices for *version* are 1, 2c, or 3.

-c community

Specifies the community string to use for authentication on the remote node.

-p port

Specifies the port to use to communicate with the remote node.

-t timeout

Specifies a timeout period, in tenths of seconds, to wait for an acknowledgment when using an SNMP Version 2 Inform request. This option is only valid when used with the -A option.

-r retries

Specifies the number of retransmissions to attempt when no acknowledgment is received when using an SNMP Version 2 Inform request. This option is only valid when used with the -A option.

-d

Dump ASN.1 packet trace

-T

Prints the OID in dotted decimal format.

-a agent\_add

Overrides the local host as the source of the notification with the given agent address. *agent\_addr* must be an IP address or hostname.

# **EXAMPLES**

The following command sends an SNMP link down Inform request to the node v2c\_node:

nnmsnmpnotify.ovpl -A -v2c v2c\_node .1.3.6.1.6.3.1.1.5.3

The following command sends an SNMP link down trap request to the node v1\_node with the agent address set to agent:

nnmsnmpnotify.ovpl -a agent v1\_node .1.3.6.1.6.3.1.1.5.3

# AUTHOR

nnmsnmpnotify.ovpl was developed by Hewlett-Packard Company.

# **FILES**

The environment variable below represents a universal path that is established according to your shell and platform requirements:

Windows: %NNM\_BIN%\nnmsnmpnotify.ovpl

UNIX: \$NNM\_BIN/nnmsnmpnotify.ovpl

# **SEE ALSO**

nnmsnmpwalk.ovpl(1M), nnmsnmpset.ovpl(1M), nnmsnmpbulk.ovpl(1M).

RFC 1155, 1157, 1212: SNMP Version 1.

RFC 1901 - 1908, 2576, 2578, 3416 - 3418: SNMP Version 2.

RFC 3411 - 3415: SNMP Version 3.

## **EXTERNAL INFLUENCES**

#### **Environmental Variables**

\$LANG determines the language in which messages appear. If \$LANG is not specified or is set to an empty string, a default of c is used instead of \$LANG. If any internationalization variable contains an invalid setting, nnmsnmpnotify.ovpl behaves as if all internationalization variables are set to c.

#### **International Code Set Support**

Supports single-byte and multiple-byte character code sets.

NOTE: SNMP MIB values of the type octetstringascii are restricted to NVT-ASCII.

nmsdbmgr — controls the NNMi embedded database, including periodic database connectivity testing

# **SYNOPSIS**

nmsdbmgr [-ovspmd] [-start] [-test] [-initnmsdb] [-stop] [-status] [-kill]

# **DESCRIPTION**

nmsdbmgr is a program that provides an interface for the ovspmd process to control the NNMi embedded database. The nmsdbmgr program enables the ovspmd process to start, stop, and check the status of the embedded database.

While running, the program tests database connectivity every five minutes and updates the status message reported to the ovspmd process, depending on the results of the connectivity test. If the database test succeeds, the message reported is Database Available. If the connectivity test fails, the message reported is Data Warehouse Inaccessible. If you see the failure message, you may experience database-related problems in NNMi, such as the failure to retrieve and display the node inventory in the NNMi console.

While it is technically possible to run this command independently of the ovspmd process, doing so is highly discouraged and could cause unexpected results.

NOTE: If you examine the process table while the nmsdbmgr program is running, notice that this program spawns many child processes named postgres or postgres.exe, depending on the platform. These child processes represent the embedded database itself. Having many instances of them is normal.

# **EXAMPLES**

Normal usage of this command is indirect, using the ovspmd process.

Typical usage starts or stops the process as follows:

```
# ovstart -c nmsdbmgr
```

```
# ovstop -c nmsdbmgr
```

```
# ovstatus -c nmsdbmgr
```

# AUTHOR

nmsdbmgr was developed by Hewlett-Packard Company.

### FILES

Windows: %NNMInstallDir%\nonOV\Postgres

UNIX: \$NNM\_DB/Postgres

UNIX: \$NNMInstallDir/nonOV/Postgres

# **SEE ALSO**

ovspmd(1M), ovstart(1M), ovstop(1M), ovstatus(1M).

nnmaction — wrapper process for the HP NNMi Action Server (action server).

# **SYNOPSIS**

nnmaction

# DESCRIPTION

nnmaction is a process referred to as the action server. It is managed by the ovspmd process. You can pass arguments to the action server by adding entries to the nnmaction.properties file.

Never run the nnmaction command manually. The ovspmd process starts and manages the nnmaction process. To restart the nnmaction process, run the ovstop nnmaction command followed by the ovstart nnmaction command. Run the ovstatus nnmaction command to determine the status of the nnmaction process.

You must be logged on as root or ar administrator to run the ovstart or ovstop commands.

# AUTHOR

nnmaction was developed by Hewlett-Packard Company.

## **FILES**

Windows: %NNM\_SHARED\_CONF%\props\nnmaction.properties

Parameter file used by the action server.

UNIX: \$NNM\_SHARED\_CONF/props/nnmaction.properties

Parameter file used by the action server.

## **SEE ALSO**

ovspmd(1M), ovstart(1M), ovstop(1M), ovstatus(1M)

nnmbackup.ovpl --- script used to back up NNMi data and files

## **SYNOPSIS**

 $\label{eq:nnmbackup.ovpl [-?|-h|-help] [-type (online|offline)] [-scope (config|topology|events|all)] [-force] [-archive] -target <directory>$ 

# DESCRIPTION

nnmbackup.ovpl is the main backup script for NNMi. For NNMi installations using an embedded database, the nnmbackup.ovpl script determines the directories and tables to back up using the %NNM\_DATA%\shared\nnm\backup.properties (Windows) or \$NNM\_DATA/shared/nnm/backup.properties (UNIX) file. The backup.properties file also defines any files and directories that require extra processing during the restore phase. The nnmbackup.ovpl script accepts arguments to determine things like backup scope (config, topology, events, all), backup location, and backup type (online or offline).

Before running the nnmbackup.ovpl script, make sure you have adequate storage space in the target directory. For most NNMi installations, if you have enough space to store the contents of the NNMi installation, %NNM\_DATA% (Windows), or \$NNM\_DATA (UNIX) directories, you should have adequate storage space. Check the available storage space in the following locations:

- Windows: %NnmInstallDir%
- UNIX:/opt/OV (UNIX)

If you selected the embedded database option during the NNMi installation, you can find the embedded database data storage in the %NNM\_DATA%\shared\nnm\databases\Postgres (Windows) or \$NNM\_DATA/shared/nnm/databases/Postgres (UNIX) directory.

The target directory contains all of the files applicable for the backup options you have selected, or a single tar file if you use the -archive option. Each backup operation stores files in a parent directory called nnm-bak-<TIMESTAMP> inside of target directory. Any database operations occurring during the backup are included in the backup. You can compress the files after the backup completes.

Files that require extra processing during the restore phase are stored with their full paths beneath the target\_directory/special\_files/handling\_routine directory. During the restore phase, NNMi selects files for exclusion, restoration, or merge. For more information, see the nnmrestore.ovpl reference page, or the UNIX manpage.

The nnmbackup.ovpl script includes the necessary data to perform a restore operation. You must be logged in as administrator on Windows NNMi management servers or root on UNIX NNMi management servers to run the nnmbackup.ovpl script.

### Caution

Database backups performed by the nnmbackup.ovpl script only apply to the embedded

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database. If you chose a different database at install time, the table data is not backed up using this script. File-system backups work regardless of the database type. For details about how to back up NNMi data if you select a different database at install time, see the *NNMi Deployment Reference* (available at http://h20230.www2.hp.com/selfsolve/manuals).

### **Parameters**

The nnmbackup.ovpl script supports the following options:

```
-type (online|offline)
```

This option determines the type of backup to be performed. If you specify the online option, both NNMi and the nmsdbmgr process must be running before running the nnmbackup.ovpl script. If you specify the offline option, completely stop NNMi before running the nnmbackup.ovpl script.

```
-scope (config|topology|events|all)
```

This option determines the scope of the backup operation. There are two types of data that the nnmbackup.ovpl script backs up: files in the file system and tables in the database. The -scope option value for files in the file system is always applicable, regardless of the backup type you choose (see the -type option). However, the -scope option value for tables in the database is applicable only when you run an online backup using the -type online) option. For offline scoped backups, you get the entire contents of the database, not just the scope you request. For this reason, HP recommends that you do not define scope when doing offline backups (the default is all). The scopes available are config, topology, events, and all. Each scope includes all of the data and files from the previous scope (all  $\rightarrow$  events  $\rightarrow$  topology  $\rightarrow$  config). The %NNM\_DATA%\shared\nnm\backup.properties (WNIX) file contains a list of the files and tables backed up for each scope.

### -force

If you use the -force option, the nnmbackup.ovpl script starts and stops NNMi based on the type of backup you requested. For online backups, if NNMi is not running, the nnmbackup.ovpl script starts the nmsdbmgr process (required for backups). For offline backups, if NNMi is running, the command stops all NNMi processes.

### -archive

If you provide the -archive option, the nnmbackup.ovpl script stores the backup files in a tar file in the target directory.

```
-target <directory>
```

Specifies the output directory where you want the backup files stored. The nnmbackup.ovpl script creates a parent directory named nnm-bak-<TIMESTAMP> inside the target directory where all backup files are stored. If the archive option is present, the nnmbackup.ovpl script creates a temporary directory, nnm-bak-<TIMESTAMP>, then replaces this directory with a tar file using the same name as the temporary directory.

### -?|-h|-help

Display command usage.

### NNMi Reference Pages EXAMPLES

Suppose you want to save the NNMi configuration before discovering your network, but do not want to save the discovery results. To do this, you might run a backup using the online and config options:

#./nnmbackup.ovpl -type online -scope config -target /tmp/bak/config

Suppose you want to save the NNMi configuration, discovered topology, and event data without bringing the application down. To do this, you might run a backup using the online, events, and force options:

#./nnmbackup.ovpl -type online -scope events -target /tmp/bak/evt

Suppose you want to run a regularly scheduled backup. To do this you might perform a backup using the offline and full options:

#./nnmbackup.ovpl -force -type offline -scope all -target /tmp/bak/all

## AUTHOR

The nnmbackup.ovpl script was developed by Hewlett-Packard Company.

## **FILES**

*Windows*: %NNM\_DATA%\shared\nnm\backup.properties

UNIX: \$NNM\_DATA/shared/nnm/backup.properties

## **SEE ALSO**

nnmrestore.ovpl(1).

nnmbackupembdb.ovpl — make a full backup of the NNMi embedded database.

## **SYNOPSIS**

nnmbackupembdb.ovpl [-?|-h|-help] -target <target directory> [-force]

## DESCRIPTION

Use the nnmbackupembdb.ovpl script to make a full backup of the NNMi embedded database. The contents of the backup are uncompressed and stored in a file you specify. This file must be used to restore the NNMi embedded database by using the nnmrestoreembdb.ovpl script.

Before running the nnmbackupembdb.ovpl script, make sure you have adequate storage space in the target directory. Look for the embedded database data storage in the

 $NNM_DATA\ shared\nnm\databases\Postgres (Windows) or$ 

\$NNM\_DATA/shared/nnm/databases/Postgres (UNIX) directory. Check the size of this directory to make sure the target directory has sufficient space to store the backup file. Compress the file after backup if necessary.

The backup file is created in the target directory and contains all data stored in the database at the start of the backup operation. Any statements run in the database while the backup is running are not included in the backup.

You can run this script while NNMi is running; however, you may experience temporary performance degradation. At a minimum, the nmsdbmgr process must be running for the script to be successful. If you use the -force option, the script starts the nmsdbmgr process (if it is not running), and suppresses any interactive messages.

You must be logged in as administrator on Windows systems or root on UNIX systems to run this script.

### **Parameters**

```
-target <directory>
```

Directory name in which to store the backup file. This directory must exist.

-force

If you provide this option, the script starts the nmsdbmgr process if it is not currently running.

-?|-h|-help

Display command usage.

## EXAMPLES

# nnmbackupembdb.ovpl -target /backups/nnm

You'll see these messages:

WARNING: Running this command while NNM is running, while allowed, will cause temporary performance problems. At a minimum, please make sure the nmsdbmgr process is running (ovstart nmsdbmgr).

Are you sure you want to run a full database backup now? [n]  ${\tt y}$ 

Ok, performing full embedded database backup...

NNM embedded database successfully backed up to /backups/nnm/nnm-bak.2009092906.pgd. #

## AUTHOR

nnmbackupembdb.ovpl was developed by Hewlett-Packard Company.

## **FILES**

Windows: %NNM\_BIN%\nnmbackupembdb.ovpl

UNIX: \$NNM\_BIN/nnmbackupembdb.ovpl

## **SEE ALSO**

ovstart(1M), ovstop(1M), ovstatus(1M), nmsdbmgr(1M), nnmrestoreembdb.ovpl(1M).

nnmcertmerge.ovpl - Automation of trust and key store merges into NNMi certificate stores

## **SYNOPSIS**

nnmcertmerge.ovpl [-?|-h|-help] [-keystore <file> -truststore <file>]|[-directory <directory>]

## DESCRIPTION

Use the nnmcertmerge.ovpl script to automate certificate store merges into the nnm.keystore and nnm.truststore files. The nnmcertmerge.ovpl script simplifies the task of merging all certificates when NNMi is using the Global Network Management, High Availability, or application failover features.

You must be logged in as administrator on Windows systems or root on UNIX systems or as to run this script.

## **Parameters**

nnmcertmerge.ovpl supports the following options:

-keystore <file>

If you provide this option, the target file is merged into the nnm.keystore file. This option can be provide at the same time as the -truststore option.

-truststore <file>

If you provide this option, the target file is merged into the nnm.truststore file. This option can be provide at the same time as the -keystore option.

-directory <directory>

You must use the -directory option by itself. If you provide this option, the script handles all files in the target directory as follows:

The script merges all files ending in .keystore into the nnm.keystore file.

The script merges all files ending in .truststore into the nnm.truststore file.

-?|-h|-help

Displays the command usage.

### EXAMPLES

March 2011

Merge a set of keystores and truststores with NNMi:

nnmcertmerge.ovpl -directory /tmp/AppFailoverHosts/

## AUTHOR

nnmcertmerge.ovpl was developed by Hewlett-Packard Company.

### **FILES**

The nnmcertmerge.ovpl script resides in the %NNM\_BIN% directory (Windows) or the \$NNM\_BIN directory (UNIX).

nnmchangedbpw.ovpl — change the user name and password used to authenticate with the NNMi database.

## **SYNOPSIS**

nnmchangedbpw.ovpl

## DESCRIPTION

Use the nnmchangedbpw.ovpl script to change the user name and password NNMi uses to connect to the database. This script is useful when database passwords expire, or if you need to change the database user name. Before running this script, run the ovstop command to stop NNMi.

### Note

To avoid adverse behavior after changing the database user name and password, you must stop NNMi before running the nnmchangedbpw.ovpl script. You can run this script while NNMi is running, but any new database connections created by NNMi fail during authentication.

You must be logged in as administrator on Windows systems or root on UNIX systems to run this script.

### **Parameters**

No supported parameters.

### **EXAMPLES**

Use the nnmchangedbpw.ovpl script if your organization requires frequent password changes for the NNMi database, or to change the user name NNMi uses to connect to the NNMi database.

The nnmchangedbpw.ovpl script does not display the password as you type it in.

When using the nnmchangedbpw.ovpl script, you should see the following messages:

# nnmchangedbpw.ovpl
WARNING: Please make sure NNM has been stopped before running this tool.
Failure to stop NNM could result in unexpected database failures.
Have you stopped NNM (ovstop)? [n] y
Thank you!
Please provide a database user account name.
user: mydbuser
Please provide the password for database user account.
password: mynewpw
enter password again: mynewpw

#

```
User/Password changed successfully!
```

# **AUTHOR**

nnmchangedbpw.ovpl was developed by Hewlett-Packard Company.

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### **FILES**

Windows: %NNM\_BIN%\nnmchangedbpw.ovpl

UNIX: \$NNM\_BIN/nnmchangedbpw.ovpl

### **SEE ALSO**

ovstart(1M), ovstop(1M), ovstatus(1M).

nnmchangeembdbpw.ovpl — change the password used to authenticate with the NNMi embedded database.

## **SYNOPSIS**

nnmchangeembdbpw.ovpl

## DESCRIPTION

Use the nnmchangeembdbpw.ovpl script to change the password NNMi uses to connect to the embedded database. This script is useful if you installed NNMi with the embedded database option. Only use this script if you want to change the default password that was created for the embedded database during installation. If you do not run this script, NNMi functions normally.

Before running the nnmchangeembdbpw.ovpl script, do the following:

- Run the ovstop command to stop NNMi.
- Run the ovstart nmsdbmgr command to start the nmsdbmgr process.

### Note

If the nmsdbmgr process is not running, the nnmchangeembdbpw.ovpl script fails.

After the nnmchangeembdbpw.ovpl script finishes, the embedded database password is changed to the value supplied through the interactive prompts, and the NNMi management server is reconfigured to use the new password to connect to the database.

You must be logged in as administrator on Windows systems or root on UNIX systems to run the nnmchangeembdbpw.ovpl script.

### **Parameters**

No supported parameters.

### EXAMPLES

Use the nnmchangeembdbpw.ovpl script if your organization requires frequent password changes for the NNMi embedded database, or to change the user name NNMi uses to connect to the embedded database.

The nnmchangeembdbpw.ovpl script does not display the password as you type it in.

When using the nnmchangeembdbpw.ovpl script, you should see the following messages:

WARNING: Stop NNMi and all NNMi processes before running this tool. Failure to stop NNMi could result in unexpected database failures. After stopping NNMi, run ovstart nmsdbmgr to start only the database. Have you stopped NNM (ovstop)? [n] y Thank you! Provide a new password for the embedded database user account. password: mynewpw enter password again: mynewpw Password changed successfully! #

## AUTHOR

nnmchangeembdbpw.ovpl was developed by Hewlett-Packard Company.

### **FILES**

Windows: %NNM\_BIN%\nnmchangeembdbpw.ovpl

UNIX: \$NNM\_BIN/nnmchangeembdbpw.ovpl

### **SEE ALSO**

ovstart(1M), ovstop(1M), ovstatus(1M), nmsdbmgr(1M).

nnmchangesyspw.ovpl — change the password for the system account normally set during NNMi installation.

## SYNOPSIS

nnmchangesyspw.ovpl

## DESCRIPTION

You can use the nnmchangesyspw.ovpl script to change the NNMi system password. The NNMi system password is normally set during installation and used for recovery purposes. Only use this command if you want to reset the system password that was set during NNMi installation.

Before running the nnmchangesyspw.ovpl script, run the ovstop command to stop NNMi. After running the nnmchangesyspw.ovpl script, run the ovstart command to start NNMi. This will ensure that the new value for the password is valid immediately.

You must be logged in as administrator on Windows systems or root on UNIX systems to run this script.

### **Parameters**

No supported parameters.

### EXAMPLES

You might want to change the system password if you have deleted all other user accounts with administrator privileges, and do not remember the system password value set during NNMi installation.

The nnmchangesyspw.ovpl script does not display the password as you type it in.

When using the nnmchangesyspw.ovpl script, you should see the following messages:

```
# nnmchangesyspw.ovpl
WARNING: This change may not take affect immediately unless NNM is
        restarted. Please run ovstop before executing this script,
        and ovstart after execution to ensure the change is immediate.
Would you like to continue? [n] y
Thank you!
Please provide a new password for the system user account.
password: mynewpw
enter password again: mynewpw
System password changed successfully
```

### AUTHOR

nnmchangesyspw.ovpl was developed by Hewlett-Packard Company.

## **FILES**

Windows: %NNM\_BIN%\nnmchangesyspw.ovpl

UNIX: \$NNM\_BIN/nnmchangesyspw.ovpl

## **SEE ALSO**

ovstart(1M), ovstop(1M), ovstatus(1M).

nnmcommconf.ovpl — display communication configuration information

## **SYNOPSIS**

nnmcommconf.ovpl [-u username ] [-p password] [-jndiHost host name] [-jndiPort port Default is 1099] proto <icmp | snmp> -host <hostname>

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

nnmcommconf.ovpl is a script that reads information from NNMi about how NNMi tries to communicate with a given host using a specific protocol, then displays this information. The nnmcommconf.ovpl script displays information based on either SNMP or ICMP protocols.

### **Parameters**

nnmcommconf.ovpl recognizes the following options.

-proto <protocol>

protocol: SNMP or ICMP

-host

The name of the host you plan to retrieve information from.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. The nnmcommconf.ovpl script requires this username unless a correctly configured <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. The nnmcommconf.ovpl script requires this password unless a correctly configured <u>nnm.properties(4)</u> file exists.

-jndiHost

The server JNDI host; the default is localhost.

The server JNDI port; the default is 1099.

## **EXAMPLES**

nnmcommconf.ovpl -username foo -password bar -proto icmp -host baz

By running the command as shown above, you might get the information displayed below.

address	=10.2.1.2
timeout	=2000
address	=10.2.1.2
retries	=1
enabled	=true
region name	e =default

 ${\tt nnmcommconf.ovpl}$  -username foo -password bar -proto  ${\tt snmp}$  -host baz

By running the command as shown above, you might get the information displayed below.

name	=baz	
address	=10	.2.1.1
addressFo	orced	=false
getCommur	nity	=public
timeout	=50	00
retries	=1	
port	=161	
enabled	=tri	ue
region na	ame	=default

## AUTHOR

### **FILES**

nnmcommconf.ovpl resides in the following directory:

Windows: %NNM\_BIN%\nnmcommconf.ovpl

UNIX: \$NNM\_BIN/nnmcommconf.ovpl

## **SEE ALSO**

<u>nnm.properties</u>(4), nnmcommload.ovpl(1M).

nnmcommload.ovpl --- load communication settings from a comma separated file

## **SYNOPSIS**

nnmcommload.ovpl [-u username ] [-p password] [-jndiHost hostname] [-jndiPort port Default is 1099] file <filepath | filename>

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

Use the nnmcommload.ovpl script to import communication settings for a group of devices in bulk. This is useful if the community strings are managed by a change control mechanism. You can bulk insert the assignments into NNMi. Each assignment shows up in the NNMi console as an individual entry in the Specific Node Settings tab of the Communication Configuration dialog.

If you specify hostnames as IP addresses, the nnmcommload.ovpl script does not resolve the IP addresses to fully qualified names. If you specify actual hostnames, the nnmcommload.ovpl script resolves the hostnames to their fully qualified names using DNS. This can take some time to work through large import files. For files containing more than 500 lines, the nnmcommload.ovpl script saves the entries to the database in batches of 500. After the nnmcommload.ovpl script reads 500 lines from the import file, the SNMP configuration entries for those lines will be resolved based on any existing SNMP region or default settings and saved to the database.

To perform the import, create a text file that includes the information shown below. Create one line for each device. Within each line, add the information in the order shown in the list below. Separate each value with a comma. Enter comments in lines that start with a number (#) character. The nnmcommload.ovpl script interprets the data strictly by position within the line, so you must specify a comma as a placeholder for non-specified values. You can embed commas by quoting the string. For example: "comm,string"

- Target node name or IP address (required)
- Read community string (optional)
- Management address (optional)
- Write community string (optional)
- Timeout in milliseconds (optional)
- Number of retries (optional)
- Port (optional)

- Proxy address (optional)
- Proxy port (optional)
- User name (SNMP V3 optional)
- Context name (SNMP V3 optional)
- Authentication protocol (SNMP V3 optional MD5|SHA)
- Authentication password (SNMP V3 optional)
- Privacy protocol (SNMP V3 optional DES|3DES|AES|AES192|AES256)
- Privacy password (SNMP V3 optional)
- Preferred SNMP version (optional 1|2|3)
- Enable SNMP Communication flag (optional true|false)
- Enable SNMP Address Rediscovery flag (optional true|false)
- Enable SNMP GetBulk flag (optional true|false)
- Description (optional)

For example, all of the following entries are considered valid entries:

```
hostname
hostname,
hostname,,
hostname,public
hostname,,10.2.2.3,,1000,2,161
node1,community,10.3.7.96,writecommunity
node2, community,10.3.7.95 (the space character before community will be removed)
10.2.23.34,community,10.2.23.8
```

### 10.2.23.34, community, 10.2.23.88, writecommunity, 2000, 2, 161, 10.56.22.199, 162

### **Parameters**

nnmcommload.ovpl recognizes the following options.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. The nnmcommload.ovpl script requires this username unless a correctly configured <u>nnm.properties(4)</u> file exists.

You must supply the administrator (Windows) or root (UNIX) password to run the script. The nnmcommload.ovpl script requires this password unless a correctly configured <u>nnm.properties(4)</u> file exists.

```
-jndiHost (optional)
```

The hostname of the server running the jboss application server. If you do not specify a hostname, the nnmcommload.ovpl script uses localhost as the default value.

```
-jndiPort (optional)
```

The jboss application server port. If you do not specify this port, the nnmcommload.ovpl script uses 1099 as the default value.

-file (required)

A file name or full path to a file created with the format described above containing the data to be loaded.

## **EXAMPLES**

```
nnmcommload.ovpl -user joe -password secret import.txt
nnmcommload.ovpl -user joe -password secret C:\temp\import.txt
nnmcommload.ovpl -user joe -password secret /tmp/import.txt
nnmcommload.ovpl -user joe -password secret -jndiHost myserver -jndiPort 1117 secret
import.txt
```

## AUTHOR

nnmcommload.ovpl was developed by Hewlett-Packard Company.

### **FILES**

nnmcommload.ovpl resides in the following location:

*Windows: install\_dir\bin\nnmcommload.ovpl* 

UNIX: /opt/bin/nnmcommload.ovpl

# **SEE ALSO**

<u>nnm.properties</u>(4), nnmcommconf.ovpl(1M).

nnmconfigexport.ovpl — Export the configuration to one or more files that can be imported on another system.

# SYNOPSIS

 $\label{eq:nnmconfigexport.ovpl-?|-c < configuration>[,configuration...] [-a < author_key>] [-u < username> -p < password>] [-x < file_prefix>] [-f < output file or directory>] [-v < file_prefix] [-f < output file or directory] [-v < file_prefix] [-f < output file or directory] [-v < file_prefix] [-f < output file or directory] [-v < file_prefix] [-f < output file or directory] [-v < file_prefix] [-f < output file_prefix] [-v < file_prefix] [-f < output file_prefix] [-v < file_prefi$ 

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\*username*\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

nnmconfigexport.ovpl is a Perl script that enables you to export the customized configuration to stdout, or to save it in a file.

### **Parameters**

nnmconfigexport.ovpl supports the following options:

-?

Displays the usage statement.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. The administrator username is required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. The administrator username is required unless a <u>nnm.properties(4)</u> file exists.

-c <configuration>[,configuration...]

Exports the XML schema for the specified configuration. Use a comma separated list for multiple configurations. If there are multiple configurations, you must specify a directory when using the -f option.

Valid configurations:

account

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Exports user accounts, user roles, user principals, user groups and user account mappings.

author

Exports authors. Can be optionally filtered using the -a argument.

#### customCorrelation

Exports custom correlation configuration. Can be optionally filtered using the -a argument.

comm

Exports communication configuration. Does not export SNMPv3 communication configuration and device credentials. The encryption algorithms used with this data rely on an internal key specific to the NNMi installation. It is not possible to import this data, so the data is excluded from the export.

#### custpoll

Exports custom poller configuration.

#### device

Exports device profiles. Can be optionally filtered using the -a argument.

disco

Exports discovery configuration (does not include seeds).

#### discoseed

Exports discovery seeds.

#### ifgroup

Exports interface groups.

#### iftype

Exports interface types (IfTypes). Can be optionally filtered using the -a argument.

incident

Exports incident configuration. Can be optionally filtered using the -a argument.

menu

Exports menus. Can be optionally filtered using the -a argument.

#### menuitem

Exports all menu items configured for the Actions menu. If you supply the -a argument, the output contains the related parent menus and sub-menus.

#### mibexpr

Exports MIB expressions. Can be optionally filtered using the -a argument.

#### monitoring

Exports monitoring configuration.

nodegroup

Exports node groups.

#### ngmap

Exports node group maps. The node host names must match between both NNMi management servers for the node coordinates to import successfully.

#### rams

Exports one or more route analytics management server configurations.

NOTE: The Query Password field of a RAMS configuration will only be valid when you import it into the same NNMi installation on the same system. If you import the Query Password field into a different system, you will have to re-enter the Query Password.

#### security

Exports security groups and tenants.

#### securitymappings

Exports security group mappings.

#### station

Exports NNM 6.x/7.x management stations.

status

Exports the node group status configuration.

#### ui

Exports user interface settings.

#### all

Exports all of the available configuration areas. If you use this option, you must direct the output to a directory.

```
-a <author_key>
```

Export only the configuration items created by author with key author\_key in a special XML format used for incremental import. The nnmconfigimport.ovpl script automatically detects this XML format. You do not need to use a special option when using the nnmconfigimport.ovpl script. This option is only available for configurations author, customCorrelation, device, incident, menu, and menuitem. You can find available author keys by doing an export of authors. See the examples shown below.

-f <output file or directory>

Saves the output to the specified file or directory.

-x <file\_prefix>

A file name prefix that is used to name files when the specified output is a directory. Files will be named <prefix>-<area>.xml.

## **EXAMPLES**

nnmconfigexport.ovpl -u myusername -p myadminpassword -c comm

Exports the communication configuration to stdout.

```
nnmconfigexport.ovpl -u myusername -p myadminpassword -c comm,disco -f /tmp -x my
```

Exports the communication and discovery configurations to files named /tmp/my-comm.xml and /tmp/my-disco.xml.

nnmconfigexport.ovpl -u myusername -p myadminpassword -c author

Exports all authors with author key and label to stdout.

```
nnmconfigexport.ovpl -u myusername -p myadminpassword -c menuitem -a
com.mycorp.nnm.author -f /tmp/mycorpmenuitems.xml
```

Exports the menuitem configuration created by author with key com.mycorp.nnm.author to the /tmp/mycorpmenuitems.xml file.

### **AUTHOR**

nnmconfigexport.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

nnmconfigimport.ovpl(1M), nnm.properties(4).

nnmconfigimport.ovpl — import the nnmconfigexport.ovpl XML output to the NNMi database.

