



Hewlett Packard Enterprise

Course Data Sheet

NNMi120 – Network Node Manager i Software 10.x Essentials

Course No.: NNMI120-101	Category/Sub Category: Operations Management/Network Management
For software version(s): Software version used in the labs:	Course length: 5 days
Delivery formats: Instructor Led (ILT) and Virtual Instructor Led (VILT)	Training is available as a private session onsite.
To order visit: http://h20546.www2.hp.com/main/index.cfm	

Course Description

This course is designed for those Network and/or System administrators tasked with the installation, configuration, and maintenance of the Network Node Manager i Software (NNMi) product. This course teaches the skills needed to successfully implement the product to manage small, medium, or large networked enterprises. The course includes training on the NNM i Smart Plug-In (NNM iSPI) Performance for Metrics Software, and NNMi Smart Plug-In Engineering Toolset.

This course is designed for administrators of the NNMi software 10.10 application.

The hands-on lab exercises in this course use NNMi software version 10.10.

Audience / Job Roles

This course is intended for network or system administrators and network engineers seeking a more in-depth knowledge of Network Node Manager i Software 10.10.

Course Objectives

Upon successful completion of this course, you should be able to:

- Configure network discovery
- Manipulate NNMi tables and device object records
- Design topology maps
- Configure incidents
- Generate performance graphs
- Generate performance reports
- Perform core administration tasks
- Manage an ESXi virtual environment
- Describe the features available in the iSPI for Engineering Toolset

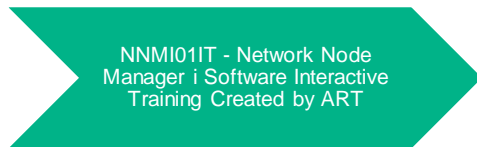
Prerequisites / Recommended Skills

To be successful in this course, you should have the following prerequisites or knowledge.

- Windows system administration
- Network protocols
- Network device administration

Learning Path

Operators:



Administrators:



Certification

N/A

Course Topics

Modules	Objectives
Module 1: Introduction to HP Network Node Manager i (NNMi) Software	<ul style="list-style-type: none"> Describe how NNMi supports best business practices Describe how NNMi fits in the HP family of management products Differentiate NNMi and NNMi Advanced feature sets List add-on and integrated products available from HPE Describe how NNMi supports efficiency and effectiveness in managing your complex network
Module 2: Managing SNMP and ICMP Communication	<ul style="list-style-type: none"> Configure authentication for SNMPv1, SNMPv2, SNMPv3 (individual, region, type, filter, default) Configure alternative authentication names Use an alternate SNMP port or timeout Use an SNMP proxy Use the SNMP Command Line Interface (CLI)
Module 3: Discovery Architecture and Operation	<ul style="list-style-type: none"> Describe what NNMi discovers, how far, which objects Describe how NNMi groups discovered objects Describe how NNMi discovers connectivity Describe limits of duplicate IP address management
Module 4: Configuring Discovery	<ul style="list-style-type: none"> Turn auto-discover (inventory) on/off Schedule discovery Initiate manual discovery (single, group, all nodes) Expand discovery (single node, from file, for region) Limit discovery (filter by region, type, node or interface level, before/after SNMP query) Recheck node configuration Recheck connectivity Remove discovered objects (individually, by filter, by region)
Module 5: Touring the Management Console	<ul style="list-style-type: none"> Start the NNMi console Locate workspaces Navigate tables, maps, views, and forms Access object details Working with Performance and Overview Dashboards Sort and filter tables
Module 6: Configuring Node and Interface Groups	<ul style="list-style-type: none"> Describe how node and interface groups are applied in NNMi Configure a group by object type, region, specific object, default Use advanced filtering on object capabilities
Module 7: Customizing Views	<ul style="list-style-type: none"> Create a map of a node group Place the map in the list of topology maps Control the default map displayed when the console opens Add a background to a map Control status propagation Add connections to Path View maps
Module 8: Status Monitoring Architecture and Operation	<ul style="list-style-type: none"> Differentiate between fault monitoring and performance monitoring Identify data gathered for interface monitoring and component health Describe the roles of State Poller service and Causal Engine Describe the operation of neighbor analysis

