

HP Network Management Center

For the Windows[®], HP-UX, Linux, and Solaris operating systems

Software Version: NMC 9.20

Ports Reference



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Acknowledgements

This product includes software developed by the Apache Software Foundation.
(<http://www.apache.org>)

This product includes software developed by the Indiana University Extreme! Lab.
(<http://www.extreme.indiana.edu>)

Available Product Documentation

In addition to this guide, the following documentation is available for NNMi:

- *HP Network Node Manager i Software Documentation List*—Available on the HP manuals web site. Use this file to track additions to and revisions within the NNMi documentation set for this version of NNMi. Click a link to access a document on the HP manuals web site.
- *HP Network Node Manager i Software Interactive Installation Guide*—This is an interactive document, and is available on the NNMI 9.20 product media. See the `nnmi_interactive_installation_en_README.txt` file, located on the product media, for more information.
- *HP Network Node Manager i Software Upgrade Reference*—Available on the HP manuals web site. This document provides information to help you upgrade from earlier versions of NNM and NNMi.
- *HP Network Node Manager i Software Release Notes*—Available on the product media and the NNMi management server.
- *HP Network Node Manager i Software System and Device Support Matrix*—Available on the product media and the NNMi management server.
- *HP Network Node Manager iSPI Network Engineering Toolset Planning and Installation Guide*—Available on the NNM iSPI NET diagnostics server product media.

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Introduction

This document shows ports that Network Management Center (NMC) products use in network communications.

The ports listed in [NMC Well-Known Ports](#) on page 6 are those used by all NMC products, sorted by port number to help you identify any possible port conflicts.

In addition, subsequent sections document the ports used by the individual products that comprise NMC. See the respective sections that follow:

- [HP Network Node Manager i Software](#)
- [NNM iSPI for MPLS](#)
- [NNM iSPI for IP Telephony](#)
- [NNM iSPI for IP Multicast](#)
- [NNM iSPI Performance for Traffic](#)
- [NNM iSPI Performance for QA](#)
- [NNM iSPI Performance for Metrics and NPS](#)
- [NNM iSPI NET](#)
- [HP Network Automation](#)

NMC Well-Known Ports

Table 1 shows the ports that Network Management Center (NMC) products use in network communications. The ports listed in Table 1 are those used by all NMC products, sorted by port number to help you identify any possible port conflicts. If port conflicts occur between products, you can change most of these port numbers as shown in the *Change Configuration* column.

Table 1 Ports Used by NMC Products

Port	NMC Product	Type	Name	Purpose	Change Configuration
69	NA Core	UDP	TFTP Port	Network devices to the NA server	Change not supported
80	NA Core	TCP	HTTP Port	HTTP port from the NA client to the NA server	Contact your Support representative for assistance.
80	NNMi	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI & Web Services - In GNM configurations NNMi uses this port to establish communication from the global manager to the regional manager - Once this port is open, it becomes bi-directional	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX). You can also change this during installation.
162	NNMi	UDP	trapPort	SNMP trap port	Modify using the nrmtrapconfig.ovpl Perl script. See the <i>nrmtrapconfig.ovpl</i> reference page, or the UNIX manpage, for more information.
443	NA Core	TCP	HTTPS Port	HTTPS port from the NA client to the NA server	Contact your Support representative for assistance.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
443	NNMi	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI & Web Services	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
514	NA Core	UDP	Syslog Port	Receive syslog messages from network devices on the NA server	See “Configuring the NA Syslog Server” in the NA Installation and Upgrade Guide.
1098	NA Core	TCP	RMI Activation Port	Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include: -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/API Command Reference.)	Contact your Support representative for assistance.
1098	NNMi	TCP	nmsas.server.port.naming.rmi	- Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
1099	NA Core	TCP	RMI Registration Port	Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include: -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/ API Command Reference.)	Contact your Support representative for assistance.
1099	NNMi	TCP	nmsas.server.port.naming.port	- Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
1433	NA Core	TCP	Microsoft SQL Server Port	Port on the Microsoft SQL Server that communicates with the NA Core. In a Distributed System configuration, the SQL Server databases communicate with each other on port 1433.	Contact your Support representative for assistance.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
1521	NA Core	TCP	Oracle SQL*Net Port	Port on the Oracle database server that communicates with the NA Core. In a Distributed System configuration, the Oracle processes connect to each other on port 1521.	Contact your Support representative for assistance.
2001	NA Satellite	TCP	Gateway Tunnel Port	TunnelPort from the Satellite to the Core Gateway. The Core Gateway listens for tunnel connections.	Contact your Support representative for assistance.
3002	NA Satellite	TCP	Gateway Proxy Port	ProxyPort from the NA Core to the Core Gateway and from the Satellite agent to the Satellite	See "Device Access Page Fields" in the NA help.
3306	NA Core	TCP	MySQL Port	Port on the MySQL database server that communicates with the NA Core	Contact your Support representative for assistance.
3306	NNM iSPI NET	TCP	MySQL database port	Provides access to MySQL database.	Change not supported.
3873	NNMi	TCP	nmsas.server.port.remoting.ejb3	- Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
4040	NA Satellite	TCP	Gateway Ident Port	IdentPort from the NA Core to the Core Gateway	Contact your Support representative for assistance.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
4444	NNMi	TCP	nmsas.server.port.jmx .jrmp	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the <code>%NNM_CONF%\nmm\props\nms-local.properties</code> file (Windows) or <code>\$(NNM_CONF)/nmm/props/nms-local.properties</code> file (UNIX).
4445	NNMi	TCP	nmsas.server.port.jmx .rmi	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the <code>%NNM_CONF%\nmm\props\nms-local.properties</code> file (Windows) or <code>\$(NNM_CONF)/nmm/props/nms-local.properties</code> file (UNIX).
4446	NA Core	TCP	jboss Remoting Port	<p>Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include:</p> <ul style="list-style-type: none"> -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/API Command Reference.) 	Contact your Support representative for assistance.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
4446	NNMi	TCP	nmsas.server.port.invoker.unified	<ul style="list-style-type: none"> - Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only 	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
4457	NNMi	TCP	nmsas.server.port.hq	<ul style="list-style-type: none"> - Used for un-encrypted Global Network Management traffic. - Messaging travels from the global manager to the regional manager - Once this port is open, it becomes bi-directional 	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
4459	NNMi	TCP	nmsas.server.port.hq.ssl	<ul style="list-style-type: none"> - Used for encrypted Global Network Management traffic. - Messaging travels from the global manager to the regional manager - Once this port is open, it becomes bi-directional 	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
4712	NA Core	TCP	jbossTS Recovery Manager Port	jboss transaction management	Contact your Support representative for assistance.
4712	NNMi	TCP	nmsas.server.port.ts.recovery	Internal transaction service port	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
4713	NA Core	TCP	jbossTS Transaction Status Manager Port	jboss transaction management	Contact your Support representative for assistance.
4713	NNMi	TCP	nmsas.server.port.ts.status	Internal transaction service port	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4714	NA Core	TCP	jbossTS Socket Process ID Port	jboss transaction management	Contact your Support representative for assistance.
4714	NNMi	TCP	nmsas.server.port.ts.id	Internal transaction service port	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
5432	NNM iSPI for IP Multicast	TCP	com.hp.ov.nms.postgresql.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file.	N/A
5432	NNM iSPI for IP Telephony	TCP	com.hp.ov.nms.postgresql.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file.	N/A

