TRAINING GOALS:

This Network Node Manager i (NNMi) ART course is comprised of 8 modules and is designed for Network Operators and Administrators. This includes an overview of NNMi, key terminologies and definitions, and methods to troubleshoot a networked environment. The course provides simulations to reinforce learning objectives. The hands-on lab simulations use version 10.5 of the software.

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

- Use the NNMi software to monitor and troubleshoot a networked environment
- Quickly identify, address and remediate problems
- Monitor incidents and perform network diagnostics
- Use the NNMi monitoring toolsto obtain the information necessary to use networked devices at optimal performance and efficiency
- Understand Virtualization support and view performance reports

Audience/Job Roles

- Network Designers, Operators, and Administrators
- NNMi end-users who need to install, configure, test, use, and maintain an NNMi system and its integration with other Micro Focus products

CONSPECT:

- Introduction to Network Node Manager i 10.50
  - Network Operations Management Suite
  - NNMi Functionality and Features
  - Continuous Spiral Discovery
  - Map-Based Management
  - Graphical Topology Visualization
  - Comprehensive Device Fault Monitoring
  - Active Root Cause Analysis for Topology Changes
  - Incident Management and Event Correlation
  - NNM iSPI for Operational Performance Management
High Availability (HA) and Application Level Failover

NNMi Advanced Features

SNMP Configuration and Network Discovery
- Network Management Tasks
- NNMi’s Network Management Model
- SNMP Operations in NNMi
- NNMi Communication Layer Architecture
- SNMP Configuration Operations
  - Configure the Common User Operations Performed for SNMP
  - Configure the SNMPv1 and SNMPv2c Communication Settings
  - Configure the SNMPv3 Communication Settings
  - Configure the Regional SNMP Proxy

Spiral Discovery Concepts
- Spiral Discovery in NNMi
- Inventory Basics Stage – Initial Discovery of a New Node
- Connectivity Details Stage
- Connectivity Analysis Stage
- New Node Discovery for Node Characteristics
- Discovery of Islands (Disconnected Subnets)
- Rediscovery of Nodes in NNMi

Device Discovery Operations
- Common User Operations Performed for Device Discovery
- Set Initial Discovery Configuration and Interval Settings
- Configure Interface Filters – Included Interfaces
- Define Auto-Discovery Rules
- Configure IP Exclusion Range
- Create Discovery Seeds
- Add Multiple Discovery Seeds
- Verify Discovery
- View Discovered Objects
- Delete an Object from the Inventory
- Discovering Nodes while Using Network Address Translation (NAT)

Perform SNMP Configuration using the NNMi Console*
Perform Network Discovery*

Using the NNMi Management Console
- Accessing NNMi Console
- NNMi Console Main Page
- Navigating the NNMi Console
- Locate Workspaces
- Display Map Views
- View Network Overview Dashboard
- Visualize Key Groups in Topology Maps
- View the Inventory in a Tabular View
- Display Data in a Tabular View
- Review Object Details in the Analysis Pane
- Modify Attribute Values of an Incident Object
- Invoke User Initiated Actions from the Menu
- Use Filters on Views
- View Status of a Selected Node Group
- Find a Node in the Inventory
- Schedule Node Outages using Management Mode
- View Component Performance Dashboard
- View Interface Performance Dashboard
- View Node Performance Metrics for Performance Analysis
- View Inventory Node Details*
- Review the Device Information*
- Review Information about a Stacked Switch*

- Incident Management
  - Incident Generation Process
  - Incident Lifecycle
  - Incident Lifecycle States
  - NNMi Incident Concepts
  - Incident Browsing Workspace Views
    - Current Incidents View
    - Historical Incidents View
  - Common User Operations for Incident Management
    - Review Incident Details
    - Own an Incident
    - Assign an Incident
    - Annotate an Incident
    - View the Related Object Details
    - View Impacted Nodes
  - Manage Incidents Using NNMi*
○ Explore the Historical Incident View*

○ Troubleshooting Network Problems
  ○ Troubleshooting a Network Issue
  ○ User Operations for Troubleshooting Network Issues
  ○ Topology Map View
  ○ Node Group Overview
  ○ View Status Details for a Node Group
  ○ View Network Propagation Status
  ○ Incident Views
  ○ Layer 2 Neighbor View
  ○ Layer 3 Neighbor View
  ○ Path View
  ○ Router and Switch Views
  ○ Test Accessibility Using the Ping Command
  ○ View the Network Route Using the Trace Route Command
  ○ Access Devices Using the Telnet Command
  ○ Perform Status Polling on a Device
  ○ Perform Configuration Polling on a Device
  ○ View Real-time Performance Graphs
  ○ Troubleshoot Network Problems*

○ Inventory Nodes Management
  ○ Inventory Management
  ○ Grouping of Nodes
  ○ Existence of Nodes in Multiple Groups
  ○ Group Hierarchy and Containment
  ○ Default Node Groups
  ○ Common User Operations for Inventory Management
  ○ Create a New Node Group
  ○ Add a Device Filter and Additional Filter Attributes
  ○ Assign Specific Nodes to a Node Group
  ○ Define Child Node Groups
  ○ Select Device Descriptors
  ○ Select the Device Model and Device Profile
  ○ Preview Nodes that Belong to a Node Group
  ○ Configure Node Group Status Propagation
  ○ View Default Interface Groups
- Configure Child Node Groups
- Configure a Parent Node Group

- Performance Reporting
  - iSPI Performance for Metrics
  - Single Sign-On (SSO) Configuration
  - NNM iSPI for Performance Integration with NNMi
  - Launching iSPI Reports from NNMi Console
  - Launching NPS Portal Reports
  - Extension Packs in iSPI for Performance
    - Performance Reporting Groups
    - Self Monitoring Extension Pack
    - Interface Health Extension Pack
    - Component Health Extension Pack
  - Types of Reports Supported in iSPI
    - Chart Detail Reports
    - Dashboard Reports
    - Headline Reports
    - Baseline Sleeve Reports
    - Top N Reports
    - Peak Period Reports
    - Threshold Sleeve Reports
  - View iSPI Performance Reports

- Virtualization Management * Indicates a simulation
  - Key Concepts of Virtualization
  - Discover and Monitor the hypervisor (ESXi Server)
  - Management of ESXi Servers
  - Management of ESXi Virtual Machines
  - Web Agent Running on the ESXi Server
  - Device Credentials for Web Agent
  - Trusted Certificates for Web Agent
  - Managed Nodes (VMs) on the ESXi Server
  - Managed Virtual Switches on the ESXi Server
  - Wheel Map Diagram
  - Loom Map Diagram
  - Layer 2 Map
  - Manage Virtualization using NNMi
**REQUIREMENTS:**

To maximize success in this course, students should have basic networking experience.

**Difficulty level**

* Indicates a simulation

**CERTIFICATE:**

The participants will obtain certificates signed by Micro Focus (course completion).

**TRAINER:**

Authorized Micro Focus Trainer.