## **SYNOPSIS**

 $\label{eq:nnmconfigimport.ovpl-?|[-u < username > -p < password >] -f < input file or directory > [-x < file prefix >] [-memory < number of megabytes >] [-timeout < time in seconds >] \\$ 

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

nnmconfigimport.ovpl is a Perl script that enables you to import the output from the nnmconfigexport.ovpl script into the NNMi database.

NOTE: When performing an action import, you must restart the NNMi console (sign out, then sign in) for the changes to take effect.

### **Parameters**

The nnmconfigimport.ovpl script supports the following options:

-?

Displays the usage statement.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-f <input file or directory>

Imports the configuration XML file, or, if you specify a directory, imports all of the files in that directory.

-x <file prefix>

The file prefix used to filter files to be imported when you use the -f option and specify a directory.

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Any files within the specified directory that are named *<file prefix>-\** will be imported, then sorted by dependencies.

-memory <memory in megabytes>

The amount of memory available for the nnmconfigimport.ovpl script to perform work. The default is 512 megabytes. Larger import files may require this value be set to 1024 or 2048. This option is not presented in the usage message since it is used by the nnmconfigimport.ovpl script and not passed to the actual import tool.

-timeout <time in seconds>

The amount of time available for the import of a particular file to complete. Some import types such as incidents might require a larger timeout value based on the amount of data. The default is 1800 (30 minutes). This option is not presented in the usage message since it is used by the nnmconfigimport.ovpl script, and not passed to the actual import tool.

### NOTES

By default the nnmconfigimport.ovpl script replaces the existing configuration.

In order to add configuration elements, you must run the nnmconfigexport.ovpl script with a provided author\_key.

The nnmconfigimport.ovpl script automatically detects if you ran the nnmconfigexport.ovpl script using a provided author\_key, and adds configuration entries instead of replacing them.

The Query Password field of a RAMS configuration will only be valid when you import it into the same NNMi installation on the same system. If you import it into a different system, you will need to re-enter the Query Password.

Never edit the nnmconfigexport.ovpl output files before importing them.

### EXAMPLES

nnmconfigimport.ovpl -u system -p openview -f /tmp/nnmconfig.xml

Imports the customized configuration in the /tmp/nnmconfig.xml file to the NNMi database. (You must provide an NNMi username and password. In this case, the username is system and the password is openview.)

### AUTHOR

nnmconfigimport.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

nnmconfigexport.ovpl(1M), nnm.properties(4).

nnmconfigpoll.ovpl — poll a node for discovery information

## **SYNOPSIS**

# DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmconfigpoll.ovpl script sends a request to the discovery service to poll the node for discovery information. The node must exist in the discovered topology. The *node* parameter you enter can be a node name in the topology or an IP address associated with a node.

Running the nnmconfigpoll.ovpl script starts a layer 2 connectivity analysis for the node. NNMi displays status messages for the layer 3 discovery information in the NNMi console as the discovery service polls the device.

The nnmconfigpoll.ovpl script polls for discovery information. To poll for status information, use the the nnmstatuspoll.ovpl script.

## **Parameters**

The nnmconfigpoll.ovpl script recognizes the following parameters and options:

-v

Display verbose information about the discovery poll.

```
-t <timeout in secs>
```

The client waits timeout in secs seconds for a response.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-jndiHost <serverName>

The server JNDI host; default is localhost.

-jndiPort <port>

The server JNDI port; default is 1099.

### **EXAMPLES**

The following examples show how to use the nnmconfigpoll.ovpl script to poll a node using different options.

Poll a node using its node name.

nnmconfigpoll.ovpl -u username -p password thisnode

Poll a node using its fully qualified node name.

nnmconfigpoll.ovpl thisnode.x.y.z

Poll a node using its IP address.

nnmconfigpoll.ovpl 10.97.247.129

### AUTHOR

nnmconfigpoll.ovpl was developed by Hewlett-Packard Company.

### FILES

Windows: %NNM\_BIN%\nnmconfigpoll.ovpl

UNIX: \$NNM\_BIN/nnmconfigpoll.ovpl

### **SEE ALSO**

nnmstatuspoll.ovpl(1M).

nnmconnedit.ovpl — make corrections to the L2 (layer 2) connection topology. Users can add and delete connections.

## SYNOPSIS

 $\label{eq:linear} \begin{array}{l} \texttt{nnmconnedit.ovpl-f} \textit{ corrections file -t [add|delete] [-help] [-u < \texttt{username} > -p < \texttt{password} > ] [-jndiHost < \texttt{hostName} > Default: localhost] [-jndiPort < \texttt{port} > Default: 1099] \end{array}$ 

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

Due to a variety of factors, NNMi L2 connection topology discovery can contain inaccuracies. The nnmconnedit.ovpl script provides a way for the user to add connections to or delete connections from NNMi. The administrator creates the *corrections file* and must follow the following structured XML format:

```
<connectionedits>
    <connection>
    <operation>add or delete</operation>
    <node>name, long name or IP address</node>
    <interface>ifName, ifAlias, ifDescr or ifIndex</interface>
    <node>name, long name or IP address</node>
    <interface>ifName, ifAlias, ifDescr or ifIndex</interface>
    </connection>
</connection>
```

Where:

operation identifies whether the connection is to be added or deleted.

node is identified by its short name, long name (DNS name) or IP address.

*interface* is identified in order by ifIndex, ifName, ifDescr, or ifAlias. This value must be unique. Note that using ifIndex is discouraged due to the interface renumbering feature supported by some devices. For non-SNMP nodes, ifAlias or ifDescr are recommended.

For each connection element, there must be at least two nodes and two interfaces. The number of nodes and interfaces must be equal. Each node and interface pair is known as an endpoint, so a single connection element can have two or more endpoints specified. Multiple connection elements are permitted within a corrections file.

When adding a connection, each endpoint will be removed from any existing connection of which it may be a member, then added to the new connection. If there are more than two endpoints specified in the connection element, the connection will appear on maps as a shared-media connection symbol. If the NNMi Reference Pages 9.10 March 2011 connection element specifies a connection which already exists in the NNMi database, then nothing will be changed.

When deleting a connection, nothing will be changed unless a connection with the same set of endpoints already exists in the NNMi database. In that case, all of the specified endpoints will be left in a disconnected state.

### **Parameters**

The nnmconnedit.ovpl script recognizes the following parameters and options:

```
-f corrections file
```

Specifies the name of the file that contains the formatted connection add and delete directives.

```
-t [add | delete]
```

Generates a template file that can be used to create a corrections file. Specifying *add* will create an add operation template while specifying *delete* will generate a delete operation template.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-jndiHost <serverName>
```

The server JNDI host; default is localhost.

```
-jndiPort <port>
```

The server JNDI port; default is 1099.

-help

This option displays the script usage information.

## **EXAMPLES**

Suppose that NNMi connection discovery was unable to find the L2 connection between two switches manufactured by different vendors. To remedy this, go to each device and get the node names and interface names that need to be connected. Next, create the add template file, mychg.xml, passing the -t option of the nnmconnedit.ovpl script. Next, edit the file, filling in the node and interface information. Save your changes in the mychg.xml file.

The following is an example of the mychg.xml (add template) file:

Finally, run the nnmconnedit.ovpl script, passing the mychg.xml file with the -f option.

nnmconnedit.ovpl -f mychg.xml

Suppose that NNMi connection discovery creates an L2 connection where none should exist. To remedy this, get the node names and interfaces involved in the incorrect connection. Then create the mychg.xml (delete template) file, passing the -t option of the nnmconnedit.ovpl script. Next, edit the file by filling in the node and interface information. Save your changes in the mychg.xml file.

The following is an example of the mychg.xml (delete template) file:

Finally, run the nnmconnedit.ovpl script, passing the mychg.xml file with the -f option.

nnmconnedit.ovpl -u username -p password -f mychg.xml

# AUTHOR

nnmconnedit.ovpl was developed by Hewlett-Packard Company.

### **FILES**

None

## See Also

None

nnmdeleteattributes.ovpl — script to delete custom attributes from a comma separated values (CSV) file for both nodes and interfaces.

## SYNOPSIS

 $\label{eq:stributes.ovpl [-?] [-u < username > -p < password >] [-t < object type >] [-f < csv_filename >] [-s < csv formatted line >] \\$ 

## DESCRIPTION

nnmdeleteattributes.ovpl allows custom attributes to be deleted from a comma separated values (CSV) file, such as a .csv file from Microsoft<sup>TM</sup> Excel. This command is useful if you have previously created custom attributes that are no longer needed. This command will delete attributes from either nodes or interfaces. For nodes, once the attributes are deleted, any nodes in a node group formed by referencing those attributes will disappear from the node group.

You must either be logged on to the system as root/administrator, or supply a user/password with NNMi "Administrator" authority to run this command.

### **Parameters**

nnmdeleteattributes.ovpl supports the following options:

-?

Prints the usage statement.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-t <object type>
```

Supply the object type to load attributes on. Must be either "node" or "interface".

-f <csv\_filename>

Supply the CSV file name (with path, e.g. /opt/tmp/mynodes.csv) that lists the custom attributes to delete.

-s <csv formatted line>

# Syntax of Comma Separated File for Nodes

The CSV file you supply must have the following syntax for deleting attributes from nodes.

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Attribute Name

The name of the custom attribute.

Additional attribute names may be specified on the same line or on a separate line with the same node DNS|IP Address.

Example lines:

192.168.1.1, Project, Service Type

192.168.1.1, Asset Tracking

192.168.2.2, Project, Service Type, Asset Tracking

# Syntax of Comma Separated File for Interfaces

The CSV file you supply must have the following syntax for deleting attributes from interfaces.

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Interface Id

Specify the identifier of the interface on the node specified in the previous field. The value may be the interface index, alias, name or description and is searched in this same order. All matching interfaces have the attribute(s) loaded. This field is compulsory.

• Column 3(C) : Attribute Name

The name of the custom attribute.

Additional attribute names may be specified on the same line or on a separate line with the same node

192.168.1.1,1001,Project,Service Type

192.168.1.1,1001,Asset Tracking

192.168.2.2, A1, Project, Service Type, Asset Tracking

# **Use of Microsoft Excel**

Microsoft Excel is a handy tool to create comma separated files, but .csv files do not maintain the Excel spreadsheet's column width, comments, etc. It is recommended that you store a nnmdeleteattributes.ovpl input file as a native .xls format, and then perform File:Save As... to create a .csv file. Then you can add Excel comments to the file, make columns wider, and you do not need to worry about escaping the comma character.

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# EXAMPLES

Sample CSV file contents for nodes: 192.168.2.2,Project,Service Type,Asset Tracking To delete the Node custom attributes from a CSV file: nnmdeleteattributes.ovpl -t node -u system -p myadminpasswd -f /tmp/test.csv To delete the Node custom attributes from the command line: nnmdeleteattributes.ovpl -t node -u system -p myadminpasswd -s "192.168.1.1,Project" Sample CSV file contents for interfaces: 192.168.2.2,1001,Project,Service Type,Asset Tracking To delete the Interface custom attributes from a CSV file: nnmdeleteattributes.ovpl -t node -u system -p myadminpasswd -f /tmp/test.csv To delete the Interface custom attributes from the command line:

nnmdeleteattributes.ovpl -t node -u system -p myadminpasswd -s "192.168.1.1, Project"

# AUTHOR

nnmdeleteattributes.ovpl was developed by Hewlett-Packard Company.

# FILES

\$NNM\_BIN/nnmdeleteattributes.ovpl

## **SEE ALSO**

nnmloadattributes.ovpl(1M), nnmloadnodegroups.ovpl(1M), nnm.properties(4).

nnmdeleteurlaction.ovpl — delete URL actions and menus for the supplied author key.

### **SYNOPSIS**

```
nnmdeleteurlaction.ovpl [-h | -help | -?] <authorKey>
```

### DESCRIPTION

The nnmdeleteurlaction.ovpl Perl script enables you to delete URL actions and menus by providing the author key to actions or menus.

NOTE: When using the nnmdeleteurlaction.ovpl script to delete an action or menu, you must restart the NNMi console (sign out; then sign back in) to implement the changes.

Use the nnmdeleteurlaction.ovpl script to remove (during uninstall) any actions or menus created during the installation of NNMi iSPIs or third party integrations.

### **Parameters**

nnmdeleteurlaction.ovpl supports the following options:

```
-? | -h | -help
```

Displays the usage statement.

### EXAMPLES

nnmdeleteurlaction.ovpl com.hp.nms.author.nas

Deletes the URL actions and menus that are created when the NAS integration is installed.

## AUTHOR

nnmdeleteurlaction.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

<u>nnmconfigimport.ovpl(1M)</u>, <u>nnmconfigexport.ovpl(1M)</u>.

nnmdisableperfspi.ovpl — disables the optional HP iSPI for Performance Smart Plug In for use on the local NNM system

## SYNOPSIS

nnmdisableperfspi.ovpl

## DESCRIPTION

In order for NNM to stop collecting performance data and passing it to the Performance SPI for aggregation and reporting, several configuration changes must take place.

- 1. The SPI licenses must be uninstalled/disabled.
- 2. URL launch actions must be removed and will no longer show up in the NNM UI.
- 3. The Single Sign On service must be un-deployed from the NNM jboss server.

Disabling the license will prevent future data collection of performance metrics as well as disabling the ability to enable or disable performance monitoring of interfaces through monitoring configuration.

URL launch actions are removed from the NNM UI menu system. All NNM consoles that are currently running will need to exit and log back in before the action menu will reflect these changes. The URL actions that are removed are as follows: Reporting - Home Page, Reporting - Report Menu, Reporting - Data Explorer Live, Reporting - Chart Detail Live, Reporting - Path Health.

The ssoservlet that provides for single sign on between NNM and iSPI for Performance will be removed.

This script currently will not remove the user or shared drive that was setup during the nnmenableperfspi.ovpl script. These will need to be removed manually. Refer to the NNM iSPI for Performance documentation for additional information.

## ENVIRONMENT

This script must be run with full administrative privileges and requires standard NNM environment variables to be configured.

## AUTHOR

nnmdisableperfspi.ovpl was developed by Hewlett-Packard Company.

## FILES

The nnmdisableperfspi.ovpl script removes the ssoservlet.war from the jboss structure.

## **SEE ALSO**

nnmlicense.ovpl(1M), nnmenableperfspi.ovpl(1M).

nnmdiscocfg.ovpl

# SYNOPSIS

nnmdiscocfg.ovpl -autodisco rule=rulename rangetype=ignore/include [ -f ipAddressRangeFile | -n
ipAddressRanges] [-u <username> -p <password>] [-jndiHost <hostName> Default: localhost] [-jndiPort
<port> Default: 1099]

nnmdiscocfg.ovpl -excludeipaddrs [ -f ipAddressRangeFile | -n ipAddressRanges] [-u <username> -p <password>] [-jndiHost <hostName> Default: localhost] [-jndiPort <port> Default: 1099]

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmdiscocfg.ovpl script permits the addition of ip address ranges to existing auto-discovery rules. The auto-discovery ip address ranges control how discovery finds devices in your network.

You can add discovery IP address range exclusion filters to prevent the creation of unwanted ip addresses in the NNMi topology. NNMi does not associate addresses matching the filters with nodes or interfaces and none of these nodes or interfaces will show up in the IP Address inventory. IP address range filters do not control how auto-discovery locates and identifies devices in your network.

#### **Parameters**

The nnmdiscocfg.ovpl script recognizes the following parameters and options:

-autodisco rule=*ruleName* rangetype=ignore|include

Add ip address ranges to an existing auto-disovery rule specified by *ruleName*. The ranges can be included in the rule by specifying rangetype=include or ignore.

-excludeipaddrs

Add ip address ranges to the discovery Excluded IP Addresses configuration.

-f ipAddressRangeFile

Specify a text file for the script to read that contains the IP address ranges.

-n *ipAddressRanges* 

Specify IP address ranges to load directly from the command line, with each range separated by a

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-jndiHost <serverName>
```

The server JNDI host; default is localhost.

-jndiPort <port>

The server JNDI port; default is 1099.

## **EXAMPLES**

Add a list of IP address ranges to an existing auto-discovery rule:

```
nnmdiscocfg.ovpl -autodisco rule=bld1floor2 rangetype=include -n 10.2.112.21-34 10.2.112.36 10.1.*.1-98
```

Add an IP address range to the IP Address exclusion configuration:

```
nnmdiscocfg.ovpl -u username -p password -excludeipaddrs -n 198.2.*.117
```

Load IP address range from a file named privateNet1.txt located on your local files system in the tmp directory:

```
nnmdiscocfg.ovpl -autodisco rule=bld1floor2 rangetype=exclude -f /tmp/lab3devices.txt
```

Load IP address range filters from a file named ignoreAddresses.txt located on your local files system in the tmp directory:

nnmdiscocfg.ovpl -excludeipaddrs -f /tmp/ignoreAddresses.txt

## AUTHOR

nnmdiscocfg.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

nnmnoderediscover.ovpl(1M), nnm.properties(4)

nnmenableperfspi.ovpl — enable the optional HP iSPI for Performance Smart Plug In for use on the local NNM system

## **SYNOPSIS**

nnmenableperfspi.ovpl

## DESCRIPTION

In order for NNM to begin collecting performance data and pass it to the Performance SPI for aggregation and reporting, several configuration changes must take place.

- 1. The SPI license must be enabled.
- 2. URL launch actions must be loaded into the NNM UI.
- 3. Drive space may need to be shared with the Performance SPI, possibly requiring a new operating system user to be configured on the NNM system.
- 4. The Single Sign On service must be deployed into the NNM jboss.

Enabling the license:

The license is initially enabled using an 'Instant On' setting which allows the Performance SPI to function for a limited period of time. The script achieves this by running the nnmlicense.ovpl command with the options 'PerfSPI -installIO'

Loading URL Launch Actions:

Five separate launch actions are added into the NNM UI menu system. They are as follows: Reporting - Home Page, Reporting - Report Menu, Reporting - Data Explorer Live, Reporting - Chart Detail Live, Reporting - Path Health. The Path Health action is only available from the path view sections of the UI.

Sharing Drive Space (Required only when NNM and iSPI for Performance are on separate systems):

The directory where performance data is deposited by NNM is \$NnmInstallDir/data/shared/perfSpi/datafiles. This must be shared with the Performance SPI system. When the Performance SPI and NNM co-exist on the same system there is no need to configure a network share of the directory structure. If NNM is installed on HPUX, Solaris, or Linux the script will attempt to configure either NFS or Samba for the correct network share. NFS should be used if NNM and the iSPI for Performance are both on Unix (HPUX, Solaris or Linux) systems. Samba should be used if NNM is on an HPUX, Solaris, or Linux system and the iSPI for Performance is on a Windows system. If both NNM and the iSPI for Performance are on Windows the script can configure a Windows shared folder for you. When Windows file sharing or Samba is used to share the performance data folder, there is a requirement to have use a shared OS account (identical username/password) on both the NNM machine (for exporting the share) and on the iSPI for Performance machine (for accessing the share). The nnmenableperfspi.ovpl script will establish this user account for you on the NNMi machine. Alternatively, the script offers you the opportunity to configure the operating

Deploying the Single Sign On Service:

Users of NNM operate in an authenticated environment - they must provide a username and password in order to access the system. Those same credentials should be used to distinguish users of the Performance SPI system and to avoid double log in issues. In order for this to happen, NNM is configured as a 'trusted provider' for the Performance SPI. The SPI and NNM must be installed on systems which reside within the same network domain. The ssoservlet is part of the enabling apparatus for this functionality.

The following information will be required in order to complete the enablement:

- Fully qualified host name of the NNM system (Note: the enablement script will provide a default value which should work in most cases)

- Fully qualified host name of the SPI system - required only if the SPI will be installed on a remote server.

- Username and Password for enabling Windows or Samba file sharing - required only if the SPI will be installed on a remote \*Windows\* server.

## **ENVIRONMENT**

This script must be run with full administrative privileges and required standard NNM environment variables to be configured.

# AUTHOR

nnmenableperfspi.ovpl was developed by Hewlett-Packard Company.

## **FILES**

The nnmenableperfspi.ovpl script loads URL actions into the NNM menu system. These actions are stored as XML files in the newconfig directory of the NNM installation. It also places ssoservlet.war into the jboss structure. The war file is stored within the newconfig directory prior to deployment.

## SEE ALSO

 $nnmlicense.ovpl(1M)\ ,\ nnmconfigimport.ovpl(1M)\ ,\ nnmconfigexport.ovpl(1M)\ ,\ nnmdisableperfspi.ovpl(1M)\ .$ 

nnmhealth.ovpl — Prints NNMi health information

## **SYNOPSIS**

 $\label{eq:linear} \begin{array}{l} \texttt{nnmhealth.ovpl} \ [-u < & \texttt{username} > -p < & \texttt{password} > \] ( \ \texttt{-print} \\ [quiet|brief|detailed|conclusions|verbose|agents|history] \ | \ \texttt{-activate} < & \texttt{conclusions} > \ | \ \texttt{-suppress} \\ < & \texttt{conclusions} > \ ) \end{array}$ 

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmhealth.ovpl script prints out information about the internal health of NNMi. It supports several levels of output from no output, except for the return code (quiet), to the full health report (verbose).

In addition to viewing the current health of NNMi, you might use the nnmhealth.ovpl script to suppress or activate individual health conclusions. The administrator might suppress health conclusions if he or she is aware of the problem and does not want NNMi to report more warnings until the issue is resolved.

If the administrator modifies the suppressed list using the nnmhealth.ovpl script, the modifications take effect on the next health scan. The modifications to the suppressed list continue until the administrator activates them or until the administrator restarts NNMi.

## **Parameters**

The nnmhealth.ovpl script supports the following options:

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-print <level>

Prints information about the health of NNMi. The level can be one of the following: brief|conclusions|detailed||quiet|agents|verbose

-print brief: Prints the overall system status. The value can be one of the following:

Normal

Warning

Minor

Major

Critical

-print conclusions: Prints the active and surpressed conclusions.

-print detailed: Prints detailed system health information.

-print agents: Prints the registered agents.

-print quiet: Returns an integer value that represent the system status. The value can be one of the following:

- 0 Normal
- 1 Warning
- 2 Minor
- 3 Major
- 4 Critical

-print verbose [-filter AgentList]: Prints verbose information for all registered agents. Optionally you can supply a list of comma separated agent names using the -filter option. The verbose output is for support use only.

-suppress <conclusions>

Configures the supplied conclusions to be suppressed until NNMi is restarted or until the conclusion is activated again. Specify conclusions as a comma separated list. You can find active conclusions using the -print conclusions option.

Note that suppressing a conclusion does not imply it would otherwise be active.

-activate <conclusions>

Removes the supplied conclusions from the suppressed list. Specify the conclusions as a comma separated list. You can find suppressed conclusions available to be activated by using the -print conclusions option.

#### -help

Prints the usage statement.

#### NNMi Reference Pages EXAMPLES

nnmhealth.ovpl -u username -p password -print brief

Prints the overall status of NNMi.

nnmhealth.ovpl -u username -p password -print detailed

Prints the current list of health warnings.

nnmhealth.ovpl -u username -p password -print agents

Prints the current list of registered agents that report health related information.

nnmhealth.ovpl -u username -p password -print history

Prints history information of registered health agents..

nnmhealth.ovpl -u username -p password -suppress "SystemLowSwap,SystemLowSwapPercent"

Configures NNMi to skip checking the health of swap space in abolute terms and also as a percentage.

nnmhealth.ovpl -u username -p password -activate "SystemLowSwap"

Configures NNMi to resume checking for the SystemLowSwap conclusion.

## AUTHOR

nnmhealth.ovpl was developed by Hewlett-Packard Company.

nnmincidentcfg.ovpl --- create incident configurations from SNMP MIBs

## **SYNOPSIS**

nnmincidentcfg.ovpl [ [ [-loadTraps mib\_module\_name [-authorLabel author\_label -authorKey author\_key]] | -deleteAuthor author\_key | -deleteCategory category\_key | -deleteFamily family\_key | disableAllTraps <true/false> [-u username] [-p password] ]

## DESCRIPTION

nnmincidentcfg.ovpl is used to create incident configurations for SNMP traps defined in a TRAP-TYPE or NOTIFICATION-TYPE macro in an SNMP MIB file. To load a MIB into NNMi for defining MIB Expressions or to display numeric SNMP Object Identifiers as text, use the nnmloadmib.ovpl command.

The created incident will have the following values, which can then be manually updated with the NNMi user interface:

- 1. Name will be set to the name of the trap/notification in the MIB file.
- 2. Oid will be set to the oid of the trap/notification in the MIB file.
- 3. Enable will be set to "true."
- 4. Category will be set to "Status."
- 5. Family will be set to "Node."
- 6. Severity will be set to "Normal."
- 7. Message Format will be set to the name of the incident configuration.
- 8. Description will be set to the trap/notification description in the MIB file.

The created incident can be accessed using the Incident Configuration view. This can be further customized as required.

nnmincidentcfg.ovpl supports a special annotation called *#SUMMARY*. The value for the **#SUMMARY** annotation will be used as Message Format value in the created incident configuration entry. This annotation is applied to the MIB file just after the trap description as a MIB comment. The following shows an example of this:

```
MyTrap TRAP-TYPE
ENTERPRISE hp
VARIABLES {
    serverName, trapTime, volumeName, volumeNum
}
DESCRIPTION "The disk volume is out of space. Please consult
your sysop, and/or the proper manual."
--#SUMMARY "Volume $1 on system $2 is out of space."
    Page 82
```

#### **Parameters**

nnmincidentcfg.ovpl supports the following options:

```
-loadTraps <mib_module_name>
```

Specify the MIB module name that has the trap definitions. nnmincidentcfg.ovpl parses trap/notification definitions (TRAP-TYPE or NOTIFICATION-TYPE macros) found in the MIB module, and creates incident configurations for each entry.

-authorLabel <author\_label>

Specifies the label of the author for the target incident configurations. This is an optional parameter. If author label is specified, then author key must also be specified.

```
-authorKey <author_key>
```

Specifies the key of the author for the target incident configurations. This is an optional parameter. If author key is specified, then author label must also be specified. It is recommended that java packaging notation with your company's domain be used, such as com.example.nnm.author.

-deleteAuthor <author\_key>

It may be desirable to delete an Author that is no longer being used by the incident configuration. This option may be used to delete an Author by specifying the Author key value as long as no configurations reference the Author object.

-deleteCategory <category\_key>

It may be desirable to delete a Category that is no longer being used by the incident configuration. This option may be used to delete a Category by specifying the Category key value as long as no incidents or incident configurations reference the Category object.

-deleteFamily <family\_key>

It may be desirable to delete a Family that is no longer being used by the incident configuration. This option may be used to delete a Family by specifying the Family key value as long as no incidents or incident configurations reference the Family object

-disableAllTraps <true | false >

If *true* all traps should be loaded as disabled in the incident configuration. The default value is *false*, meaning the incident configuration is enabled by default.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

nnmincidentcfg.ovpl -loadTraps "CISCO-VTP-MIB" -authorLabel "Cisco" -authorKey com.example.cisco.nnm.author

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nnmincidentcfg.ovpl -loadTraps "mpls"

# AUTHOR

nnmincidentcfg.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

RFC 2578 Structure of Management Information Version 2 (SMIv2)

RFCs 1155, 1212, 1215: SNMP Version 1 Structure of Management Information

RFCs 1902, 1903, 1904: SNMP Version 2 Structure of Management Information

nnmloadmib.ovpl(1M),

<u>nnm.properties(4)</u>.

nnmldap.ovpl — reload or view LDAP configuration.

## **SYNOPSIS**

nnmldap.ovpl -reload | -info | -diagnose <username> | -encrypt <password>

## DESCRIPTION

nnmldap.ovpl is a script that enables you to reload, view or diagnose changes to the Lightweight Directory Access Protocol (LDAP) sign-in configuration without restarting jboss.

### **Parameters**

nnmldap.ovpl supports the following options:

-info

Displays the LDAP configuration, such as

```
Configuration=providerURL:"ldap://example.com:636/". Number of available Incident assignment users:0
```

-reload

Reloads the LDAP configuration.

-diagnose <username>

Verifies configuration in the ldap.properties file by attempting to access *<username>* in the Directory Service using the LDAP configuration parameters. This command will respond with information to help you diagnose LDAP configuration problems.

<username> must be a valid username in the Directory Service. It is the same name that is used in the NNMi console username prompt of the NNMi login screen.

```
-encrypt <password>
```

Encrypts the supplied LDAP bind password so that it can be safely stored in the ldap.properties file.

The output of this command should be copied into the bindCredential property in the ldap.properties file. Encrypted passwords start with the {ENC} prefix.

Encrypted passwords can only be decrypted by the same NNMi which created them. If the database is reset or the properties are copied to a new NNMi system then this command will need to be re-run to generate a new encrypted password.

nnmldap.ovpl -info

Returns the current LDAP configuration.

nnmldap.ovpl -reload

Reads modifications to the ldap.properties file (such as enabling or disabling LDAP).

nnmldap.ovpl -diagnose <username>

Shows configuration parameters for the ldap.properties file, and verifies that information can be extracted from the Directory Service.

nnmldap.ovpl -encrypt password

Returns the encrypted value of the supplied password string. For example: {ENC}Mgnb1w007XYYenHvAFf3dQ==

## AUTHOR

nnmldap.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

nnmsso.ovpl(1M), ldap.properties(4).

nnmlicense.ovpl - administer Network Node Manager licensing

## **SYNOPSIS**

 $\texttt{nnmlicense.ovpl} \; [-h \mid -help]$ 

nnmlicense.ovpl [ <PRODUCT> [-nosync] [(-g|-gui)|(-install|-f <lic\_file>] ]

The -f|-install option installs license passwords into the licensing database.

## DESCRIPTION

nnmlicense.ovpl provides license management for HP Network Node Manager (NNMi). License management includes the ability to retrieve license passwords from Hewlett-Packard, installing license passwords from a file, the removal of license passwords, and reporting valid licenses.

There are two steps to adding a license: updating the license database and notifying the running NNMi processes that new license information is available. The -nosync option performs the former but does not notify NNMi. If the -nosync option is not specified, the running NNMi system is automatically notified; it is not necessary to stop and restart NNMi.

The -nosync option allows you to perform multiple licensing tasks (e.g. removing a license and installing a replacement license). You then notify NNMi with the following:

nnmlicense.ovpl NNM

The -g|-gui option opens the license management GUI, which provides access to most license management capabilities:

Retrieve/Install License Key

Enables a license password to be retrieved from Hewlett-Packard.

Install/Restore License Key

Installs license passwords from a text file.

Request License Key through Email/Fax

Provides the ability to to request a license for systems that cannot transfer data to Hewlett-Packard.

Report License Key

Reports license information for the particular product.

Backup License File

Enables the backing up of a license file before installing or removing licenses.

Removes license keys (usually temporary or emergency licenses provided by Hewlett-Packard).

Recover License Key

Adds back licenses that were previously removed.

The license management GUI enables multiple operations before updating the running NNMi system. For example, you can replace a license by removing the old license, and then adding a new one in its place.

### **Parameters**

#### PRODUCT

The short name for the product being licensed.

-nosync

Prevents synchronization with the running NNMi system.

-g|-gui

Starts the license management GUI.

