



CHAPTER 1

Overview

This chapter provides basic information about Virtual Network Management Center (VNMC) and the VNMC CLI.

This chapter includes the following sections:

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Information About VNMC

This section contains information about the VNMC.

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VNMC

VNMC is a virtual appliance, based on Red Hat Enterprise Linux (RHEL), that provides centralized device and security policy management of the Cisco Virtual Security Gateway (VSG) for the Cisco Nexus 1000V Series switch. Designed for multitenant operation, VNMC provides seamless, scalable, and automation-centric management for virtualized data center and cloud environments. With a web-based GUI, CLI, and XML APIs, VNMC allows you to manage VSGs that are deployed throughout the data center from a centralized location.

Multitenancy refers to the architectural principle, where a single instance of the software runs on a Software-as-a-Service (SaaS) server, serving multiple client organizations or tenants. Multitenancy is contrasted with a multi-instance architecture, where separate software instances are set up for different client organizations. With a multitenant architecture, a software application is designed to virtually partition data and configurations, so that each tenant works with a customized virtual application instance.

VNMC is built on an information model-driven architecture, where each managed device is represented by its subcomponents. This architecture enables VNMC to provide greater agility and simplification for securing multitenant infrastructure.

VNMC communicates with vCenter, VSM, and VSG over a management VLAN.

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System Requirements

Following are the requirements for Cisco VNMC:

Virtual Appliance requirements	<ul style="list-style-type: none"> • 1.5 GHz virtual CPU • 3 Gb RAM • 25 Gb hard drive • One network management interface
Hypervisor requirements	<ul style="list-style-type: none"> • VMware vSphere 4.0.1, 4.0.2, or 4.1.0 with VMware ESX or ESXi • VMware vCenter 4.0.1, 4.0.2, or 4.1.0
Protocol requirements	<ul style="list-style-type: none"> • HTTP/HTTPS • LDAP
Operating system	<ul style="list-style-type: none"> • Linux

Information About the VNMC CLI

This section contains information about the VNMC CLIs.

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- [VNMC CLIs Basic Commands, page 1-5](#)

Overview of the VNMC CLIs

An important component of the VNMC is the CLI. With it, you can perform the following tasks:

- Restore VNMC to full state of the VNMC without having to reinstall.
- Collect the technical support data and copy it to a file.
- Change the hostname.
- Change the management interface IP settings.
- Configure VNMC device profiles.
- Create VNMC system policies.
- Create backups and import/export services.

VNMC contains six sub-CLIs. You use all six sub-CLIs to manage VNMC. The CLIs are as follows:

- Management controller—This is the default CLI. The command prompt is host-name#. Use this CLI to perform the following tasks:

host-name#	
commit-buffer	Commit transaction buffer
connect	Connect to another CLI
discard-buffer	Discard transaction buffer
exit	Exit from command interpreter
scope	Changes the current mode
show	Show system information

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```

terminal      Terminal
top          Go to the top mode
where         Show information about the current mode

host-name# show
cli           CLI Information
clock         Clock
network-interface VM IP interface
system        Systems
version       Version of installed applications

```

- Local management—This is the local management CLI. The command prompt is host-name(local-mgmt)#. Use this CLI to perform the following tasks:

```

host-name(local-mgmt)#
connect      Connect to Another CLI
copy         Copy a file
delete       Delete a file
dir          Show content of dir
download    Download an application from a remote system
exit         Exit from command interpreter
install     Install a downloaded application
modify       Modify the shared secret on service registry
reboot      Perform system reboot
restore     Restore the VM
service      Control services
show         Show system information
terminal    Terminal
top          Go to the top mode

host-name(local-mgmt)#
connect
local-mgmt   Local-mgmt
policy-mgr   Policy-mgr
resource-mgr Resource-mgr
service-reg  Service-reg
vm-mgr       Vm-mgr

host-name(local-mgmt)#
show
cli           CLI Information
clock         Clock
download    Downloaded applications
install     Installed applications
process      Process
tech-support Show tech support
version       Version of installed applications

```

- Policy manager—This is the policy manager CLI. The command prompt is host-name(policy-mgr)#. Use this CLI to perform the following tasks:

```

host-name(policy-mgr)#
commit-buffer Commit transaction buffer
connect      Connect to Another CLI
discard-buffer Discard transaction buffer
exit         Exit from command interpreter
scope        Changes the current mode
show         Show system information
terminal    Terminal
top          Go to the top mode
where         Show information about the current mode

host-name(policy-mgr)#
connect
policy-mgr   Policy-mgr
resource-mgr Resource-mgr
service-reg  Service-reg

```

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```
vm-mgr          Vm-mgr

host-name(policy-mgr)#
  monitoring  Monitor the system
  org        Organizations

host-name(policy-mgr)#
  show
    cli      CLI Information
    org      Organizations
    timezone Set timezone
    version  Version of installed applications
```

- Resource manager—This is the resource manager CLI. The command prompt is host-name(resource-mgr)#. Use this CLI to perform the following tasks:

```
host-name(resource-mgr)#
  commit-buffer Commit transaction buffer
  connect       Connect to Another CLI
  discard-buffer Discard transaction buffer
  exit          Exit from command interpreter
  scope         Changes the current mode
  show          Show system information
  terminal     Terminal
  top           Go to the top mode
  where         Show information about the current mode

host-name(resource-mgr)#
  connect
    policy-mgr  Policy-mgr
    resource-mgr Resource-mgr
    service-reg  Service-reg
    vm-mgr      Vm-mgr

host-name(resource-mgr)#
  scope
    monitoring Monitor the system

Tech-Docs(resource-mgr)#
  show
    cli      CLI Information
    version Version of installed applications
```

- Service registry—This is the service registry CLI. The command prompt is host-name(service-reg)#. Use this CLI to perform the following tasks:

```
Tech-Docs(service-reg)#
  acknowledge Acknowledge
  commit-buffer Commit transaction buffer
  connect       Connect to Another CLI
  discard-buffer Discard transaction buffer
  exit          Exit from command interpreter
  scope         Changes the current mode
  show          Show system information
  terminal     Terminal
  top           Go to the top mode
  where         Show information about the current mode

host-name(service-reg)#
  connect
    policy-mgr  Policy-mgr
    resource-mgr Resource-mgr
    service-reg  Service-reg
    vm-mgr      Vm-mgr

host-name(service-reg)#
  scope
    monitoring Monitor the system

host-name(service-reg)#
  show
```

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cli	CLI Information
clients	Show registered clients
controllers	Show registered controllers
fault	Fault
providers	Show registered providers
version	Version of installed applications

- Virtual machine manager—This is the virtual machine manager CLI. The command prompt is host-name(vm-mgr)#. Use this CLI to perform the following tasks:

```

host-name(vm-mgr)#
  commit-buffer  Commit transaction buffer
  connect        Connect to Another CLI
  discard-buffer Discard transaction buffer
  exit           Exit from command interpreter
  scope          Changes the current mode
  show           Show system information
  terminal       Terminal
  top            Go to the top mode
  where          Show information about the current mode

host-name(vm-mgr)# connect
  policy-mgr    Policy-mgr
  resource-mgr  Resource-mgr
  service-reg   Service-reg
  vm-mgr        Vm-mgr

host-name(vm-mgr)# scope
  monitoring    Monitor the system

host-name(vm-mgr)# show
  cli           CLI Information
  version       Version of installed applications

```

VNMC CLIs Basic Commands

The basic commands for the VNMC CLIs are as follows:

- commit-buffer**—Saves the configuration.
commit-buffer can be used with the optional keyword **verify-only**. When you execute **commit-buffer verify-only** the configuration is not saved, just verified.
- connect**—Connects to other CLIs.
- discard-buffer**—Deletes the configuration.
- enter**—Creates an object and places you in a mode.
- exit**—Exits modes, CLIs, and the default CLI.
- scope**—Places you in a mode.
- show**—Displays information.
- top**—Places you in management controller mode.
- where**—Shows you where you are at in the VNMC CLI.
- ?**—Displays the commands available in the mode.
- >**—Redirects show commands to a file.
- >>**—Redirect show commands to a file in append mode.

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- |—Pipes cshow command output to a filter.