

HPE Network Node Manager i Software

Step-by-Step Guide to Using NNMi Import and Export Tools

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Introduction

This document describes the some common usage scenarios for using NNMi's import and export tools, provides some helpful examples, and offers some best practices for using the tools.

The import and exports commands are listed below:

- nnmconfigimport.ovpl
- nnmconfigexport.ovpl

Useful Scenarios

Use the NNMi import and export tools when you want to:

- Make substantial changes to the NNMi configuration and be able to revert back to a known good state, if needed.
- Move the configuration of a lab's test server to a production server.
- Move one production server configuration to another production server configuration (overwriting the current configuration)
- · Merge changes from one NNMi management server to another NNMi management server.

Note

The NNMi import tool performs database merges, updates, and insertions.

Tip: Use NNMi's backup and restore tools (nnmbackup.ovpl and nnmrestore.ovpl) to perform migrations involving the overwriting of data (from one computer to another). If you create a full backup with nnmbackup.ovpl, this backup can be restored to another NNMi station (assuming it has the same version and patch level) or to the same server. Note that all of the data is restored including nodes, incidents, and configuration.

Tip: Use nnmnodedelete. ovpl and nnmtrimincidents. ovpl to remove nodes and incidents.

Best Practices

Note the following best practices when exporting and importing a configuration:

- See Export/ Import Behavior and Dependencies in the NNMi help to learn about the specific behaviors of the configuration item you are interested in. Especially note whether the import overwrites or merges the configuration. Also note the dependencies on other configurations. Make substantial changes to the NNMi configuration and be able to revert back to a known good state, if needed.
- Avoid conflicts in the Ordering field.
- · Avoid name conflicts in Node Groups, Interface Groups, and their universally unique identifiers (UUIDs).
- Import the configuration files in the correct order based on dependencies.

Learning the Specific Export and Import Behaviors

Consider the three export and import behavior choices:

- · Replaces all-replaces the entire existing configuration during the import.
- Incremental—updates all object instances with matching key identifiers during the import.
- Incremental (subset)-includes configuration changes that were made by one Author.

Configuration files can have dependencies. For example, the Node Group Map Settings configuration area has a dependency Node Groups.

Before proceeding to the following examples, refer to Export/Import Behavior and Dependencies in the NNMi help.

Incremental (Merge) Import Example

For this example, remember that Node Group have an "incremental" import behavior.

1. Create a Node Group called Node Group 1

Network Node Manager i	<u>F</u> ile	<u>V</u> iew <u>T</u> ools A <u>c</u> tions	<u>H</u> elp				Use
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Inventory			List				
	•	Data Center	~	-	~	Aug 5, 2016 11:18:46	
Management Mode	-	Important Nodes	~	~	-		Important Nodes such as Edge Routers representing the egress points to local networks from WAN e
R Incident Browsing	-	Microsoft Windows Systems	~	-	-	-	Any system running Microsoft Windows, including servers, desktops, and workstations. The systems
℅ Integration Module Configuration		My Important Subnets	~	-	~	Aug 4, 2016 9:14:35 P	
✗ Configuration		My Network	~	-	~	Aug 5, 2016 11:18:46	
Communication Configuration	-	Neighbor Connections Filter	-	-	-		Used as a filter when computing neighbor connections for Node Group Maps
Discovery	-	Networking Infrastructure Devic	~	-	-		Networking Infrastructure Devices
		Node Group 1	>	-	~	Aug 16, 2016 12:14:51	
Monitoring	0	Non-SNMP Devices	~	-	-	-	Nodes which have never responded to SNMP queries during the discovery process.
 Incidents 	0	Routers	~	~	-	-	Includes nodes which do routing. For routers, the monitoring settings will by default monitor both co
Status Configuration	0	Subnet A	~	-	~	Aug 4, 2016 12:42:22	
Global Network Management	Ø	Switches	~	~	-	-	Includes nodes which do switching.
 User Interface 	8	Test	~	-	~	Aug 12, 2016 11:54:26	
 Escurity 	-	VMware ESX Hosts	~	~	-	Aug 2, 2016 11:25:34.	
MIBs	0	Virtual Machines	~	~	-	Aug 2, 2016 11:25:34	Virtual Machines
I Device Profiles							
 Boject Groups 							
I Node Groups							
Interface Groups							

Figure 1: Configuartion Create Node Group 1

- Export the configuration using the following command: nnmconfigexport.ovpl -c nodegroup -f nodegroup. 1. xml You should see a message similar to the following: Successfully exported /var/tmp/config/nodegroup. 1. xml.
- 3. Delete Node Group 1, and then create Node Group 2.