```
-f|-install <lic_file>
```

Install the license contained in the specified license file

## **EXAMPLES**

To install a license password contained in a file named "license.txt", perform the following:

\$NnmInstallDir/bin/nnmlicense.ovpl NNM -f license.txt

This will update the license database and notify NNMi of the licensing change. To avoid notifying NNMi, the -nosync option can be provided:

\$NnmInstallDir/bin/nnmlicense.ovpl NNM -nosync -f license.txt

The following example demonstrates replacing a license with a new one. Suppose the customer is given a temporary license for the NNM product, with a capacity of 500 nodes. Sometime later this customer receives their official license. The temporary license must first be removed the permanent license is accepted. This can be done using the license management GUI. First remove the temporary license (Remove License Key), and then add the permanent license (Install/Restore License Key). The running NNMi system is updated when they exit the GUI.

## AUTHOR

nnmlicense.ovpl was developed by Hewlett-Packard Company.

\$NnmInstallDir/misc/nms/lic/NNM.pdf

Product definition file used by licensing.

\$NnmDataDir/shared/nnm/conf/licensing/NNM.bin

Data file representing the license information that is consumed by ovjboss.

<drive>:\Program Files (x86)\Common Files\Hewlett-Packard\HPOvLIC

Program files and data files for licensing on Microsoft Windows systems.

/opt/OV/HPOvLIC

Program files for licensing on UNIX-based systems.

/var/opt/OV/HPOvLIC

Data files for licensing on UNIX-based systems.

## **SEE ALSO**

Installation Guide for future details on licensing.

nnmloadattributes.ovpl — script to load custom attributes from a comma separated values (CSV) file for nodes and interfaces.

## **SYNOPSIS**

 $\label{eq:nnmloadattributes.ovpl [-?] [-u < username > -p < password >] [-t < object type >] [-f < csv_filename >] [-r < true / false >] [-s < csv formatted line >] [-s$ 

## DESCRIPTION

nnmloadattributes.ovpl allows custom attributes to be loaded from a comma separated values (CSV) file, such as a .csv file from Microsoft<sup>TM</sup> Excel. This command is useful if you have a large number of nodes or interfaces that are defined in an external datastore, and you would like to load these attributes into NNM. For nodes, after loading into NNM you can use the Node Group forms to group nodes according to their custom attributes.

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

### **Parameters**

nnmloadattributes.ovpl supports the following options:

-?

Prints the usage statement.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-r <true | false>

Existing attribute values are not changed unless this argument is provided with the value of true.

-t <object type>

Supply the object type to load attributes on. Must be either "node" or "interface".

-f <csv\_filename>

Supply the CSV file name (with path, e.g. /opt/tmp/mynodes.csv) from where you want to import the custom attributes.

-s <csv formatted line>

Supply a single CSV formatted line. Eliminates the need to create a file for a simple change

### Syntax of Comma Separated File For Node Attributes

The CSV file you supply must have the following syntax for adding attributes on nodes. See below for the syntax for interface attributes.

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Attribute Name

The name of the custom attribute.

• Column 3(C) : Attribute Value

The value of the custom attribute.

Additional attribute name and value pairs may be specified on the same line or on a separate line with the same node DNS/IP Address.

Example lines:

192.168.1.1,Location,Building Five Upper,Service Type,eCommerce

192.168.1.1, Asset Tracking, N1234

192.168.2.2, Location, Fort Collins, Service Type, IT, Asset Tracking, F4321

### Syntax of Comma Separated File For Interface Attributes

The CSV file you supply must have the following syntax for adding attributes on interfaces..

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Interface Id

Specify the identifier of the interface on the node specified in the previous field. The

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value may be the interface index, alias, name or description and is searched in this same order. All matching interfaces have the attribute(s) loaded. This field is compulsory.

• Column 3(C) : Attribute Name

The name of the custom attribute.

• Column 4(D) : Attribute Value

The value of the custom attribute.

Additional attribute name and value pairs may be specified on the same line or on a separate line with the same node DNS/IP Address and Interface Id.

Example lines:

192.168.1.1,1001,Location,Building Five Upper,Service Type,eCommerce

192.168.1.1,1001,Asset Tracking,N1234

192.168.2.2, A1, Location, Fort Collins, Service Type, IT, Asset Tracking, F4321

#### **Use of Microsoft Excel**

Microsoft Excel is a handy tool to create comma separated files, but .csv files do not maintain the Excel spreadsheet's column width, comments, etc. It is recommended that you store a nnmloadattributes.ovpl input file as a native .xls format, and then perform File:Save As... to create a .csv file. Then you can add Excel comments to the file, make columns wider, and you do not need to worry about escaping the comma character.

#### **EXAMPLES**

Sample node CSV file contents:

192.168.2.2, Location, Fort Collins, Service Type, IT, Asset Tracking, F4321

To load the Node custom attributes from a CSV file overwriting existing values:

nnmloadattributes.ovpl -t node -u system -p myadminpasswd -f /tmp/test.csv -r true

To load the Node custom attributes from the command line:

nnmloadattributes.ovpl -t node -u system -p myadminpasswd -s "192.168.1.1,Project,IT Update of Building Five"

Sample interface CSV file contents:

192.168.2.2, A1, Location, Fort Collins, Service Type, IT, Asset Tracking, F4321

To load the Interface custom attributes from a CSV file overwriting existing values:

nnmloadattributes.ovpl -t interface -u system -p myadminpasswd -f /tmp/test.csv -r true

To load the Interface custom attributes from the command line:

nnmloadattributes.ovpl -t interface -u system -p myadminpasswd -s
"192.168.1.1,1001,Project,IT Update of Building Five"

# AUTHOR

nnmloadattributes.ovpl was developed by Hewlett-Packard Company.

### **FILES**

\$NNM\_BIN/nnmloadattributes.ovpl

## **SEE ALSO**

nnmdeleteattributes.ovpl(1M), nnmloadnodegroups.ovpl(1M), nnm.properties(4).

nnmloadmib.ovpl — load and unload SNMP MIBs

## **SYNOPSIS**

nnmloadmib.ovpl [ [-load mib-file] [-unload mib module] [-list] [-u username] [-p password] ]

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

nnmloadmib.ovpl is a script that loads an SNMP Management Information Base (MIB) in the Internet Structure of Management Information (SMI) format into NNMi. NNMi applications use this MIB information when converting SNMP Object Identifiers (OIDs) from numeric to human readable text. Load any new MIB information into NNMi before using the NNMi console to create a MIB expression that relies on the newly loaded MIB information. NNMi supports SMI Version 1 (RFC1155, 1212, 1215) and SMI Version 2 (RFC2578) SMI formats.

The nnmloadmib.ovpl script compiles and loads MIB modules for use by NNMi applications and stores the resulting information in the NNMi database.

To load corresponding NNMi Incident Configuration for TRAP-TYPE and NOTIFICATION-TYPE macros from a MIB, use the nnmincidentcfg.ovpl script after using the nnmloadmib.ovpl script to load the MIB into the NNMi MIB database.

#### **Parameters**

The nnmloadmib.ovpl script supports the following parameters:

```
-load mib-file
```

Load the contents of the *mib-file* file into the MIB database.

Note: HP recommends copying the *mib-file* file to the <code>\$NNM\_DATA/shared/nnm/user-snmp-mibs</code> (UNIX) or <code>%NNM\_DATA%\shared\nnm\user-snmp-mibs</code> (Windows) directory (or a child directory) before running the **nnmloadmib.ovpl** script. Copying the *mib-file* file in this way enables the **Actions > Display MIB File** menu and the <code>-list</code> option to locate the original MIB file.

-unload mib module

Unload *mib* module from the MIB database, where *mib* module is the name of a MIB module that has been loaded into the MIB database.

Lists the MIBs loaded in the database.

This option does not require the user to provide a username and password.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. The nnmloadmib.ovpl script requires this username unless a correctly configured <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. The nnmloadmib.ovpl script requires this password unless a correctly configured <u>nnm.properties(4)</u> file exists.

#### Syntax of MIB Files

Most of the relevant syntax for MIB files is described in RFC documents. See the "SEE ALSO" section of this reference page (and the UNIX manpage).

#### **Diagnostics**

The nnmloadmib.ovpl script returns the following exit codes:

0

The script ran successfully.

1

Invalid command-line usage.

20

An unexpected exception occurred after running the script.

21

You were not permitted to run the script with the credentials you supplied.

22

The script detected a syntax error in the MIB file, or there was a failure to load the MIB due to a service failure.

23

You used an illegal argument - typically you typed an option such as -load without including the required file name.

24

The script could not communicate with the mib loader service running in NNMi.

25

You did not supply any arguments. This script requires you to supply several arguments

27

NNMi is available, but the mib loader service is not resolvable.

30

The list operation failed due to database issues.

When the nnmloadmib.ovpl command fails, it will display a descriptive error message to help diagnose and fix potential problems with the MIB. All error messages have a similar format:

SEVERITY: MESSAGE FILENAME:LINE\_NUMBER:COLUMN\_NUMBER: DETAIL\_MESSAGE

Below are some common failures and recommended fixes for each.

ERROR: Cannot find symbol file:///tmp/CHECKPOINT-MIB.mib:2620:16:cpvTNlMonCurrAddr

The symbol name listed was either not found as a declaration in the MIB being loaded, or it is not listed as an import at the top of the MIB definition. This could be caused by a typo in the symbol name or a missing import delaration.

ERROR: Found symbol file:///tmp/CHECKPOINT-MIB.mib:3509:27:routingDest but expected a class org.jsmiparser.smi.SmiType instead of class org.jsmiparser.smi.SmiVariable

The symbol name listed is not of the expected type. In this case, an SMI type was expected, but a MIB variable name was provided instead. The solution in this particular case was to specify the correct SMI type, which was IPAddress.

ERROR: Cannot find module file:///tmp/rfc1472-PPP-SEC-MIB.mib:9:26:PPP-LCP-MIB

This error indicates that the specified MIB module, which is listed as an import, has not been loaded, and the parser cannot follow the import as a result. The solution is to load the referenced MIB first.

ERROR: Parse error: unexpected token: --#

NNMi supports some custom trap message formatting information that can be specified in a TRAP-TYPE or NOTIFICATION-TYPE macro definition. The following are valid values:

> --#TYPE --#SUMMARY --#ARGUMENTS --#SEVERITY --#GENERIC --#CATEGORY --#SOURCE\_ID --#TIMEINDEX --#HELP --#HELPTAG --#STATE

This error indicates you have invalid keyword following the --#, or a sequence of keywords that NNMi does not expect. To correct this problem, remove any --# entries that do not correspond to the above list, or add an extra comment character sequence (--) to the beginning of the line.

## **EXAMPLES**

To load the <code>\$NNM\_DATA/shared/nnm/user-snmp-mibs/corp.mib MIB</code> file, run the nnmloadmib.ovpl script as follows:

nnmloadmib.ovpl -load \$NNM\_DATA/shared/nnm/user-snmp-mibs/corp.mib-u user -p password

To list the loaded MIBs, run the nnmloadmib.ovpl script as follows::

nnmloadmib.ovpl -list -u user -p password

## AUTHOR

nnmloadmib.ovpl was developed by Carnegie-Mellon University and Hewlett-Packard Company.

### **FILES**

Windows: %NnmInstallDir%\misc\nnm\snmp-mibs\\*

Windows: %NnmDataDir%\shared\nnm\user-snmp-mibs/\*

UNIX:\$NnmInstallDir/misc/nnm/snmp-mibs/\*

UNIX:\$NnmDataDir/shared/nnm/user-snmp-mibs/\*

## **SEE ALSO**

**Return to Reference Pages Index** 

RFC 2578 Structure of Management Information Version 2 (SMIv2) RFCs 1155, 1212, 1215: SNMP Version 1 Structure of Management Information RFCs 1902, 1903, 1904: SNMP Version 2 Structure of Management Information nnmincidentcfg.ovpl(1M), nnmsnmpwalk.ovpl(1M).

nnmloadnodegroups.ovpl --- script to load Node Group definitions from a comma-separated values (CSV) file.

#### SYNOPSIS

 $\texttt{nnmloadnodegroups.ovpl [-?] [-u < username > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >] [-r true | false] -f < csv_filename > -p < password >]$ 

#### DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmloadnodegroups.ovpl script loads Node Group definitions from a comma-separated values (CSV) file, such as a .csv file exported from Microsoft<sup>TM</sup> Excel. This script is useful if you have a large amount of node data defined in an external datastore, and you want to load it into the NNMi database as a starting point for Node Group definitions. After loading the contents of the .csv file into NNMi, you can use the Node Group form to further refine the definition of each Node Group.

The following settings cannot be set in the CSV file. You must import the Node Group and then use the Node Group form to modify these default settings:

- Calculate Status = true (NNMi calculates the Node Group status)
- Add to Filter List = false (NNMi does not add this Node Group to NNM iSPI Performance for Metrics and NNM iSPI Performance for Traffic)

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

#### **Parameters**

nnmloadnodegroups.ovpl supports the following options:

-?

Prints the usage statement.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a nnm.properties(4) file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a nnm.properties(4) file exists.

-r true | false

Back up the existing Node Group configuration before using this option.

-r false (the default setting) means if the Node Group Name already exists in the NNMi database, the nnmloadnodegroups.ovpl command does not change the previous settings.

-r true means all the settings for any existing Node Group with the same Name (column 1) are overwritten with the values in your CSV file. Caution: this is not a merge, it is a complete replacement of that Node Group configuration.

```
-f <csv_filename>
```

Enter the CSV file name and the path for the CSV file.

#### Syntax of Comma-Separated File

The CSV file you supply must have the following syntax:

Required. Column 1. You must provide a value for Node Group Name.

Optional. Columns 2-14 are optional. Leave any combination of these columns blank.

You do not need to add a comma to indicate the end of Column 14. No semicolon ";" is required at the end of the last entry within a column

NNMi combines the results of all settings in the following manner:

1. NNMi first evaluates any Device Filters (column 5). Nodes must match at least one specification to belong to this Node Group.

2. NNMi then evaluates any Additional Filters (columns 7-14). Nodes must also pass all Additional Filters specifications to belong to this Node Group. Note: After importing, the Node Group form's Additional Filters tab displays the combined columns 7-14 settings. You can change the default Boolean logic using the Node Group form's Additional Filters Editor.

3. Any Additional Nodes specified (column 6) are always included in the Node Group, regardless of any filters.

4. Any Child Node Groups (column 4) results are treated the same as Additional Nodes.

Empty lines or lines starting with a # character are ignored as comments. Add the following comment to line 1 to make it easy to remember the syntax for each required column.

#[NodeGroupName],[Notes],[AddtoFilterList],[ChildNodeGroup:0/1;...],DeviceFilter[Category1:Vendor1:Family1:Profile1;...],AdditionalNodes[Fully-Qaul-hostname;...],AdditionalFilters > [hostname;...],[hostedIPAddress;...],[mgmtIPAddress;...],[customAttrName/customAttrValue;...],[capability;...]

• Column 1(A) : Node Group Name

Required. Specify the Name of the Node Group you want to import. (This becomes the Name attribute value in the Node Group form.)

• Column 2(B) : Notes

Optional. Describe the Node Group in your own terms. (This becomes the Notes field text in the Node Group form.)

• Column 3(C) : Add to View Filter List

Optional. Sets the Add to View Filter List field of the Node Group form.

1 (the default setting) means this Node Group is available in the drop-down filter list when viewing tables, such as the All Nodes table.

0 means do not include this Node Group in the view drop-down filter list.

Recommendation: Set this value to 1 only for top-level or most commonly used Node Groups. Avoid too many Node Groups or the view filter list is too long and difficult to use.

• Column 4(D) : Child Node Groups

Optional. Specify a list of child Node Groups for this Node Group, separated by semicolon ";" (After importing, these specifications appear on the Child Node Groups tab of the Node Group form.) Note: If you are configuring Child Node Groups, the specified child Node Group must either already exist in the NNMi database or be defined in the same CSV file.

Example: ChildNodeGroup1:1[;ChildNodeGroup2:0;...]

0 (the default setting) means that child Node Group is shown as a Node Group icon in maps of the parent Node Group.

1 means expand the child Node Group in a map of the parent Node Group. This option displays all nodes as if they were defined within the parent Node Group.

Valid entries for Child Node Groups are:

- computers:1
- computers:0
- computers:
- computers:;printers:1
- Column 5(E) : Device Filters

Optional. Add Device Filters settings, separated by semicolon ";" (After importing, these specifications appear on the Device Filters tab of the Node Group form.) Each filter specification consists of 4 optional colon-separated parts in the following format:

Category1:Vendor1:Family1:Profile1[;Category2:Vendor2:Family2:Profile2 ...]

Provide the exact specification from the device's MIB file (not the text string displayed in the NNMi console's Device Profile form).

To match more filters, you may omit portions of a filter specification. For example, if you want to match any family for Category1 and Vendor1, add an entry such as the following:

To leave family unspecified for filter1 and family and profile unspecified for filter2:

Category1:vendor1::profile1;Category2:vendor2::;

Valid example entries for device profile:

- com.hp.ov.nms.devices.printer:com.hp.ov.nms.devices.hewlettpackard::.1.3.6.1.4.1.9.1.380
- com.mycomp.ov.nms.devices.printer:com.hp.ov.nms.devices.mycompanyname::
- com.hp.ov.nms.devices.printer:::
- · :::.1.3.6.1.4.1.9.1.380
- Column 6(F) : Additional Nodes

Optional. Specify a list of specific node hostnames you want added to this Node Group, separated by a semicolon ";" (After importing, these specifications appear on the Additional Nodes tab of the Node Group form.) The hostnames you provide must be the current value of the fully-qualified, case-sensitive Hostname attribute as it appears on the Node form.

For example hostname1.x.y.z;hostname2.x.y.z;hostname3.x.y.z

• Column 7(G) : Additional Filters "sysName" code (Hostname Wildcards)

Optional. List the hostname wildcards separated by semicolon ";" (equivalent to the Operator "="). If you need other Operators, use the Node Group form after importing (these specifications appear on the Additional Filters tab of the Node Group form).

For example: \*.cnd.hp.com;\*snmp.hp.com

• Column 8(H) : Additional Filters "hostedIPAddress" code (Hosted IP Address Ranges)

Optional. List the hosted IP address ranges separated by semicolon ";" (equivalent to the Operator "=") If you need other Operators, use the Node Group form after importing (these specifications appear on the Additional Filters tab of the Node Group form). Ranges have a lower and an upper address, separated by a dash. The addresses are inclusive. To include a single IP address, use the same value for the lower and upper address values. Note that if any address on a node matches this range, the node will be included in the Node Group.

Valid example: 10.20.30.1-10.20.30.254;192.168.177.1-192.168.180.254;1.1.1.1-1.1.1

• Column 9(I) : Additional Filters "mgmtIPAddress" code (Management Address Ranges)

Optional. List the management Address ranges separated by semicolon ";" (equivalent to the Operator "=") Ranges are in the same format as hosted IP address ranges. If you need other Operators, use the Node Group form after importing (these specifications appear on the Additional Filters tab of the Node Group form). Note that Spiral Discovery only creates management IP Addresses on nodes that support SNMP. See the online help for the Node form's Management Address field for more information about how Spiral Discovery selects the Management Address.

Column 10(J) : Additional Filters "customAttrName:customAttrValue" codes (Custom Node Attributes)

Optional. List the custom attributes assigned to nodes as follows: "custom attribute name" operator "custom attribute value" [:...] and note the name and the value must be surrounded by quotes. After importing, these Custom Node Attribute specifications appear on the Additional Filters tab of the Node Group form.

Valid values for operator are as follows:

=, !=, like, not like, between, not between, >, >=, <, <=, is null, is not null (If you need other values, use the Node Group form after importing.) The operators is null and is not null do not have a value, for example, "my attribute" is not null. The values for between and not between are specified as x AND y (for example, "my attribute" between "100 AND 200").

For more than one custom attribute statement, place a semicolon between statements (for example, "Location" = "Bldg. Five"; "Service Type" = "eCommerce"). Multiple "customAttrName:customAttrValue" statements are AND'ed together. Therefore, all the statements must evaluate to true for each node to be included in the Node Group.

• Column 11(K) : Additional Filters "capability" code (Capabilities)

Optional. List the capabilities assigned to nodes as follows: capability operator "capability value"[i...] Note the value must be surrounded by quotes. After importing, these Capabilities specifications appear on the Additional Filters tab of the Node Group form.

The valid values for operator are as follows:

=, !=, like, not like (If you need other values, use the Node Group form after importing.)

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For more than one capability statement, place a semicolon between statements (for example, capability = "com.hp.ov.nms.isLANSwitch"; capability != "com.hp.ov.nms.isIPv4Router"). Multiple capability statements are AND'ed together. Therefore, all the statements must evaluate to true for each node to be included in the Node Group.

• Column 12(L) : Security Group Details

Optional. Specify a list of security-group properties that you want to add to this node-group, separated by semicolon ";". To associate this node-group with a security-group by UUID, enter in the security-group's UUID in the form (xxxxxxx-xxxx-xxxx-xxxx), where (x) is a hexadecimal digit (0-9a-fA-F) otherwise it will be assumed that the node-group is to be associated with a security-group by name.

For example 12345678-1234-1234-123456123456;test\_security\_group\_name

• Column 13(M) : Tenant Details

Optional. Specify a list of tenant properties that you want to add to this node-group, separated by semicolon ";". To associate this node-group with a tenant by UUID, enter in the tenant's UUID in the form (xxxxxxx-xxxx-xxxxx), where (x) is a hexadecimal digit (0-9a-fA-F) otherwise it will be assumed that the node-group is to be associated with a tenant by name.

For example 12345678-1234-1234-123456123456;test\_security\_group\_name

• Column 14(N) : Node Name

Optional. Specify a list of nodes by name that you want to add to this node-group, separated by semicolon ";". To associate this node-group with a node by node-name, include the node names in a list of semicolon-separated values.

For example test\_node\_name;node\_name\_2

#### **Use of Microsoft Excel**

Microsoft Excel is a useful tool to create comma-separated files, but .csv files do not maintain their column width, comments, and other spreadsheet options. HP recommends that you store a nnmloadnodegroups.ovpl input file as a native .xls format, then complete a File:Save As... command to create a .csv file. You can then add Excel comments to the file, make columns wider, and do not need to escape the comma character. Microsoft Excel also makes it easy to populate the list of child Node Groups. To do this, make column 4(D) contain a calculated value such as the following:

=\$A1&":0;"&\$A2&":0;"&\$A3&":0;"&\$A4&":0;"&\$A5&":0;"&\$A6&":0;"&\$A7&":0;"

This example combines the Node Group Names defined in the first column of the first 7 rows, as child Node Groups of the Node Group Name defined in the first cell of the current row. Using this Excel reference, if you rename the child Node Group in the first column, you do not need to go back and change the reference in the parent Node Group's column 4(D). Note that typing a comma in a line after a leading # in Microsoft Excel generates a non-commented entry when the .xls file is saved as a .csv file (creating a Node Group with a Name starting with the # character).

#### EXAMPLES

Sample CSV file contents:

SNMP,Nodes that support SNMP and that are present in Colorado,,,,,server1.myco.com;server2.myco.com,\*.hp.com

Note

When entering data in CSV files, do not use the separator characters (":" and ";") for other purposes (for example, in the Names - column 1 - of Node Groups). If you need to use the separator characters, escape them with "\". For example:

- "computer:1" must be entered as "computer\:1"
- "computer;1" must be entered as "computer\;1"
- "computer\:1" must be entered as "computer\\\:1"

To load the Node Groups from a CSV file without overwriting any existing Node Group that matches a Name defined in column 1 of your CSV file:

nnmloadnodegroups.ovpl -u system -p myadminpasswd -f /tmp/test.csv

To load the Node Groups from a CSV file, and overwrite any existing Node Group that matches a Name defined in column 1 of your CSV file (Caution: this is not a merge, it is a complete replacement of that matching Node Group's configuration):

nnmloadnodegroups.ovpl -u system -p myadminpasswd -r true -f /tmp/test.csv

#### AUTHOR

nnmloadnodegroups.ovpl was developed by Hewlett-Packard Company.

#### **FILES**

Windows: %NNM\_BIN%\nnmloadnodegroups.ovpl

 $\textit{UNIX: \$NNM\_BIN/nnmloadnodegroups.ovpl}$ 

#### SEE ALSO

nnmconfigimport.ovpl(1M), nnm.properties(4).

nnmloadseeds.ovpl --- load discovery node seed information

## **SYNOPSIS**

 $\label{eq:nnmloadseeds.ovpl-f} $$ nnmloadseeds.ovpl-f seedFile [-t tenant] | -n seeds [-t tenant] [-u < username > -p < password >] [-jndiHost < hostName > Default: localhost] [-jndiPort < port > Default: 1099] $$$ 

# DESCRIPTION

nnmloadseeds.ovpl allows discovery seeds to be loaded using command line arguments (-n option) or from a text file (-f option). A seed is a device that you want NNM to use as a starting point for the spiral discovery process. Seed values are either IP addresses or host names. When using the -n option the seeds are entered on the command line, separated by white space. Seeds are always added to NNM even if they do not support SNMP

The -f option accepts a file with a single entry specified per line. Each line has the following format:

*IPAddress*/HostName, "Optional Tenant Name or UUID" # (optional comment to help identify the node, if desired)

Where:

*IPAddress* = the IP address of the node you wish to add.

*HostName* = the host name of the node you wish to add.

Tenants can be optionally specified using either the tenant name or tenant UUID. The tenant specification must be contained within quotation marks. The node discovered from the seed will be assigned to the specified tenant. If no tenant is specified, the node will be assigned to the default tenant.

Comments can be deliminated with a *#* character. Additionally, you can use INCLUDE-FILE *filename* to include other seedfiles.

If you specify the -t option, the tenant you specify will be used for all nodes passed in via the -n option, or all nodes in the seed file specified with the -f option. If you use -t and -f and your seed file contains seeds with tenants specified, all seeds with specified tenants will be rejected as invalid seeds.

Note that you should set up the SNMP configuration for the devices being loaded before running this command.

#### **Parameters**

The nnmloadseeds.ovpl command recognizes the following parameters and options:

-f seedFile

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-n *seeds* 

Specify seeds to load directly from the command line, with each seed separated by a space.

9.10

-t tenant name or UUID

Specify the tenant to be used for all seeds being loaded.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-jndiHost <serverName>

The server JNDI host; default is localhost.

