

# IMC Essentials for Network Administrators

## HL048S

<b>HPE course number</b>	HL048S
<b>Course length</b>	5 Days
<b>Delivery mode</b>	ILT, VILT
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### Why HPE Education Services?

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This training course covers monitoring and managing a computer network with HPE Intelligent Management Center Software Platform (IMC) version 7.3. This course discusses installation, adding devices, viewing and managing both firmware and configuration, managing alarms and VLANs. It also teaches compliance, ACL, virtualization, and performance management, plus Network Traffic Analyzer and Zero Touch Provisioning. The hands-on laboratory exercises monitor and manage ArubaOS Switch, ArubaOS-CX, Comware, Cisco, Arista, pfSense firewall, Windows server, VMware ESXi, and Linux server.

### Audience

- Network engineers and administrators
- Network architects and consultants

This course is the combination of:

- H9TB1S: Managing HPE IMC I: Implementation Fundamentals (3 days)
- H9TB2S: Managing HPE IMC II: Compliance Policies and Performance Management (2 days)

### Prerequisites

Learners should have networking experience to get the most from this training course.

### Course objectives

By the end of the course, you should be able to meet the following objectives:

- Describe IMC's software structure
- Describe the protocols IMC uses to monitor and manage devices
- Discover devices automatically and add devices manually
- View the managed devices in multiple ways
- Manage device configurations and firmware
- Automate device configuration changes
- Monitor the network's performance
- Discover the new Desktop User Interface
- Discover the Quick Service Process
- Discover and isolate faults in your environment
- Make configuration changes to your computing environment
- Authenticate users with 802.1X and UAM
- Manage the performance of your environment
- Increase the security of your environment

\*Realize Technology Value with Training, IDC Infographic 2037, Sponsored by HPE, October 2017

## H9TB1S: Managing HPE IMC I: Implementation Fundamentals (Days 1 to 3)

### Detailed course outline

<b>Module 1: Compliance and Intelligent Policy Center</b>	<ul style="list-style-type: none"> <li>• Create a policy and have IMC check for a policy violation on managed devices</li> </ul>	<ul style="list-style-type: none"> <li>• Have IMC perform an additional action based on a generated alert.</li> </ul>
<b>Module 2: ACL Management</b>	<ul style="list-style-type: none"> <li>• ACL assistant feature</li> <li>• Managing ACL templates</li> <li>• Managing ACL resources</li> </ul>	<ul style="list-style-type: none"> <li>• Managing device ACL configurations</li> <li>• Deploying ACLs using IMC's ACL deployment wizard</li> </ul>
<b>Module 3: Virtualization Management</b>	<ul style="list-style-type: none"> <li>• An introduction to virtualization</li> <li>• Adding virtual hosts to IMC</li> </ul>	<ul style="list-style-type: none"> <li>• Using Virtual Resource Manager (VRM)</li> <li>• An introduction to managing virtual devices in VRM</li> </ul>
<b>Module 4: Performance Management</b>	<ul style="list-style-type: none"> <li>• Describe the types of performance metrics that a network administrator can monitor using IMC</li> <li>• Analyze the performance characteristics being tracked by IMC</li> <li>• View, interpret, and configure performance widgets in the IMC home window</li> <li>• Describe the difference between global index settings and individual device monitoring settings</li> </ul>	<ul style="list-style-type: none"> <li>• Configure individual device monitoring settings</li> <li>• Use topology maps to access device performance metrics</li> <li>• Configure topology maps to display specific performance metrics</li> <li>• Describe the difference between global index data and real-time monitoring data</li> <li>• Configure real-time performance data</li> </ul>
<b>Module 5: Network Traffic Analyzer (NTA)</b>	<ul style="list-style-type: none"> <li>• Understanding traffic monitoring and NTA's capabilities</li> <li>• Configuring networking devices for NTA</li> <li>• Configuring NTA for traffic analysis and auditing</li> <li>• Using host session monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up and using interface monitoring</li> <li>• Setting up NTA widgets on the home window</li> <li>• Performing traffic log audits</li> </ul>
<b>Module 6: Zero Touch Provisioning</b>	<ul style="list-style-type: none"> <li>• Create configuration template for the device final configuration</li> <li>• Create configuration template for the device ZTP initial configuration</li> </ul>	<ul style="list-style-type: none"> <li>• Create a Auto Deployment Plan and have IMC deploy Zero Touch Provision</li> <li>• IMC will automatically add the new device.</li> </ul>