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
5432	NNM iSPI for MPLS	TCP	com.hp.ov.nms.postgres.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file.	N/A
5432	NNMi	TCP	com.hp.ov.nms.postgres.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server.	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
5432	NNM iSPI Performance for QA	TCP	com.hp.ov.nms.postgres.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file.	N/A
5432	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	com.hp.ov.nms.postgres.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file.	N/A

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
5432	NNM iSPI Performance for Traffic (Traffic Master)	TCP	com.hp.ov.nms.postgresql.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the nms-local.properties file	N/A
5445	NA Core	TCP	jboss HornetQ netty port	jboss Messaging service	Contact your Support representative for assistance.
5455	NA Core	TCP	jboss HornetQ netty-batch port	jboss Messaging service	Contact your Support representative for assistance.
6099	NA Core	TCP	Software Management Port Image Server	HTTPS port from the NA server to the Software Image Management server	See "Server Page Fields" in the NA help.
7800-7810	NNMi	TCP		- JGroups ports for application failover - If application failover is not used, HP recommends configuring the system firewall to restrict access to these ports	Modify the %NNM_CONF%\nrm\props\nms-cluster.properties file (Windows) or \$NNM_CONF/nrm/props/nms-cluster.properties file (UNIX).
8005	NA Satellite	TCP	Tomcat Server Port	Port for Tomcat to listen for commands like SHUTDOWN	Contact your Support representative for assistance.
8009	NA Satellite	TCP	Tomcat AJP Port	Port for Tomcat to listen for AJP messages	Contact your Support representative for assistance.
8022	NA Core	TCP	SSH Server Port	SSH port from the NA client to the NA server on the Linux or Solaris operating system	See "Telnet/SSH Page Fields" in the NA help.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
8023	NA Core	TCP	Telnet Server Port	Telnet port from the NA client to the NA server on the Linux or Solaris operating system	See "Telnet/SSH Page Fields" in the NA help.
8080	NA Core	TCP	HTTP Port	HTTP port from the NA client to the NA server. Use instead of 80 when NA coexists with NNMi.	Contact your Support representative for assistance.
8080	NNM iSPI NET	TCP	jetty http port	Default HTTP port - used for Web UI & Web Services.	Post-install modifications not supported.
8084	NNM iSPI for IP Multicast	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX). You can also change this during installation.
8443	NA Core	TCP	HTTPS Port	HTTPS port from the NA client to the NA server. Use instead of 443 when NA coexists with NNMi.	Contact your Support representative for assistance.
8443	NA Satellite	TCP	Tomcat HTTPS Port	RpcPort from the Satellite to the management agent (Tomcat), Syslog, TFTP	Contact your Support representative for assistance.
8443	NNM iSPI NET	TCP	jetty SSL/https port	Default HTTPS port - used for Web UI & Web Services.	Post-install modifications not supported.
8886	NNMi	TCP	OVSPMD_MGMT	NNMi ovspmd (process manager) management port	Modify the /etc/services file
8887	NNMi	TCP	OVSPMD_REQ	NNMi ovspmd (process manager) request port	Modify the /etc/services file