```
-jndiPort <port>
```

The server JNDI port; default is 1099.

## **EXAMPLES**

Load a list of devices as seeds:

nnmloadseeds.ovpl -n mimcisco8540 15.2.112.22

Load seed for a node using its fully qualified name with username and password:

nnmloadseeds.ovpl -u username -p password -n mimcisco8540.superpoller3.mim

Load seeds from a file name that is named seeds\_to\_load.txt:

nnmloadseeds.ovpl -f /tmp/seeds\_to\_load.txt

Load seed for a node using its fully qualified name and specific tenant assignment:

nnmloadseeds.ovpl -n mimcisco8540.superpoller3.mim -t Customer1

Load seeds from a file name that is named seeds\_to\_load.txt and assign all seeds to a given tenant:

nnmloadseeds.ovpl -f /tmp/seeds\_to\_load.txt -t Customer2

# AUTHOR

nnmloadseeds.ovpl was developed by Hewlett-Packard Company.

## FILES

*Windows: install\_dir\bin\nnmloadseeds.ovpl* 

UNIX: \$NNM\_BIN/nnmloadseeds.ovpl

## **SEE ALSO**

nnmseeddelete.ovpl(1M), nnmnodedelete.ovpl(1M), nnmnoderediscover.ovpl(1M), nnm.properties(4).

nnmmanagementmode.ovpl — Change the NNM management mode of a node or interface.

## **SYNOPSIS**

```
nnmmanagementmode.ovpl [[-node.name nodename -mode mode]
|[-t object type [[ -f csv_filename [-b batch size]] | [-s csv formatted line]]]]
[-jdniHost hostname]
[-jdniPort port]
[-u username -p password]
[-?]
```

## DESCRIPTION

nnmmanagementmode.ovpl allows the system administrator to set the management mode of a node or interface in the NNM database.

#### **Parameters**

nnmmanagementmode.ovpl recognizes the following options. Any unrecognized options are reported by a usage message.

-?

Prints the usage statement.

-node.name nodename

The name of a node to change management mode on.

-mode *mode* 

The desired management mode to set. Valid values are "MANAGED", "NOTMANAGED", or "OUTOFSERVICE".

-t object type

Supply the object type to set the management mode on. Valid values are "node" or "interface".

-f csv\_filename

Supply the CSV file name (with path, e.g. /opt/tmp/mynodes.csv) from where you want to set the management mode. If the file contains incorrect entries (too many/few columns, incorrect mode) the command will report these but will not execute any of the entries.

-b batch size

If the input comes from a file, the command will process all entries and send the request to the server in chunks specified by this option. The default is 1000 entries at a time.

-s csv formatted line

Supply a single CSV formatted line. Eliminates the need to create a file for a simple change

-jndiHost hostname

The server jndi host; the default is localhost

-jndiPort port

The server jndi port; the default is 1099

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

#### Syntax of Comma Separated File for node management mode

The CSV file you supply must have the following syntax for setting management mode on nodes.

Empty lines are ignored.

Lines that being with the # character are ignored.

All columns are mandatory

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. The search algorithm is as follows:

- find a node that has a matching management ip address
- find a node that has a matching ip address in the default domain
- find a node that has a matching host name
- find a node that has a matching name
- Column 2(B) : Management mode

The mode to set the node to. Valid entries are "MANAGED', "NOTMANAGED", "OUTOFSERVICE"

Example lines:

192.168.1.1, OUTOFSERVICE

my.fqdn.com, MANAGED

#### Syntax of Comma Separated File for interface management mode

The CSV file you supply must have the following syntax for setting management mode on interfaces.

Empty lines are ignored.

Lines that being with the # character are ignored.

All columns are mandatory

• Column 1(A) : Node DNS | IP Address

Specify the DNS name of the node OR the IP address. The search algorithm is the same as specified above.

• Column 2(B) : Interface id

Interface Id Specify the identifier of the interface on the node specified in the previous field. The search algorithm is as follows:

- ifIndex
- ifName
- ifAlias
- ifDescription
- Column 3(C) : Mode

The management mode to set the interface to. Valid entries are "INHERITED', "NOTMANAGED", "OUTOFSERVICE"

Example lines:

192.168.1.1,1,OUTOFSERVICE

my.fqdn.com, myAlias, MANAGED

#### **RETURN VALUE**

nnmmanagementmode.ovpl exits with the status 0 (zero) if no errors were encountered, 1 otherwise.

## AUTHOR

nnmmanagementmode.ovpl was developed by Hewlett-Packard Company.

### **EXTERNALINFLUENCES**

#### **Environmental Variables**

nnmnetdeletenodeattrs.ovpl — script to delete node custom attributes from a comma separated values (CSV) file

## **SYNOPSIS**

 $\label{eq:nnmnetdeletenodeattrs.ovpl [-?] [-u < username > -p < password >] [-f < csv_filename >] [-s < csv_formatted line >] [-s < csv_form$ 

## DESCRIPTION

IMPORTANT: This command is deprecated and will be removed in a future release. Please use nnmdeleteattributes.ovpl instead.

nnmnetdeletenodeattrs.ovpl allows node custom attributes to be deleted from a comma separated values (CSV) file, such as a .csv file from Microsoft<sup>TM</sup> Excel. This command is useful if you have previously created custom attributes that are no longer needed. Once the attributes are deleted, any nodes in a node group formed by referencing those attributes will disappear from the node group.

NOTE: unlike nnmnetloadnodeattrs.ovpl this command does NOT require a valid iSPI-NET license.

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

#### **Parameters**

nnmnetdeletenodeattrs.ovpl supports the following options:

-?

Prints the usage statement.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-f <csv\_filename>

Supply the CSV file name (with path, e.g. /opt/tmp/mynodes.csv) that lists the custom attributes to delete.

```
-s <csv formatted line>
```

## Syntax of Comma Separated File

The CSV file you supply must have the following syntax for adding attributes.

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Attribute Name

The name of the custom attribute.

Additional attribute names may be specified on the same line or on a separate line with the same node DNS|IP Address.

Example lines:

192.168.1.1, Project, Service Type

192.168.1.1, Asset Tracking

192.168.2.2, Project, Service Type, Asset Tracking

## **Use of Microsoft Excel**

Microsoft Excel is a handy tool to create comma separated files, but .csv files do not maintain the Excel spreadsheet's column width, comments, etc. It is recommended that you store a nnmnetdeletenodeattrs.ovpl input file as a native .xls format, and then perform File:Save As... to create a .csv file. Then you can add Excel comments to the file, make columns wider, and you do not need to worry about escaping the comma character.

## EXAMPLES

Sample CSV file contents:

192.168.2.2, Project, Service Type, Asset Tracking

To delete the Node custom attributes from a CSV file:

nnmnetloadnodeattrs.ovpl -u system -p myadminpasswd -f /tmp/test.csv

To delete the Node custom attributes from the command line:

nnmnetloadnodeattrs.ovpl -u system -p myadminpasswd -s "192.168.1.1, Project"

## AUTHOR

nnmnetloadnodeattrs.ovpl was developed by Hewlett-Packard Company.

## **FILES**

\$NNM\_BIN/nnmnetloadnodeattrs.ovpl

# **SEE ALSO**

nnmnetloadnodeattrs.ovpl(1M), nnmloadnodegroups.ovpl(1M), nnm.properties(4).

nnmnetloadnodeattrs.ovpl — script to load node custom attributes from a comma separated values (CSV) file

## **SYNOPSIS**

 $\label{eq:nnmnetloadnodeattrs.ovpl [-?] [-u < username > -p < password >] [-f < csv_filename >] [-r < true \ / false >] [-s < csv \ formatted \ line >]$ 

## DESCRIPTION

IMPORTANT: This command is deprecated and will be removed in a future release. Please use nnmloadattributes.ovpl instead.

nnmnetloadnodeattrs.ovpl allows node custom attributes to be loaded from a comma separated values (CSV) file, such as a .csv file from Microsoft<sup>TM</sup> Excel. This command is useful if you have a large number of nodes that are defined in an external datastore, and you would like to load these attributes into NNM. After loading into NNM you can use the Node Group forms to group nodes according to their custom attributes.

NOTE: this utility requires a valid iSPI-NET license.

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

### **Parameters**

nnmnetloadnodeattrs.ovpl supports the following options:

```
-?
```

Prints the usage statement.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-r <true | false>

Existing attribute values are not changed unless this argument is provided with the value of true.

```
-f <csv_filename>
```

NNMi Reference Pages 9.10 March 2011 Supply the CSV file name (with path, e.g. /opt/tmp/mynodes.csv) from where you want to import the custom attributes.

```
-s <csv formatted line>
```

Supply a single CSV formatted line. Eliminates the need to create a file for a simple change

### Syntax of Comma Separated File

The CSV file you supply must have the following syntax for adding attributes.

Empty lines are ignored.

Lines that being with the # character are ignored.

• Column 1(A) : Node DNS|IP Address

Specify the DNS name of the node OR the IP address. This field is compulsory.

• Column 2(B) : Attribute Name

The name of the custom attribute.

• Column 3(C) : Attribute Value

The value of the custom attribute.

Additional attribute name and value pairs may be specified on the same line or on a separate line with the same node DNS/IP Address.

Example lines:

192.168.1.1, Location, Building Five Upper, Service Type, eCommerce

192.168.1.1, Asset Tracking, N1234

192.168.2.2, Location, Fort Collins, Service Type, IT, Asset Tracking, F4321

### **Use of Microsoft Excel**

Microsoft Excel is a handy tool to create comma separated files, but .csv files do not maintain the Excel spreadsheet's column width, comments, etc. It is recommended that you store a nnmnetloadnodeattrs.ovpl input file as a native .xls format, and then perform File:Save As... to create a .csv file. Then you can add Excel comments to the file, make columns wider, and you do not need to worry about escaping the comma character.

### EXAMPLES

Sample CSV file contents:

To load the Node custom attributes from a CSV file overwriting existing values:

nnmnetloadnodeattrs.ovpl -u system -p myadminpasswd -f /tmp/test.csv -r true

To load the Node custom attributes from the command line:

nnmnetloadnodeattrs.ovpl -u system -p myadminpasswd -s "192.168.1.1,Project,IT Update of Building Five"

### AUTHOR

nnmnetloadnodeattrs.ovpl was developed by Hewlett-Packard Company.

#### **FILES**

\$NNM\_BIN/nnmnetloadnodeattrs.ovpl

### **SEE ALSO**

nnmnetdeletenodeattrs.ovpl(1M), nnmloadnodegroups.ovpl(1M), nnm.properties(4).

nnmnodedelete.ovpl - Remove node(s) and associated data from the NNM topology database

## **SYNOPSIS**

nnmnodedelete.ovpl -help | -node <hostName> | -rm <Regional NNMi management server> | -file
<filename> [-u <username> -p <password>] [-jndiHost <hostName> Default: localhost] [-jndiPort
<port> Default: 1099]

## DESCRIPTION

nnmnodedelete.ovpl removes a node and its associate data like interfaces, ip addresses etc from the system. If this results in empty VLANs and/or subnets they will be removed as well. If incidents point to this node, the Source Node field will be blanked out, but the incidents will not be removed. The node is identified using the hostName field.

The -rm option accepts the name of a Regional NNMi management server. Nodes that are managed by that Regional Manager, will be removed from the local database.

The -file option accepts a file with a single entry specified per line. Each line has the following format:

HOSTNAME # (optional comment to help identify the node, if desired) Where: HOSTNAME = the host name of the node you wish to add. Comments can be deliminated with a # character.

### **Parameters**

nnmnodedelete.ovpl supports the following options:

-node <hostName>

The hostname of the node to delete.

```
-rm <RegionalManagerName>
```

The name of the Regional NNMi management server.

-file <fileName>

Specify a text file to read the nodes from.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required

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unless a <u>nnm.properties(4)</u> file exists.

-jndiHost <serverName>

The server JNDI host; default is localhost.

-jndiPort <port>

The server JNDI port; default is 1099.

-help

Prints the usage statement.

## **EXAMPLES**

nnmnodedelete.ovpl -u username -p password -node myNode

Removes the node myNode. (You must provide an NNM username and password.)

nnmnodedelete.ovpl -u username -p password -rm myRegionalManager

Removes all nodes associated with myRegionalManager (You must provide an NNM username and password.)

nnmnodedelete.ovpl -u username -p password -file myFile

Reads the nodes specified in the  $m_{Y}$ File file and attempts to remove them from the database. (You must provide an NNM username and password.)

## **Diagnostics**

nnmnodedelete.ovpl returns the following exit codes:

0

Operation was successful.

1

An error occured; see error message for details.

2

Partly successful but some nodes were not deleted; see error messages for details.

## AUTHOR

 $\verb+nnmnodedelete.ovpl was developed by Hewlett-Packard Company.$ 

## FILES

## NOTES

The deleted node could be rediscovered if it was created due to a Auto Discovery Rule. The workaround would be to add the node's ip address to the Excluded IP Addresses entry in the Discovery Configuration form.

## **SEE ALSO**

<u>nnmseeddelete.ovpl(1M)</u>, <u>nnmnoderediscover.ovpl(1M)</u>, <u>nnmtopodump.ovpl(1M)</u>, <u>nnmresetembdb.ovpl(1M)</u>, <u>nnm.properties</u>(4).

nnmnodegroup.ovpl — List the names of node groups or print node attributes of nodes belonging to a certain node group.

## SYNOPSIS

```
nnmnodegroup.ovpl
{ -?
| -list
| -printNodes <group name> [ -hostName | -shortName | -uuid | -ip ]}
[-jdniHost hostname ]
[-jdniPort port ]
[-u username -p password ]
```

## DESCRIPTION

nnmnodegroup.ovpl will list all node groups in the database or print node attributes belonging to a certain node group. When printing the node attributes, the group name is a required argument; if no other arguments are given, the hostName, shortName, uuid and management IP address attributes of each node are dumped; one comma separated line per node.

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

#### **Parameters**

nnmnodegroup.ovpl supports the following options:

-list

Print the name of the node groups in the database.

```
-printNodes <node group name> [-hostName | -shortName | -uuid | -ip]
```

Print attributes of nodes belonging to the specified node group. If no additional parameters are provided, the hostName, shortName, uuid and management ip address attributes of each node will be printed; one comma separated line per node.

Optionally one of the following parameters can be specified, only the specified attribute will be printed:

-hostName

Prints the hostName of each node belonging to the node group.

-shortName

Prints the short name of each node belonging to the node group.

Prints the UUID of each node belonging to the node group.

-ip

Prints the management IP address of each node belonging to the node group. If this can not be determined, the host name will be printed instead.

-?

Prints the usage statement.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-jndiHost

The server JNDI host; default is localhost.

-jndiPort

The server JNDI port; default is 1099.

### EXAMPLES

To print the hostName, shortName, uuid and management ip address of all nodes that belong to the node group Routers:

nnmnodegroup.ovpl -printNodes Routers

To only print the host name of all nodes that belong to the node group Non-SNMP Devices:

nnmnodegroup.ovpl -printNodes "Non-SNMP Devices" -hostName

To list the node group names in the database:

nnmnodegroup.ovpl -list

### **RETURN VALUE**

nnmnodegroup.ovpl exits with the status 0 (zero) if no errors were encountered, 1 otherwise.

## AUTHOR

nnmnodegroup.ovpl was developed by Hewlett-Packard Company.

### **FILES**

\$NNM\_BIN/nnmnodegroup.ovpl

nnmnoderediscover.ovpl --- Discover node details after the node has changed

## **SYNOPSIS**

nnmnoderediscover.ovpl -help | -node <hostName> | -rm <Regional NNMi management server> | -file
<filename> | -all [-u <username> -p <password>] [-jndiHost <hostName> Default: localhost] [-jndiPort
<port> Default: 1099]

## DESCRIPTION

nnmnoderediscover.ovpl places node(s) into the NNMi discovery queue. The amount of time before the node starts discovery is dependent on how long NNMi takes to get to the node in the queue.

If the node is already in the discovery queue, it is not added again.

Note that when using the NNMi Advanced Global Network Management feature, nodes that are managed by a Regional Manager only go through discovery on the Regional Manager (NNMi management station) and are not rediscovered by the Global Manager.

The -rm option is for the NNMi Advanced Global Network Management feature. It is used when issuing the nnmnoderediscover.ovpl script on a Global Manager. NNMi requests that the Regional Manager (NNMi management server) send the most recent discovery results to the Global Manager.

The -file option accepts a file with a single entry specified per line. Each line contains a short name, or a fully-qualified DNS domain name, or an IP address. Each line has the following format: HostName # (optional comment to help identify the node) Where: HostName = the short name or DNS name or IP address of the node you want to add.

The -all option causes all nodes managed by the local NNMi management server to be rediscovered. Note that when you use the NNMi Advanced Global Network Management feature and issue the nnmnoderediscover.ovpl script on a Global Manager, the most recent discovery results are sent from the Regional Manager to the Global Manager.

### **Parameters**

nnmnoderediscover.ovpl supports the following options:

-node <hostName>

The hostname of the node to rediscover.

```
-rm <RegionalManagerName>
```

When using the NNMi Advanced Global Network Management feature and issuing the nnmnoderediscover.ovpl script on a Global Manager, the Name attribute value identifies a Regional NNMi management server.

-file <fileName>

Specifies a text file to read the nodes from.

-all

Specifies all nodes are to be rediscovered.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-jndiHost <serverName>

The server JNDI host; default is localhost.

-jndiPort <port>

The server JNDI port; default is 1099.

-help

Displays the usage statement.

#### **EXAMPLES**

nnmnoderediscover.ovpl -u username -p password -node myNode

Rediscovers the node myNode. You must provide a valid administrator username and password.

nnmnoderediscover.ovpl -u username -p password -rm myRegionalManager

Rediscovers all nodes associated with myRegionalManager. You must provide a valid administrator username and password.

nnmnoderediscover.ovpl -u username -p password -file myFile

Reads the nodes specified in the myFile file and places them into the NNMi discovery queue. You must provide a valid administrator username and password.

#### **Diagnostics**

nnmnoderediscover.ovpl returns the following exit codes:

0

Operation was successful.

# AUTHOR

nnmnoderediscover.ovpl was developed by Hewlett-Packard Company.

# SEE ALSO

nnmdiscocfg.ovpl(1M), nnmloadseeds.ovpl(1M), nnmseeddelete.ovpl(1M), nnm.properties(4).

nnmofficialfqdn.ovpl — Display the official Fully Qualified Domain Name (FQDN) of the NNMi management server.

## SYNOPSIS

nnmofficialfqdn.ovpl

## DESCRIPTION

Use nnmofficialfqdn.ovpl to display the official Fully Qualified Domain Name (FQDN). The official FQDN must be correct and consistent across systems to enable Single Sign On with NNM iSPIs. NNMi sets the official FQDN during installation. After installation, you can change it using the nnmsetofficialfqdn.ovpl command.

#### **Options**

nnmofficialfqdn.ovpl by default displays verbose output with a ping test. nnmofficialfqdn.ovpl recognizes the following options:

-d

Display the domain name of the official FQDN. If the FQDN is only a short hostname or an IP address and if the terse option (-t) is used, NNMi does not display a value; otherwise, NNMi displays a message informing you that the domain name cannot be found.

-t

Terse mode. Displays the FQDN or domain name value only. When the FQDN or domain name is not found, no warning or informative text is shown. This option also skips the ping test.

-m

Query for the default FQDN and display the value. NNMi displays whichever value it finds first using the following order:

- FQDN
- Short hostname
- IP address

If none of the above are found, then 'localhost' is displayed.

-h

Display the help menu listing all the options.

#### EXAMPLES

Running the command without any options displays the official FQDN and performs a ping test:

```
# nnmofficialfqdn.ovpl
    FQDN: hostname.somedomain
    Ping test: pinging hostname.somedomain please wait...
    Ping OK
```

Running the command with the -t option displays the official FQDN as follows:

Running the command using the -d option displays the domain name as follows:

```
# nnmofficialfqdn.ovpl -d
Domain: somedomain
```

Running the command using the -d and -t options displays only the domain name:

## AUTHOR

nnmofficialfqdn.ovpl was developed by Hewlett-Packard Company.

#### FILES

nnmofficialfqdn.ovpl resides in \$NNM\_BIN directory.

### **SEE ALSO**

nnmsetofficialfqdn.ovpl(1M), nnmsetdomain.ovpl(1M), nnmsso.ovpl(1M).

nnmooflow.ovpl --- Manage available HP OO flow definitions used by NNMi iSPI NET.

#### **SYNOPSIS**

nnmooflow.ovpl [-h] [-l] [-i xmlfilename] [-d uuid]

#### **DESCRIPTION**

Manage user defined HP OO flow definitions. This command can be used to list current HP OO flow definitions available to NNMi, import a new HP OO flow definition to NNMi, or delete an existing HP OO flow definition from NNMi.

HP OO flows are authored using HP Operations Orchestration Studio. Flows in HP OO can be invoked from NNMi during incident processing. A number of arguments can be passed to HP OO flows. See below for the full list of arguments which can be passed.

This list option will show all available HP OO flow definitions including those shipped with the iSPI NET diagnostics server and those previously imported. Note that only user defined HP OO flow definitions can be deleted.

An HP OO flow definition is imported into NNMi by creating an xmlfile using the format described below and importing the definition using the -i option. A single xml file can contain a single flow definition. If multiple flow definitions need to be imported to NNMi, create a separate xml file for each.

The following is a sample import xmlfile

```
<definition xmlns="http://openview.hp.com/xmlns/nnmi/diagnostics/1">
    <uuid>a2dbd722-b0c3-43ad-b435-4eae9adf37b1</uuid>
    <name>Test Flow</name>
    <description>A test flow for import</description>
    <arguments>
        <argument>
            <type>HOST</type>
            <name>hostname</name>
            <required>true</required>
        </argument>
        <argument>
            <type>SHELL_USERNAME</type>
            <name>user</name>
            <required>false</required>
        </argument>
        <argument>
            <type>SHELL_PASSWORD</type>
            <name>password</name>
            <required>true</required>
        </argument>
    </arguments>
    <filters>
        <filter>
            <vendor>com.hp.ov.nms.devices.cisco</vendor>
            <category>com.hp.ov.nms.devices.router</category>
```

The XML document requires the following structure:

```
<definition>
    <uuid></uuid>
    <name></name>
    <description></description>
    <arguments>
        <arguments>
        <filters>
        <filters>
        </filters>
    </filters>
</definition>
```

<definition> - XML document element.

<uuid>nnnnnnnnnnnnnnnnnnnnnnnnnnnnnn/</uuid>- contains the uuid of the HP OO flow as provided by HP OO Studio. The uuid is available on the properties tab for the flow displayed in HP OO Studio.

<name>string</name> - contains the name of the flow to be displayed in NNMi. Name can be a maximum of 128 characters. More than 128 characters will cause a parse exception when reading the xml file.

<description>string</description> - contains the description of the flow to be displayed in NNMi. Description can be a maximum size of 2048 characters. More than 2048 characters will cause a parse exception when reading the xml file.

<arguments> - contains a list of 1 or more <argument> elements to pass to the flow. Include as many <argument> children as necessary. Each flow defined in HP OO Studio can accept named inputs. The <arguments> list allows HP NNMi to pass NNMi defined variables to these inputs. The <type> element defines the variable NNMi will pass to the input identified in the <name> element. SHELL\_USERNAME and SHELL\_PASSWORD are defined using NNMi's creditional configuration in NNMi's Communication configuration workspace. The variables passed to the HP OO flow are determined based on the incident's related device, interface, or port. If a argument is specified as required but NNMi can't determine an appropriate value based on the incident, the HP OO flow will not be invoked.

An <argument> element contains a <type>, a <name>, and <required> elements.

The <type> element can be any of the following: SHELL\_USERNAME, SHELL\_PASSWORD, HOST, IFACE\_IFNAME, IFACE\_IFTYPE, IFACE\_IFALIAS, IFACE\_IFINDEX, PORT\_NAME, PORT\_INDEX.

The <name> element represents the name of the input as defined in the HP OO Flow. The variable will be passed to the HP OO Flow using this input name.

The <required> element may be true or false and indicates if the argument must be supplied to HP OO.

Multiple <filter> elements can be specified. <filter> elements define the types of devices where a flow can be excuted. <filter> elements are constructed using <vendor>, <category>, and <family> child elements.

Filters specify the vendor, category, and family of the device or devices the flow supports. As such flows can be defined for generic use across a vendor's product line or defined to more narrowly execute on a category or family of devices from a vendor. Use the "unique key" as indentified in sub forms for Device Profile. You can find the "unique key" by opening the form corresponding to a specific Device vendor, Device Category, or Device Family using the Device Profile workspace.

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A filter can specify just vendor, category, or family or all three to indicate a very specific device profile. <filters> can be empty, if the flow can operate on any device.

Once a flow definition has been imported to NNMi, it is available to be used in NNMi Incident Configuration. See NNMi online help for instructions on configuring incident flows.

#### **Parameters**

nnmooflow.ovpl supports the following parameters:

-h

Displays command summary

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Displays a list of all HP OO flow definitions available for use in incident configuration.

-d uuid

Removes the flow definition identified by the uuid. HP defined flow definitions can not be removed. User defined flow definitions which are referenced in incident configuration also may not be removed.

-i xmlfilename

Imports the flow definition defined by the xml file. A flow can be repeatly imported to NNMi. Only the last flow definition for a uuid imported by this command will be retained in the configuration.

#### **EXAMPLES**

To list currently available HP OO Flow Definitions:

nnmooflow.ovpl -1

To load a flow definition

nnmooflow.ovpl -i flow.xml

To delete a flow definition

nnmooflow.ovpl -d 01d616b0-e852-4235-b447-48185bd31444

### AUTHOR

nnmooflow.ovpl was developed by Hewlett-Packard Company.

nnmopcexport.ovpl — export NNMi management event and SNMP trap configurations to HP OM policies (SNMP template) file.

## SYNOPSIS

nnmopcexport.ovpl -help

nnmopcexport.ovpl [-u <username> -p <password>] [-jndiHost <hostname> -jndiPort <port>] -template
<template\_name> -application <application\_name> [-agtmsi\_copy | -agtmsi\_divert] [-svmsi\_copy | svmsi\_divert] [-msgtype] [-author <author code>] [-oid <snmp oid prefix>] [-omi\_hi] -file
<output\_file name> [-force]

nnmopcexport.ovpl [-u <username> -p <password>] [-jndiHost <hostname> -jndiPort <port>] -template
<template\_name> -application\_name> [-agtmsi\_copy | -agtmsi\_divert] [-svmsi\_copy | svmsi\_divert] [-msgtype] [-author <author code>] [-oid <snmp oid prefix>] [-omi\_hi] -omi\_policy

#### DESCRIPTION

nnmopcexport.ovpl reads the NNMi management event and SNMP trap configurations and exports the configurations as an HP OM policies file. This tool provides similar functionality to the HP OM ovtrap2opc utility that converted legacy NNM trapd.conf files into HP OM policies.

### **Parameters**

nnmopcexport.ovpl supports the following parameters:

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless the user has root or administrator privileges or a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless the user has root or administrator privileges or a <u>nnm.properties(4)</u> file exists.

-agtmsi\_copy

Copy matching messages to the OVO Agent Message Stream Interface.

-agtmsi\_divert

Divert matching messages to the OVO Agent Message Stream Interface.

-application <application\_name>

Set the policy application name.

-author <author\_code>

Export events matching the author code.

-file <output\_filename>

Save output to file with the specified name.

#### -force

Overwrite an existing policy file specified by -file <output\_file\_name>.

#### -jndiHost <hostname>

The server jndi host; default is localhost.

#### -jndiPort <port>

The server jndi port; default is 1099.

#### -msgtype

Set the message type to the name of the condition. The value of the resulting MSGTYPE field will be truncated to 32 characters for OM import compatibility.

-oid <snmp\_oid\_prefix>

Export events with snmp trap OIDs matching the provided OID.

#### -omi\_hi

Include HP OMi health indicators for applicable NNMi management events.

#### -omi\_policy

Export in OMi policy format. A header file and a data file are created of the form <UUID>\_header.xml and <UUID>\_data where UUID is an Universally Unique Identifier. The -file option is ignored.

#### -svmsi\_copy

Copy matching messages to the OVO Server Message Stream Interface.

#### -svmsi\_divert

Divert matching messages to the OVO Server Message Stream Interface.

-template template name

Set the <template\_name>.

-help

Show help.

#### EXAMPLES

Export an OM policy file containing all NNMi management events and SNMP trap definitions:

nnmopcexport.ovpl -u user -p pass -template "SNMP Traps" -application "NNMi" -file policies.dat

Export an OMi policy file containing all NNMi management events and SNMP trap definitions and OMi health indicators:

nnmopcexport.ovpl -u user -p pass -template "SNMP Traps" -application "NNMi" -omi\_hi - omi\_policy

## AUTHOR

nnmopcexport.ovpl was developed by Hewlett-Packard Company.

nnmresetembdb.ovpl — drop (delete) and recreate the embedded database, if NNMi is configured to run with the embedded database

## SYNOPSIS

nnmresetembdb.ovpl [-?|-h|-help] [-silent] [-nostart]

## DESCRIPTION

Use nnmresetembdb.ovpl to drop (delete) and recreate the NNMi embedded database. This command is useful only if you installed NNMi with the embedded database option. You should use this command only if your database is corrupt, and you are willing to lose all of your data; or, if you simply want to reset your database to the state it was in after initial installation.

If NNMi is running when this command is executed, the command first stops NNMi (using ovstop), then starts the nmsdbmgr process to work with the database (using ovstart). Unless the -nostart option is present, NNMi restarts (using ovstart) upon successful completion of the reset process.

When the database reset has completed, the embedded database has no tables or data in it. The tables are recreated when you restart NNMi using the ovstart command, or when the nnmresetembdb.ovpl command automatically starts NNMi. You must be logged in as root on UNIX systems, or as administrator on Windows systems to run this command.

## **Parameters**

The nnmresetembdb.ovpl command recognizes the following parameters:

-silent

The nnmresetembdb.ovpl command does not display the command results when you use the -silent option.

-nostart

The nnmresetembdb.ovpl command does not start NNMi after the database reset when you use the - nostart option.

-?|-h|-help

Display command usage.

## EXAMPLES

You can use this script to reset your database if you have a bad discovery or a corrupted database; or if you

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want to reset the database (including configuration items stored in the database) to the state the database was in after initial installation.

You'll see these messages:

# nnmresetembdb.ovpl -nostart

WARNING: Running this tool will stop NNM, drop and recreate the database, and restart NNM. Please make sure no major activity is occurring at this time. Is it OK to stop NNM (ovstop)? [n] y Thank you! WARNING: This will delete all configuration and discovered data. You cannot recover from a reset unless you have taken a backup. Are you sure you wish to reset your database? [n] y Attempting to reset the embedded database... Starting nmsdbmgr process for database reset... Successfully started nmsdbmgr process for database reset. Successfully reset private database. Successfully reset NNM embedded database.

#

## AUTHOR

nnmresetembdb.ovpl was developed by Hewlett-Packard Company.

## **FILES**

nnmresetembdb.ovpl resides in \$NNM\_BIN (UNIX) or install\_dir\bin (Windows) directories.

## **SEE ALSO**

nmsdbmgr.ovpl(1M), nnmnodedelete.ovpl(1M), ovstart.ovpl(1M), ovstop.ovpl(1M), ovstatus.ovpl(1M).

 $nnmrestore.ovpl - restore \ a \ backup \ created \ by \ the \ nnmbackup . ovpl \ script$ 

## **SYNOPSIS**

nnmrestore.ovpl [-?|-h|-help] [-force] [-lic] [-partial] -source <directory>

## DESCRIPTION

nnmrestore.ovpl is the main restore script for NNMi. The command uses a previous NNMi backup created using the nnmbackup.ovpl script to restore NNMi to the state stored in the backup files. The scope of the restore is determined by the content of the backup and by the command-line arguments you provide. The nnmrestore.ovpl script restores only the data contained in the backup files.

The nnmrestore.ovpl script detects the following:

- Was the backup performed on the target system? If the backup was taken locally, the -lic parameter permits the restoration of licensing information.
- Is the target system running an Oracle or Postgres database? If you require a full restore of an Oracle database, for example, running the nnmrestore.ovpl script without the -partial parameter, the nnmrestore.ovpl script prompts you for information to determine if the target system is using the same Oracle database instance as the backup, or if an Oracle backup and restore operation has already taken place on the target system. You must answer these questions correctly or the script will copy or merge the SSL certificates incorrectly and the database will become unaccessible from the target installation.

The source directory contains either all of the files required for the restore options you have selected, or a single tar file. If the source is a tar file, the nnmrestore.ovpl script extracts the tar file to a temporary folder in the current working directory. The nnmrestore.ovpl script removes the temporary folder after completing the restore.

NNMi must be stopped to complete restore operations. If you use the -force option, the nnmrestore.ovpl script stops NNMi. If the files present in the source folder indicate that the original backup was an online backup, the restore process starts the nmsdbmgr process to make sure the embedded database is available. To restore the files from an online backup, you must use the -force option.

You must be logged in as as administrator on Windows systems or root on UNIX systems to run the nnmrestore.ovpl script.

#### Caution

The database restore performed by the nnmrestore.ovpl script applies only to the embedded database. If you chose a different database at installation, the table data is not restored using the nnmrestore.ovpl script. File-system restores work regardless of database type. For details about what you need to restore if you select a different database at installation, refer to the *NNMi Deployment Reference* (available at

nnmrestore.ovpl supports the following options:

-force

If you provide this option, the nnmrestore.ovpl script stops NNMi before running the restore procedure. Also, the script starts the nmsdbmgr process if it must restore the type of backup on which the restore is based. This restore from an online backup to use this option.

#### -lic

If you provide this option, the nnmrestore.ovpl script restores licensing information. Note that the script only restores licensing information if it successfully validates that the backup operation was performed on the same system.

#### -partial

Without this option, the nnmrestore.ovpl script restores the database and corresponding SSL certificates. In the case of a system-to-system restore, the nnmrestore.ovplscript merges the nnm.keystore and nnm.truststore files with the target system's nnm.keystore and nnm.truststore files. The merge routine merges all certificate aliases from the backed up stores that do not already exist on the target system. There is one exception, if the FQDN.selfsigned key alias exists in both stores, the target system's key alias is removed and replaced with the one stored in the backup. Before the certificates are merged or restored, a backup is performed, stored in the same directory, and labeled \*.original.

When you use the *-partial* option, the *nnmrestore.ovpl* script will not restore the database and corresponding SSL certificates. The *-partial* option is only useful for restoring configuration files.

#### -source<directory>

Specifies the input directory containing the restore files. If the source you provide is a tar file, the nnmrestore.ovpl script extracts the tar file to a temporary folder in the current working directory. The script removes the temporary folder after completing the restore.

#### -?|-h|-help

Display command usage.

### **EXAMPLES**

To restore a previous backup:

#./nnmrestore.ovpl -source /tmp/bak/config

To restore with the -force option:

#./nnmrestore.ovpl -force -source /tmp/bak/all

To restore everything except the database, SSL certificates, and licenses, use the -partial option:

To restore everything, including licensing information on a local system, use the -lic option:

#./nnmrestore.ovpl -lic -source /tmp/bak/all

# AUTHOR

nnmrestore.ovpl was developed by Hewlett-Packard Company.

# **SEE ALSO**

nnmbackup.ovpl(1M).

nnmrestoreembdb.ovpl --- restore a full backup of the NNMi embedded database

## **SYNOPSIS**

nnmrestoreembdb.ovpl [-?|-h|-help] [-force] -source <backup file>

## DESCRIPTION

Use the nnmrestoreembdb.ovpl script to restore a full backup of the NNMi embedded database. Create the backup file required for the restore using the nnmbackupembdb.ovpl script. Because query planning statistics are not backed up, these statistics are gathered as part of the restore procedure to ensure good database performance after a restore.

Before running the nnmrestoreembdb.ovpl script, make sure the embedded database is empty. You can do this by running the nnmresetembdb.ovpl script. If you do not clear the embedded database, the restore procedure runs the nnmresetembdb.ovpl script for you and the restore fails if the nnmresetembdb.ovpl script fails.

Do not run this script while NNMi is running unless you specify the -force option. Only the nmsdbmgr process can (and must) be running when you run the nnmrestoreembdb.ovpl script. You must be logged in as as administrator on Windows systems or root on UNIX systems, to run this script.

#### **Parameters**

```
-source <backup file>
```

The file to use when restoring the backup. This file must be a file that was created using the nnmbackupembdb.ovpl script.

-force

If you provide this option, the script stops NNMi if it is currently running, then starts the nmsdbmgr process.

