Viewing Discovered Devices and their Properties

Grid Manager provides a Devices page under Data Management for a complete list of every device that discovery finds, and lists all unmanaged and managed devices. Here you can explore information about the discovered devices and drill down to specific information about every device. For information, see the next section.

Listed devices can be displayed in one of three states in the Devices page:

- Devices that appear with an empty value in the Managed column are devices that are discovered, but are not recognized by IPAM, are not part of an IPAM network, and hence cannot be changed to managed status in Grid Manager. These discovered devices cannot be changed to managed status, but you can perform actions such as activating and deactivating ports, executing DiscoverNow on the device, view their list of connected networks, and other actions. Avoid changing the state of ports or taking other actions on a discovered device, unless the action is verified by an administrator.
- Device shown in yellow table rows are unmanaged devices, but are recognized by IPAM and can be converted to managed status. Yellow rows appear with a value of No in the Managed column. You can convert devices in yellow table rows to managed objects under IPAM (host, fixed address, A record or PTR record).
- Devices shown in light grey table rows are managed devices, with a value of Yes in the Managed column.

Note
For information about managed and unmanaged devices, see Converting Unmanaged Devices to Managed Devices. You can also use the "Unmanaged devices and networks" filter in global search to locate all the unmanaged devices and networks discovered through discovery. For more information, see Using Global Search.

Also, you can view VRF-based devices and map them to network views from the Data Management Devices tab. See Viewing Discovered VRFs and Mapping Network Views.

Viewing the Complete List of Discovered Devices

The Data Management tab → Devices tab provides a complete view of all discovered devices discovered by Network Insight. The list includes routers, switches, firewalls and other security devices, wireless APs, end hosts and servers in end-host networks. Use NIOS standard filtering to narrow down the status table to the devices or values you want to examine.

You can see the following information in the devices table:

- **IP Address**: The detected management IP address (IPv4 or IPv6).
- **Name**: Detected name of the device. Each device name provides a link to the complete body of information associated with the device, arranged in five tabs: Interfaces, Networks, IP Addresses, Assets and Components. For more information, see the sections under Accessing Detailed Device Information.
- **Device Type**: The network device type: Router, Switch-Router, Firewall, NIOS (Infoblox appliance), vNIOS, SDN Controller, SDN Element, and others.
- **Model**: The model name as detected by the device during discovery.
- **Serial Number**: The serial number of the discovered device.
- **Vendor**: The equipment manufacturer (Cisco, Juniper, Fortinet, F5, and others).
- **Device Version**: The Operating System version for the network device.
- **Chassis S/N**: The chassis serial number of the discovered device.
- **Location**: The physical location of the network device as detected by the device during discovery.
- **Description**: Verbose description of the network device as collected from the device by discovery.
- **Discover Now**: Indicates when the device is undergoing a current discovery process. A "Pending" icon appears in this column to indicate the status.
- **Managed**: Indicates the status of the device in Grid Manager. A blank value in this field indicates the device has been discovered but is not recognized in IPAM; a No value indicates the device is recognized by IPAM but is not managed under Grid Manager; and a Yes value indicates that the device is fully managed by Grid Manager from use of the Convert command and can support related features such as port reservations and IPAM/DHCP object assignments.
- **Active Users**: The number of active users on the Active Directory domain for the selected IP address.

For each listed device, the Action icon provides the following options depending on the device type and its status:

- **Show IP AM Address**: Shows the management IP address for the device that has a network in IPAM—the main IPAM tab appears, showing details for the IP address. This option is greyed out for devices that have a management IP that is not part of an IPAM network.
- **Edit**: Displays the Device Properties Editor window. Alternatively, you can select the device and click the Edit icon above the devices table. For more information, see Editing Device Properties.
- **Interfaces**: A direct link to the Interfaces page for the chosen device. Unmanaged devices may have managed interfaces that appear in this page, and managed devices may have unmanaged interfaces that appear here. For more information, see Viewing Interface Information for Discovered Devices.
- **Discover Now**: Immediately performs discovery on the selected device.
- **Convert**: For devices in unmanaged status (shown in yellow), allows conversion of the device to a managed object in Grid Manager: a host, fixed address, A record or PTR record. For more information, see Converting Unmanaged Devices to Managed Devices.
- **IPAM Networks**: A drop-down list of all IPv4/IPv6 IPAM networks currently provisioned on the device. Each network provides a link to the IP Map page for the selected network.
- **Device Details**: A basic list of information about the chosen device, including the IP address by which the device is discovered, operational status, IPAM Type (whether the device is managed or unmanaged), the Device Type and the number of Interfaces.
- **Click Device Support** to verify data collection activities in the following tabs:
• **Data Collection:** You can view the timestamp at which the most recent collection from various data sources was completed. The sources from which device support information is collected are listed under the Data Source column, and it includes the device’s routing table (ipRouteTable), environment monitoring (DeviceEnvMon), and numerous other data sources as applicable to the specific device type. It displays the following information for each discovered device:
  - **Data Source:** The sources from which the device support information was collected.
  - **End Time:** The most recent timestamp of the data collected by the discovery member.
  - **Device Support:** Lists various types of information supported for collection on the current device. You can view the following details for each discovered device:
    - **Function:** Data function that can be collected by Network Insight. The value can be Device Vendor, Device Model, Device Version, VLANs, Forwarding, VRFs, Inventory, and SecurityControl.
    - **Supported:** Indicates whether this data function is supported for the selected device. The value can be Yes or No. If it is No, Network Insight will not attempt to gather the data. For instance, for a Cisco router, Network Insight does not attempt to gather VLAN information, so a No value will be displayed in the **Supported** column.
    - **Available:** Reflects whether the data has actually been collected. The value can be Yes or No. A value of Yes for Supported and No for Available indicates a discovery misconfiguration or could possibly require an adjustment to the Device Support Bundle (DSB) for that particular device model.
    - **Value:** Displays the value collected for the Device Vendor, Device Model, and Device Version data functions. Displays Last Collected time for the VLANs, Forwarding, VRFs, Inventory, and Security Control data functions.
  - **Show Active Users:** Displays the Active Users dialog box. You can view all the active users on the Active Directory domain for the selected device. For more information, see “Viewing Active Network Users.”