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
9004	NNM iSPI NET	TCP	HP OO RAS port	Provides access to HP OO Remote Action Service.	Change not supported.
9090	NA Satellite	TCP	Gateway Admin Port	AdminPort from the Satellite to the Core Gateway. Note that the Satellite uses all of the ports that the NA Core uses for managing devices (from the Satellite to the device: 22, 23, 514, 80, and 443).	See "Device Access Page Fields" in the NA help.
9300	NNM iSPI Performance for Metrics and NPS	TCP	NPS UI	Default HTTP port - used for Web UI & BI Web Services.	Change using configureWebAccess.ovpl.
9301	NNM iSPI Performance for Metrics and NPS	TCP	Sybase ASE	Sybase ASE (BI Content Manager Database). Used by processes running on the same server.	Change not supported.
9302	NNM iSPI Performance for Metrics and NPS	TCP	Sybase IQ Agent	Sybase IQ Agent service. Used by processes running on the same server.	Change not supported.
9303	NNM iSPI Performance for Metrics and NPS	TCP	Sybase IQ - PerfSPI DB	Sybase IQ database used to store all NPS extensionPack data. Used by processes running on the same server.	Change not supported.
9304	NNM iSPI Performance for Metrics and NPS	TCP	Sybase IQ - PerfSPI DEMO DB	Sybase IQ database used to store extensionPack DEMO data. Used by processes running on the same server.	Change not supported.
9305	NNM iSPI Performance for Metrics and NPS	TCP	NPS UI - SSL	Default Secure HTTPS port (SSL) - used for Web UI & BI Web Services.	Change using configureWebAccess.ovpl.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
9306	NNM iSPI Performance for Metrics and NPS	TCP	Database SQL Rewrite Proxy - PerfSPI DB	SQL Rewrite proxy for the Perfspi database - used by BI Server. Used by processes running on the same server.	Change not supported.
9307	NNM iSPI Performance for Metrics and NPS	TCP	Database SQL Rewrite Proxy - PerfSPI DEMO DB	SQL Rewrite proxy for the Perfspi DEMO database - used by BI Server. Used by processes running on the same server.	Change not supported.
9308	NNM iSPI Performance for Metrics and NPS	TCP	Sybase ASE Backup Server	Sybase ASE backup server for the BI content manager database. Used by processes running on the same server.	Change not supported.
10080	NNM iSPI for IP Telephony	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX). You can also change this during installation.
10083	NNM iSPI for IP Telephony	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10084	NNM iSPI for IP Telephony	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
10085	NNM iSPI for IP Telephony	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10086	NNM iSPI for IP Telephony	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10087	NNM iSPI for IP Telephony	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10089	NNM iSPI for IP Telephony	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10092	NNM iSPI for IP Telephony	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
10099	NNM iSPI for IP Telephony	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX). You can also change this during installation.
10443	NNM iSPI for IP Telephony	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX). You can also change this during installation.
11080	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX). You can also change this during installation.
11081	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX). You can also change this during installation.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
11083	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11084	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11085	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11086	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11087	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
11089	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11092	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11099	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX). You can also change this during installation.
11712	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11713	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
11714	NNM iSPI Performance for Traffic (Traffic Leaf)	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
12080	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX). You can also change this during installation.
12081	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX). You can also change this during installation.
12083	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
12084	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12085	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12086	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12087	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12089	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.remoting.ejb3	Default EJB3	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
12092	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12099	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX). You can also change this during installation.
12712	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12713	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12714	NNM iSPI Performance for Traffic (Traffic Master)	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
14083	NNM iSPI for IP Multicast	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14084	NNM iSPI for IP Multicast	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14085	NNM iSPI for IP Multicast	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14086	NNM iSPI for IP Multicast	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14087	NNM iSPI for IP Multicast	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
14089	NNM iSPI for IP Multicast	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14092	NNM iSPI for IP Multicast	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14099	NNM iSPI for IP Multicast	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX). You can also change this during installation.
14102	NNM iSPI for IP Multicast	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14103	NNM iSPI for IP Multicast	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
14104	NNM iSPI for IP Multicast	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14443	NNM iSPI for IP Multicast	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX). You can also change this during installation.
14712	NNM iSPI for IP Telephony	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
14713	NNM iSPI for IP Telephony	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
14714	NNM iSPI for IP Telephony	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
24040	NNM iSPI for MPLS	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX). You can also change this during installation.
24041	NNM iSPI for MPLS	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24043	NNM iSPI for MPLS	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX). You can also change this during installation.
24044	NNM iSPI for MPLS	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
24045	NNM iSPI for MPLS	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24046	NNM iSPI for MPLS	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX). You can also change this during installation.
24047	NNM iSPI for MPLS	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24048	NNM iSPI for MPLS	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24049	NNM iSPI for MPLS	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
24092	NNM iSPI for MPLS	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24712	NNM iSPI for MPLS	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24713	NNM iSPI for MPLS	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24714	NNM iSPI for MPLS	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
54040	NNM iSPI Performance for QA	TCP	nmsas.server.port.web.http	Default HTTP port - used for Web UI.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX). You can also change this during installation.