```
-?|-h|-help
```

Display script usage.

#### **EXAMPLES**

Use this script to run a full database recovery when a restore from backup becomes necessary.

You will see these messages:

# nnmrestoreembdb.ovpl -source /backups/nnmDb.dump

NNMi embedded database successfully restored from /backups/nnmDb.dump. #

# AUTHOR

nnmrestoreembdb.ovpl was developed by Hewlett-Packard Company.

## **FILES**

nnmrestoreembdb.ovpl resides in the following directories:

- Windows: %nnm\_bin%
- UNIX: \$NNM\_BIN

## **SEE ALSO**

ovstart(1M), ovstop(1M), ovstatus(1M), nmsdbmgr(1M), nnmbackupembdb.ovpl(1M).

nnmsecurity.ovpl — NNMi Security Management

## **SYNOPSIS**

 $\texttt{nnmsecurity.ovpl} \ \textbf{-help}$ 

 $\label{eq:nnmsecurity.ovpl-assignNodeToSecurityGroup((-node < name or hostname or management address or uuid> -securityGroup < name or uuid>) | -file < name>) | -assignNodeToTenant((-node < name or hostname or management address or uuid>) | -file < name) | -assignSecurityGroupToTenant(-tenant < name or uuid> -securityGroup < name or uuid>) | -file < name>) | -assignUserGroupToSecurityGroup((-userGroup < name> -securityGroup < name or uuid>) | -file < name>) | -assignUserGroupToGroup((-userGroup < name> -securityGroup < name or uuid> -role < role>) | -file < name>) | -file < n$ 

nnmsecurity.ovpl -createSecurityGroup ((<name> [-securityGroupUuid <uuid>] [-description <description>]) | -file <name>) | -createTenant (<name> [-tenantUuid <uuid>] [-securityGroupUuid <uuid>] [-description <description>]) | -createUserAccount ((<username> -role <role> [-password <password>] [-directoryServiceAccount <true/false>]) | -file <name>) | -createUserGroup ((<name> [displayName <user friendly group name>] [-description <description>] [-directoryServiceName <dn>]) | -file <name>) [-u <username> -p <password>] [-jndiHost <hostname> Default: localhost] [jndiPort <port> Default: 1099]

 $\label{eq:nnmsecurity.ovpl-deleteSecurityGroup(<groupName or uuid>|-file <name>)|-deleteUserAccount (<name>|-file <name>)|-deleteUserGroup <name>[-u <username>-p <password>][-jndiHost <hostname> Default: localhost][-jndiPort <port> Default: 1099]$ 

nnmsecurity.ovpl -displayConfigReport [<report>[, <report>]] [-u <username> -p <password>] [jndiHost <hostname> Default: localhost] [-jndiPort <port> Default: 1099]

nnmsecurity.ovpl -listNode <nodeName> | -listNodesInSecurityGroup <groupName or uuid> | listSecurityGroupForTenant <uuid> | -listSecurityGroups | -listTenants | -listUserGroupMembers
<groupName> | -listUserGroups <user> | -listUserGroupsForSecurityGroup <groupName or uuid> [-u
<username> -p <password>] [-jndiHost <hostname> Default: localhost] [-jndiPort <port> Default: 1099]

nnmsecurity.ovpl -removeUserFromGroup ((-user <name> -userGroup <name>) | -file <name>) | deleteUserGroup (<name> | -file <name>) | -removeUserGroupFromSecurityGroup ((-userGroup
<groupName> -securityGroup <groupName or uuid> [-role <role>]) | -file <file>) | -updateUserGroup
((<name> [-displayName <user friendly group name>] [-description <description>] [directoryServiceName <dn>]) | -file <name>) [-u <username> -p <password>] [-jndiHost <hostname>
Default: localhost] [-jndiPort <port> Default: 1099]

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory.

nnmsecurity.ovpl is used to manage NNMi security configuration. It provides commands to create, update, and remove security objects such as user accounts, user groups, and security groups as well as to configure the relationships among these objects. This command replaces the deprecated nnmprincipalconfig.ovpl command.

### **Parameters**

nnmsecurity.ovpl supports the following commands:

-assignNodeToSecurityGroup (-node <name or hostname or management address or uuid> - securityGroup <name or uuid>) | -file <name>

Assigns nodes to security groups using either command line arguments or an input file.

-node

Identifies a node by name, hostname, management address, or UUID.

-securityGroup

Identifies a security group by name or UUID.

-file

Path to a CSV-formatted file containing lists of node to security group assignment with the format: securitygroup, node

-help

Prints the usage statement.

```
-assignNodeToTenant (-node <name or hostname or management address or uuid> -tenant
<name or uuid>) | -file <name>
```

Assigns a node to a tenant using either command line arguments or an input file. The node-to-tenant assignment must be done on an NNMi management server that directly manages both objects. Global node-to-tenant assignments are unsupported.

-node

Identifies a node by name, hostname, management address, or UUID.

-tenant

Identifies a tenant by name or UUID.

-file

Path to a CSV-formatted file containing lists of node to tenant assignments with the format: node, tenant

-assignSecurityGroupToTenant -tenant <name or uuid> -securityGroup <name or uuid>

Changes the default security group for a tenant. The default security group for a tenant is used to specify which security group to use when new nodes are seeded for the tenant. Changing this value

does not affect existing nodes.

-tenant

The name or UUID of the tenant to modify.

-securityGroup

The name or UUID of the security group to set as the default for the tenant.

```
-assignUserGroupToSecurityGroup (-userGroup <name> -securityGroup <name or uuid> -role
<role>) | -file <name>
```

Assigns user groups to security groups. User groups are assigned to security groups to give the users in the group access to the nodes in the security group. Each assignment includes a role as part of the assignment which controls which actions are available to the users on the nodes.

-userGroup

Identifies the user group to assign by name.

-securityGroup

Identifies by name or UUID the security group to receive the user group.

-role

Identifies the role to use in the assignment by key. Available roles are: admin, level2, level1, guest

-file

Path to a CSV-formatted file containing lists of assignments with the format: userGroup, securityGroup, role

-assignUserToGroup (-user <name> -userGroup <name>) | -file <name>

Assigns users to user groups. Users are assigned to groups which are then given access to objects. A user can be assigned to multiple groups and has access to all objects from all of their groups. The default groups of admin, client, level2, level1 and guest also give the users assigned to them the matching role of the same name on NNMi itself.

-user

Identifies the user to assign by name.

-userGroup

Identifies the user group to assign by name.

-file

Path to a CSV-formatted file containing lists of assignments with the format: user, userGroup

```
-createSecurityGroup (<name> [-securityGroupUuid <uuid>] [-description <description>]) |
-file <name>
```

Creates a new security group. Security groups group similar topology objects to simplify the security configuration. Each security group consists of a name, UUID, and description.

-securityGroupUuid

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Optional UUID for the new security group. If this parameter is not supplied, NNMi generates the value.

-description

Optional description for the new security group.

-file

Path to a CSV-formatted file containing lists of security groups with the format: name, uuid, description

-createTenant <name> [-tenantUuid <uuid>] [-securityGroupUuid <uuid>] [-description
<description>]

Creates a new tenant along with a matching security group of the same name.

-tenantUuid

Optional UUID for the new tenant. If this parameter is not supplied, NNMi generates the value.

-securityGroupUuid

Optional UUID for the new security group. If this parameter is not supplied, NNMi generates the value.

-description

Optional description for the new tenant.

-createUserAccount (<username> -role <role> [-password <password>] [directoryServiceAccount <true/false>]) | -file <name>

Creates a new user account.

-role

Internal accounts require that a role be specified. NNMi automatically assigns the new user to the matching user group. External accounts do not require a role because the directory service might supply the roles.

#### -password

The password for the new user. Only used for internal accounts.

-directoryServiceAccount

Specifies whether an external directory service manages this user account. Use false for an account that is stored internally in the NNMi database. Use true for an external account that is stored in a directory service. The default value is false.

#### -file

Path to a CSV-formatted file containing lists of user accounts with the format: username, role, password, directoryServiceAccount

-createUserGroup (<name> [-displayName <user friendly group name>] [-description
<description>] [-directoryServiceName <dn>]) | -file <name>

Creates a new user group.

-displayName

Optional friendly name for the user group.

-description

Optional description of the new group.

-directoryServiceName

Optional for directory service users. Use this option to pair a directory service distinguished name with this user group.

-file

Path to a CSV-formatted file containing lists of user groups with the format: name, displayName, description, directoryServiceName

-deleteSecurityGroup <groupName or uuid> | -file <name>

Removes a security group by name or UUID. The security group must not have any nodes or tenants assigned to it.

-file

Path to a CSV-formatted file containing lists of security groups with the format: name, uuid, description. This format is the same as for createSecurityGroup however only the name (or UUID if present) is used.

-deleteUserAccount <name> | -file <name>

Removes a user account by name.

-file

Path to a CSV-formatted file containing lists of user accounts with the format: username, role, password, directoryServiceAccount. This format is the same as for createUserAccount however only the username is used to match the accounts to remove.

-deleteUserGroup <name>

Removes a user group by name.

-displayConfigReport [<report>[, <report>]]

Displays security configuration reports. Available reports are: unusualRoleCombinations, emptySecurityGroups, emptyUserGroups, securityGroupsWithSameName, usersWithoutGroups, tenantsWithSameName, usersWithoutRoles

If no reports are specified, all available reports are run.

-listNode <node name>

Displays the UUIDs of the security group and tenant associated with the specified node. The node can be specified as name, hostname, or UUID. The output lists node UUID and name; security group UUID and name; and tenant UUID and name on separate lines.

-listNodesInSecurityGroup <groupName or uuid>

Lists nodes in a security group by security group name or UUID.

```
-listSecurityGroupForTenant <uuid>
```

Displays the configured default security group for the specified tenant.

-listSecurityGroups

Lists the names of all configured security groups.

-listTenants

Lists the names of all configured tenants.

-listUserGroupMembers <groupName>

Lists users in the specified user group.

-listUserGroups <user>

Lists user group membership for the specified user.

-listUserGroupsForSecurityGroup <groupName or uuid>

Lists user groups associated with the specified security group.

-removeUserFromGroup (-user <name> -userGroup <name>) | -file <filename>

Removes mappings between user accounts and user groups.

-user

The username of the user account to modify.

-userGroup

The name of the user group to unmap from the specified user account.

-file

Path to a CSV-formatted file containing lists of user to user group mappings with the format: user, userGroup

-deleteUserGroup <name> | -file <name>

Removes user groups by name. Mappings between the user group and user accounts and security groups are also removed.

-file

Path to a CSV-formatted file containing lists of user to user group mappings with the format: usergroup, description. This format is the same as createUserGroup; however, only the name is used to match the groups to be removed.

-removeUserGroupFromSecurityGroup (-userGroup <groupName> -securityGroup <groupName or uuid> [-role <role>]) | -file <name>

Removes mappings between user groups and security groups.

-userGroup

The name of the user group.

-securityGroup

-role

An optional role. If no role is specified, mappings for all roles are removed.

-file

Path to a CSV-formatted file containing lists of user to user group mappings with the format: userGroup, securityGroup, role

-updateUserGroup <name> ([-displayName <user friendly group name>] [-description <description>] [-directoryServiceName <dn>]) | -file <name>

Updates a user group. All user group attributes except name can be updated.

-displayName

Optional friendly name for the user group.

-description

Optional description of the group.

-directoryServiceName

Optional for directory service users. Use this option to pair a directory service distinguished name with this user group.

-file

Path to a CSV-formatted file containing lists of user groups with the format: name, displayName, description, directoryServiceName

#### -u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. The nnmsecurity.ovpl script requires this username unless a correctly configured <u>nnm.properties(4)</u> file exists.

#### -p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. The nnmsecurity.ovpl script requires this password unless a correctly configured <u>nnm.properties(4)</u> file exists.

```
-jndiHost <hostname>
```

The server jndi host; default is localhost.

-jndiPort <port>

The server jndi port; default is 1099.

#### **EXAMPLES**

nnmsecurity.ovpl -createTenant myTenant

nnmsecurity.ovpl -listTenants

Lists all configured tenants.

<code>nnmsecurity.ovpl -createTenant "Tenant with a space"</code> , <code>nnmsecurity.ovpl -createTenant  $\!$ Tenant</code>

Depending on the shell you use, you can use quotation marks around the tenant name to create a tenant with spaces in the name, or you can use the escape character to create a tenant with a special character in its name.

nnmsecurity.ovpl -createSecurityGroup mySecurityGroup

Creates the security group mySecurityGroup.

```
<code>nnmsecurity.ovpl -createSecurityGroup "Group with a space", nnmsecurity.ovpl - createSecurityGroup \!MyGroup</code></code>
```

Depending on the shell you use, you can use quotation marks around the security group name to create a security group with spaces in the name, or you can use the escape character to create a security group with a special character in its name.

```
nnmsecurity.ovpl -listSecurityGroups
```

Lists all configured security groups.

nnmsecurity.ovpl -listNode myNode

Lists the associated security group and tenant for the supplied node.

## DIAGNOSTICS

nnmsecurity.ovpl returns the following exit codes:

0

Operation was successful.

1

An error occurred; see error message for details.

## AUTHOR

nnmsecurity.ovpl was developed by Hewlett-Packard Company.

## **FILES**

The environment variable below represents a universal path that is established according to your shell and platform requirements:

UNIX: \$NNM\_BIN/nnmsecurity.ovpl

# **SEE ALSO**

<u>nnm.properties(4)</u>.

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nnmseeddelete.ovpl - Remove seed from the NNM topology database

#### **SYNOPSIS**

nnmseeddelete.ovpl -help | -seed < seed> | [-u < username> -p < password>] [-jndiHost < hostName>
Default: localhost] [-jndiPort < port> Default: 1099]

## DESCRIPTION

nnmseeddelete.ovpl removes a seed from the system.

#### **Parameters**

nnmseeddelete.ovpl supports the following options:

-seed <seed>

The seed to delete. A seed can be a host name or an IP address and must match exactly as listed in the seed list.

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-jndiHost <serverName>

The server JNDI host; default is localhost.

```
-jndiPort <port>
```

The server JNDI port; default is 1099.

#### **EXAMPLES**

nnmseeddelete.ovpl -u username -p password -seed 10.1.2.3

Removes the seed 10.1.2.3. (You must provide an NNM username and password.)

#### NNMi Reference Pages **Diagnostics**

nnmseeddelete.ovpl returns the following exit codes:

0

Operation was successful.

1

An error occured; see error message for details.

-help

Prints the usage statement.

## AUTHOR

nnmseeddelete.ovpl was developed by Hewlett-Packard Company.

### **FILES**

\$NNM\_BIN/nnmseeddelete.ovpl

## **SEE ALSO**

nnmloadseeds.ovpl(1M), nnm.properties(4).

nnmsetdampenedinterval.ovpl --- sets the dampened interval for all incident configurations

## **SYNOPSIS**

 $\label{eq:nnmsetdampendinterval.ovpl[[-hours hours][-minutes minutes][-seconds seconds][-u username][-p password]]$ 

## DESCRIPTION

nnmsetdampenedinterval.ovpl Sets the dampened interval for all incident configurations. The maximum dampened interval that can be set is 60 minutes. A dampened interval of at least 6 minutes is recommended. At least one of hours, minutes, or seconds must be specified. To disable dampening, set hours, minutes, and seconds to 0.

#### **Parameters**

#### -hours hours

Specify the number of hours for the dampened interval. If specified, the value for *hours* must be greater than or equal to 0.

-minutes minutes

Specify the number of minutes for the dampened interval. If specified, the value for *minutes* must be greater than or equal to 0.

-seconds seconds

Specify the number of seconds for the dampened interval. If specified, the value for *seconds* must be greater than or equal to 0.

-jndiHost hostname

Server jndi host. Default is localhost.

-jndiPort port

Server jndi port. Default is 1099.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

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March 2011 You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

## **EXAMPLES**

Set the dampened interval for all incident configurations to 10 minutes 10 seconds: nnmsetdampenedinterval.ovpl -hours 0 -minutes 10 -seconds 10 Set the dampened interval for all incident configurations to 1 hour: nnmsetdampenedinterval.ovpl -hours 1 Set the dampened interval for all incident configurations to 6 minutes: nnmsetdampenedinterval.ovpl -minutes 6 Set the dampened interval for all incident configurations to 30 seconds: nnmsetdampenedinterval.ovpl -seconds 30 Set the dampened interval for all incident configurations to 10 minutes 10 seconds: nnmsetdampenedinterval.ovpl -minutes 10 -seconds 10 Disable dampening for all incident configurations: nnmsetdampenedinterval.ovpl -hours 0 -minutes 0 -seconds 0

# **AUTHOR**

nnmsetdampenedinterval.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

<u>nnm.properties</u>(4)

nnmsetofficialfqdn.ovpl — Set the official Fully Qualified Domain Name (FQDN) of the NNMi management server.

## SYNOPSIS

 $\texttt{nnmsetofficialfqdn.ovpl} \; [-f \mid -force] < \!\!\! \textit{fqdn} \!\!\!>$ 

## DESCRIPTION

Use the nnmsetofficialfqdn.ovpl script to change the official FQDN for the NNMi management server after installation. If you run this script without any arguments, it sets the official FQDN to the default value. The default value is obtained by performing a hostname lookup. See the reference page for the nnmofficialfqdn.ovpl script using the -m option for more information about the default hostname lookup.

If the FQDN is changed, the user is prompted to auto generate a new SSL certificate. All certificates that NNMi auto generates have the following alias syntax: fqdn.selfsigned. Because the SSL certificate is tied to the FQDN, HTTPS breaks if a new certificate is not generated and added to both the nnm.keystore and nnm.truststore files. If you provide the -force option, the nnmsetofficialfqdn.ovpl script generates and inserts the certificate into both the nnm.keystore and nnm.truststore files. If the new certificate's alias already exists in either the nnm.keystore or nnm.truststore files, the certificate is not inserted.

If a new certificate is generated, the system property com.hp.ov.nms.ssl.KEY\_ALIAS in the nmslocal.properties file is updated to reference the new certificate alias. This is a necessary step for HTTPS to work correctly when NNMi is started again.

#### **Options**

There are two optional arguments to nnmsetofficialfqdn.ovpl

<fqdn>

Resets the official FQDN to <fqdn> on confirmation from the user.

If the value of <fqdn> does not have a domain (for example, it is a short hostname, IP address or localhost), SSO is disabled.

-force|-f

This is a *force flag* that does not prompt the user for confirmation and does not print verbose information. When used alone, the force flag sets the official FQDN to the default. When  $f_{qdn}$  is used after this flag, it changes the official FQDN to  $f_{qdn}$ .

### **EXAMPLES**

nnmsetofficialfqdn.ovpl

Set the FQDN to the value somehost.somedomain:

 ${\tt nnmset official fqdn.ovpl \ somehost.somedomain}$ 

Force the official FQDN to the default value:

```
nnmsetofficialfqdn.ovpl -f
```

# AUTHOR

nnmsetofficialfqdn.ovpl was developed by Hewlett-Packard Company.

## **FILES**

nnmsetofficialfqdn.ovpl resides in the %NNM\_BIN% (Windows) or \$NNM\_BIN (UNIX) directory.

## **SEE ALSO**

nnmofficialfqdn.ovpl(1M), nnmsetdomain.ovpl(1M), nnmsso.ovpl(1M).

nnmsnmpbulk.ovpl — Queries a node for information using an SNMPv2c GetBulk request.

### **SYNOPSIS**

nnmsnmpbulk.ovpl -u user\_name -p passwd [options] node object-id [,object-id]...

options: [-d] [-v version] [-c community] [-port port(default:161)] [-t timeout(default:5000)] [-r
retries(default:1)] [-T] [-n non-repeaters] [-m max-repetitions] [-pp Proxy Port] [-pa Proxy
Address] [-a Authentication Protocol] [-A Authentication Pass phrase] [-X Privacy Protocol] [X Privacy Passphrase] [-N Context Name] [-v3u SNMPv3 user name]

### DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmsnmpbulk.ovpl script uses the SNMPv2c/v3 GetBulk request to retrieve information from an SNMP agent. The SNMP GetBulk request minimizes the number of protocol exchanges required to retrieve a large amount of information. This increases performance, as the nnmsnmpbulk.ovpl script uses fewer SNMP requests to retrieve management information from the remote node.

If the node is an SNMPv1-only agent, the nnmsnmpbulk.ovpl script automatically downgrades the GetBulk request to an SNMPv1-supported GetNext request.

node can be a system with an IP address that supports SNMP. You can supply IP nodes to the nnmsnmpbulk.ovpl script using either a node's IP address or its hostname.

Supply command arguments for one or more OIDs in dotted decimal format or as a mnemonic name. Before attempting to supply a mnemonic name, load the MIB that defines the OID by using the nnmloadmib.ovpl script.

Only users who belong to System, Administrator or Web Service Client roles can run the nnmsnmpbulk.ovpl script. Users who are in Level1, Level2 or Guest roles cannot run the nnmsnmpbulk.ovpl script.

#### **Parameters**

#### -d

Dumps all SNMP packets to standard output in a hexadecimal and decoded ASN.1 format.

March 2011

Requests a specific version of SNMP be used to communicate with the remote node. Valid choices for *version* are 1, 2, 2c, or 3.

If you do not specify the version, the nnmsnmpbulk.ovpl script uses 2c as the default for nodes not in the topology.

-c community

Specifies the community string to use for authentication on the remote node.

-port port

Specifies the port to use to communicate with the remote node.

-t timeout

Specifies a timeout period, in milliseconds, for communication with the remote node.

-r retries

Specifies the number of retries to use for communication with the remote node.

-T

Prints the OID in dotted decimal format and the MIB variable value with no textual conventions applied.

-n

*non-repeaters* specifies the number of variables for which a single lexicographic successor is to be returned. This value represents the number of non-repeating varbinds (values) you want the nnmsnmpbulk.ovpl script to retrieve.

-m

Max-Repetitions specifies the number of lexicographic successors to be returned for the remaining variables. This value represents the number of rows to retrieve for a repeating varbind (value). The repeating varbind is present in each table row.

-pp Proxy Port

Specifies the Proxy Port to use in communication with the node

-pa Proxy Address

Specifies the Proxy IP Address to use to communicate with the node.

-a Authentication Protocol

SNMPv3 Authentication Protocol (MD5|SHA)

-A Authentication Passphrase

SNMPv3 Authentication Passphrase

-x Privacy Protocol

-X Privacy Passphrase

SNMPv3 Privacy Passphrase

-N context

SNMPv3 Context Name (for example, vlan1)

-v3u SNMPv3 user name

SNMPv3 security name (for example, testV3user)

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. The nnmsnmpbulk.ovpl script requires this username unless a correctly configured <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) pssword to run the script. The nnmsnmpbulk.ovpl script requires this password unless a correctly configured <u>nnm.properties(4)</u> file exists.

If the nnmsnmpbulk.ovpl script does not receive a response, it uses a linear backoff algorithm based on the *timeout* and *retries* arguments to resend the SNMP request. For example, if the *timeout* argument is 2000 (two seconds) and the *retries* argument is 3, the initial request would time out after two seconds, the first retry would time out after four seconds, the second retry would time out after six seconds, and the last retry would time out after eight seconds. The nnmsnmpbulk.ovpl script requires additional time to resolve the configuration.

### **EXAMPLES**

The following command retrieves all information under the system MIB OID from node testnode:

```
nnmsnmpbulk.ovpl -c community testnode .1.3.6.1.2.1.1.0
```

## AUTHOR

nnmsnmpbulk.ovpl was developed by Hewlett-Packard Company.

### **FILES**

The environment variable below represents a universal path that is established according to your shell and platform requirements:

```
Windows: %NNM_BIN%\nnmsnmpbulk.ovpl
```

## **SEE ALSO**

nnmloadmib.ovpl(1M), nnmsnmpnotify.ovpl(1M), nnmsnmpset.ovpl(1M), nnmsnmpwalk.ovpl(1M).

RFC 1155, 1157, 1212: SNMP Version 1.

RFC 1901 - 1908, 2576, 2578, 3416 - 3418: SNMP Version 2.

*RFC 3411 - 3415: SNMP Version 3.* 

## **EXTERNAL INFLUENCES**

#### **Environmental Variables**

\$LANG determines the language in which messages appear. If \$LANG is not specified or is set to an empty string, a default of c is used instead of \$LANG. If any internationalization variable contains an invalid setting, the nnmsnmpbulk.ovpl script functions as if all internationalization variables are set to c.

#### **International Code Set Support**

Supports single-byte and multiple-byte character code sets.

NOTE: SNMP MIB values of the type DISPLAY STRING are restricted to NVT-ASCII.

nnmsnmpwalk.ovpl --- query a node using multiple SNMP GETNEXT requests

## **SYNOPSIS**

nnmsnmpwalk.ovpl -u user\_name -p passwd [options] node object-id

nnmsnmpget.ovpl -u user\_name -p passwd [options] node object-id [,object-id]...

nnmsnmpnext.ovpl -u user\_name -p passwd [options] node object-id [,object-id]...

options: [-d] [-V version] [-c community] [-port port(default:161)] [-t timeout(default:5000)] [-r retries(default:1)] [-T] [-pp Proxy Port] [-pa Proxy Address] [-a Authentication Protocol] [-A Authentication Pass phrase] [-X Privacy Protocol] [-X Privacy Passphrase] [-N Context Name] [-V3u SNMPv3 user name]

## DESCRIPTION

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmsnmpwalk.ovpl script sends repeated SNMP GETNEXT requests to retrieve values for all instances of MIB objects registered on node node. The nnmsnmpwalk.ovpl script determines whether to use SNMP Version 1 or Community-based SNMP Version 2 (SNMPv2c) or version 3, based on the value supplied for the -v option and the type of remote node. If you do not specify a variable, the nnmsnmpwalk.ovpl script retrieves all values beneath object.iso.org. If you do supply a variable, the variable's value determines the starting point in the object identifier space that is searched. For example, the nnmsnmpwalk.ovpl script retrieves the entire system group if you supply .1.3.6.1.2.1.1.1. as a variable value. The nnmsnmpwalk.ovpl script script terminates when all object information beneath the specified variable has been returned.

The nnmsnmpget.ovpl script uses the SNMP Get request to query node for information.

Normally an SNMP instance number needs to be appended, such as using .0 in .1.3.6.1.2.1.1.1.0 to get the system.sysDescr.0 value).

The nnmsnmpnext.ovpl script performs the same action as the nnmsnmpwalk.ovpl script, except that the nnmsnmpnext.ovpl script only returns a single value.

node can be an IP-addressable system that supports SNMP, or a target name for which an SNMP proxy configuration is defined. You can identify IP nodes by Internet address or hostname.

You might supply one or more variables as arguments to any of these scripts. Each variable is an object identifier in dotted decimal format or mnemonic name. If you plan to specify the variables by mnemonic name, use the nnmloadmib.ovpl script to load the MIB that defines the object identifier before using this method.

If you attempt to search beyond the end of the remote node's MIB with either the nnmsnmpwalk.ovpl or nnmsnmpnext.ovpl scripts, the scripts display an End of MIB message.

Only users who belong to System, Administrator or Web Service Client roles can run these scripts. Users who are in Level1, Level2 or Guest roles cannot run these commands.

### **Options**

-d

Dumps all SNMP packets to standard output in a hexadecimal and decoded ASN.1 format.

-v version

Requests the script to use a specific version of SNMP to communicate with the remote node. Valid choices for *version* are 1, 2c, or 3.

If you do not specify the version, the script uses 2c as the default for nodes not in the topology.

-c community

Specifies the community string to use for authentication on the remote node.

-port port

Specifies the port to use in communication with the remote node.

-t timeout

Specifies a timeout period, in milliseconds, for communication with the remote node.

-r retries

Specifies the number of retries to use for communication with the remote node.

-T

Prints the OID in dotted decimal format and the MIB variable value with no textual conventions applied.

-pp Proxy Port

Specifies the Proxy Port to use in communication with the node

-pa Proxy Address

Specifies the Proxy IP Address to use in communication with the node

-a Authentication Protocol

SNMPv3 Authentication Protocol (MD5|SHA)

-A Authentication Passphrase

-x Privacy Protocol

#### SNMPv3 Privacy Protocol (DES|3DES|AES|AES192|AES256)

-X Privacy Passphrase

SNMPv3 Privacy Passphrase

-N context

SNMPv3 Context Name (for example, vlan1)

-v3u SNMPv3 user name

SNMPv3 security name (for example, testV3user)

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

If the nnmsnmpwalk.ovpl script does not receive a response, it uses a linear backoff algorithm based on the *timeout* and *retries* arguments to resend the SNMP request. For example, if the *timeout* argument is 2000 (two seconds) and the *retries* argument is 3, the initial request would time out after two seconds, the first retry would time out after four seconds, the second retry would time out after six seconds, and the last retry would time out after eight seconds. The nnmsnmpwalk.ovpl script requires additional time to resolve the configuration.

#### **EXAMPLES**

The following script usage requests the system subtree for the node *testnode*:

nnmsnmpwalk.ovpl testnode system

Output for the above command typically resembles the following:

nnmsnmpwalk.ovpl -c	community 10.97.1.7 .1.3.6.1.2.1.1
.1.3.6.1.2.1.1.1.0:	ASN_OCTET_STR = Ethernet Switch 470-24T-PWR
.1.3.6.1.2.1.1.2.0:	ASN_OBJECT_ID = .1.3.6.1.4.1.45.3.63.1
.1.3.6.1.2.1.1.3.0:	ASN_TIMETICKS = 63050579
.1.3.6.1.2.1.1.4.0:	ASN_OCTET_STR = Bob Jones 933-558-3453
.1.3.6.1.2.1.1.5.0:	ASN_OCTET_STR = wr3-2-front-storage-n91-60-2
.1.3.6.1.2.1.1.6.0:	ASN_OCTET_STR = Woods Run 3 2nd floor
.1.3.6.1.2.1.1.7.0:	ASN_INTEGER = 3

# AUTHOR

 $\verb+nnmsnmpwalk.ovpl, nnmsnmpget.ovpl, and \verb+nnmsnmpnext.ovpl were developed by Hewlett-Packard Company.$ 

#### FILES

- Windows: %NNM\_BIN%\nnmsnmpwalk.ovpl
- Windows: %NNM\_BIN%\nnmsnmpget.ovpl
- Windows: %NNM\_BIN%\nnmsnmpnext.ovpl
- UNIX: \$NNM\_BIN/nnmsnmpwalk.ovpl
- UNIX: \$NNM\_BIN/nnmsnmpget.ovpl
- UNIX: \$NNM\_BIN/nnmsnmpnext.ovpl

For information about universal paths for your platform and shell, see the <u>nnm.envvars(1)</u> reference page.

#### **SEE ALSO**

<u>nnmsnmpset.ovpl(1M)</u>, <u>nnmsnmpbulk.ovpl(1M)</u>, <u>nnmsnmpnotify.ovpl(1M)</u>.

RFC 1155, 1157, 1212: SNMP Version 1.

RFC 1901 - 1908, 2576, 2578, 3416 - 3418: SNMP Version 2.

*RFC 3411 - 3415: SNMP Version 3.* 

#### **EXTERNAL INFLUENCES**

#### **Environmental Variables**

\$LANG determines the language in which messages appear. If \$LANG is not specified or is set to an empty string, a default of c is used instead of \$LANG. If any internationalization variable contains an invalid setting, nnmsnmpget.ovpl behaves as if all internationalization variables are set to c.

#### **International Code Set Support**

Supports single-byte and multiple-byte character code sets.

NOTE: SNMP MIB values of the type DISPLAY STRING are restricted to NVT-ASCII.

disco.NoVLANIndexing — Specifies certain nodes where VLAN Indexing should be skipped during discovery polling.

## SYNOPSIS

disco.NoVLANIndexing

# DESCRIPTION

One of the methods NNMi uses to learn layer 2 connectivity between and among switch devices in a managed network is to retrieve the dotldTpFdbTable (FDB) from the switches. However, for Cisco switches, NNMi must use a VLAN-indexing method to retrieve the entire FDB. Using this method, NNMi retrieves the FDB once for each configured VLAN on the Cisco device. If there is a large number of VLANs configured on each device, retrieving the FDB with VLAN-indexing might take a very long time, sometimes even hours, to complete.

Cisco switches are often configured to use the Cisco Discovery Protocol (CDP). CDP is considered to be a superior method for learning layer 2 connectivity. Large switches located in the in the core of the network might contain many VLANs. These switches typically do not have end nodes connected directly to them. If the switches you want to manage do not have end nodes connected directly to them, you might want to suppress the collection of the FDB on these large switches. NNMi still completes the layer 2 discovery using data collected from CDP. These large switches are prime candidates for suppression of VLAN-indexing. Do not suppress VLAN-indexing on smaller switches located at the network's edge (often known as access switches) that have many end nodes attached to them.

You can configure NNMi to suppress VLAN indexing. To do this, the NNMi administrator needs to create the disco.NoVLANIndexing file, where the name of the file is case-sensitive. The ovjboss service reads the disco.NoVLANIndexing file when it starts. If the NNMi administrator makes changes to the disco.NoVLANIndexing file after the ovjboss service starts, those changes will not take effect until the next time the ovjboss service starts. By default, the disco.NoVLANIndexing file does not exist. If the disco.NoVLANIndexing does not exist, this feature is disabled and NNMi attempts to use VLAN-indexing to collect the entire FDB table on all devices.

The disco.NovLANIndexing file can contain IP addresses, IP address ranges, and comments. A comment consists of the pound (or hash) sign (#) and all characters between # and the end of the line. NNMi treats an empty line as a comment. IP addresses are specified in the standard IP version 4 dotted-decimal notation or standard IP version 6 format (RFC 2373).

For details on the format of IP address ranges, see the *Configure Address Ranges for Regions* section of the NNMi help.

NNMi considers a node to match if one of the listed IP addresses matches a node's management address. Other IP addresses hosted by the node are not considered. If a node matches one of the addresses in the disco.NovLANIndexing file, NNMi collects only the default FDB (the FDB which is accessible by using the community string with no @vlan-id suffix appended).

Disabling the collecting of the entire FDB might cause some inaccuracies in the layer 2 layout of the

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managed network. HP is not responsible for these inaccuracies. Carefully consider which switches you include in the disco.NoVLANIndexing file.

### **EXAMPLES**

The following is an example of a disco.NoVLANIndexing file:

# AUTHOR

disco.NoVLANIndexing was developed by Hewlett-Packard Company.

## **FILES**

\$NnmDataDir/shared/nnm/conf/disco/disco.NoVLANIndexing

%NnmDataDir%\shared\nnm\conf\disco\disco.NoVLANIndexing

## **SEE ALSO**

See the *Maintaining NNMi* chapter in the newest version of the *NNMi Deployment Reference* for more information.

See the Configure Address Ranges for Regions section of the NNMi help.

disco.SkipXdpProcessing — Contains a list of management IP addresses for nodes NNMi should not query for discovery protocol information.

## SYNOPSIS

disco.SkipXdpProcessing

## DESCRIPTION

One method NNMi uses to discover layer 2 connectivity between and among network devices in a managed network is to collect information from the devices related to their discovery protocols. There are many defined discovery protocols. For example, Link Layer Discovery Protocol (LLDP) is an industry standard protocol, while there are many vendor-specific protocols like Cisco Discovery Protocol (CDP) for Cisco devices. These are all handled by NNMi discovery in the XdpAnalyzer.

You can configure NNMi to suppress discovery protocol collections for devices you specify. This feature makes use of a configuration file, disco.SkipXdpProcessing, that the NNMi administrator creates. The name of the file is case-sensitive. The ovjboss service reads the disco.SkipXdpProcessing when it starts up. If the NNMi administrator makes changes to this file after the ovjboss service starts up, those changes will not take effect until the next time the ovjboss service starts. By default, the disco.SkipXdpProcessing file does not exist. If the disco.SkipXdpProcessing does not exist, this feature is disabled and NNMi attempts to collect discovery protocol information from all managed nodes.

For more information about the known problems fixed by this feature, refer to the SEE ALSO section below.

The disco.SkipXdpProcessing file can contain IP addresses and comments. A comment consists of the pound (or hash) sign (#) and all characters between # and the end of the line. NNMi treats an empty line as a comment. Specify IP addresses in the standard IP version 4 dotted-decimal notation or standard IP version 6 format (RFC 2373).

NNMi considers a node to match if one of the listed IP addresses matches a node's management address. Other IP addresses hosted by the node are not considered. If a node matches one of the addresses in the disco.SkipXdpProcessing file, NNMi skips the XdpAnalyzer service for that node and does not collect discovery protocol information.

Disabling the discovery protocol processing of a node or nodes might cause some inaccuracies in the layer 2 layout of the managed network. HP is not responsible for these inaccuracies.

## EXAMPLES

The following is an example of a disco.SkipXdpProcessing file:

```
#This entry supresses the XdpAnalyzer processing for the node whose management address is 10.2.37.149
10.2.37.149
```

192.168.100.1 #This entry causes the node 192.168.100.1 to be skipped, too

```
# Here are some examples of IPv6 addresses:
    2136::8:800:200C:417a
    fd01::a352:1245:fc4B
```

### AUTHOR

disco.SkipXdpProcessing was developed by Hewlett-Packard Company.

#### **FILES**

\$NnmDataDir/shared/nnm/conf/disco/disco.SkipXdpProcessing

%NnmDataDir%\shared\nnm\conf\disco\disco.SkipXdpProcessing

#### **SEE ALSO**

See the *Maintaining NNMi* chapter in the newest version of the *NNMi Deployment Reference* for more information.

hostnolookup.conf — file containing hostnames or hostname wildcards that should not be resolved to IP addresses using the system IP name server

## SYNOPSIS

hostnolookup.conf

## DESCRIPTION

hostnolookup.conf is a file used by the ovjboss process to determine whether a hostname should be resolved to an IP address using the system IP name server. The ovjboss process attempts to match a hostname against each entry in the hostnolookup.conf file before attempting to resolve the hostname to an IP address. If a match is found, the ovjboss process does not attempt to resolve the hostname to an IP address using the system IP name server.

Add entries to the file containing one hostname or hostname wildcard. Each entry must be on a single line. To add comments, place a number sign (#) in front of the comment. That causes the remainder of the line to be ignored. You can add blank lines to the hostnolookup.conf file.

Use the hostnolookup.conf file if you determine that a specific hostname (or set of hostnames) cannot be resolved to an IP address using the systems IP name server.

The administrator must create the hostnolookup.conf file. It does not exist by default.

If you modify the hostnolookup.conf file while the ovjboss process is running, use the \$NnmInstallDir/support/nmsdnssync.ovpl script to load the updated file. The nmsdnssync.ovpl script also reloads the ipnolookup.conf file.

## **EXAMPLES**

The following is an example of a hostnolookup.conf file:

# A single hostname badsys.mydomain.mycorp.com # An IP wildcard \*.baddomain.mycorp.com

In the first example, the system name is bad in some way, causing some DNS servers to respond with unexpected results. In the second example, there is a domain that cannot be resolved. Adding these entries to the hostnolookup.conf file stops NNMi from attempting to resolve the hostnames.

### AUTHOR

hostnolookup.conf was developed by Hewlett-Packard Company.

### **FILES**

%NNM\_DATA%\shared\nnm\conf\hostnolookup.conf
\$NNM\_DATA/shared/nnm/conf/hostnolookup.conf

## **SEE ALSO**

ipnolookup.conf(4).

ipnolookup.conf — file containing IP addresses or IP wildcards that should not be resolved to hostnames using the system IP name server

## SYNOPSIS

ipnolookup.conf

## DESCRIPTION

ipnolookup.conf is a file used by all NNMi processes to determine whether an IP address should be resolved to a hostname using the system IP name server. NNMi processes attempt to match an IP address against each entry in the ipnolookup.conf file before attempting to resolve the IP address to a hostname. If a match is found, the NNMi process does not attempt to resolve the IP address to a hostname using the system IP name server.

Add entries to the file containing one IP address or IP wildcard per line. Each entry must be on a single line. To add comments, place a number sign (#) in front of the comment. This causes the remainder of the line to be ignored. You can add blank lines to the ipnolookup.conf file.

Use the ipnolookup.conf file when you determine that a specific IP address (or range of IP addresses) cannot be resolved to a hostname using the system IP name server.

The administrator must create the ipnolookup.conf file. It does not exist by default.

If you modify the ipnolookup.conf file while NNMi processes are running, run the \$NnmInstallDir/support/nmsdnssync.ovpl script with no arguments to load the modifications you made to the ipnolookup.conf file.

### **EXAMPLES**

The following is an example of a ipnolookup.conf file:

```
# A single IP address
192.168.1.100
# An IP wildcard
10.*.*.*
# An IP wildcard range
192.168.1.101-255
```

In the first example, the single IP address could be routed to the Internet because many web sites use a 192.168.\*.\* IP address. In the second example, the IP wildcard range could be NAT addresses. As such, they are not suitable for communications. In the third example, the IP wildcard range could be a set of addresses used for some purpose other than the primary IP address.

## AUTHOR

ipnolookup.conf was developed by Hewlett-Packard Company.

## FILES

*Windows*: %NNM\_DATA%\shared\nnm\conf\ipnolookup.conf

UNIX: \$NNM\_DATA/shared/nnm/conf/ipnolookup.conf

## **SEE ALSO**

hostnolookup.conf(4).

logging.properties — file containing configurable logging properties used by the NMSLogManager service to control how NNMi uses the java.util.logging framework to produce log files.

## SYNOPSIS

logging.properties

## DESCRIPTION

logging.properties is a file used by the NMSLogManager ovjboss service to configure how NNMi produces log files using the java.util.logging framework. After you make changes to this file, you must restart the ovjboss servuce, or run the \$NnmInstallDir/support/nnmrereadlogging.ovpl script.

NOTE: This document does not explain the java.util.logging framework. To learn more about this framework, go to <u>http://download.oracle.com/javase/1.4.2/docs/api/java/util/logging/package-summary.html</u>

The format of the logging.properties file conforms to the standard format required by the java.util.logging framework, and adds some custom extensions used by NNMi to support NNMi logging requirements. In addition to the basic java.util.logging framework logging properties, NNMi adds the following name=value entries to the logging.properties file:

<package.name>.<LogFileHandler>.count

Specifies the number of archive log files NNMi should keep when ovjboss restarts. The default value is 2.

<package.name>.<LogFileHandler>.limit

Specifies the size (in bytes) the active log file should become before being rolled to a new active log file. The default value is 1048576 (1MB).

<package.name>.<LogFileHandler>.pattern

Specifies the pattern to use in naming log files for the LogFileHandler. The default value is <logBaseName>.%g.%u.log.

#### Where:

- %g corresponds to the current count of archived log sets (see count above).
- %u is controlled by java.util.logging based on file locking. The "u" in %u stands for *unique*. This value is only incremented if the current file name is locked. When that happens, the process increments %u until it can get a file lock, so that a new log file can be created.

NOTE: While %g reflects a limit on the number of archived sets of logs, an increment of %u shows that the file is currently locked. In the logging.properties file, if you set 5 for count and 1MB for limit, you can get up to five sets of archive log files. Each set has as many 1MB log files as are required to store the logging data.

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As with standard java.util.logging framework properties files, you can specify default log levels, parent logger relationships, log formatters, and other log handlers to use. If you are unsure about changing any logging setting, **it's a good idea to check with support to make sure you make appropriate changes**.

#### **EXAMPLES**

If you want to keep five sets of NNMi log files and roll the active logs by size approximately every 5MB, edit the logging.properties file as follows:

```
com.hp.ov.nms.admin.log.NnmMainFileHandler.limit = 5000000
com.hp.ov.nms.admin.log.NnmMainFileHandler.count = 5
```

Assuming you have a very busy system and you restart it once a week, you could get a set of files that looks something like this:

```
nnm.0.0.log Note: the current log file
nnm.1.0.log Note: this may have been archived due to a process restart
completed this morning
nnm.2.0.log Note: this may have been caused by hitting a file size limit of 5
MB
nnm.3.0.log Note: this may have been archived due to a process restart
completed this morning
nnm.4.0.log Note: this may be an archive of the very first log file, and may
have been created when the
first log file surpassed a file size limit of 5 MB
additional log entries...
```

## AUTHOR

logging.properties was developed by Hewlett-Packard Company.

### FILES

*Windows*: %NNM\_DATA%\shared\nnm\conf\ovjboss\logging.properties

UNIX: \$NNM\_DATA/shared/nnm/conf/ovjboss/logging.properties

NNMi specific java.util.logging framework properties used by the NMSLogManager service.

### **SEE ALSO**

ovjboss(1M).

nnm.ports — The following information shows the ports the NNMi management server listens on. In the case of port conflicts, you can change many of these port numbers.

## SYNOPSIS

nnm.ports

There is no command synopsis. The *nnm.ports* reference page documents the well-known ports you can change by modifying the nms-local.properties file.

#### DESCRIPTION

To change these port numbers, follow these steps:

1. Edit the %NnmDataDir%\conf\nnm\props\nms-local.properties (Windows) or /var/opt/OV/conf/nnm/props/nms-local.properties (Unix) file to modify the ports used by NNMi.

2. Identify the line containing the port number you need to change.

3. If necessary, remove the #! characters at the beginning of the line.

4. Modify the port number; then save your changes.

5. From a command prompt, run ovstop, then ovstart to restart NNMi.

The following ports are currently defined:

```
jboss.http.port=80
```

This TCP port is used as the default HTTP port for Web UI and Web Services. The installation script prompts you to set this value during the NNMi installation. You can change this port value by modifying the nms-local.properties file or during NNMi installation.

jboss.https.port=443

This TCP port is used as the default secure HTTPS port (SSL) for Web UI and Web Services. The installation script prompts you to set this value during the NNMi installation.

jboss.rmi.port=1098

This is the default TCP port of the RMI naming service.

jboss.jnp.port=1099

This TCP port is the default listening port for the bootstrap JNP service (JNDI provider).

jboss.ejb3.port=3873

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This TCP port is used for remote clients to communicate with the EJB 3 container, and is the default EJB3 remoting connector port.

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jboss.jrmp.port=4444

This TCP port is the RMI Object port (Java Remote Method Protocol) used by RMI to transfer data (JRMP invoker).

jboss.pooled.port=4445

This TCP port is the default port (invoker port) used when pooling RMI requests.

jboss.socket.port=4446

This TCP port is the default RMI remoting server connector port. The jboss Remoting service uses this port.

jboss.bisocket.port=4457

This TCP port is the default messaging bi-socket connector port used by the jboss Remoting service.

jboss.jmsControl.port=4458

This TCP port is the default JMS control part; it is used for Global Network Management communication.

jboss.sslbisocket.port=4459

This TCP port is the default messaging bi-socket connector; it is used for secure Global Network Management communication.

jboss.ssljmsControl.port=4460

This TCP port is the default JMS control port; it is used for used for secure Global Network Management communication.

jboss.ws.port=8083

This TCP port is the default jboss Web Service port.

## AUTHOR

nnm.ports was developed by Hewlett-Packard Company.

## FILES

Windows: %NnmDataDir%\conf\nnm\props\nms-local.properties

UNIX: /var/opt/OV/conf/nnm/props/nms-local.properties

#### ovstatus(1), ovstart(1M), ovstop(1M).

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nnm.properties — file containing the username and password for command line tools

### **SYNOPSIS**

nnm.properties

## DESCRIPTION

If you frequently run NNMi command line tools, HP recommends you create an nnm.properties file. This file contains a username and password that you can use in place of the -u and -p command line options. Using the nnm.properties file, you can run many commands without entering your password. The nnm.properties file contains an encrypted version of the password and should be created by running the nnmsetcmduserpw.ovpl script. Never manually edit the nnm.properties file. The nnmsetcmduserpw.ovpl script creates or edits a file placed in an .nnm subdirectory under your home directory at the following locations:

- Windows: drive:\Documents and Settings\username\.nnm\
- *UNIX*: ~/.nnm/

The contents of this file must be defined as follows:

nnm.username

The account user name.

nnm.password

The account encrypted password.

Most command line tools require an administrative user with an *admin* role assigned to the tool.

#### AUTHOR

nnm.properties was developed by Hewlett-Packard Company.

#### **FILES**

The environment variable below represents a universal path that is established according to your shell and platform requirements:

Windows: drive:\Documents and Settings\username\.nnm\nnm.properties

UNIX: \$HOME/.nnm/nnm.properties

### **SEE ALSO**

<u>nnmsetcmduserpw.ovpl(1)</u>.

ldap.properties — file containing the settings for communicating with and building LDAP queries to the directory service

## SYNOPSIS

ldap.properties

## DESCRIPTION

For detailed information about the contents of the ldap.properties file, see the Integrating NNMi with a Directory Service through LDAP chapter of the NNMi Deployment Reference.

After modifying this file, run the nnmldap.ovpl -reload command to reload the configuration.

## AUTHOR

ldap.properties was developed by Hewlett-Packard Company.

## **FILES**

Windows: %NNM\_SHARED\_CONF%\ldap.properties

UNIX: \$NNM\_SHARED\_CONF/ldap.properties

## **SEE ALSO**

nnmldap.ovpl(1M).

nnmtrapd.conf - Filter file to block traps based on IP address or OID

## **SYNOPSIS**

nnmtrapd.conf

## DESCRIPTION

nnmtrapd.conf file can be used to configure filters to block traps based on both IP address and trap OID.

The filters are entered one per line. Each filter consists of an IP address, range or wildcard folowed by one or more comma separated list of trap OIDs or range of trap OIDs or wildcards.

The format of the filter is:

```
<IP Address, OID[,OID]*>
```

IP Address could be a single IP Address or a pattern in prefix/prefix-length notation or range-wildcard notation. The special notation of "\*" indicates all addresses. You may not combine the prefix/prefix-length notation with the range-wildcard notation in the same address. Host name cannot be specified instead of an address. Every filter entry should have a unique address (single, wild card or range). Examples of addresses in prefix/prefix-length notation are:

10.2.112.0/20 1080:0:a00::/44

The same addresses in range-wildcard notations are:

```
10.2.112-127.*
1080:0:a00-a0f:*:*:*:*:*
```

The trap OID can also be specified as a range or as wildcard. However, you may only use either a range or a wildcard in one OID. Only the last sub OID of an OID can be specified as a wildcard or range. The special notation ".\*" indicates all OIDs. Some examples are:

.1.3.6.1.4.1.11.2.17.1.0.58915834-58915868 .1.3.6.1.4.1.11.\*

For generic traps like link up, you can append the enterprise OID of the vendor to the trap OID for blocking a specific vendor. Conversely, to block a generic trap from all vendors you need to append a wildcard to the trap OID.

Blocking all traps from all address is not allowed. So the following entry is ignored:

<\*, .\*>

### **EXAMPLES**

The following example blocks all generic traps from all subnets in the range 10.2.120 to 10.2.127:

<10.2.120.0/21, .1.3.6.1.6.3.1.1.5.\*>

The following example blocks link up traps from all devices in the 10.6.112/21 subnet whose enterprise OID is .1.3.6.1.4.1.11.2.3.7.11.17:

<10.6.112.0/21, .1.3.6.1.6.3.1.1.5.4.1.3.6.1.4.1.11.2.3.7.11.17>

The following example blocks link up traps from all devices in the 10.6.112/21 subnet.

<10.6.112.0/21, .1.3.6.1.6.3.1.1.5.4.\*>

The following example blocks all traps under the OID .1.3.6.1.4.1.11.2.17 and the authentication failure trap from a single IPv6 address.

<1080::8:800:200c:417a, .1.3.6.1.4.1.11.2.17.\*, .1.3.6.1.6.3.1.1.5.5.\*>

#### AUTHOR

nnmtrapd.conf was developed by Hewlett-Packard Company.

#### FILES

\$NnmDataDir/shared/nnm/conf/nnmtrapd.conf

#### **SEE ALSO**

nnmtrapconfig.ovpl(1M).

trapFilter.conf — Filter file to block traps based on IP address or OID

## **SYNOPSIS**

trapFilter.conf

## DESCRIPTION

Use the trapFilter.conf file to configure filters to block traps based on both IP address and trap OID. This is similar to using the nnmtrapd.conf file, except that traps blocked by the trapFilter.conf file do not get stored in the trap binary store, nor are they used to analyze trap rates. Trap rates are not affected by incoming traps blocked by the trapFilter.conf. file. NNMi does not store incoming traps blocked by the trapFilter.conf file.

Enter the filters one filter per line. Each filter consists of an IP address, range, or wildcard followed by one or more comma separated trap OIDs, range of trap OIDs, or wildcards.

The format of the filter is as follows:

```
<IP Address, OID[,OID]*>
```

*IP* Address could be a single IP Address or a pattern in prefix/prefix-length notation or range-wildcard notation. The special notation of "\*" indicates all addresses. Do not combine the prefix/prefix-length notation with the range-wildcard notation in the same address. Do not specify the hostname instead of an address. Every filter entry should have a unique address (single, wildcard, or range). Examples of addresses in prefix/prefix-length notation are as follows:

10.2.112.0/20 1080:0:a00::/44

The same addresses in range-wildcard notations are:

10.2.112-127.\* 1080:0:a00-a0f:\*:\*:\*:\*:\*

Specify the trap OID as a range or as wildcard. Only use a range or a wildcard in one OID. Only specify the last sub OID of an OID as a wildcard or range. The special notation ".\*" indicates all OIDs. Some examples are as follows:

.1.3.6.1.4.1.11.2.17.1.0.58915834-58915868 .1.3.6.1.4.1.11.\*

For generic traps like linkUp, you can append the enterprise OID of the vendor to the trap OID for blocking a specific vendor. Conversely, to block a generic trap from all vendors you need to append a wildcard to the trap OID.

Blocking all traps from all addresses is not allowed. So the following entry is ignored:

<\*, .\*>

### EXAMPLES

The following example blocks all generic traps from all subnets in the range 10.2.120 to 10.2.127:

<10.2.120.0/21, .1.3.6.1.6.3.1.1.5.\*>

The following example blocks link up traps from all devices in the 10.6.112/21 subnet whose enterprise OID is .1.3.6.1.4.1.11.2.3.7.11.17:

<10.6.112.0/21, .1.3.6.1.6.3.1.1.5.4.1.3.6.1.4.1.11.2.3.7.11.17>

The following example blocks link up traps from all devices in the 10.6.112/21 subnet.

<10.6.112.0/21, .1.3.6.1.6.3.1.1.5.4.\*>

The following example blocks all traps under the OID .1.3.6.1.4.1.11.2.17 and the authentication failure trap from a single IPv6 address.

<1080::8:800:200c:417a, .1.3.6.1.4.1.11.2.17.\*, .1.3.6.1.6.3.1.1.5.5.\*>

## AUTHOR

trapFilter.conf was developed by Hewlett-Packard Company.

## **FILES**

\$NnmDataDir/shared/nnm/conf/trapFilter.conf

## **SEE ALSO**

nnmtrapconfig.ovpl(1M).

UnnumberedNodeGroup.conf — Node group name that is used to identify those nodes unnumbered interfaces should be discovered with

## **SYNOPSIS**

UnnumberedNodeGroup

## DESCRIPTION

UnnumberedNodeGroup.conf is a file used by NNMi to determine whether devices should be evaluated for the existence of unnumbered interfaces, and thus infer potential L2 connection across them. This file must contain the name of a single node group, or it can be the name of a parent node group that represents multiple child node groups containing the device identifiers.

If this file is missing or specified node group name does not exist in the NNMi system, unnumbered interface management will not be enabled. In addition, the administrator must create the UnnumberedNodeGroup.conf file. It does not exist by default.

If you modify the UnnumberedNodeGroup.conf file while NNMi processes are running, you must restart NNMi.

### **EXAMPLES**

The following is an example of a UnnumberedNodeGroup.conf file:

Unnumbered Node Group

In the example, A node group named Unnumbered Node Group is existing in NNMi.

### AUTHOR

UnnumberedNodeGroup.conf was developed by Hewlett-Packard Company.

### **FILES**

\$NnmDataDir/shared/nnm/conf/disco/UnnumberedNodeGroup.conf

### **SEE ALSO**

UnnumberedSubnets.conf(4).

UnnumberedSubnets.conf — Contains a list of subnets that should be looked up by the NNMi against routing tables on the devices for unnumbered interface management

## SYNOPSIS

UnnumberedSubnets.conf

## DESCRIPTION

UnnumberedSubnets.conf is a file used by NNMi to scope down the routing table query for unnumbered interface management. If you do not create and configure this file, NNMi will do the full MIB-II routing table walk against devices; By using the UnnumberedSubnets.conf file, NNMi requests MIB data for only those routes falling in the specified subnet ranges. It is a good practice to use this file and reduce the amount of discovery traffic and performance effect on the devices.

The UnnumberedSubnets.conf file can have one or more lines of CIDR subnets. The order of the subnets is not important, and NNMi will sort them out before querying the routing table. The range of subnet is inclusive.

The administrator must create the UnnumberedSubnets.conf file. It does not exist by default.

If you modify the UnnumberedSubnets.conf file while NNMi processes are running, you must restart NNMi.

### **EXAMPLES**

The following is an example of a UnnumberedSubnets.conf file:

```
#This entry filters the following routes: 10.1.0-63.
10.1.5.0/18
#This entry filters the following routes: 15.2.*.*
15.2.126.0/16
#This entry filters the following routes: 192.168.1.0-255
192.168.1.0/24
```

In the example, instead of full routing table walk, NNMi only queries routing tables ipRoutingTable or ipCidrRoutingTable for routes in the specified ranges.

## AUTHOR

UnnumberedSubnets.conf was developed by Hewlett-Packard Company.

### FILES

## SEE ALSO

UnnumberedNodeGroup.conf(4).

nnmsnmpset.ovpl — issue an SNMP set request

## **SYNOPSIS**

```
nnmsnmpset.ovpl -u user_name -p passwd [options] node object-id asnType value [object-id asnType value]...
```

options: [-d] [-V version] [-c write community] [-port port(default:161)] [-t
timeout(default:5000)] [-r retries(default:1)] [-T] [-pp Proxy Port] [-pa Proxy Address] [-a
Authentication Protocol] [-A Authentication Pass phrase] [-X Privacy Protocol] [-X Privacy
Passphrase] [-N Context Name] [-V3u SNMPv3 user name]

### **DESCRIPTION**

If you frequently run NNMi command line tools, create an nnm.properties file containing your username and password. Doing so permits you to run many NNMi command line tools and scripts without entering a username and password. Place the nnm.properties file in a .nnm subdirectory within your home directory. For example, you might place the nnm.properties file you create in the *drive*:\Documents and Settings\username\.nnm\ (Windows) or ~/.nnm (UNIX) directory.

The nnmsnmpset.ovpl script sends an SNMP set request to alter MIB objects on the remote node.

*node* can be an IP-addressable system that supports SNMP, or a target name for which an SNMP proxy configuration is defined. You can identify IP nodes by an Internet address or by a hostname.

The nnmsnmpset.ovpl script passes data to the remote node as a triple of *object-id,asnType,value*. Supply one or more triples to the nnmsnmpset.ovpl script as command-line arguments.

Each *object-id* is an object instance identifier in dotted decimal format (for example, .1.3.6.1.4.1.11.2.17.2.1.0 or mnemonic string format (for example, openViewSourceId.0).

Each *asnType* must be one of the following asnTypes:

integer
integer32
unsigned32
octetstring
octetstringhex
octetstringoctal
octetstringascii

null
ipaddress
counter
counter32
counter64 (for SNMPv2c or v3 capable remote nodes)
gauge
gauge32
timeticks
opaque
opaquehex
opaqueoctal
opaqueascii

For a complete description of each asnType, refer to RFC 1155 and RFC 1902.

The *value* parameter must be valid for the asnType specified. When using a asnType that requires a hexadecimal or octal value, you must fully define each byte of the value. For example, if you specify fff (or 17377), it is missing a byte, and will not work. Use 0fff (or 017377) instead. The nnmsnmpset.ovpl script ignores the *null* asnType. You must specify a *value* on the command line. If you try to use a *null* type, the nnmsnmpset.ovpl script ignores the null script ignores the null type when it creates the request. *value* must not be larger than 512 bytes.

Only users who belong to System, Administrator or Web Service Client roles can run the nnmsnmpset.ovpl script. Users who are in Level1, Level2 or Guest roles cannot run the nnmsnmpset.ovpl script.

## Parameters

-d

Dumps all SNMP packets to standard output in a hexadecimal and decoded ASN.1 format.

-v version

Requests the nnmsnmpset.ovpl script to use a specific version of SNMP to communicate with the remote node. Valid choices for *version* are 1, 2c, or 3.

If you do not specify the version, the nnmsnmpset.ovpl script uses 2c as the default for nodes not in the topology.