Network Node Manager i	Eile	⊻iew <u>T</u> ools A <u>c</u> tions	<u>H</u> elp				
🔟 Dashboards	Node Gr	oups ×					
معن Incident Management	2 1	: 🗃 🖸 🛱 🦘 🐪	1				
	Status	▲ Name	Add to View Filter List	Add to Filter List	Calculate Status	Status Last Modified	Notes
🖃 Inventory	V	Data Center	~	-	~	Aug 5, 2016 11:18:46	
n Management Mode	0	Important Nodes	~	~	-	Aug 2, 2016 11:25:34	Important Nodes such as Edge Routers representing the egress points to local networks
R Incident Browsing	0	Microsoft Windows Systems	~	-	-	Aug 2, 2016 11:25:34	Any system running Microsoft Windows, including servers, desktops, and workstations. T
◦ Integration Module Configuration	۸	My Important Subnets	~	-	~	Aug 4, 2016 9:14:35 P	
✗ Configuration	A	My Network	~	-	~	Aug 5, 2016 11:18:46	
Communication Configuration	0	Neighbor Connections Filter		-	-	Aug 2, 2016 11:25:34	Used as a filter when computing neighbor connections for Node Group Maps
Discovery	0	Networking Infrastructure Devic	~	-	-		Networking Infrastructure Devices
	e l	Node Group 2	>	-	~	Aug 16, 2016 12:22:31	
Monitoring	0	Non-SNMP Devices	~	-	-		Nodes which have never responded to SNMP queries during the discovery process.
Incidents	\oslash	Routers	~	~	-	-	Includes nodes which do routing. For routers, the monitoring settings will by default mon
Status Configuration	0	Subnet A	~	-	~	Aug 4, 2016 12:42:22	
Global Network Management	Ø	Switches	~	~	-		Includes nodes which do switching.
 User Interface 	8	Test	~	-	~	Aug 12, 2016 11:54:26	
Security	0	VMware ESX Hosts	~	~	-	Aug 2, 2016 11:25:34	
MIBs	0	Virtual Machines	~	~	-	Aug 2, 2016 11:25:34	Virtual Machines
Device Profiles							
▼							

Figure 2: Configuration Create Node Group 2

Interface Groups

4. Export the configuration again using the following command (so this export does not contain Node Group 1): nnmconfigexport.ovpl -c nodegroup -f nodegroup. 2. xml

You should see a message similar to the following:

Successfully exported /var/tmp/config/nodegroup.2.xml.

5. Delete Node Group 2

Now neither Node Group 1 nor 2 exists in the database.

- 6. Perform an import of Node Group 1 using the following command:
 - nnmconfigimport.ovpl -f nodegroup.1.xml

You should see a message similar to the following:

Successfully imported nodegroup. 1. xml.

7. Perform an import Node Group 2 using the following command:

nnmconfigimport.ovpl -f nodegroup.2.xml

You should see a message similar to the following:

Successfully imported nodegroup. 2. xml.

On importing the two configurations, the data is merged, as opposed to overwritten. The database contains both Node Group 1 and Node Group 2.

