Monitoring VMware NSX-T

VMware: NSX-T PowerPack version 101

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Chapter 1

Introduction to the VMware NSX-T PowerPack

Overview

This manual describes how to monitor VMware NSX-T in SL1 using the *VMware: NSX-T* PowerPack.

The following sections provide an overview of VMware NSX-T and the *VMware: NSX-T* PowerPack:

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What Does the VMware: NSX-T PowerPack Monitor?

To monitor VMware NSX-T applications using SL1, you must install the *VMware: NSX-T* PowerPack. This PowerPack enables you to discover, model, and collect data about VMware NSX-T applications.

The *VMware: NSX-T* PowerPack includes:

- A sample credential that you can use as a template to connect to the VMware NSX-T devices you want to monitor
- Dynamic Applications and Run Book Actions to discover, model, and monitor performance metrics and/or collect configuration data for VMware NSX-T devices

- Device Classes for each of the VMware NSX-T devices SL1 monitors
- Event Policies and corresponding alerts that are triggered when VMware NSX-T devices meet certain status criteria
- A Device Template that enables you to easily align multiple Dynamic Applications to VMware NSX-T devices

Installing the VMware: NSX-T PowerPack

Before completing the steps in this manual, you must import and install the minimum SL1 version 11.3.0 then install the latest version of the *VMware: NSX-T* PowerPack.

TIP: By default, installing a new version of a PowerPack overwrites all content from a previous version of that PowerPack that has already been installed on the target system. You can use the ***Enable Selective PowerPack Field Protection*** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. (For more information, see the ***System Administration*** manual.)

IMPORTANT: The minimum required MySQL version is 5.6.0.

To download and install the PowerPack:

1. Search for and download the PowerPack from the **PowerPacks** page (Product Downloads > PowerPacks & SyncPacks) at the ScienceLogic Support Site.
2. In SL1, go to the **PowerPacks** page (System > Manage > PowerPacks).
3. Click the **[Actions]** button and choose *Import PowerPack*. The **Import PowerPack** dialog box appears.
4. Click **[Browse]** and navigate to the PowerPack file from step 1.
5. Select the PowerPack file and click **[Import]**. The **PowerPack Installer** modal displays a list of the PowerPack contents.
6. Click **[Install]**. The PowerPack is added to the **PowerPacks** page.

NOTE: If you exit the **PowerPack Installer** modal without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPacks** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

Requirements and Limitations

The following limitations and requirements apply to specific functionality in the *VMware: NSX-T* PowerPack:

- A new execution environment is available in this version of the PowerPack. However, the old environment will not be deleted. Users should remove the old executions environment after upgrading from VMware: NSX-T v100. To do this, go to **System > Customize > ScienceLogic Libraries > Actions > Execution Environments** and filter on '**VMware: NSX-T**'. There will be two environments shown. Delete the environment that has an **Env GUID** of "**48C1B924812A1C56783FDD0864F7D229**".

Chapter 2

Configuring VMware NSX-T Monitoring

Overview

The following sections describe how to configure and discover VMware NSX-T devices for monitoring by SL1 using the *VMware: NSX-T* PowerPack:

Prerequisites for Monitoring VMware NSX-T

To configure the SL1 system to monitor VMware NSX-T devices using the *VMware: NSX-T* PowerPack, you must first have the following information about the VMware NSX-T devices that you want to monitor:

- User must have access to the REST API with read permissions, as the PowerPack uses the REST API to monitor VMware NSX-T.

Creating a Credential for VMware NSX-T

To use the Dynamic Applications in the *VMware: NSX-T*PowerPack, you must configure a Basic/Snippet credential for the VMware web service.

NOTE: If you are using an SL1 system prior to version 11.1.0, the new user interface does not include the ***Duplicate*** option for sample credential(s). ScienceLogic recommends that you use *the classic user interface and the Save As button* to create new credentials from sample credentials. This will prevent you from overwriting the sample credential(s).

To define a credential in the Guided Discovery:

1. Go to the **Credentials** page (Manage > Credentials).
2. Locate the "VMware: NSX-T Example" sample credential. Click its **[Actions]** icon (···) and select ***Duplicate***. A copy of the credential, called **VMware: NSX-T Example copy** appears.
3. Click the **[Actions]** icon (···) for the **VMware: NSX-T Example copy** credential and select ***Edit***. The **Edit Credential** page appears:

4. Supply values in the following fields:

   - ***Name***. Name of the credential. Can be any combination of alphanumeric characters, up to 64 characters.
   - ***All Organizations***. Toggle on (blue) to align the credential to all organizations, or toggle off (gray) and then select one or more specific organizations from the ***What organization manages this service?*** drop-down field to align the credential with those specific organizations.
   - ***Timeout (ms)***. Time, in milliseconds, after which SL1 will stop trying to communicate with the device from which you want to retrieve data.
   - ***Hostname/IP***. In most cases, you can use the default setting.
   - ***Port***. Use the default setting.
   - ***Username***. Enter the username SL1 will use to connect to the VMware NSX-T service.