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
54043	NNM iSPI Performance for QA	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX). You can also change this during installation.
54046	NNM iSPI Performance for QA	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX). You can also change this during installation.
54047	NNM iSPI Performance for QA	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54084	NNM iSPI Performance for QA	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54085	NNM iSPI Performance for QA	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
54086	NNM iSPI Performance for QA	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54087	NNM iSPI Performance for QA	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54088	NNM iSPI Performance for QA	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54089	NNM iSPI Performance for QA	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).

Table 1 Ports Used by NMC Products (cont'd)

Port	NMC Product	Type	Name	Purpose	Change Configuration
54712	NNM iSPI Performance for QA	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54713	NNM iSPI Performance for QA	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54714	NNM iSPI Performance for QA	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).

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Table 2 shows the ports NNMi uses on the management server. NNMi listens on these ports. If port conflicts occur, you can change most of these port numbers as shown in the *Change Configuration* column. See the *nmm.ports* reference page, or the UNIX manpage, for more information.

- ▶ For application failover to work successfully, open TCP ports 7800-7810. For the application failover feature to function correctly, the active and standby NNMi management servers must have unrestricted network access to each other.

Table 2 Ports Used on the NNMi Management Server

Port	Type	Name	Purpose	Change Configuration
80	TCP	nmsas.server.port.web .http	Default HTTP port - used for Web UI & Web Services - In GNM configurations NNMi uses this port to establish communication from the global manager to the regional manager - Once this port is open, it becomes bi-directional	Modify the %NNM_CONF%\nmm\props\ nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/ nms-local.properties file (UNIX). You can also change this during installation.
162	UDP	trapPort	SNMP trap port	Modify using the nmmtrapconfig.ovpl Perl script. See the <i>nmmtrapconfig.ovpl</i> reference page, or the UNIX manpage, for more information.
443	TCP	nmsas.server.port.web .https	Default secure HTTPS port (SSL) - used for Web UI & Web Services	Modify the %NNM_CONF%\nmm\props\ nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/ nms-local.properties file (UNIX).

Table 2 Ports Used on the NNMi Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
1098	TCP	nmsas.server.port.naming.rmi	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
1099	TCP	nmsas.server.port.naming.port	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
3873	TCP	nmsas.server.port.remoting.ejb3	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).
4444	TCP	nmsas.server.port.jmx.jrmp	<p>- Used by NNMi command line tools to communicate with a variety of services used by NNMi</p> <p>- HP recommends configuring the system firewall to restrict access to these ports to localhost only</p>	Modify the %NNM_CONF%\nrm\props\nms-local.properties file (Windows) or \$NNM_CONF/nrm/props/nms-local.properties file (UNIX).

Table 2 Ports Used on the NNMi Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
4445	TCP	nmsas.server.port.jmx .rmi	<ul style="list-style-type: none"> - Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only 	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4446	TCP	nmsas.server.port.invoker.unified	<ul style="list-style-type: none"> - Used by NNMi command line tools to communicate with a variety of services used by NNMi - HP recommends configuring the system firewall to restrict access to these ports to localhost only 	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4457	TCP	nmsas.server.port.hq	<ul style="list-style-type: none"> - Used for un-encrypted Global Network Management traffic. - Messaging travels from the global manager to the regional manager - Once this port is open, it becomes bi-directional 	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).

Table 2 Ports Used on the NNMi Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
4459	TCP	nmsas.server.port.hq.ssl	<p>- Used for encrypted Global Network Management traffic.</p> <p>- Messaging travels from the global manager to the regional manager</p> <p>- Once this port is open, it becomes bi-directional</p>	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4712	TCP	nmsas.server.port.ts.recovery	Internal transaction service port	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4713	TCP	nmsas.server.port.ts.status	Internal transaction service port	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
4714	TCP	nmsas.server.port.ts.id	Internal transaction service port	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).
5432	TCP	com.hp.ov.nms.postgres.port	This PostgreSQL port is the port the embedded database listens on for this NNMi management server.	Modify the %NNM_CONF%\nmm\props\nms-local.properties file (Windows) or \$NNM_CONF/nmm/props/nms-local.properties file (UNIX).

Table 2 Ports Used on the NNMi Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
7800-7810	TCP		- JGroups ports for application failover - If application failover is not used, HP recommends configuring the system firewall to restrict access to these ports	Modify the %NNM_CONF%\nrm\props\nms-cluster.properties file (Windows) or \$NNM_CONF/nrm/props/nms-cluster.properties file (UNIX).
8886	TCP	OVSPMD_MGMT	NNMi ovspmd (process manager) management port	Modify the /etc/services file
8887	TCP	OVSPMD_REQ	NNMi ovspmd (process manager) request port	Modify the /etc/services file

Table 3 shows some of the ports NNMi uses to communicate with other systems. If a firewall separates NNMi from these systems, you must open many of these ports in the firewall. The actual set of ports depends on the set of integrations you configured to use with NNMi and how you configured those integrations. If column 4 indicates *Client*, NNMi connects or sends to this port; if column 4 indicates *Server*, NNMi listens on this port.