Network Node Manager i	<u>F</u> ile	<u>V</u> iew <u>T</u> ools A <u>c</u> tions	<u>H</u> elp				
네 Dashboards	Node Gr	oups 🗙					
م Incident Management	C *	: 🗃 8 % 4 K	1				
📥 Topology Maps			Add to	Add to			
Monitoring	Status	▲ Name	View	Filter	Calculate	Status Last Modified	Notes
A Troubleshooting			Filter List	List	Status		
Inventory	V	Data Center	×		~	Aug 5, 2016 11:18:46.	
n Management Mode	Ø	Important Nodes	~	~	-		Important Nodes such as Edge Routers representing the egress
A Incident Browsing	0	Microsoft Windows Systems	~	-	-	Aug 2, 2016 11:25:34.	Any system running Microsoft Windows, including servers, desl
∞ Integration Module Configuration	۸	My Important Subnets	~	-	~	Aug 4, 2016 9:14:35 P	
✗ Configuration	V	My Network	~	-	~	Aug 5, 2016 11:18:46	
 Communication Configuration 	0	Neighbor Connections Filter	-	-	-	Aug 2, 2016 11:25:34.	Used as a filter when computing neighbor connections for Node
	0	Notworking Infractructure Devic			-	Aug 2, 2016 11:25:34	Networking Infrastructure Devices
	0	Node Group 1	~	-	~	Aug 16, 2016 12:28:40	
Monitoring	Ø	Node Group 2	~	·]	~	Aug 16, 2016 12:28:51	
Incidents	0	NOR-SIMMP Devices	*	-	-	Aug 2, 2016 11:25:34.	Nodes which have never responded to SNMP queries during th
Status Configuration	Ø	Routers	~	~	-	Aug 2, 2016 11:25:34	Includes nodes which do routing. For routers, the monitoring se
🛅 Global Network Management	Ø	Subnet A	~	-	~	Aug 4, 2016 12:42:22	
 User Interface 	Ø	Switches	~	~	-	Aug 2, 2016 11:25:34	Includes nodes which do switching.
Security	8	Test	~	-	~	Aug 12, 2016 11:54:26	
MIBs	0	VMware ESX Hosts	~	~	-	Aug 2, 2016 11:25:34	VMware ESX Hosts
Device Profiles	0	Virtual Machines	~	~	-	Aug 2, 2016 11:25:34.	Virtual Machines
🔻 🗁 Object Groups							
I Node Groups							
Interface Groups							

Figure 3: Configuration both Node Groups Displayed

"Replace All" Import Example

The Discovery configuration import uses the "Replaces all" import behavior. So instead of a merge, the import performs a replacement of data.

1. Create an Auto-Discovery rule called discorange1.

iscovery Configurat	ion * ×							
* 🖻 🖻 3	1							
 Global Control 		<	Sc	hedule Se	ttings	Auto-Discov	ery Rules	Subnet Connection Rule
Enable Discovery of ATM/Frame Relay Interfaces for Performance Monitoring Auto-Discovery Pin	app	fault		ess, NNMi	ignores tha		m discovered nodes for A For more information, clic	
his control can over Ping Sweep	ide the Enable Ping Sweep choice for all Auto-Discovery Rules.	•	Or I	Discover Matching Nodes		Discover Any SNMP Device	Discover Non- SNMP Devices	Name
Sweep Interval	24.00 Hours V	1		~	~	~	-	BLR network
Node Name Resolut	ion	20	D I	~	-	-	-	discorange1

Figure 4: Discovery Configuration - Create discorange1 Auto-Discovery Rule

2. Perform an export of the discorange1 configuration using the following command:

nnmconfigexport.ovpl -c disco -f disco.1.xml

You should see a message similar to the following:

Successfully exported /var/tmp/config/disco.1.xml.

- 3. Delete the discorange1 Auto-Discovery Rule.
- 4. Create a new Auto-Discovery rule called discorange2.

<u>File View Tools Actions Help</u>								
Discovery Configuration * *								
Global Control	<	Sched	ule Se	ttings	Auto-Disco	very Rules	Subnet Connection Rules	Unnumbered Interfac
Enable Discovery of ATM/Frame Relay Interfaces for Performance Monitoring Auto-Discovery Ping Sweep Control (IPv4 only)	арр	fault Ter	1 addr	ess, NNM	i ignores th	at address. I	m discovered nodes for Auto- For more information, click he	
This control can override the Enable Ping Sweep choice for all Auto-Discovery Rules. Ping Sweep None	•	Disco Or Mato Node	hing	Enable Ping Sweep	Discover Any SNMP Device	Discover Non- SNMP Devices	Name	
Sweep Interval 24.00 Hours V	1						BLR network	
Node Name Resolution	30	• •		÷	-	-	discorange2	
First Choice Short DNS Name								
Second Choice Short sysName								

Figure 5: Discovery Configuration - Create discorange2 Auto-Discovery Rule

5. Perform an import of the discorange1 configuration using the following command:

nnmconfigimport.ovpl -f disco.1.xml

You should see a message similar to the following:

Successfully imported disco.1.xml.