```
-cwrite community
```

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Specifies the write community string to use for authentication on the remote node.

-port port

Specifies the port to use in communication with the remote node.

#### -t timeout

Specifies a timeout period, in milliseconds, for communication with the remote node.

#### -r retries

Specifies the number of retries to use for communication with the remote node.

-T

Prints the OID in dotted decimal format and the MIB variable value with no textual conventions applied.

-pp Proxy Port

Specifies the Proxy Port to use in communication with the node

#### -pa Proxy Address

Specifies the Proxy IP Address to use in communication with the node

-a Authentication Protocol

SNMPv3 Authentication Protocol (MD5|SHA)

-A Authentication Passphrase

SNMPv3 Authentication Passphrase

-x Privacy Protocol

#### SNMPv3 Privacy Protocol (DES|3DES|AES|AES192|AES256)

-X Privacy Passphrase

SNMPv3 Privacy Passphrase

-N context

SNMPv3 Context Name (for example, vlan1)

-v3u SNMPv3 user name

SNMPv3 security name (for example, testV3user)

-u <*username*>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

If the nnmsnmpset.ovpl script does not receive a response, it uses a linear backoff algorithm based on the *timeout* and *retries* arguments to resend the SNMP request. For example, if the *timeout* argument is 2000 (two seconds) and the *retries* argument is 3, the initial request would time out after two seconds, the first retry would time out after four seconds, the second retry would time out after six seconds, and the last retry would time out after eight seconds. The nnmsnmpset.ovpl script requires additional time to resolve the configuration.

### **EXAMPLES**

The following command sets the system contact to Bob Jones for the node testnode:

nnmsnmpset.ovpl -c writeCommunity testnode system.sysContact.0 octetstring "Bob Jones"

The output for this command is as follows:

```
system.sysContact.0 OCTET STRING-(ascii): Bob Jones
```

## AUTHOR

nnmsnmpset.ovpl was developed by Hewlett-Packard Company.

### **FILES**

See the nnm.envvars reference page (and the UNIX manpage) for information about using environment variables for the following files:

install\_dir\bin\nnmsnmpset.ovpl
install dir\doc\rfc\*.txt

## **SEE ALSO**

nnmsnmpwalk.ovpl(1M), nnmsnmpbulk.ovpl(1M), nnmsnmpnotify.ovpl(1M).

RFC 1155, 1157, 1212: SNMP Version 1.

RFC 1901 - 1908, 2576, 2578, 3416 - 3418: SNMP Version 2.

RFC 3411 - 3415: SNMP Version 3.

### **EXTERNAL INFLUENCES**

### **Environmental Variables**

\$LANG determines the language in which messages appear. If \$LANG is not specified or is set to an empty string, a default of c is used instead of \$LANG. If any internationalization variable contains an invalid setting, nnmsnmpset.ovpl behaves as if all internationalization variables are set to c.

### **International Code Set Support**

Supports single-byte and multiple-byte character code sets.

NOTE: SNMP MIB values of the asnType octetstringascii are restricted to NVT-ASCII.

nnmsso.ovpl — reload single sign-on configuration.

## **SYNOPSIS**

nnmsso.ovpl -reload

## DESCRIPTION

nnmsso.ovpl is a script that enables you to reload the single sign-on (SSO) configuration from the nmsui.properties file without restarting ovjboss.

### **Parameters**

The nnmsso.ovpl script supports the following options:

-reload

Reloads the SSO configuration.

## EXAMPLES

nnmsso.ovpl -reload

Reads modifications made to the nms-ui.properties file. These changes could include enabling SSO, disabling SSO, or changing the initString.

## AUTHOR

nnmsso.ovpl was developed by Hewlett-Packard Company.

### **FILES**

Windows: %NNM\_PROPS%\nms-ui.properties

UNIX: \$NNM\_PROPS/nms-ui.properties

## **SEE ALSO**

nnmofficialfqdn.ovpl(1M), nnmsetofficialfqdn.ovpl(1M), nnmldap.ovpl(1M).

nnmstatuspoll.ovpl — update the status for a node using the State Poller

### **SYNOPSIS**

 $\texttt{nnmstatuspoll.ovpl} \left[ -\texttt{node} < \texttt{nodename} \middle| \texttt{IP} \ \texttt{Address} > \left[ -\texttt{t} \ \texttt{timeout} \ \texttt{in} \ \texttt{secs} \right] \left[ -\texttt{v} \right] \right]$ 

### DESCRIPTION

The nnmstatuspoll.ovpl script enables you to dynamically poll a device that is being monitored. This results in a refresh of key collected state values. When all of the information for the state demand poll has been collected and displayed, the nnmstatuspoll.ovpl script informs you that the task that you requested is complete.

### **Parameters**

```
-t <timeout in secs>
```

Client waits till given timeout in sec.

-v

Displays the detailed verbose log message on console.

```
-jndiHost <hostname>
```

Jboss server host. Default is localhost.

-jndiPort <port>

Jboss server port. Default is 1099.

-node <nodename | IP Address>

Target node name or IP address.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-help

Prints the usage statement.

### **RETURN VALUE**

nnmstatuspoll.ovpl returns the appropriate output shown in the above Parameters section.

When using -v option, you see the information in the following columns:

- Column 1: Indicates which protocol is used to collect the data.
- Column 2: Indicates which device name was polled.

Column 3: Indicates which MIB instance was polled.

Column 4: Indicates the result of the poll.

Column 5: Indicates a mapped value, if it exists.

### AUTHOR

nnmstatuspoll.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

nnm.properties(4)

nnmtopodump.ovpl — Displays the contents of the NNMi topology database

## **SYNOPSIS**

 $\verb|nnmtopodump.ovpl-h|-u < username > -p < password > -type < type > [-legacy < format >] [-filter < filter >]$ 

## DESCRIPTION

nnmtopodump.ovpl displays the contents of the topology database. By default, NNMi displays the output in xml format unless you specify the -legacy option.

### **Parameters**

The nnmtopodump.ovpl script supports the following options:

-h

Displays the usage statement.

```
-u <username>
```

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-p <password>
```

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-http.host <host>

The server host; default is localhost.

```
-http.port <port>
```

The server host; default is 8004.

```
-type <type>
```

The type of the objects available to be printed. Use one of the following types: node|interface|incident|ip|subnet|rrp|vlan|nodeSensor|interfaceAggregation|card|l2connection

```
-legacy [short|long]
```

If you use the legacy option, NNMi displays the data in text output. If you do not specify this option, then NNMi displays the output in xml form. Use the legacy option with the following type values only: node, interface, ip, l2connection and interfaceAggregation. For -legacy short, this is only valid

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for the type values node, interface, and l2connection.

Filters the output by property. The nnmtopodump.ovpl script supports the following filters:

node - node.name | node.shortname | node.id | node.uuid | node.status

interface - node.name | node.shortname | node.id | interface.ifType | interface.id | interface.uuid

ip - interface.id | node.id | ip.value | ip.id

vlan - node.name | node.id | vlan.id | vlan.name | vlan.value

nodeSensor - node.name | node.hostname | node.id | nodeSensor.id | nodeSensor.name | nodeSensor.type

card - node.name | node.hostname | node.id | card.id |card.name

12connection - 12connection.name | 12connection.id | 12connection.uuid

interfaceAggregation - master.id | master.uuid | master.index | master.alias | slave.id | slave.uuid | slave.index | slave.alias

### **EXAMPLES**

nnmtopodump.ovpl -u username -p password -type node

Displays all of the nodes in the topology database in xml format. (You must provide an NNMi username and password.)

nnmtopodump.ovpl -u username -p password -legacy long -type node

To display the nodes in text format, you must use the legacy option. When you use the legacy option with -type node, NNMi displays the nodes and their interfaces.

Equivalent command in NNM 6.x/7.x: ovtopodump -1

nnmtopodump.ovpl -u username -p password -type node -filter node.name=foo.hp.com

Display information about node foo.hp.com in xml format.

```
nnmtopodump.ovpl -u username -p password -legacy long -type node -filter
node.name=foo.hp.com
```

Display information about node foo.hp.com in text format. When you use the legacy option with -type node, it displays the nodes with the interfaces attached to the node.

Equivalent command in NNM 6.x/7.x: ovtopodump -lr foo.hp.com

nnmtopodump.ovpl -u username -p password -legacy long -type node -filter node.id=2345

Display information about the node having nodeid as 2345 in text format. NNMi also displays all interfaces of the node.

Equivalent command in NNM 6.x/7.x: ovtopodump -lr 2345

## AUTHOR

nnmtopodump.ovpl was developed by Hewlett-Packard Company.

## **SEE ALSO**

<u>nnmnodedelete.ovpl(1M)</u>, <u>nnm.properties(4)</u>.

nnmtrapconfig.ovpl --- Configure HP NNM Trap service

## SYNOPSIS

nnmtrapconfig.ovpl -u <user> -p <password> [-showProp] [-start] [-stop] [-readFilter] [-dumpBlockList]
[-resetBlockCache]

nnmtrapconfig.ovpl -setProp -u <user> -p <password> [-trapInterface <ip\_addr>] [-unsetTrapInterface]
[-trapPort <port>] [-recvSocketBufSize <size>] [-blockTraps] [-unblockTraps] [-thresholdRate <rate>] [rearmRate <rate>] [-overallThresholdRate <rate>] [-overallRearmRate <rate>] [-windowSize <time>] [updateSourcesPeriod <time>] [-notifySourcesPeriod <time>] [-minTrapCount <count>] [-numSources
<count>] [-databaseQSize <count>] [-pipelineQSize <count>] [-databaseFileSize <size>] [databaseFileCount <count>] [-persist] [-loopbackAddrOverride <ip\_addr>] [-resetLoopbackAddrOverride]

## DESCRIPTION

nnmtrapconfig.ovpl can be used to display or modify the current properties of the Trap Service. In addition it can be used to start or stop the Trap Service. It also provides the following filter related functionalities: read filter configuration files, print out the current filter configuration and blocking caches or reset the blocking caches

## **Parameters**

nnmtrapconfig.ovpl supports the following parameters:

-u <*username*>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-showProp

Show the properties associated with Trap Service and their current values.

-start

Start the Trap Service.

-stop

Stop the Trap Service.

Cause Trap Service to read the filter configuration files.

#### -dumpBlockList

Print out the filter configuration and the blocking caches that the Trap Service creates.

#### -resetBlockCache

Reset the blocking caches in the Trap Service.

To set values for one or more properties, run nnmtrapconfig.ovpl with the following options

#### -u user

The name of a user with system or administrator roles.

#### -p password

The password for the specified user.

#### -setProp

Set values for properties associated with Trap Service.

#### -trapInterface *ip* address

Set IP address on which the Trap Service listens for traps. By default it listens on all interfaces.

#### -unsetTrapInterface

Set Trap Service to listen on all interfaces.

#### -trapPort port

Set the port on which the Trap Service listens for traps. By default this is 162.

#### -recvSocketBufSize size

Set the size of socket buffer, in kilobytes, on which Trap Service listens for traps.

#### -blockTraps

Block traps based on filter and threshold configurations.

#### -unblockTraps

Do not block traps.

#### -thresholdRate rate

Set the rate in traps/sec at which trap sources or trap oids are blocked. This feature is only available with the NNM iSPI NET license.

#### -rearmRate rate

Set the rate in traps/sec at which blocked trap sources or trap oids are unblocked. This rate should be

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less than or equal to the thresholdRate. This feature is only available with the NNM iSPI NET license.

```
-overallThresholdRate rate
```

Set the rate in traps/sec at which all incoming traps are blocked.

```
-overallRearmRate rate
```

Set the rate in traps/sec at which all incoming traps are unblocked. This rate should be less than or equal to the overallThresholdRate

```
-windowSize time
```

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Set monitoring window size in seconds. This determines the window size in which trap sources are monitored. This means that whenever this time expires the counters keeping track of incoming traps are reset and a new window is started.

-updateSourcesPeriod time

Set the time period in seconds after which the list of blocked traps and sources are updated. This feature is only available with the NNM iSPI NET license.

#### -notifySourcesPeriod time

Set the time period in seconds after which the list of blocked traps and sources are reported in the trapanalytics log file under the NNM\_LOG directory. This reporting is only available with the NNM iSPI NET license. This is also the time period after which a trap storm incident is generated, in case a trap storm occurs and the overallThresholdRate is violated.

-minTrapCount count

Set the minimum number of traps to be received from a source before it is considered for blocking. Also the minimum number of the same trap received before that trap is considered for blocking.

-numSources count

Set the number of nosiest sources to monitor at any given time. These will be the sources that are sending the most traps as well as the traps that occur most frequently. This information is reported in the trapanalytics log file in the NNM\_LOG directory. This feature is only available with the NNM iSPI NET license.

```
-databaseQSize count
```

Set the maximum number of traps that can be held in the queue that writes traps to the database.

-pipelineQSize count

Set the maximum number of traps that can be held in the queues for each stage of the trap pipeline.

-databaseFileSize *size* 

Set the maximum size, in MB, for one file in the trap database. When the file size reaches this value a rollover happens.

Set the maximum number of files in the trap database.

-persist

Persist the current properties so that on future restarts these values will be used.

-loopbackAddrOverride *ip address* 

Sets the IP Address to replace the source address of a trap if the source address is a loopback address before forwarding the trap.

-resetLoopbackAddrOverride

Resets the loopback override address. When this options is executed, the user supplied loopback override address will be removed. In this case, NNM chooses one of the server's addresses as the loopback override address.

## **EXAMPLES**

Show the properties associated with the Trap Service and their values:

nnmtrapconfig.ovpl -u user -p pass -showProp
Start the Trap Service:
nnmtrapconfig.ovpl -u user -p pass -start
Set the trap port to 1162:
nnmtrapconfig.ovpl -u user -p pass -setProp -trapPort 1162
Enable blocking and also persist the current values for future invocations of Trap Service
nnmtrapconfig.ovpl -u user -p pass -setProp -blockTraps -persist
Persist the current values for future invocations of Trap Service
nnmtrapconfig.ovpl -u user -p pass -setProp -blockTraps -persist

## **FILES**

The following file stores properties for NNM Trap Service:

Windows: data\_dir\shared\nnm\conf\nnmtrapserver.properties

 $UNIX: \ /var/opt/OV/shared/nnm/conf/nnmtrapserver.properties$ 

The blocking filters can be configured in the following file:

 $Windows: {\tt data\_dir} {\tt shared} {\tt nnm} {\tt conf} {\tt nnmtrapd.conf}$ 

UNIX: /var/opt/OV/shared/nnm/conf/nnmtrapd.conf

### **AUTHOR**

nnmtrapconfig.ovpl was developed by Hewlett-Packard Company.

nnmtrapdload.ovpl --- Merge traps/events from a trapd.conf file with the current database

## **SYNOPSIS**

nnmtrapdload.ovpl [ [ [ -loadTrapd <trapd\_file> [ -authorLabel <author\_label> -authorKey
<author\_key> ]] -verbose <true/false> -skipExisting <true/false> -disableAllTraps <true/false> [-u
<user>] [-p <password>] ]

## DESCRIPTION

Parses and merges events/traps from an existing trapd.conf file into the database.

nnmtrapdload.ovpl should only be used for importing snmp trapd configurations, and NOT 6.x/7.x legacy ov event trap definitions.

If the provided category is not supported it is by default mapped to Status

If the provided severity is not supported it is by default mapped to Normal

The trap/event parser only resolves the tokens EVENT, FORMAT, SDESC, and EDESC, it does not resolve the tokens; EXEC, FORWARD, DISPLAY, or NODES

### **Parameters**

nnmtrapdload.ovpl supports the following parameters:

-u <username>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-loadTrapd trapd\_file

File location for trapd.conf

-authorLabel author\_label

Author label for storing incident configs in the database.

-authorKey author\_key

Author key for storing incident configs in the database.

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-verbose true | false

If true logs each trap/event with verbose output; default is false

-skipExisting true | false

If true skips over traps/events that already exist in the database (updates/merges are not performed); default is false

```
-disableAllTraps true/false
```

If specified all traps should be loaded as disabled; default is false

### **EXAMPLES**

To Load trapd.conf file with verbose output

nnmtrapdload.ovpl -loadTrapd /tmp/conf/trapd.conf -verbose true -u user -p password

To load trapd.conf file while skipping existing entries

nnmtrapdload.ovpl -loadTrapd /tmp/conf/trapd.conf -skipExisting true -u user -p password

To load trapd.conf file with all events disabled

```
nnmtrapdload.ovpl -loadTrapd /tmp/conf/trapd.conf -disableAllTraps true -u user -p
password
```

To load trapd.conf file with a supplied author

```
nnmtrapdload.ovpl -loadTrapd /tmp/conf/trapd.conf -authorLabel trapd_parser -authorKey com.hp.ov.nnm.parser -u user -p password
```

## AUTHOR

nnmtrapdload.ovpl was developed by Hewlett-Packard Company.

nnmtrimincidents.ovpl --- delete and (optionally) archive incidents

## **SYNOPSIS**

nnmtrimincidents.ovpl [ [ [-age age -incr incr] | -date date ] [-nature nature] [-lifecycle lifecycleState] [-origin origin] [-name name] [-family family] [-sysobjectid sysobjectid] [-path path] [-archiveOnly] [-trimOnly] [-trimAndArchive] [-batch batchSize] [-u username] [-p password] [quiet] ]

## DESCRIPTION

nnmtrimincidents.ovpl is used to delete incidents from the incident table. The deleted incidents are (optionally) saved in a compressed archive file:

data\_dir\tmp\incidentArchive.ISO 8601 Date.Time Ms.txt.gz

The default behavior is to delete incidents without archiving.

### **Parameters**

-age *age* 

Specifies the age of incidents to trim. You should use this option in conjunction with the *incr* option. If specified, the value for *age* must be greater than 0.

-incr increment

Specifies the increment for age option. Supported increments include days, weeks, and months.

-date date

Specifies the date from which older incidents are trimmed. The date is specified in ISO 8601 standard format: *yyyy-mm-ddThh:mm:ss[+ or -]hh:mm*.

```
-archiveOnly
```

Creates an archive file. Does not trim incidents. This option requires you to specify the *age* or *date* option.

-trimOnly

Trims incidents without archiving the deleted incidents. This is the default behavior.

-trimAndArchive

Trims incidents with archiving the deleted incidents.

Specifies the batch size when trimming incidents. If specified, the value for *batch* must be greater than 0 and less than or equal to 1000.

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-path path

Specifies the archive file name with a complete path. This path overrides the default archive file:

data\_dir\tmp\incidentArchive.txt.gz

```
-jndiHost hostname
```

Server jndi host. Default is localhost.

```
-jndiPort port
```

Server jndi port. Default is 1099.

-lifecycle lifecycle

Specifies the lifecycle state of incidents matching the *age* | *date* to trim.

Example *lifecycle* states include:

Registered

InProgress

Completed

Closed

#### -name *name*

Specifies the name of incidents matching the age | date to trim.

-family family

Optionally specify the family of incidents matching age|date to trim.

-sysobjectid sysobjectid

Optionally specify the device system object id of incidents matching age|date to trim.

#### -nature nature

Specifies the nature of incidents matching the age | date to trim.

Examples of *nature* include:

RootCause

SecondaryRootCause

Symptom

ServiceImpact

Info

None

Dedup\_Stream\_Correlation

Rate\_Stream\_Correlation

-origin origin

Specifies the origin of incidents matching the age | date to trim.

Example *origin* states include:

ManagementSoftware

ManuallyCreated

RemotelyGenerated

SnmpTrap

Syslog

Other

-u <*username*>

You must supply the administrator (Windows) or root (UNIX) username to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

-p <password>

You must supply the administrator (Windows) or root (UNIX) password to run the script. Required unless a <u>nnm.properties(4)</u> file exists.

```
-quiet quiet
```

Specifies non-prompt mode.>

### **EXAMPLES**

Trim incidents older than 6 days:

nnmtrimincidents.ovpl -age 6 -incr days

Trim incidents older than 6 weeks with a nature of Symptom:

nnmtrimincidents.ovpl -age 6 -incr weeks -nature Symptom

Trim incidents older than 6 months with a lifecycle state of Closed:

nnmtrimincidents.ovpl -age 6 -incr months -lifecycle Closed

Trim incidents older than the specified date:

nnmtrimincidents.ovpl -date 2007-07-16T19:20:30

NNMi Reference Pages 9.10 Trim incidents older than the specified date with a nature of Symptom: nnmtrimincidents.ovpl -date 2007-07-16T19:20:30+01:00 -nature Symptom Trim incidents older than the specified date with a lifecycle state of Closed: nnmtrimincidents.ovpl -date 2007-07-16T19:20:30-01:00 -lifecycle Closed Trim incidents older than 6 days using the specified filename for the archive: nnmtrimincidents.ovpl -age 6 -incr days -path "C:\BkupDir\saveIncidents.gz" Trim incidents older than 6 days (without archiving): nnmtrimincidents.ovpl -age 6 -incr days Trim incidents older than 6 days (without archiving): nnmtrimincidents.ovpl -trimOnly -age 6 -incr days Archive incidents older than 6 days (without trimming): nnmtrimincidents.ovpl -archiveOnly -age 6 -incr days Trim and archive incidents older than 6 days: nnmtrimincidents.ovpl -trimAndArchive -age 6 -incr days

March 2011

## AUTHOR

nnmtrimincidents.ovpl was developed by Hewlett-Packard Company.

# SEE ALSO

nnm.properties(4)

nnmwhat — get specific NNM information from executables and libraries

## **SYNOPSIS**

nnmwhat FILE

## DESCRIPTION

The nnmwhat command is the equivalent command to the what command available on most Unix systems. This command is used to pull select string information from files such that specific information can be returned. This includes the copyright, operating system, patch level and product level. This is useful for the patching process and Support when determining the versions of files that are on the system.

### **Parameters**

Provide a file name to execute the command against. If no file is provided then STDIN is used.

## EXAMPLES

nnmwhat ovaddobj.exe will return the information from the ovaddobj.exe command.

ovaddobj - object registration utility

### **SYNOPSIS**

ovaddobj [ lrf-file ]

### DESCRIPTION

ovaddobj is used to register object managers (i.e. agents) with the HP process management proces ovspmd(1M).

### **Parameters**

#### lrf-file

Specifies a Local Registration File (LRF), which must contain information about a single agent and the objects it manages.

#### Note

You must specify all objects managed by the agent in the same LRF. Running ovaddobj against an LRF containing additional objects managed by a previously registered object manager does *not add* those objects. Instead, it *replaces* the previously registered objects with the new objects.

### **EXAMPLES**

ovaddobj mylrf

This registers the agent and all the objects described in the LRF mylrf into the NNM startup file.

### AUTHOR

ovaddobj was developed by Hewlett-Packard Company.

### FILES

See the nnm.envvars reference page (and the UNIX manpage) for information about using environment variables for the following files:

install\_dir/bin/ovaddobj

## **SEE ALSO**

ovstatus(1), ovstart(1M), ovstop(1M), ovdelobj(1M), ovspmd(1M), nnmcluster(1).

ovdelobj - object deregistration utility

## **SYNOPSIS**

ovdelobj [ lrf-file ]

### DESCRIPTION

ovdelobj is used to deregister the information for object managers (i.e. agents) from the HP process management process ovspmd(1M).

### **Parameters**

lrf-file

Specifies a Local Registration File (LRF), which contains information about a single agent and the objects it manages.

## EXAMPLES

ovdelobj mylrf

This deregisters the agent and all the objects described in the LRF mylrf.

## AUTHOR

ovdelobj was developed by Hewlett-Packard Company.

## FILES

See the nnm.envvars reference page (and the UNIX manpage) for information about using environment variables for the following file:

install\_dir/bin/ovdelobj

## **SEE ALSO**

ovstatus(1), ovstart(1M), ovstop(1M), ovaddobj(1M), ovspmd(1M), nnmcluster(1M).

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ovjboss --- wrapper around the jboss Application Server

## SYNOPSIS

ovjboss

# DESCRIPTION

ovjboss is a service component that falls under the management of ovspmd. It uses properties files (\$NNM\_DATA/shared/nnm/conf/props/nms-support.properties \$NNM\_DATA/shared/nnm/conf/props/nms-jboss.properties, and \$NNM\_DATA/shared/nnm/conf/props/ovjboss.jvmargs) to pass arguments to the jboss application server. Each file contains documentation on how to change the settings it controls.

This command should be never be executed directly but it falls under the management of ovspmd. It will be started when running ovstart or ovstart -c ovjboss. To stop it either call ovstop or ovstop -c ovjboss. To see the status of internal services it monitors, call ovstatus -v ovjboss.

If there are problems starting ovbjoss, one can look at the ovjboss.log and jbossServer.log log files and see if that might contain information to help solve the problem:

You must be logged on as administrator (Windows) or root (UNIX) user to run this command.

# EXAMPLES

To start NNM including ovjboss run the following command:

\$InstallDir/bin/ovstart

To only start ovjboss run the following command:

\$InstallDir/bin/ovstart -c ovjboss

To find the status of services started by ovjboss run the following command:

\$InstallDir/bin/ovstatus -v ovjboss

# AUTHOR

ovjboss was developed by Hewlett-Packard Company.

# FILES

Parameter file used by services started inside ovjboss.

\$NNM\_DATA/shared/nnm/conf/props/nms-support.properties

Parameter file used by services started inside ovjboss.

\$NNM\_DATA/shared/nnm/conf/props/ovjboss.jvmargs

Parameters passed to the JVM that jboss runs in

\$NNM\_DATA/nnm/conf/nms-local.properties

Local configuration file, including Ports configuration

\$NNM\_DATA/log/nnm/jbossServer.log

Log file containing exceptions (if any)

\$NNM\_DATA/log/nnm/ovjboss.log

Log file containing stderr messages

### **SEE ALSO**

ovspmd(1)

nms-local.properties(4)

ovserror — Reports the most recently generated errors from the ovspmd process. The ovserror process is used internally by other processes, and should never be invoked by the user.