Table 3 Ports Used for Communication Between the NNMi Management Server and Other Systems

Port	Type	Purpose	Client, Server
80	TCP	Default HTTP port for NNMi; used for Web UI and Web Services	Server
80	TCP	Default HTTP port for NNMi connecting to other applications. The actual port depends on NNMi configuration.	Client
161	UDP	SNMP request port	Client
162	UDP	SNMP trap port - traps received by NNMi	Server
162	UDP	SNMP trap port; Trap Forwarding, Northbound Interface, or NetCool integrations	Client
389	TCP	Default LDAP port	Client
395	UDP	nGenius Probe SNMP trap port	Client
443	TCP	Default secure HTTPS port for NNMi connecting to other applications; the actual port depends on NNMi configuration. Default HTTPS port for HP OM on Windows	Client
443	TCP	Default secure HTTPS port; used for Web UI and Web Services	Server
636	TCP	Default secure LDAP port (SSL)	Client
1741	TCP	Default CiscoWorks LMS web services port	Client
4457	TCP	Used for un-encrypted Global Network Management traffic. The connection is from the global manager to the regional manager.	Client, Server

Table 3 Ports Used for Communication Between the NNMi Management Server and Other Systems (cont'd)

Port	Type	Purpose	Client, Server
4459	TCP	Used for encrypted Global Network Management traffic. The connection is from the global manager to the regional manager.	Client, Server
7800-7810	TCP	JGroups ports for application failover	Client and Server
8004	TCP	Default HTTP port for NNMi if another web server already has port 80. Used for Web UI and Web Services. Verify the actual HTTP port for your NNMi management server.	Server
8080	TCP	Default HTTP port for connecting to NA if installed on the same system as NNMi. Default HTTPS port for HP UCMDB web services	Client
8443 or 8444	TCP	Default HTTP port for connecting to HP OM for UNIX	Client
9300	TCP	Default HTTP port for connecting to NNM iSPI Performance for Metrics	Client
50000	TCP	Default HTTPS port for connecting to SIM	Client

- ▶ If you configure NNMi to use ICMP fault polling or ping sweep for discovery, configure the firewall to pass ICMP packets through the firewall.
- ▶ The Web Services approach for the NNMi-HP OM integration does not work through a firewall, however the NNMi-HP OM integration using the Northbound Interface does work through a firewall.

If you plan to use the global network management feature, [Table 4](#) shows the well-known ports that need to be accessible from a global NNMi management server to a regional NNMi management server. The global network management feature requires these ports to be open for TCP access from the global NNMi management server to the regional NNMi management server. The regional NNMi management server will not open sockets back to the global NNMi management server.

Table 4 Required Accessible Sockets for Global Network Management

Security	Parameter	TCP Port
non-SSL	jboss.http.port	80
	jboss.bisocket.port	4457
SSL	jboss.https.port	443
	jboss.sslbisocket.port	4459

NNM iSPI for MPLS

Table 5 shows the ports the HP Network Node Manager iSPI for MPLS Software uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/mpls/server.properties`.

Table 5 Ports Used on the HP Network Node Manager iSPI for MPLS Software Management Server

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgres.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file.	N/A
24040	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\mpls\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/mpls/server.properties</code> file (UNIX). You can also change this during installation.
24041	TCP	<code>nmsas.server.port.remoting.ejb3</code>	Default EJB3 remoting connector port	Modify the <code>%NnmDataDir%\nmsas\mpls\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/mpls/server.properties</code> file (UNIX).

Table 5 Ports Used on the HP Network Node Manager iSPI for MPLS Software Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
24043	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX). You can also change this during installation.
24044	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24045	TCP	nmsas.server.port.invoker.unified	Default RMI remotng server connector port	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24046	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX). You can also change this during installation.

Table 5 Ports Used on the HP Network Node Manager iSPI for MPLS Software Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
24047	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24048	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24049	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24092	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).

Table 5 Ports Used on the HP Network Node Manager iSPI for MPLS Software Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
24712	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24713	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).
24714	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\mpls\server.properties file (Windows) or \$NnmDataDir/nmsas/mpls/server.properties file (UNIX).

NNM iSPI for IP Telephony

Table 6 shows the ports the NNM iSPI for IP Telephony uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/ipt/server.properties`.

Table 6 Ports Used on the NNM iSPI for IP Telephony Management Server

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgres.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file.	N/A
10080	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\ipt\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/ipt/server.properties</code> file (UNIX). You can also change this during installation.
10083	TCP	<code>nmsas.server.port.naming.rmi</code>	Default port for RMI naming service	Modify the <code>%NnmDataDir%\nmsas\ipt\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/ipt/server.properties</code> file (UNIX).
10084	TCP	<code>nmsas.server.port.jmx.jrmp</code>	Default RMI object port (JRMP invoker)	Modify the <code>%NnmDataDir%\nmsas\ipt\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/ipt/server.properties</code> file (UNIX).

Table 6 Ports Used on the NNM iSPI for IP Telephony Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
10085	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10086	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10087	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10089	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
10092	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).

Table 6 Ports Used on the NNM iSPI for IP Telephony Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
10099	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX). You can also change this during installation.
10443	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX). You can also change this during installation.
14712	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
14713	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).
14714	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\ipt\server.properties file (Windows) or \$NnmDataDir/nmsas/ipt/server.properties file (UNIX).

NNM iSPI for IP Multicast

Table 7 shows the ports the NNM iSPI for IP Multicast uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/multicast/server.properties`.