Even though there was not a conflict with discorange2, the disco. 1. xml configuration overwrote the configuration.

iscovery Configuration * 🕱			
7 🗈 🖻 C			
▼ Global Control	< Schedule Settings	Auto-Discovery Rules	Subnet Connection Ru
Enable Discovery of ATM/Frame Relay Interfaces for Performance		NMi gathers addresses fro NMi ignores that address. I	
Monitoring Auto-Discovery Ping Sweep Control (IPvL only)		י 🕯	
Auto-Discovery Ping Sweep Control (IPv4 only) his control can override the Enable Ping Sweep choice for all Auto-Discovery Rule Ping Sweep None V	* * *	le Discover Discover Any Non- SNMP SNMP	Name
Auto-Discovery Ping Sweep Control (IPv4 only) his control can override the Enable Ping Sweep choice for all Auto-Discovery Rule	★ ■ C + Discover Enab ▲ Or Matching Ping	le Discover Discover Any Non- SNMP SNMP	

Figure 6: Discovery Configuration: disco.1.xml File Overwrote Configuration

Avoid Conflicts in the Ordering Fields

Many configurations, such as Monitoring Configuration, have an Ordering field.

Note

While the Monitoring Configuration import has a "Replaces all" behavior, it only replaces all if there are no conflicts in the Ordering field.

The following figure shows the default configuration of Monitoring Configuration:

For this example, start by exporting this default configuration so that you can revert back to it if necessary.

1. Perform an export of the monitoring1 configuration using the following command:

nnmconfigexport.ovpl -c monitoring -f monitoring.1.xml

You should see a message similar to the following:

Successfully exported /var/tmp/config/monitoring.1.xml.¥

Elle <u>View Iools</u> Actions <u>H</u> elp										
Monitoring Configuration X										
				_						
 Global Control 	Interfa	ace Settings Node	Settir	ngs Defa	ult Settings	5				
If disabled, previous device state and status values remain unchanged. For more information, click here.	•									
Enable State Polling 🔽	When	multiple settings are	define	d, NNMi ap	plies them a	according t	o the Order	ing number	(lowest nur	mber f
If you do not select Enable State Polling above, NNMi disables monitoring for the following object types and resets the previous states for each.	*	≅ ≎ 5	Î							
Enable Card Polling Enable Chassis Polling	▲ 0	Name	En SN an We	l Enable Managem		Enable Interface Fault	Enable Node Sensor	Enable Physical Sensor	Enable Node Sensor	Enab Phys Sens
Enable Node Sensor Polling	С		Po of	Polling	Polling	Polling	Fault Polling	Fault Polling	Performan Polling	r Perfo Polli
Enable Physical Sensor Polling	100	Routers	No	·		~	~	~	~	~
Enable Router Redundancy Group	200	Networking Infrastr	uc 🗸	~	-	~	~	~	-	-
Polling	300	Microsoft Windows	Sy 🗸	~	-	~	-		-	-
	400	Non-SNMP Devices	~	*	~	*	-	-	-	-

Figure 7: Monitoring Configuration - Default

2. Delete the Monitoring policy based on Routers (Ordering 100).

3. Create a Monitoring policy based on Data Center and reuse the Ordering value of 100.

fonitoring Configuration * 🕱							
 Global Control 	Interface Settings	Node Settings	Defa	ult Settings			
disabled, previous device state and status values remain unchanged. For more information, click her	e. 🗸						
Enable State Polling 🔽	When multiple setting	gs are defined,	NNMi app	olies them a	ccording to	the Order	ing numb
you do not select Enable State Polling above, NNMi disables monitoring for the following object typer revious states for each.		• 💼					
Enable Card Polling Enable Chassis Enable Chassis Enable Chassis	▲ Or Name	and Net	lanagem	Enable IP Address	Interface	Enable Node Sensor	Enable Physica Sensor
Enable Node Sensor 🔽 Polling				Fault Polling	Fault Polling	Fault Polling	Fault Polling
Enable Physical Sensor Polling	100 Data Center	× .		-	~	~	~
Enable Router Redundancy Group	200 Networking in	irasiruc 🗸 🗸	/	-	~	~	~
Polling	300 Microsoft Win	dows Sy 🖌 🗸	/	÷	~	÷	-
	400 Non-SNMP De	evices 🗸 🗸	/	~	~	-	-

Figure 8: Monitoring Configuration: Replace Routers with Data Center

4. Assuming that you want to revert back to the original configuration, perform an import using the following command:

nnmconfigimport.ovpl -f monitoring.1.xml

You should see the following error message:

Configuration Import Error:

Database constraint violation: Could not execute JDBC batch update

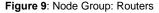
The import fails because the original configuration had Routers at 100 and the new configuration has Data Center at 100. To resolve this problem, you need to remove the conflict, save the configuration, and then re-import. To remove the conflict, you can either change the Ordering number of the current configuration (change Data Center to 99) or you can completely remove the policy for Data Center if you no longer need it.