Click **Discovery Status** in the Toolbar to view the same list of network devices showing the discovery data set. You can sort the table by Name or IP address. Use Grid Manager-standard filtering to display device names, IP addresses or other values in which you are interested.

**Editing Device Properties**

In the Device Properties Editor, you can change the management IP address and settings for interfaces of the selected device, apply extensible attributes, or apply administrative permissions for Grid Manager admin access to the device.

To edit properties of a device:

1. In the **Data Management Devices** tab, click the Action icon for the required device or select the device and click the Edit icon above the table.
2. In the **General** tab, edit the following general device properties:
   - **Name:** The discovered device name, such as SPINE, LEAF, switch1.building2.com, or office1router.
   - **Management IP address:** This IP address is used for the device to be discovered by the discovery member. If the device has more than one IP address that can be used as the management IP, you can manually select the required address from the list of those discovered on the device.
   - **Device Type:** Router, Switch-Router, Firewall, NIOS (Infoblox appliance), vNIOS, SDN Controller, SDN Element, and others.
   - **Description:** Description of the network device as collected from the device by discovery.
   - **Vendor:** The vendor of network device. For example, Cisco, Juniper, Aruba, Dell, Infoblox, or HP.
   - **Device Version:** The OS version of the device.
   - **Location:** Displays the physical location of the device as detected during discovery.
   - **Discover Now:** Displays the status of the Discovery Now operation of the device.
   - **Object Type:** The object type.
3. In the **Interfaces** tab, edit the following basic port settings:
   - **Admin Status**
   - **Description**
   - **Data VLAN**
   - **Voice VLAN**
4. In the **Extensible Attributes** tab, add any attributes that are necessary for the device.
5. In the **Permissions** tab, edit administrative permissions for the device:
   a. Click the Add icon. Grid Manager displays the Admin Group/Role Selector dialog box.
   b. In the Admin Group/Role Selector dialog box, select the admin group you want to add, and then click the Select icon.
   c. Select the permission for the group.
   d. Select an object to which the permission applies from the drop-down list in the Resources column.

**Note**

Changing of management IP address may take some time.

- **Managed:** Indicates whether this device is managed or unmanaged in NIOS.
- **Device Type:** Indicates the device type: Router, Switch-Router, Firewall, NIOS (Infoblox appliance), vNIOS, SDN Controller, SDN Element, and others.

- **Description:** Description of the network device as collected from the device by discovery.
- **Model:** The device model.
- **Vendor:** The vendor of network device. For example, Cisco, Juniper, Aruba, Dell, Infoblox, or HP.
- **Device Version:** The OS version of the device.
- **Location:** Displays the physical location of the device as detected during discovery.
- **Discover Now:** Displays the status of the Discovery Now operation of the device.
- **Object Type:** The object type.

3. In the **Interfaces** tab, edit the following basic port settings:
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   a. Click the Add icon. Grid Manager displays the Admin Group/Role Selector dialog box.
   b. In the Admin Group/Role Selector dialog box, select the admin group you want to add, and then click the Select icon.
   c. Select the permission for the group.
   d. Select an object to which the permission applies from the drop-down list in the Resources column.

**Note**

Administrators can access discovered and managed devices in Grid Manager. For tasks such as provisioning networks, adding administrative permissions is advised to ensure that unauthorized changes to device configurations cannot take place. For example, you can use accounts with the Port Control permission to control and manage network provisioning tasks.

6. Click **Verify** where applicable, for example, in the interfaces settings.
7. Click **Save & Close.**
Viewing Discovered VRFs and Mapping Network Views

To view VRF instances (or VRFs) and map corresponding network views, do the following:

1. From the Data Management tab, select the Devices tab, and then click VRF Mapping from the Toolbar.
2. The VRF Mapping dialog appears and displays the following:
   - **VRF Name**: The name of the VRF on the hosting device, which typically contains the interface name and its VRF route distinguisher.
   - **Device Name**: The discovered name of the device that is hosting the VRF.
   - **Device IP Address**: The IP address of the managed VRF hosting device.
   - **Network View**: The network view that is associated with the VRF. You can click this field and select a different network view from the drop-down list.

You can do the following in this tab:

- To assign the same network view to multiple VRFs, select the check boxes of the VRFs, and then click the Edit icon. The VRF Mapping dialog displays the Edit VRF Network View panel. From the Network View drop-down list, select the network view you want to assign to all the selected VRFs, and then click Save. If there is only one network view in the Grid, which is the default view, the Network View column is hidden by default.
- You can use filters to narrow down the list. You can filter the list based on the VRF name, Device name, Device IP address, and network view. For more information, see Using Filters.
- You can sort the data in ascending or descending order by column.

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<th>Note</th>
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<td>The appliance displays a warning message when there are discovered VRFs that are not mapped to network views. To ensure that discovered VRFs are mapped to network views, you can configure automatic VRF mapping, as described in Configuring Automatic VRF Mapping.</td>
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