Table 7 Ports Used on the NNM iSPI for IP Multicast Management Server

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgresql.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file.	N/A
8084	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\multicast\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/multicast/server.properties</code> file (UNIX). You can also change this during installation.
14083	TCP	<code>nmsas.server.port.naming.rmi</code>	Default port for RMI naming service	Modify the <code>%NnmDataDir%\nmsas\multicast\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/multicast/server.properties</code> file (UNIX).

Table 7 Ports Used on the NNM iSPI for IP Multicast Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
14084	TCP	nmsas.server.port.jmx .jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\ multicast\ server.properties file (Windows) or \$NnmDataDir/nmsas/ multicast/ server.properties file (UNIX).
14085	TCP	nmsas.server.port.jmx .rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\ multicast\ server.properties file (Windows) or \$NnmDataDir/nmsas/ multicast/ server.properties file (UNIX).
14086	TCP	nmsas.server.port.inv oker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\ multicast\ server.properties file (Windows) or \$NnmDataDir/nmsas/ multicast/ server.properties file (UNIX).
14087	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ multicast\ server.properties file (Windows) or \$NnmDataDir/nmsas/ multicast/ server.properties file (UNIX).
14089	TCP	nmsas.server.port.rem oting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\ multicast\ server.properties file (Windows) or \$NnmDataDir/nmsas/ multicast/ server.properties file (UNIX).

Table 7 Ports Used on the NNM iSPI for IP Multicast Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
14092	TCP	nmsas.server.port.hq. ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14099	TCP	nmsas.server.port.nam ing.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX). You can also change this during installation.
14102	TCP	nmsas.server.port.ts. id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).

Table 7 Ports Used on the NNM iSPI for IP Multicast Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
14103	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14104	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX).
14443	TCP	nmsas.server.port.web.https	Default secure HTTPS port (SSL) - used for Web UI.	Modify the %NnmDataDir%\nmsas\multicast\server.properties file (Windows) or \$NnmDataDir/nmsas/multicast/server.properties file (UNIX). You can also change this during installation.

NNM iSPI Performance for Traffic

Table 8 shows the ports the NNM iSPI Performance for Traffic (Traffic Master component) uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/traffic-master/server.properties`.

Table 8 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Master)

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgres.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file	N/A
12080	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\traffic-master\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/traffic-master/server.properties</code> file (UNIX). You can also change this during installation.
12081	TCP	<code>nmsas.server.port.web.https</code>	Default secure HTTPS port (SSL) - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\traffic-master\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/traffic-master/server.properties</code> file (UNIX). You can also change this during installation.

Table 8 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Master) (cont'd)

Port	Type	Name	Purpose	Change Configuration
12083	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12084	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12085	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12086	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12087	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).

Table 8 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Master) (cont'd)

Port	Type	Name	Purpose	Change Configuration
12089	TCP	nmsas.server.port.remoting.ejb3	Default EJB3	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12092	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12099	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX). You can also change this during installation.

Table 8 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Master) (cont'd)

Port	Type	Name	Purpose	Change Configuration
12712	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12713	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).
12714	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-master\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-master/server.properties file (UNIX).

Table 9 shows the ports the NNM iSPI Performance for Traffic (Traffic Leaf component) uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/traffic-leaf/server.properties`.

Table 9 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Leaf)

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgresql.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file.	N/A
11080	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\traffic-leaf\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/traffic-leaf/server.properties</code> file (UNIX). You can also change this during installation.
11081	TCP	<code>nmsas.server.port.web.https</code>	Default secure HTTPS port (SSL) - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\traffic-leaf\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/traffic-leaf/server.properties</code> file (UNIX). You can also change this during installation.
11083	TCP	<code>nmsas.server.port.naming.rmi</code>	Default port for RMI naming service	Modify the <code>%NnmDataDir%\nmsas\traffic-leaf\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/traffic-leaf/server.properties</code> file (UNIX).

**Table 9 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Leaf)
(cont'd)**

Port	Type	Name	Purpose	Change Configuration
11084	TCP	nmsas.server.port.jmx .jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\ traffic-leaf\ server.properties file (Windows) or \$NnmDataDir/nmsas/ traffic-leaf/ server.properties file (UNIX).
11085	TCP	nmsas.server.port.jmx .rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\ traffic-leaf\ server.properties file (Windows) or \$NnmDataDir/nmsas/ traffic-leaf/ server.properties file (UNIX).
11086	TCP	nmsas.server.port.inv oker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\ traffic-leaf\ server.properties file (Windows) or \$NnmDataDir/nmsas/ traffic-leaf/ server.properties file (UNIX).
11087	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\ traffic-leaf\ server.properties file (Windows) or \$NnmDataDir/nmsas/ traffic-leaf/ server.properties file (UNIX).
11089	TCP	nmsas.server.port.rem oting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\ traffic-leaf\ server.properties file (Windows) or \$NnmDataDir/nmsas/ traffic-leaf/ server.properties file (UNIX).

Table 9 Ports Used on the NNM iSPI Performance for Traffic Management Server (Traffic Leaf) (cont'd)

Port	Type	Name	Purpose	Change Configuration
11092	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11099	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX). You can also change this during installation.
11712	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11713	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).
11714	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\traffic-leaf\server.properties file (Windows) or \$NnmDataDir/nmsas/traffic-leaf/server.properties file (UNIX).