Tip: When you change Data Center to 99, you avoid the Ordering conflict but the Data Center policy is deleted when you import the previous Monitoring Configuration. This result is because the Monitoring Configuration import has a "Replaces all" behavior.

Avoid Name Conflicts in Node Groups, Interface Groups, and Assigned UUIDs

NNMi includes a default Node Group called Routers with an assigned UUID.

Node Groups ≭ Node Group ≭ C [*] C [*] □ □ □ □ □ □ □ □ C □ □							
• Basics	^	Device Filters	Additional Filters	Additional Nodes	Child Node Grou	s Status	
Name Routers Calculate Status Status No Status Add to View Filter List		Filters, Nodes n					Family, or Device Profile. If yo to belong to this Node Group
Notes Includes nodes which do routing. For routers, the monitoring settings will by default monitor both connected interfaces and interfaces hosting addresses.		Device Cat Gateway Router Switch-Ro	eg Device Vendor	Device Family	Device Model		
You can filter Node Groups using Device Filters, Additional Filters, Additional Nodes, and Child Node Groups. If you use Device Filters and Additional Filters, Nodes must match at least one Device Filter and the Additional Filters specifications to belong to this Node Group. Nodes that are specified as Additional Additional Additional Additional Node Groups always are members of this Node Group. See Help \rightarrow Using the Node Group form.	~				Total: 3	Selected: 0	Filter: OFF



Consider the following scenario. You perform the following steps:

1. Export the original configuration.

- 2. Delete the default Routers Node Group.
- 3. Create a new Node Group called Routers.

The newly created Routers Node Group has a different UUID than that of the original Routers Node Group. If you were to attempt to import the configuration that has the original definition of Routers in it, the import will fail because of the conflict between the Node Group name and the UUID.

Tip: Avoid naming customer-built Node Groups with the same names as default Node Groups, in case you later want to revert back to the original product settings.

A similar issue occurs when you try to move configurations from one NNMi management server to another.

Consider the following scenarios. You perform the following steps:

- 1. Create a Node Group called NetBotz on Server A (Server A assigns a UUID for this Node Group).
- 2. On Server B, create the same Node Group, NetBotz (Server B assigns a UUID to this Node Group that is different from the one created on Server A).
- 3. Import the configuration from Server A to Server B.

The import fails because of the conflict between the Node Group name and the UUID.

Tip: To avoid Node Group name and UUID conflicts as the one previously described, rather than creating the same configuration on two different servers, create the configuration on one server and move it to the other server using a configuration import.

Conflict Example

Tip: If you are planning to replace a configuration on a server, then first delete the configuration from that server.

Consider the following example:

- 1. Export the current default Monitoring Configuration.
- 2. Delete the Monitoring Configuration based on Routers (Ordering 100).
- 3. Create a Monitoring Configuration in Node Settings called My Favorite Routers, with Ordering set to 100.

Assuming you want to revert back to the previous configuration, delete the entire configuration and then re-import:

- 4. From the workspace navigation panel, select the **Configuration** workspace, expand the **Monitoring** folder, and then click **Monitoring Configuration**.
- 5. Click the Node Settings tab.
- 6. Select all of the configurations and delete them.
- 7. Click the Interface Settings tab.
- 8. Select all of the configurations and delete them.

tonitoring Configuration 🗴														
3 🗈 🖻 3														
Global Control	Int	terface Se	ttings Node S	ettin	i gs Defa	ult Settings								
f disabled, previous device state and status values remain unchanged. For more information, click here.		•												
Enable State Polling 🛛	Wh	nen multip	le settings are de	fine	d, NNMi ap	plies them a	ccording to	the Order	ing number	(lowest nu	mber first).			
f you do not select Enable State Polling above, NNMI disables monitoring for the following object types and resets the revious states for each.		* 🗃	0 1 1											
Enable Card Polling Enable Chassis Folling Enable Node Sensor	4	Or Nam	e	Ena SNI and We Pol	Enable Managem Address	Enable IP Address Fault Polling		Enable Node Sensor Fault	Enable Physical Sensor Fault		r Performar	Unconnec	IP	Aggr Interf
Poling				of	-			Polling	Polling	Polling	Polling		Addresse	5
Enable Physical Sensor Polling	1	.00 Rout	ers		~	-	~	~	~	~	~	-	~	~
nable Router edundancy Group 🔽	2	00 Netw	orking Infrastruc	*	~	-	~	~	~	-	-	-	-	~
Polling	3	00 Micro	soft Windows Sy	~	~	-	~	-	-	-	-	-	-	~
	4	00 Non-	SNMP Devices	~	~	~	~							