Module 9: Customizing Status Monitoring	<ul style="list-style-type: none"> • Turn polling on/off (specific nodes, region, type) • Set polling interval by node or interface group • Set objects to out-of-service mode • Select polling protocol and set of data to be gathered • Verify the polling settings for an object • Perform an on-demand status poll of an object • Check polling backlog/performance • Exclude objects from status polling (individual, region, type)
Module 10: Configuring Users	<ul style="list-style-type: none"> • Configure a user account for each of your NNMi users with the appropriate capabilities • Describe what each user group may access in the console • Configure Custom Security groups • Configure tenants • Configure command-line permissions • Audit account activity
Module 11: Troubleshooting Network Issues	<ul style="list-style-type: none"> • Describe the incident life cycle, assignments and ownership, and states • View network incidents and incident details • Sort and filter incidents • Assign and reassign incidents • Delete an incident • Annotate an incident • View historical incidents (closed) • Cross-launch to graphical visualization • Interpret root cause incidents • Launch and interpret network visualization (different types) • List nodes, interfaces, and addresses in the network • View object details • Filter a view by node group or interface group • Invoke troubleshooting tools • Check the status and configuration of a device • Display incidents for a device
Module 12: Troubleshooting Using MIBs	<ul style="list-style-type: none"> • Describe the use of Management Information Base (MIB) browsing and graphing during troubleshooting • Graph MIB data • Browse MIB data
Module 13: Event Monitoring Architecture	<ul style="list-style-type: none"> • Describe event sources and processing
Module 14: Customizing Event Monitoring	<ul style="list-style-type: none"> • Add and delete event definitions • Customize event category/severity/message • Create a new category or family • Add vendor trap definitions • Exclude an event from the display • Block trap storms • Block reception of events
Module 15: Thresholds and Custom MIB Monitoring	<ul style="list-style-type: none"> • Configure iSPI Performance for Metrics Software thresholds and incidents • Configure Custom Polling Threshold Monitoring

<p>Module 16: iSPI Performance for Metrics Software Architecture</p>	<ul style="list-style-type: none"> • Describe how NNMi passes data to the iSPI for Performance Metrics Software • Describe how the iSPI Performance for Metrics Software stores data • Perform basic troubleshooting steps • Verify that data is being collected by NNMi • Verify that collected data is being used by the iSPI Performance for Metrics Software • Check that the iSPI Performance for Metrics Software is configured properly • Start the iSPI Performance for Metrics Software service • Verify that performance polling is enabled • Verify that the iSPI Performance for Metrics Software Home Page opens
<p>Module 17: Viewing Performance Data and Reports</p>	<ul style="list-style-type: none"> • List the reports available from the iSPI Performance for Metrics Software • Explain the difference between reports and live reports • Modify the report settings to change the way a report displays data • Determine the appropriate report to view based on use cases
<p>Module 18: Administering NNMi</p>	<ul style="list-style-type: none"> • Customize NNMi console settings • Back up NNMi data and configuration • Check NNMi health from the GUI • Locate NNMi log files • Move from test to production (import/export tools)
<p>Module 19: Managing Virtualization</p>	<ul style="list-style-type: none"> • Identify the Hypervisor (ESXi Server) hosting a virtual machine (VM) • Use a loom map to identify the hosting Hypervisor's Network Interface Card (NIC) that the Virtual Machine is connected to • Use a wheel map to identify the hosting hypervisor's Network Interface Card (NIC) that the Virtual Machine is connected to.
<p>Appendix A: iSPI Engineering Toolset</p>	<ul style="list-style-type: none"> • Describe the functionality provided by the iSPI Network Engineering Toolset • Generate Incident-triggered diagnostic execution • Generate Trap Analytics reports