## SYNOPSIS

ovserror

# DESCRIPTION

ovserror reports the most recently generated errors from the ovspmd process. It takes no parameters.

## **RETURN VALUE**

ovserror reports the most recently generated errors from the ovspmd process.

# AUTHOR

ovserror was developed by Hewlett-Packard Company.

## **SEE ALSO**

ovstatus(1), ovstart(1M), ovstop(1M), ovspmd(1M).

ovspmd — NNM process management service

# **SYNOPSIS**

ovspmd [ [install] [start] [stop] [remove] [-W] [-d] [-V] [-f startup\_file] ]

# DESCRIPTION

ovspmd manages the service processes that are part of NNM. It starts, stops, and reports status on these processes in response to requests from ovstart, ovstop, and ovstatus. ovspmd is normally started automatically by ovstart. On Windows, ovspmd is registered as a service. ovspmd registers under the service name HP OpenView Process Manager.

ovstart sends a request to ovspmd to start the object manager programs specified in the NNM startup file (SUF), by default ovsuf. NNM-managed processes are configured in a local registration file (LRF), and added to the SUF by ovaddobj. If you call ovstart with no arguments, ovspmd starts all managed processes configured to be started automatically (that is, with the initial start flag ovs\_YES\_START in the LRF).

ovstop sends a request to ovspmd to stop configured managed processes. If you call ovstop with no arguments, ovspmd stops all currently running managed processes, and then exits.

ovstatus sends a request to ovspmd to report the current running status of configured managed processes.

Managed processes are started by ovspmd as services (that is, in the background, with stdin, stdout, and stderr ignored).

Each managed process can be configured with a dependency list (that is, a list of other processes that must already be running before the process can be started successfully). ovspmd does not start a managed process until all the processes on which it depends have already initialized successfully. On startup, ovspmd verifies that no LRF-specified dependencies form a cycle. (An example of a cycle is  $A \rightarrow B \rightarrow C \rightarrow A$ .) These dependencies determine a relative sequencing for starting, as well as a reverse order for stopping.

ovspmd has a mechanism to automatically restart processes that fail unexpectedly. This process entails adding a retry count for the daemon processes as listed in the

\$NNM\_DATA/shared/nnm/conf/ovspmd.restart.properties file. By default, the number of retries is 3. When a process dies unexpectedly, this count is decremented by one until it reaches zero. At that point, the process will not be automatically restarted. Attempting to start the process with ovstart will reset the retry count and start the process again. If the process has been running for two hours, then the process resets its retry counter. Removing entries will cause ovspmd not to do restarts. This is also true if the retry count is 0.

ovspmd distinguishes between three classes of object managers:

### OVs\_WELL\_BEHAVED

A well-behaved process uses the OVsPMD API (see OVsPMD\_API(3)) to communicate with ovspmd. It sends ovspmd status information about successful and unsuccessful initialization, normal termination and abnormal termination, if configured to do so. ovspmd considers a well-behaved process to have

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initialized successfully only when it explicitly reports that it has done so. A well-behaved process also exits when it receives the command OVS\_CMD\_EXIT from ovspmd.

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The status information passed by the managed process to ovspmd is forwarded to ovstart, ovstop, or ovstatus, if currently running. The last message received from each managed process is saved, and then forwarded, on request, to ovstatus. The messages received from well-behaved processes are also logged to the application event log (which can be examined with the Event Viewer).

```
OVs_NON_WELL_BEHAVED
```

ovspmd can also manage object managers that do not use the OVsPMD API (non-well-behaved processes) only if they do *not* go into the background of their own accord (see OVs\_DAEMON below). Because a non-well-behaved process returns no status messages, ovspmd considers such a process to have initialized successfully if it is not exited within the LRF-specified timeout interval.

Non-well-behaved processes are terminated with Terminal Process if they do not exit within the configured timeout.

### OVs\_DAEMON

Managed processes that go into the background cannot be managed with a communication channel or with signals. ovspmd can start such a process, but it cannot stop or report meaningful status about the process because it does not have a communication channel or a process ID for it.

### **Parameters**

### install

Install ovspmd as a service.

### start

Start the ovspmd service.

### stop

Stop the ovspmd service.

### remove

Remove the ovspmd service.

### -W

Do not start managed processes when ovspmd starts. Wait for ovstart to request it.

### -d

Used for debugging. When used, ovspmd does not become a service.

### -V

Run in very verbose mode. In this mode, ovspmd outputs very detailed information about the configuration of the managed processes. This is far too much information for ordinary use.

-f startup\_file

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Read *startup\_file* as the startup file (SUF) instead of the default. Note that *startup\_file* must be an absolute path.

# **Application Authorization**

ovspmd governs the management of NNM services. It uses the ovspmd.auth file to control which hosts, users, and applications can start and stop the NNM services. The ovspmd.auth file is located in data\_dir\conf\.

ovspmd searches the entries in the ovspmd.auth file from beginning to end. As soon as it finds an entry that either explicitly allows or denies the access under consideration, it stops looking. Therefore, more specific entries should precede more general entries.

The file contains lines specifying the authorized hosts, users, and applications. Each line lists a single host, user, and application list authorized to connect to ovspmd. The format of each line of the file is:

#comment

hostname [username [appname1 appname2 appname3 ... ]]

The pound sign (#) and anything following it is a comment, which is ignored. Blank lines are also ignored.

*username* and *appname* are optional. If no application is present, the line permits (or denies) access by any application. If no username is present, the line permits (or denies) access by any user running any application.

If *hostname* is a plus sign (+), the line refers to access from any host. If *username* is a plus sign (+), the line refers to access by any user. If a hostname is preceded by a minus sign (-), the line explicitly denies all access from that host. (Any username or application names that also happen to appear on the line are ignored.) If a username is preceded by a minus sign (-), the line explicitly denies any access by that user from the specified host. (Any application names that also happen to appear on the line are ignored.)

If any applications are listed, the line permits access only to the applications listed (by the specified user from the specified host). Note that the application names listed in the authorization file must match the registered name of the application, except that white space in the registered application name must be replaced with underscores.

The ovspmd.auth file created at installation contains more examples of the file format, and some examples are also included in the EXAMPLES section.

# DIAGNOSTICS

ovspmd issues error messages about configuration errors and system call failures. These messages are intended to be self-explanatory. If it currently has an open communication channel with ovstart, ovstop, or ovstatus, ovspmd forwards these error messages through the communication channel to be output by the program.

ovspmd can process multiple requests (start, stop, or status) at a time. Additional requests are queued by type until the current request completes.

In addition, ovspmd logs processing, configuration, and system errors using nettl in the OVS subsystem at the ERROR level. Messages indicating normal events, such as successful initialization, are logged at the

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INFORMATIVE level. Messages indicating initialization failure or abnormal termination are logged at the warning level.

## **EXAMPLES**

The following is an example of the contents of the ovspmd.auth file:

# Normally, you should authorize any application
# run by any user on the same host on which ovspmd is running.
# To do so, use a single line listing the
# name of the host on which this file is located
# (for example, "thishost"):

thishost

# Similarly, if you are running Management # Consoles, you should authorize any application # run by any user on all the client hosts and on # the server host. For example, if your server # system named "bigsystem" has one client named # "hohum", list each of them on a separate line in # this file on bigsystem:

bigsystem hohum

# It is possible to permit specific users to run # specific applications from a remote system. The # following line permits the user "shem" from host # "blimp" to run the applications "Toaster Manager" # and "Blender". Note that, because the application's # registered name "Toaster Manager" contains white # space, you must replace the whitespace with the # underscore character in the authorization file:

shem blimp Toaster\_Manager Blender

```
# It is not possible to exclude specific applications,
# except by explicitly permitting all non-excluded
# applications.
# The following line denies access by the user "fred"
# from any host:
```

+ -fred

```
# The following line denies any application access
# from the host "badguy":
```

-badguy

# AUTHOR

ovspmd was developed by Hewlett-Packard Company.

## **FILES**

See the nnm.envvars reference page (and the UNIX manpage) for information about using environment variables for the following files:

install\_dir\bin\ovspmd

```
install_dir\conf\ovsuf
```

# **EXTERNAL INFLUENCES**

### **Environmental Variables**

\$LANG provides a default value if the internationalization variables, LC\_ALL, LC\_CTYPE, and LC\_MESSAGES are unset, null, or invalid.

If \$LANG is unset, null, or invalid, the default value of C (or English\_UnitedStates.1252 on Windows) is used.

LC\_ALL (or \$LANG) determines the locale of all other processes started by ovspmd.

LC\_CTYPE determines the interpretation of text as single-byte characters, multiple-byte characters, or both; the classification of characters as printable; and the characters matched by character class expressions in regular expressions.

LC\_MESSAGES determines the language in which messages are displayed.

All other environment variables are inherited from the shell executing ovspmd (or the initial ovstart that starts ovspmd). ovspmd and all service processes share this same environment. As a result, ovspmd must be stopped and restarted for any environment changes to take effect (see ovstart(1M)).

# **SEE ALSO**

ovstatus(1), ovstart(1M), ovstop(1M), ovaddobj(1M), ovdelobj(1M), nnmcluster(1M).

ovstart — start NNM managed processes

## **SYNOPSIS**

ovstart [ [-c] [-d] [-0 ovspmd\_path] [-v] [--][ovspmd\_options...][managed\_process\_names...]]

## **DESCRIPTION**

ovstart starts NNM managed processes. If called with one or more managed\_process\_name arguments, it starts the designated managed process after first starting any other managed processes on which it depends. If called with no arguments, it starts all the managed processes that are configured to start by default.

ovstart does not exit until all the managed processes it has tried to start have either responded or timed out (failed to respond within the LRF-specified timeout interval). By default, it produces no output unless a managed process fails. When you execute it from the command line, it is advisable to use the -c or -v option to track the progress of the operation. Running ovstart again after the successful completion of a previous attempt to ovstart is completely harmless.

ovstart sends a start request (OVS\_REQ\_START) to the process management service, ovspmd. If ovspmd is not already running, ovstart starts it first.

ovstart must be run by the administrator or super-user.

The managed processes are configured by ovaddobj from information in local registration files (see lrf(4)). A managed process is named by the first field in the LRF describing it.

If ovstart is used on a node configured for NNM clustering (see nnmcluster(1M)) then the behavior of ovstart is different than described above. Specifically, ovstart behaves exactly like the "nnmcluster - daemon" command.

In a NNM cluster environment ovstart returns immediately (after launching the NNM cluster in the background). Instead, the nnmcluster command will determine if/when to start the other NNM processes. Please monitor ovstatus output to determine if NNM processes have completed startup.

In a NNM clustered environment the other command-line options to ovstart are not supported.

Note that for fine-grain control of NNM cluster attributes use the nnmcluster command directly. The ovstart command in a NNM cluster environment is provided for convenience starting NNM using a familiar command.

### **Parameters**

ovstart recognizes the following options. Any unrecognized options are reported by a usage message.

-C

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Produce one line of information about the success or failure of each managed process.

-d

Report the important stages in processing, including starting, contacting, and sending the start request to ovspmd, and closing the communication channel.

```
-o ovspmd_path
```

Specifies that the executable for ovspmd is in ovspmd\_path instead of in the default location, *install\_dir\bin*. If ovspmd is already running, this option is ignored.

-v

Produce several lines of information about the success or failure of each managed process.

- ovspmd\_options

Any option not known by ovstart is passed to ovspmd. Since the -d option is valid for both programs, it will be interpreted as an ovstart option, and will *not* be passed on to ovspmd. Likewise, the -v option *will be* passed to ovspmd since it is not valid for ovstart. If an option is not recognized by either, a usage message will be printed from ovspmd, not ovstart.

\_\_\_

Terminates the options section of the ovstart command line. Any arguments following the comment token (--) are interpreted as names of managed processes to start, and passed to ovspmd.

## **RETURN VALUE**

In a non NNM cluster environment ovstart exits with the status representing the number of object managers from the start list that were *not* started successfully. If all requested managed processes were started successfully, ovstart exits with the status 0 (zero).

In a NNM cluster environment ovstart always exit immediately with the status 0 (zero).

## DIAGNOSTICS

ovstart reports certain command-line errors (in particular, too many arguments) and system errors. The messages are prefixed with ovstart:, and are intended to be self-explanatory. ovstart also outputs error messages received from ovspmd. These messages are prefixed with ovspmd:.ovstart does not treat unrecognized options as errors, but ovspmd does.

Note that ovspmd can process multiple requests (ovstart, ovstop, or ovstatus) at a time. If any of these commands is being handled, the new request will be queued by type until the previous command has completed.

## **EXAMPLES**

ovstart

NNMi Reference Pages 9.10 running, start it with no options. Only failures are reported.

ovstart -v -V -- ovjboss

Request ovspmd to start the ovjboss process, which results in starting the Jboss application server and all of the NNM services that are deployed together within Jboss, after first starting any other managed processes that the ovjboss process depends on. If ovspmd is not already running, start it in verbose mode (-v option). Report program startup, whether successful or not (-v option). Note that the comment token (--) option is necessary so that ovstart does not interpret ovjboss as an argument to the unrecognized -v option.

# AUTHOR

ovstart was developed by Hewlett-Packard Company.

### **FILES**

See the nnm.envvars reference page (or the UNIX manpage) for information on using environment variables for the following files:

*install\_dir*\bin\ovstart

install\_dir\bin\ovspmd

# **EXTERNAL INFLUENCES**

### **Environmental Variables**

\$LANG provides a default value if the internationalization variables, LC\_ALL, LC\_CTYPE, and LC\_MESSAGES are unset, null, or invalid.

If \$LANG is unset, null, or invalid, the default value of C (or English\_UnitedStates.1252 on Windows) is used.

LC\_ALL (or \$LANG) determines the locale of all other processes started by ovspmd.

LC\_CTYPE determines the interpretation of text as single-byte and/or multi-byte characters, the classification of characters as printable, and the characters matched by character class expressions in regular expressions.

LC\_MESSAGES determines the language in which messages are displayed.

If ovstart is executed, and no ovspmd process is currently running, ovspmd inherits the environment of the executing shell. All managed processes started by ovspmd inherit this same environment.

To change the environment for ovspmd or any managed process, you must restart ovspmd with the correct environment. This requires that all managed processes be stopped (ovspmd does not terminate until all managed processes have been shut down).

As a result, to change the environment for any managed process started from ovstart/ovspmd, you must do the following:

- 1. Execute ovstop with no arguments to shut down all managed processes and ovspmd.
- 2. Set up the correct environment variables.
- 3. Execute ovstart to restart ovspmd and any or all managed processes.

### **NNM Cluster**

If a com.hp.ov.nms.cluster.name is defined in the \$NnmDataDir/shared/nnm/conf/props/nmscluster.properties file, then ovstart will defer startup to the nnmcluster command.

## **SEE ALSO**

ovstatus(1), ovstop(1M), ovaddobj(1M), ovdelobj(1M), ovspmd(1M), nnmcluster(1M).

ovstop - stop NNM managed processes

# **SYNOPSIS**

ovstop [ [-c] [-d] [-v] [managed\_process\_names...]] [ [-nofailover|-failover|-cluster]]

# DESCRIPTION

ovstop stops the NNM managed processes. ovstop sends a stop request (OVS\_REQ\_STOP) to the process management process (UNIX operating systems) or service (Windows operating systems), ovspmd. If called with one or more managed\_process\_name arguments, it stops the designated managed processes after first stopping any dependent processes. If called with no arguments, or if one of the named arguments is ovspmd, it stops all managed processes currently running, including ovspmd itself.

When a managed process does not respond to the ovstop request within the LRF-specified timeout interval, ovspmd forces the process to terminate by sending it termination signals, first SIGTERM, then SIGKILL (see kill(1)). Note that ovstop reports forced termination only if the -v or -coptions are used (for example, ovstop -v [managed\_process\_name]). Whenever a managed process times out during a stop request, it is advisable to increase its timeout value. To increase the number of seconds that ovspmd waits for a process to respond to an ovstop request, follow the instructions in \$NNM\_LRF/ov\* (UNIX operating system) or install\_dir\lrf\ov\* (Windows operating systems).

Unlike ovstart, ovstop will not start ovspmd if it is not already running.

The managed processes are configured by ovaddobj from information in Local Registration Files (see lrf(4)). A managed process is named by the first field in the LRF describing it. Like ovstart, ovstop uses dependency information from the LRF. If other managed processes depend on a managed process that is stopped, ovspmd notes their dependency and terminates all appropriate managed processes in reverse LRF dependency order.

ovstop must be run by the Windows administrator or UNIX superuser.

If an OVs\_DAEMON process is configured with a Stop Command in its LRF entry, ovstop runs the command (see lrf(4)). This feature is used to stop processes that are no longer in contact with ovspmd. The Stop Command is provided and configured by the developer of the process, if appropriate.

The names of the NNM managed processes that were started by previous ovstart operation can be obtained by running the ovstatus -c command.

The ovstop ovjboss command would stop the Jboss application server and all of the NNM services deployed together within Jboss. The names of Jboss deployed NNM services can be obtained by running the ovstatus -v ovjboss command. The NNM services could only be stopped altogether by running the ovstop ovjboss command. It is not supported to stop any of these NNM services individually, independent of the other NNM services.

If ovstop is used on a node configured for NNM clustering (see nnmcluster(1M)) then the behavior of ovstop is different than described above. Specifically, ovstop (with no parameters) behaves exactly like the Page 226

In a NNM cluster environment ovstop returns immediately (after sending the NNM cluster a shutdown signal in the background). The nnmcluster command then shuts down NNM processes which might trigger a failover of NNM services to the standby cluster node. Please monitor ovstatus output to determine if NNM processes have completed shutdown.

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In a NNM clustered environment the only command-line options recognized by ovstop are -nofailover, - failover, and -cluster.

Note that for fine-grain control of NNM cluster attributes use the nnmcluster command directly. The ovstop command in a NNM cluster environment is provided for convenience shutting down NNM services using a familiar command.

### **Parameters**

ovstop recognizes the options described below. The first argument that is not an option, and any succeeding arguments, are interpreted as names of managed processes to stop, and are passed to ovspmd in the stop request.

-C

Produce one line of information about the success or failure for each managed process.

-d

Report the important stages in its processing, including contacting and sending the stop request to ovspmd, and the closing the communication channel.

-v

Produce several lines of information about the success or failure of each managed process.

### -failover

(NNM cluster only) Causes the local NNM node to shutdown NNM processes (if it is the active node) and the NNM cluster process will terminate. At the same time, automatic failover is enabled so that NNM services will transfer to the standby node.

#### -nofailover

(NNM cluster only) Causes the local NNM node to shutdown NNM processes (if it is the active node) and the NNM cluster process will terminate. At the same time, automatic failover is disabled so that NNM services will not transfer to the standby node.

#### -cluster

(NNM cluster only) Causes all nodes in the NNM cluster to shutdown. The NNM cluster process on the standby node(s) will be shutdown first, then the active node will stop NNM services, and finally the NNM cluster process on the active node will shutdown.

## **RETURN VALUE**

ovstop exits with a status representing the number of managed processes that were not stopped

NNMi Reference Pages 9.10 March 2011 successfully. If all requested managed processes were successfully stopped, ovstop exits with the status 0 (zero).

# DIAGNOSTICS

ovstop reports certain command-line errors (in particular, too many arguments) and system errors. The messages are prefixed with ovstop:, and are intended to be self-explanatory. ovstop also outputs error messages received from ovspmd. These messages are prefixed with ovspmd:.ovstop ignores unrecognized options.

If a managed process is in a PAUSED, PAUSE\_ERROR, PAUSE\_TIMEOUT, RESUME\_ERROR, RESUME\_TIMEOUT, OR DEPENDENCY\_ERR state, it is stopped. However, a warning message is printed to inform you that ovstop was used on a process that was not in a running state.

Note that ovspmd can process multiple requests (ovstart, ovstop, or ovstatus) at a time. If any of these commands is being handled, the new request will be queued by type until the previous command has completed.

# AUTHOR

ovstop was developed by Hewlett-Packard Company.

### **FILES**

The environment variables below represent universal pathnames that are established according to your shell and platform requirements. See the nnm.envvars(1) manpage for information on universal pathnames for your platform and shell.

See the nnm.envvars reference page ((or the UNIX manpage) for information about using environment variables for the following files:

Windows: install\_dir\bin\ovstop

Windows: install\_dir\bin\ovspmd

 $UNIX: \texttt{NNM}\_\texttt{BIN}/\texttt{ovstop}$ 

UNIX: \$NNM\_BIN/ovspmd

## **EXTERNAL INFLUENCES**

### **Environmental Variables**

If a com.hp.ov.nms.cluster.name is defined in the \$NnmDataDir/shared/nnm/conf/props/nmscluster.properties file, then ovstop will defer startup to the nnmcluster command. 9.10

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March 2011 \$LANG provides a default value if the internationalization variables, LC\_ALL, LC\_CTYPE, and LC\_MESSAGES are unset, null, Or invalid.

If \$LANG is unset, null, or invalid, the default value of C (or English\_UnitedStates.1252 on Windows) is used.

LC\_ALL (or \$LANG) determines the locale of all other processes started by ovspmd.

LC\_CTYPE determines the interpretation of text as single-byte characters, multiple-byte characters, or both; the classification of characters as printable; and the characters matched by character class expressions in regular expressions.

LC\_MESSAGES determines the language in which messages are displayed.

### **NNM Cluster**

If a NNMCLUSTER\_NAME is defined in the ov.conf file, then ovstop will defer startup to the nnmcluster command.

# **SEE ALSO**

ovstatus(1), ovstart(1M), ovaddobj(1M), ovdelobj(1M), ovspmd(1M), nnmcluster(1M).

pmd - NNM Postmaster service

pmdmgr --- NNM Postmaster manager

## SYNOPSIS

pmd [ [-Lsize] [-Tsize] [-Sstack\;option[\;option] ...]]

 $\verb|pmdmgr[[-Lsize][-Tsize][-Sstack:;option[:,option]...]]]$ 

## DESCRIPTION

pmd is the NNM Postmaster service that receives NNM events forwarded from remote NNM 6.X and 7.X management stations and forwards them to the Incident pipeline.

The NNM ov\_EVENT stack, embedded within pmd, actually performs these services. In addition, ov\_EVENT logs events to the event logs in *data\_dir*shared\nnm\databases\eventdb. Logged events can be viewed with nnmdumpevents.

pmdmgr is the Postmaster service manager. You can use pmdmgr to alter stack configurations of the running Postmaster. For example, after you start pmd, you can change a stack's trace and log mask with this command. You can alter only general stack options with this command. You can set options specific to a stack (for example, OV\_EVENT) only at startup.

Only the superuser can use the pmdmgr command.

### **Parameters**

pmd and pmdmgr recognize the following options. Options that are specific to only pmd or pmdmgr are listed as such. You can use the other options for either command.

-Sstack;option[;option...]

Allows you to specify options that are particular to a stack. You can specify general and specific stack options for all stacks by using the -s option. For a list of all standardized stack options, see the section called *General Substack Options* of this reference page (and the UNIX manpage). A stack can also have options that are unique to itself.

-Qt

Allows you to truncate the trace files while pmd is running. This option is valid only for pmdmgr.

-Ql

Allows you to truncate the log files while pmd is running. This option is valid only for pmdmgr.

-Lsize

Sets the maximum size of the pmd log files, pmd.log0 and pmd.log1. By default the size of each log file is 500K.

-Tsize

Sets the maximum size of the pmd trace files, pmd.trc0 and pmd.trc1. By default the size of each trace file is 1000K.

### **Supported Stacks**

pmd can be composed of many stacks, where each stack provides a service for pmd. For NNM, the following stacks are included:

OV\_EVENT

Receives NNM events forwarded from remote NNM 6.X and 7.X management stations and forwards them to the Incident pipeline.

TRCLOG

Provides the pmd tracing and logging functionality.

### **General Substack Options**

pmd(pmdmgr) recognizes the following options for all stacks. See the -s option (above) that allows you to specify stack options for each stack.

Е

Enables a stack. It switches a stack ON. You cannot switch on stacks by using pmdmgr after starting pmd.

D

Disables a stack. It switches a stack OFF. You cannot switch stacks off by using pmdmgr after starting pmd.

T mask

Controls the trace mask for a particular stack. Each stack can have different kinds of tracing and logging enabled. To find out how to OR different types of bits into this mask, see the *Tracing and Logging* section of this reference page (and the UNIX manpage). By default, WARNING, ERROR, and DISASTER messages are logged. You can alter the trace and log mask value by using pmdmgr while pmd is running. The new trace and log mask takes effect immediately.

### **Tracing and Logging**

pmd creates trace and log files in *install\_dir*\log\. These are pmd.trc[0-1] and pmd.log[0-1]. The trace files contain all trace and log information. The log files contain only the log information.

pmd traces and logs in a circular fashion, by using two files for wrapping. When the 0 file becomes full, the 0 file is moved to the 1 file, and the old 1 file is truncated and made the 0 file. As a result, you always have

NNMi Reference Pages 9.10 the most current set of log or trace messages. The 0 file is always the current file.

By default, all stacks, as well as the pmd itself, log WARNING, ERROR, and DISASTER messages. By default, tracing is not enabled. The pmd.trcx files are not created and used until you enable tracing. The trace files are created on demand by turning on some tracing with the-T general stack option.

You can turn on additional tracing and logging by altering pmd.lrf. To alter a stack's tracing or logging, you need to change its trace mask. You can specify a trace mask for any stack in pmd. To create a mask that is a combination of the bits that are listed below, you add the bits together. In effect, you "OR" the bits. The result is then used as the argument to the substack -T option.

### DISASTERS (0x1)

Log disasters. Disasters should not occur. If they do, contact HP and supply a tracing and logging file to improve the quality of the product.

#### ERRORS (0x2)

Log errors. These are errors local to pmd, and do not include errors that are defined by protocols. CMIP errors that result from a CMISE operation are not logged by setting this bit. Errors such as no route or aborts are logged with this bit.

#### WARNINGS (0x4)

Log warnings. These are unusual conditions the system administrator may need to know about. These are not necessarily error conditions.

#### INFORM (0x8)

Log informative messages. These can be messages of various kinds (for example, when signals are received by pmd, what the argv/argc vectors are that the pmd was started with, and so on).

#### STATE (0x10)

Log state changes. This logging applies mostly to associations and bindings to pmd.

#### HDRIN (0x20)

Trace header information for operations that flow from a stack to pmd.

#### HDROUT (0x40)

Trace header information for operations that flow from pmd to a stack.

### PDUIN (0x80)

Trace PDU for operations that flow from a stack to pmd.

#### PDUOUT (0x100)

Trace PDU for operations that flow from pmd to a stack.

### RQT (0x200)

Trace pmxxx\_req calls that are related to an RQT. These calls operate on RQTs.

Trace memory allocation and de-allocation calls.

CCES (0x800)

Trace calls that are related to CCEs (for example, allocation, freeing, and finding).

### TIMERS (0x1000)

Trace timer-related pm\_xxxx\_timer function calls.

### STACKCALLS (0x2000)

Trace stack-supplied SI\_XXXX functions as pmd calls them.

### OPERATION (0x4000)

Trace pm\_stack\_ind, pm\_stack\_cnf, and pm\_failed\_operation.

### ALL\_KINDS (0xfffffff)

Log and trace everything.

### **OV\_EVENT Stack Tracing**

OV\_EVENT supports the following trace values. (None are enabled by default.) To create a mask that is a combination of the bits that are listed below, you add the bits together which effectively OR's the bits. The result is then used as the argument to the substack T option, and traces are written to the pmd trace file.

### EVENTCONNECTIONS (0x00400000)

Trace all application connections and disconnections to OV\_EVENT.

EVENTRECEIPT (0x00800000)

Trace the receipt of each event by OV\_EVENT.

EVENTFLOW (0x01000000)

Trace significant milestones as an event flows through and out OV\_EVENT. (Includes EVENTQUEUES trace as defined below.)

### EVENTFILTERS (0x02000000)

Trace events as they are filtered out; that is, when they are not forwarded to a destination application.

### EVENTQUEUES (0x0800000)

Trace events as they are queued for a busy application and when they are removed from the queue the application is listening.

### **OV\_EVENT Specific Stack Options**

The ov\_event stack supports the following options:

bsize

Sets the total size of the ov\_EVENT log files to the given size, in megabytes (default size is 16 MB). Minimum size is 1 megabyte. Once the size is exceeded, oldest events will be dropped from the event logs.

#### n

Disables OV\_EVENT logging to the event log files. The default is to log.

qnum

Specifies the maximum number of events which can be queued for a connected application. When this number is exceeded, OV\_EVENT will disconnect from the application. Events are queued when they cannot be sent to an application (receipt is blocked because the application is busy elsewhere). The default maximum is 4096 events. Valid values range from 0 to 65536.

## DIAGNOSTIC

For help with problems related to starting pmd, refer to the troubleshooting section of *HP OpenView Managing Your Network with NNM*.

## **EXAMPLES**

Switch on all possible (general and stack-specific) tracing for the ov\_EVENT stack. You want to see all inbound and outbound PDUs to and from this stack, as well as all other information. Change the pmd.lrf file to the following:

```
pmd:pmd:
OVs_YES_START::-SOV_EVENT;T0xffffffff:OVs_WELL_BEHAVED::
```

For these changes to take effect, first stop the NNM platform using the ovstop command. Second, use the ovdelobj command to delete the old pmd.lrf entry. Third, use the ovaddobj command to add the modified pmd.lrf entry. Finally, use the ovstart command to restart the platform.

To change the OV\_EVENT trace and log mask after pmd process is running, use the following command:

pmdmgr -SOV\_EVENT\;T0xf

This command causes INFORM messages to be logged, as well as DISASTER, WARNING, and ERROR messages.

## AUTHOR

pmd was developed by Hewlett-Packard Company.

# FILES

See the nnm.envvars reference page for information on using environment variables for the following files:

data\_dir\shared\nnm\lrf\pmd.lrf

 $data_dir\shared\nnm\databases\eventdb$ 

 $install_dir \log pmd.log[01]$ 

```
install_dir \log pmd.trc[01]
```

## **SEE ALSO**

<u>nnmdumpevents(1M)</u>, <u>ovstatus(1)</u>, <u>ovstart(1M)</u>, <u>ovstop(1M)</u>, <u>ovspmd(1M)</u>.