Figure 10: Monitoring Configuration: Delete Node Settings

Elie <u>View I</u> ools Actions <u>H</u> elp Monitoring Configuration x														
	_													
Global Control	Inter	face Settings	ode Setting:	5 Defaul	t Settings									
If disabled, previous device state and status values remain unchanged. For more information, click here.														
Enable State Polling 🔽	When	n multiple settings	are defined,	NNMi appl	ies them acc	cording to th	e Ordering) number ()	owest num	ber first).				
If you do not select Enable State Polling above, NNMi disables monitoring for the following object types and resets the previous states for each.	*	■ 0 +	1										₩ ←	1-3
Enable Card Polling 🔽 Enable Chassis Polling	A 0	Dr Name	Enable IP Address Fault		Doll	Poll Interfaces Hosting IP	Poll Link Aggregati Interfaces	Enable Interface Performa	Interface	Enable SONET Interface r Performa			Notes	
Enable Node Sensor 🔽			-			Addresses			Polling	Polling	Rolling	Polling		٦
Enable Physical	100	ISDN Interfaces	-	~	-	-	-	-	-	-	-	-	ISDN Interface	_
Sensor Polling	200	Point to Point In	t - 1	~	-	-	-	-			-	-	Point to Point	
Redundancy Group	300	VLAN Interfaces	-	•	•	•	1	-	÷	•	•	•	VLAN interfac	J

Figure 11: Monitoring Configuration: Delete Interface Settings

Tip: Disable **State Polling** when you delete the current Monitoring Configuration to avoid generating unexpected alarms (because no monitoring policies are in place) between the time that you delete the current configuration and the time the replacement configuration is loaded. This principle is true for other configurations, such as Node Groups, because of the references to Node Groups in Monitoring Configuration.

9. Disable State Polling by ensuring that the Enable State Polling check box is cleared.

Ionitoring Configuration * 🗙											
	_										
Global Control	Inter	ace Settings No	ode Setting	s Defaul	t Settings						
disabled, previous device state and status values remain unchanged. For more information, click here.	•										
Enable State Polling	When	When multiple settings are defined, NNMi applies them according to the Ordering number (lowest number first).									
you do not select Enable State Polling above, NNMI disables monitoring for the following object types and resets the revious states for each.	*	■ 0 +									
Enable Card Polling 🔽 Enable Chassis 🛃	▲c	r Name	Enable IP Address Fault		Poll Unconnec	Poll Interfaces Hosting	Poll Link Aggregati	Enable Interface Performa	Enable DSx Interface	SONET Interface	
Enable Node Sensor 🔽 Polling			Polling	Polling	Interfaces	Addresse	menuces	Polling	- criorina	Performa Polling	Polling
Enable Physical Sensor Polling	100	ISDN Interfaces	-	~	-	-	-	-	-	-	-
Enable Router	200	Point to Point Int	-	~	•	+	•	•	-	•	-
Redundancy Group 🗹 Polling	300	VLAN Interfaces	-	~	-	-	-	-	-	-	-

specific: Interface, Node, Default). For more information, click here.

Figure 12: Monitoring Configuration - Disable State Polling

10. Click Save and Close

11.Perform an import using the following command:

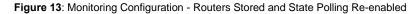
nnmconfigimport.ovpl -f monitoring.xml

You should see the following message:

Successfully imported monitoring.xml.

The Routers Node Setting has been restored with the Ordering at 100 and State Polling has been re-enabled.