## H9TB1S: Managing HPE IMC I: Implementation Fundamentals (Days 1 to 3)

### Detailed lab outline

<b>Module 1 Lab: Accessing HPE vLabs</b>	<ul style="list-style-type: none"> <li>Task 1: Connect to Your Labgroup</li> <li>Task 2: Verify SQL Readiness</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Launch IMC</li> </ul>
<b>Module 2 Lab: Installation and Initial Access</b>	<ul style="list-style-type: none"> <li>Task 1: Log In to IMC and add an account</li> <li>Task 2: Manage operator accounts</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Install a module</li> <li>Task 4: Configure Display Tiling</li> </ul>
<b>Module 3 Lab: Adding Devices</b>	<ul style="list-style-type: none"> <li>Task 1: Using auto discovery to add the switches</li> <li>Task 2: Using "Add Device" to add the two Windows servers</li> <li>Task 3: Adding Arista, pfSense and AOS-CX</li> <li>Task 4: Adding the ESXi server and the two Linux VMs</li> <li>Task 5: Convert devices to communicate using SNMPv3 and SSH</li> </ul>	<ul style="list-style-type: none"> <li>- AOS</li> <li>- Comware</li> <li>- Cisco</li> <li>- Arista</li> <li>Task 6: Observe success</li> <li>Task 7: DBman backup</li> </ul>
<b>Module 4 Lab: MIB Management</b>	<ul style="list-style-type: none"> <li>Task 1: View how IMC processes unknown private MIB traps</li> <li>Task 2: Import private MIBs and view how IMC processes private MIB traps</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Escalate a trap to an alarm</li> </ul>
<b>Module 5 Lab: View Management</b>	<ul style="list-style-type: none"> <li>Task 1: Access and Manage the Network Topology</li> <li>Task 2: IP Topology View</li> <li>Task 3: IP View</li> </ul>	<ul style="list-style-type: none"> <li>Task 4: Custom View</li> <li>Task 5: Port Group</li> <li>Task 6: Data Center Topology</li> </ul>
<b>Module 6 Lab: Configuration Management</b>	<ul style="list-style-type: none"> <li>Task 1: Firmware Backup</li> <li>Task 2: Firmware Baseline</li> <li>Task 3: Configuration Backup</li> </ul>	<ul style="list-style-type: none"> <li>Task 4: Configuration Baseline and Compare</li> <li>Task 5: Schedule device backup</li> </ul>
<b>Module 7 Lab: Alarms &amp; Events</b>	<ul style="list-style-type: none"> <li>Task 1: Understand the Alarm window information</li> <li>Task 2: Home Screen Alarm and Performance Viewing</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Creating, Seeing and Alerting Alarms</li> <li>Task 4: Alarm Ack, Recovering</li> <li>Task 5: Event to Alarm</li> </ul>
<b>Module 8 Lab: VLAN Management</b>	<ul style="list-style-type: none"> <li>Task 1: Manage Global &amp; Device VLAN information</li> </ul>	<ul style="list-style-type: none"> <li>Task 2: VLAN Deployment Task</li> </ul>