NNM iSPI Performance for QA

Table 10 shows the ports the NNM iSPI Performance for QA uses on the management server. In case of port conflicts, almost all of these port numbers can be changed using the `server.properties` file located at: `%NnmDataDir%/nmsas/qa/server.properties`.

Table 10 Ports Used on the NNM iSPI Performance for QA Management Server

Port	Type	Name	Purpose	Change Configuration
5432	TCP	<code>com.hp.ov.nms.postgres.port</code>	This PostgreSQL port is the port the embedded database listens on for this NNMi management server. The port is expected to be the same as that configured for NNMi in the <code>nms-local.properties</code> file.	N/A
54040	TCP	<code>nmsas.server.port.web.http</code>	Default HTTP port - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\qa\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/qa/server.properties</code> file (UNIX). You can also change this during installation.
54043	TCP	<code>nmsas.server.port.web.https</code>	Default secure HTTPS port (SSL) - used for Web UI.	Modify the <code>%NnmDataDir%\nmsas\qa\server.properties</code> file (Windows) or <code>\$NnmDataDir/nmsas/qa/server.properties</code> file (UNIX). You can also change this during installation.

Table 10 Ports Used on the NNM iSPI Performance for QA Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
54046	TCP	nmsas.server.port.naming.port	Default bootstrap JNP service port (JNDI provider)	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX). You can also change this during installation.
54047	TCP	nmsas.server.port.naming.rmi	Default port for RMI naming service	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54084	TCP	nmsas.server.port.jmx.jrmp	Default RMI object port (JRMP invoker)	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54085	TCP	nmsas.server.port.jmx.rmi	Default RMI pooled invoker port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54086	TCP	nmsas.server.port.invoker.unified	Default RMI remoting server connector port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).

Table 10 Ports Used on the NNM iSPI Performance for QA Management Server (cont'd)

Port	Type	Name	Purpose	Change Configuration
54087	TCP	nmsas.server.port.hq	Used for un-encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54088	TCP	nmsas.server.port.hq.ssl	Used for encrypted Global Network Management traffic.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54089	TCP	nmsas.server.port.remoting.ejb3	Default EJB3 remoting connector port	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54712	TCP	nmsas.server.port.ts.recovery	Default recovery port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54713	TCP	nmsas.server.port.ts.status	Default status port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).
54714	TCP	nmsas.server.port.ts.id	Default port used by the Transaction service.	Modify the %NnmDataDir%\nmsas\qa\server.properties file (Windows) or \$NnmDataDir/nmsas/qa/server.properties file (UNIX).

NNM iSPI Performance for Metrics and NPS

Table 11 shows the ports required for NNM iSPI Performance for Metrics and Network Performance Server (NPS). In case of port conflicts, almost all of these port numbers can be changed.

- ▶ If NNMi and NPS are not coexisting, then the network ports used for the OS network file sharing are also required (NFS services on Linux, Windows File Sharing on Windows).

Table 11 Required Ports for NNM iSPI Performance for Metrics and NPS

Port	Type	Name	Purpose	Change Configuration
9300	TCP	NPS UI	Default HTTP port - used for Web UI & BI Web Services.	Change using <code>configureWebAccess.ovpl</code> .
9301	TCP	Sybase ASE	Sybase ASE (BI Content Manager Database). Used by processes running on the same server.	Change not supported.
9302	TCP	Sybase IQ Agent	Sybase IQ Agent service. Used by processes running on the same server.	Change not supported.
9303	TCP	Sybase IQ - PerfSPI DB	Sybase IQ database used to store all NPS extensionPack data. Used by processes running on the same server.	Change not supported.
9304	TCP	Sybase IQ - PerfSPI DEMO DB	Sybase IQ database used to store extensionPack DEMO data. Used by processes running on the same server.	Change not supported.
9305	TCP	NPS UI - SSL	Default Secure HTTPS port (SSL) - used for Web UI & BI Web Services.	Change using <code>configureWebAccess.ovpl</code> .

Table 11 Required Ports for NNM iSPI Performance for Metrics and NPS (cont'd)

Port	Type	Name	Purpose	Change Configuration
9306	TCP	Database SQL Rewrite Proxy - PerfSPI DB	SQL Rewrite proxy for the Perfspi database - used by BI Server. Used by processes running on the same server.	Change not supported.
9307	TCP	Database SQL Rewrite Proxy - PerfSPI DEMO DB	SQL Rewrite proxy for the Perfspi DEMO database - used by BI Server. Used by processes running on the same server.	Change not supported.
9308	TCP	Sybase ASE Backup Server	Sybase ASE backup server for the BI content manager database. Used by processes running on the same server.	Change not supported.

NNM iSPI NET

Table 12 shows the ports used by the NNM iSPI NET diagnostics server. The NNM iSPI NET diagnostic server installs HP Operations Orchestration (HP OO). For more information, see the *HP Operations Orchestration Administrator's Guide*.

Table 12 Ports Used by the NNM iSPI NET Diagnostics Server

Port	Type	Name	Purpose	Change Configuration
3306	TCP	MySQL database port	Provides access to MySQL database.	Change not supported.
8080	TCP	jetty http port	Default HTTP port - used for Web UI & Web Services.	Post-install modifications not supported.
8443	TCP	jetty SSL/https port	Default HTTPS port - used for Web UI & Web Services.	Post-install modifications not supported.
9004	TCP	HP OO RAS port	Provides access to HP OO Remote Action Service.	Change not supported.