<u>Elle View Tools Actions H</u> elp												
Monitoring Configuration * x												
	In	nterfa	ce Settings Node Se	ettin	gs Defa	ult Settings						
If disabled, previous device state and status values remain unchanged. For more information, click here.		•										
Enable State Polling												
If you do not select Enable State Polling above, NNMi disables monitoring for the following object types and resets the previous states for each.		*	🖬 S 👆 1									
Enable Card Polling Enable Chassis				Ena SNI and	Enable	Enable IP	Enable Interface	Enable Node	Enable Physical	Enable Node	Enable Physical	Poll
Polling Enable Node Sensor		▲ Or		We Pol of	Address Polling		Fault Polling	Sensor Fault Polling	Sensor Fault Polling			Unconnect r Interfaces
Enable Physical Sensor Polling		100	Routers	Not		•	~	~	~	*	~	-
Enable Router Redundancy Group 🔽 Polling			Networking Infrastruc Microsoft Windows Sv			•	*	*	*	•	•	-
r viiniy			Non-SNMP Devices	*		~	* *		-	-	-	-
NNMi monitors each discovered interface according to the first matching configuration setting (most-specific to least- specific: Interface, Node, Default). For more information, click here.												



Import Files in the Correct Order Based on Dependencies

The nnmconf ig import. ovpl tool allows you to import an entire set of configuration files in a directory; however, you may also load files one at a time. This enables you to see any errors based on individual files. You can then delete the conflict and re-import the file. You may need to load multiple configuration files to satisfy any dependencies. For example, an Interface Group can reference a Node Group in its configuration. To satisfy this dependency, load the Node Group configuration before loading the Interface Group configuration.

Interface Groups 🕷	Lools Actions Help Interface Group * * Image: Second seco				
 Basics 		~	ifType Filte	rs Additional Filters	
* Name	Data Center Interfaces		•		
Add to View Filter List					o determine Interface Group ers to belong to this Interfac
Node Group	Data Center	▽ 🛱 🕶	* 🗃	C 🐬 📋	
Filters and Addition: Filters specifications must belong to a No Group form.	ace Groups using ifType Filters and Addit al Filters, Interfaces must match at least o to belong to this Interface Group. If you de that is a member of that Node Group. ce Group definition, select File → Save, th	one ifType Filter and the Additional select a Node Group, the Interface See Help \rightarrow Using the Interface			
Details → Show Mer	mbers (Include Child Groups).				
	erformance for Metrics and NNM iSPI for	Traffic.			

Figure 14: Interface Group: Referenced Node Group

Merger Two Server Configurations

To merge two server configurations (to keep both servers synchronized) use any of the following three methods:

Method 1:

- 1. Elect one of the servers to be the "master" server where all configuration changes are made.
- 2. Make a full backup of the master server (using nnmbackup. ovpl) and restore it to the "slave" server (using nnmrestore. ovpl) to initialize all the UUIDs to the same values.
- 3. Export your configurations from the master server and then import them onto the slave server.

Method 2:

- 1. Use the graphical user interface to manually delete configurations on the slave server that may likely cause a conflict (for example, configurations that you have changed).
- 2. Make sure that you disable State Polling during this period to avoid unexpected alarms.
- 3. Export your configurations from the master server and then import them onto the slave server.

Method 3:

- 1. Import configurations one at a time from the master server without deleting anything on the slave server.
- 2. If an import fails, then delete the conflict and re-import.

Caution

You must import configurations within the same NNMi version and patch level. For example, you cannot export a configuration in NNMi 8.x and import it into NNMi 9.x.

Tips

- Determine which method, import/export or backup/restore, is your best option for moving data based on your goals and configuration.
- Study the NNMi help to determine if the import for a given configuration merges or replaces the current configuration.
- Avoid naming customer-built configurations with the same names as default configurations (such as Node Groups). This will help you
 avoid conflicts. Remember that you can assign custom configurations a higher priority (lower number) than the default configurations,
 thereby effectively disabling the default settings.
- Delete configurations that will clash before attempting the import to avoid UUID conflicts.
- · Consider completely deleting configurations to ensure a successful import and consider disabling State Polling temporarily.
- Avoid merging between NNMi management servers. If you must use this approach, then elect one of the servers to be the master server where all configuration changes are made. Prepare the servers in advance by making a backup of the master and restoring the backup to the slave server to synchronize UUIDs.
- For simple configurations, consider using the graphical user interface to visually compare servers and re-enter data rather than using the import and export or backup and restore tools.

Conclusion

This document has presented usage scenarios and best practices for NNMi's export and import tools.

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Product name and version: NNMi 10.30

Document title: Step-by-Step Guide to Using NNMi Import and Export Tools

Feedback:



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