## H9TB2S: Managing HPE IMC II: Compliance Policies and Performance Management (Days 4 and 5)

### Detailed course outline

<b>Module 1: Compliance and Intelligent Policy Center</b>	<ul style="list-style-type: none"> <li>• Create a policy and have IMC check for a policy violation on managed devices</li> </ul>	<ul style="list-style-type: none"> <li>• Have IMC perform an additional action based on a generated alert.</li> </ul>
<b>Module 2: ACL Management</b>	<ul style="list-style-type: none"> <li>• ACL assistant feature</li> <li>• Managing ACL templates</li> <li>• Managing ACL resources</li> </ul>	<ul style="list-style-type: none"> <li>• Managing device ACL configurations</li> <li>• Deploying ACLs using IMC's ACL deployment wizard</li> </ul>
<b>Module 3: Virtualization Management</b>	<ul style="list-style-type: none"> <li>• An introduction to virtualization</li> <li>• Adding virtual hosts to IMC</li> </ul>	<ul style="list-style-type: none"> <li>• Using Virtual Resource Manager (VRM)</li> <li>• An introduction to managing virtual devices in VRM</li> </ul>
<b>Module 4: Performance Management</b>	<ul style="list-style-type: none"> <li>• Describe the types of performance metrics that a network administrator can monitor using IMC</li> <li>• Analyze the performance characteristics being tracked by IMC</li> <li>• View, interpret, and configure performance widgets in the IMC home window</li> <li>• Describe the difference between global index settings and individual device monitoring settings</li> <li>• Configure individual device monitoring settings</li> </ul>	<ul style="list-style-type: none"> <li>• Use topology maps to access device performance metrics</li> <li>• Configure topology maps to display specific performance metrics</li> <li>• Describe the difference between global index data and real-time monitoring data</li> <li>• Configure real-time performance data</li> </ul>
<b>Module 5: Network Traffic Analyzer (NTA)</b>	<ul style="list-style-type: none"> <li>• Understanding traffic monitoring and NTA's capabilities</li> <li>• Configuring networking devices for NTA</li> <li>• Configuring NTA for traffic analysis and auditing</li> <li>• Using host session monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up and using interface monitoring</li> <li>• Setting up NTA widgets on the home window</li> <li>• Performing traffic log audits</li> </ul>
<b>Module 6: Zero Touch Provisioning</b>	<ul style="list-style-type: none"> <li>• Create configuration template for the device final configuration</li> <li>• Create configuration template for the device ZTP initial configuration</li> </ul>	<ul style="list-style-type: none"> <li>• Create a Auto Deployment Plan and have IMC deploy Zero Touch Provision</li> <li>• IMC will automatically add the new device.</li> </ul>

## H9TB2S: Managing HPE IMC II: Compliance Policies and Performance Management (Days 4 and 5)

### Detailed lab outline

<b>Module 1 Lab: Compliance and Intelligent Policy Center</b>	<ul style="list-style-type: none"> <li>Task 1: Connect to Your Labgroup</li> <li>Task 2: Launch and connect to IMC</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Use "Compliance Center" for auditing</li> </ul>
<b>Module 2 Lab: ACL Management</b>	<ul style="list-style-type: none"> <li>Create, deploy, and apply an Access Control List</li> </ul>	
<b>Module 3 Lab: Virtualization Management</b>	<ul style="list-style-type: none"> <li>Access and view IMC's virtualization representation</li> </ul>	
<b>Module 4 Lab: Performance Management</b>	<ul style="list-style-type: none"> <li>Task 1: Examine and Tune Device Performance values</li> <li>Task 2: Access and Observe "Global Index Settings"</li> <li>Task 3: Use "Performance View" to monitor interface utilization</li> <li>Task 4: Access and Observe "Performance Option"</li> </ul>	<ul style="list-style-type: none"> <li>Task 5: Utilize "Real-Time Monitoring" under "Performance Management"</li> <li>Task 6: Utilize "Real-Time Monitoring" under "Device Details"</li> <li>Task 7: Observe Real-Time data on topology maps</li> <li>Task 8: "Application Performance Manager" introduction</li> </ul>
<b>Module 5 Lab: Network Traffic Analyzer</b>	<ul style="list-style-type: none"> <li>Task 1: Add Comware to NTA</li> <li>Task 2: Create a "Traffic Analysis Task"</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Perform host session monitoring</li> <li>Task 4: Perform interface monitoring</li> </ul>
<b>Module 6 Lab: Zero Touch Provisioning</b>	<ul style="list-style-type: none"> <li>Task 1: Prepare lab system for device zero touch configuration</li> <li>Task 2: Configure an Auto Deployment Plan for device zero configuration</li> </ul>	<ul style="list-style-type: none"> <li>Task 3: Observe a successful ZTP-ADP operation.</li> </ul>

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