

---

## Cluster Management

Use the Cluster Management screen to create a vManage NMS cluster. In a vManage NMS cluster, all the cluster members communicate and work cooperatively to manage all the vBond orchestrators, vEdge routers, and vSmart controllers in the overlay network. Each vManage server can manage up to about 2,000 vEdge routers in the overlay network.

It is strongly recommended that all members of a vManage NMS cluster be located in the same data center.

---

## Screen Elements

- Top bar—On the left are the menu icon, for expanding and collapsing the vManage menu, and the vManage product name. On the right are a number of icons and the user profile drop-down.
- Title bar—Includes the title of the screen, Cluster Management.
- Service Configuration bar—Includes tabs for Service Configuration and Service Reachability.
  - Service Configuration tab—Display the configured vManage NMSs and cluster services configured on each vManage NMS. When you first open the Cluster Management screen, the Service Configuration tab is selected.
    - Add vManage button—Add a new vManage NMS to a cluster.
    - Statistics Database Configuration button—Configure the vManage database to collect real-time statistics from the vEdge routers in the overlay network.
  - Service Reachability tab—Display the reachable cluster services reachable on the vManage NMSs in the cluster.
    - Current vManage—Display the IP address of the vManage NMS you are currently logged into.
- Status legend—Includes colored icons for Normal, Warning, Error, and Disabled.
- Table of vManage NMS cluster members—Click a green check mark in the table to display which cluster members are reporting the status. To re-arrange the columns, drag the column title to the desired position.



Menu

vManage NMS Clusters Table

Status Legend

CloudExpress

Tasks

Alarms

Help

User Profile

admin

Cisco vManage

ADMINISTRATION | CLUSTER MANAGEMENT

Service Configuration Service Reachability

Add vManage

Click hostname or status icon for more information

Hostname	IP Address	Status	Application Ser...	Statistics Datab...	Configuration D...	Messaging Serv...	Load Balancer	UUID
vm5001	172.172.1.2	Ready	✓	✓	✓	✓	✓	ee7e7ff-3adb...
vm5003	172.172.3.2	Ready	✓	✓	✓	✓	✓	f7320f32-8125...
vm5002	172.172.2.2	Ready	✓	✓	✓	✓	✓	58e52d99-a8d2...

Normal Warning Error Disabled

G000417

## Change the IP Address of the Current vManage NMS

It is recommended that you configure the IP address of the vManage server statically, in its configuration file. Configure this IP address on a non-tunnel interface in VPN 0. It is also recommended that you do not configure DHCP in VPN 512.

When you start a vManage NMS for the first time, the default IP address of the vManage server is shown as "localhost". Before you can add a new vManage NMS to a cluster, you must change "localhost" to an IP address:

1. In the Service Configuration tab, click the Add vManage button. The Edit vManage screen opens.
2. From the vManage IP Address drop-down list, select an IP address to assign to the vManage server.
3. Specify a username and password for the vManage server.
4. Click Update.

The vManage server automatically reboots and displays the Cluster Management screen.

## Add a vManage NMS

To add a new vManage NMS to the cluster:



1. In the Service Configuration tab, click the Add vManage button. The Add vManage screen opens.
2. Enter the IP address of the vManage NMS you are adding to the cluster.

Note: It is strongly recommended that the IP addresses of all members of the vManage cluster be in the same subnet.

3. Specify the username and password for the new vManage server.
4. Select the services to run on the vManage server. You can select from the services listed below.  
Note that the Application Server field is not editable. The vManage Application Server is the local vManage HTTP web server.
  - Statistics Database—Stores all real-time statistics from all Viptela devices in the network.
  - Configuration Database—Stores all the device and feature templates and configurations for all Viptela devices in the network.
  - Messaging Server—Distributes messages and shares state among all vManage NMS cluster members.
5. Click Add. The vManage NMS that you just added then reboots before joining the cluster.

In a cluster, it is recommended that you run at least three instances of each service.

Note: The members of a vManage cluster rely on timestamps to synchronize data and to track device uptime. For this time-dependent data to remain accurate, you cannot change the clock time on any one of the vManage servers of the cluster after you create the cluster.

---

## Configure the Statistics Database

To configure the statistics database, which stores all real-time statistics from the local vManage NMS:

1. In the Service Configuration tab, click the Statistics Database Configuration button. The Statistics Database Configuration screen opens. The top of the screen specifies the maximum space available for the database.
2. For each Statistics Type field, assign an the amount of storage to allocate, in gigabytes (GB). The total value of all fields cannot exceed the maximum available space.
3. Click Update.

vManage NMS updates the storage allocations you have assigned once a day, at midnight.

---

## View Statistics Database Space Usage

To view the amount of space available and utilized for the statistics database on the local vManage NMS, in the Service Configuration tab, click the Statistics Database Configuration button. The Statistics Database Configuration screen opens. The top of the screen shows the maximum space available for the database and the total amount of space currently being utilized. The table on this screen shows, for each statistics type, the disk space currently being utilized.



---

## View vManage Service Details

To view detailed information about the services running on a vManage NMS:

1. In the Service Configuration tab, click on the hostname of the vManage server. The IP Address screen opens, with the vManage Details tab selected. This screen displays the process IDs of all the vManage services that are enabled on the vManage NMS.
2. Click Cluster Management in the breadcrumb in the title bar to return to the Cluster Management screen.

---

## View Devices Connected to a vManage NMS

To view a list of devices connected to a vManage NMS:

1. In the Service Configuration tab, click on the hostname of the vManage server. The IP Address screen opens with the vManage Details tab selected.
2. Click the Connected Device tab to view a detailed list of all devices connected to the vManage NMS.

Alternatively:

1. In the Service Configuration tab, for a vManage NMS, click the More Actions icon to the right of its row.
2. Click Device Connected.

---

## Edit a vManage NMS

1. In the Service Configuration tab, for a vManage NMS, click the More Actions icon to the right of its row and click Edit. The Edit vManage screen opens.
2. In the vManage IP Address box, select the IP address to edit.
3. Enter the username and password, and edit the cluster services provided by that vManage NMS.
4. Click Update.

---

## Remove a vManage NMS from the Cluster

1. In the Service Configuration tab, for a vManage NMS, click the More Actions icon to the right of its row and click Remove. The Remove vManage dialog box opens.
2. Enter the username and password to confirm removal of the device from the network.
3. Click Remove.



The vManage NMS is removed from the cluster, the device is invalidated, and the certificates for that device are deleted. The remaining members in the cluster re-balance the NMS services.

---

## View Available Cluster Services

To view the services that are available and reachable on all members in the vManage NMS cluster, click the Service Reachability tab.

---

## Additional Information

[Create a vManage Cluster](#)