HP Network Automation

Table 13 shows the ports used by HP Network Automation (NA Core).

Table 13 Ports Used by HP Network Automation (NA Core)

Port	Type	Name	Purpose	Change Configuration
69	UDP	TFTP Port	Network devices to the NA server	Change not supported
80	TCP	HTTP Port	HTTP port from the NA client to the NA server	Contact your Support representative for assistance.
443	TCP	HTTPS Port	HTTPS port from the NA client to the NA server	Contact your Support representative for assistance.
514	UDP	Syslog Port	Receive syslog messages from network devices on the NA server	See “Configuring the NA Syslog Server” in the NA Installation and Upgrade Guide.
1098	TCP	RMI Activation Port	Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include: <ul style="list-style-type: none"> -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/API Command Reference.) 	Contact your Support representative for assistance.

Table 13 Ports Used by HP Network Automation (NA Core) (cont'd)

Port	Type	Name	Purpose	Change Configuration
1099	TCP	RMI Registration Port	Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include: -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/ API Command Reference.)	Contact your Support representative for assistance.
1433	TCP	Microsoft SQL Server Port	Port on the Microsoft SQL Server that communicates with the NA Core. In a Distributed System configuration, the SQL Server databases communicate with each other on port 1433.	Contact your Support representative for assistance.
1521	TCP	Oracle SQL*Net Port	Port on the Oracle database server that communicates with the NA Core. In a Distributed System configuration, the Oracle processes connect to each other on port 1521.	Contact your Support representative for assistance.
3306	TCP	MySQL Port	Port on the MySQL database server that communicates with the NA Core	Contact your Support representative for assistance.

Table 13 Ports Used by HP Network Automation (NA Core) (cont'd)

Port	Type	Name	Purpose	Change Configuration
4446	TCP	jboss Remoting Port	Port between NA clients and the NA Management Engine and between the NA Management Engines in separate NA Cores. NA clients can include: -NA Syslog Server -NA Connectors -AAA Log Reader -Syslog Reader -Customer-written API scripts (For information, see the NA API User Guide and the NA CLI/ API Command Reference.)	Contact your Support representative for assistance.
4712	TCP	jbossTS Recovery Manager Port	jboss transaction management	Contact your Support representative for assistance.
4713	TCP	jbossTS Transaction Status Manager Port	jboss transaction management	Contact your Support representative for assistance.
4714	TCP	jbossTS Socket Process ID Port	jboss transaction management	Contact your Support representative for assistance.
5445	TCP	jboss HornetQ netty port	jboss Messaging service	Contact your Support representative for assistance.
5455	TCP	jboss HornetQ netty-batch port	jboss Messaging service	Contact your Support representative for assistance.
6099	TCP	Software Image Management Server Port	HTTPS port from the NA server to the Software Image Management server	See "Server Page Fields" in the NA help.
8022	TCP	SSH Server Port	SSH port from the NA client to the NA server on the Linux or Solaris operating system	See "Telnet/SSH Page Fields" in the NA help.

Table 13 Ports Used by HP Network Automation (NA Core) (cont'd)

Port	Type	Name	Purpose	Change Configuration
8023	TCP	Telnet Server Port	Telnet port from the NA client to the NA server on the Linux or Solaris operating system	See "Telnet/SSH Page Fields" in the NA help.
8080	TCP	HTTP Port	HTTP port from the NA client to the NA server. Use instead of 80 when NA coexists with NNMi.	Contact your Support representative for assistance.
8443	TCP	HTTPS Port	HTTPS port from the NA client to the NA server. Use instead of 443 when NA coexists with NNMi.	Contact your Support representative for assistance.

Table 14 shows the ports used by HP Network Automation (NA Satellite).

Table 14 Ports Used by HP Network Automation (NA Satellite)

Port	Type	Name	Purpose	Change Configuration
2001	TCP	Gateway Tunnel Port	TunnelPort from the Satellite to the Core Gateway. The Core Gateway listens for tunnel connections.	Contact your Support representative for assistance.
3002	TCP	Gateway Proxy Port	ProxyPort from the NA Core to the Core Gateway and from the Satellite agent to the Satellite	See "Device Access Page Fields" in the NA help.
4040	TCP	Gateway Ident Port	IdentPort from the NA Core to the Core Gateway	Contact your Support representative for assistance.
8005	TCP	Tomcat Server Port	Port for Tomcat to listen for commands like SHUTDOWN	Contact your Support representative for assistance.
8009	TCP	Tomcat AJP Port	Port for Tomcat to listen for AJP messages	Contact your Support representative for assistance.
8443	TCP	Tomcat HTTPS Port	RpcPort from the Satellite to the management agent (Tomcat), Syslog, TFTP	Contact your Support representative for assistance.
9090	TCP	Gateway Admin Port	AdminPort from the Satellite to the Core Gateway. Note that the Satellite uses all of the ports that the NA Core uses for managing devices (from the Satellite to the device: 22, 23, 514, 80, and 443).	See "Device Access Page Fields" in the NA help.

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Product name and version: NMC 9.20

Document title: *HP Network Management Center Ports Reference*

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