- ***Password***. Enter the password for the NSX-T account that SL1 will use to connect to the VMware NSX-T service.

4. Click **[Save & Close]**.

> **NOTE**: If you would like to test your credential using the Credential Tester panel, click **[Save & Test]**. For detailed instructions on using the Credential Tester, see the *Testing the VMware NSX-T Credential* section.

Configuring a Basic/Snippet Credential in the SL1 Classic User Interface

To modify the VMware NSX-T credential template in the SL1 classic user interface, perform the following steps in the Classic User Interface:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Click the wrench icon () for the "VMware: NSX-T Example" credential. The **Credential Editor** modal page appears:
3. Supply values in the following fields:
    - ***Credential Name***. Enter a new name for the credential.
    - ***Hostname/IP***. In most cases, you can use the default setting.
    - ***Username***. Enter the username SL1 will use to connect to the VMware NSX-T service.
    - ***Password***. Enter the password for the VMware NSX-T account that SL1 will use to connect to the VMware NSX-T service.
4. Click the **[Save As]** button to save your changes as a new credential.

> CAUTION: Do not click the **[Save]** button, as it will save over the example credential, which you may need for future use.

Configuring a VMware NSX-T Device Template

A ***device template*** allows you to save a device configuration and apply it to multiple devices. The *VMware: NSX-T* PowerPack includes the "VMware: NSX-T Template Example." If you configure and apply this device template when you discover your VMware NSX-T devices, SL1 aligns the appropriate Dynamic Applications to the discovered VMware NSX-T device.

To configure the VMware device template:

1. Go to the **Configuration Templates** page (Devices > Templates or Registry > Devices > Templates in the SL1 classic user interface).

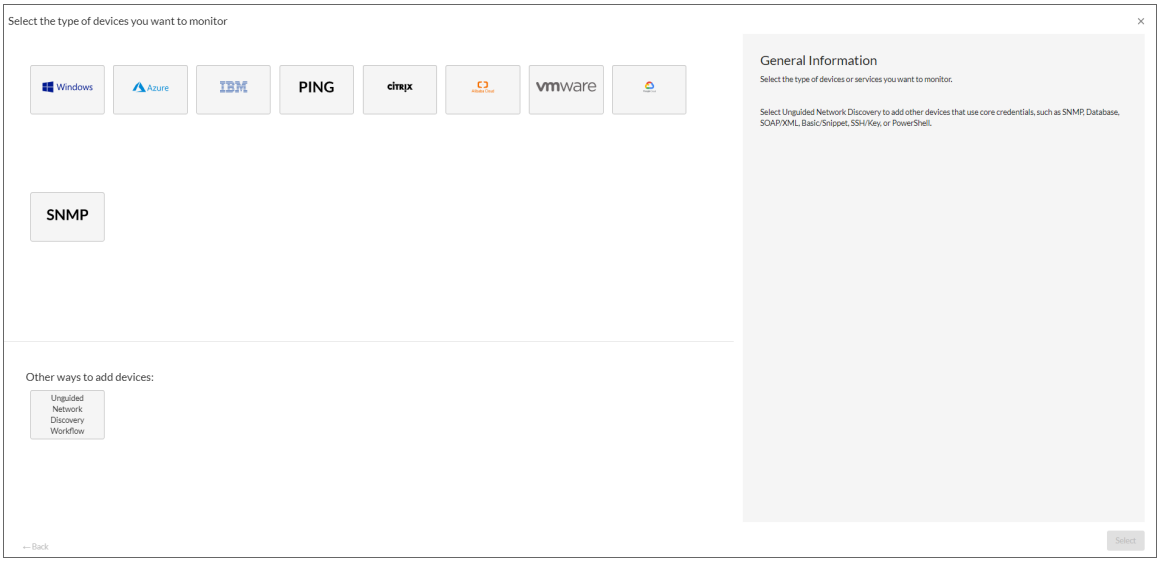
2. Locate the "VMware: NSX-T Template Example" and click its wrench icon ( ). The **Device Template Editor** page appears.
3. Click the **[Dyn Apps]** tab. The **Editing Dynamic Application Subtemplates** page appears.
4. Complete the following fields:
    - **Template Name**. Type a new name for the device template.
    - **Credentials**. Select the Basic/Snippet credential that you created for VMware NSX-T.
5. Click the next Dynamic Application listed in the **Subtemplate Selection** section on the left side of the page and then select the VMware Basic/Snippet credential in the ***Credentials*** field.
6. Repeat step 5 until the you have selected the VMware NSX-T Basic/Snippet credential in the ***Credentials*** field for all of the Dynamic Applications listed in the **Subtemplate Selection** section.
7. Click **[Save As]**.

> CAUTION: Do not click the **[Save]** button, as it will save over the "VMware vSphere Template", which you may need for future use.

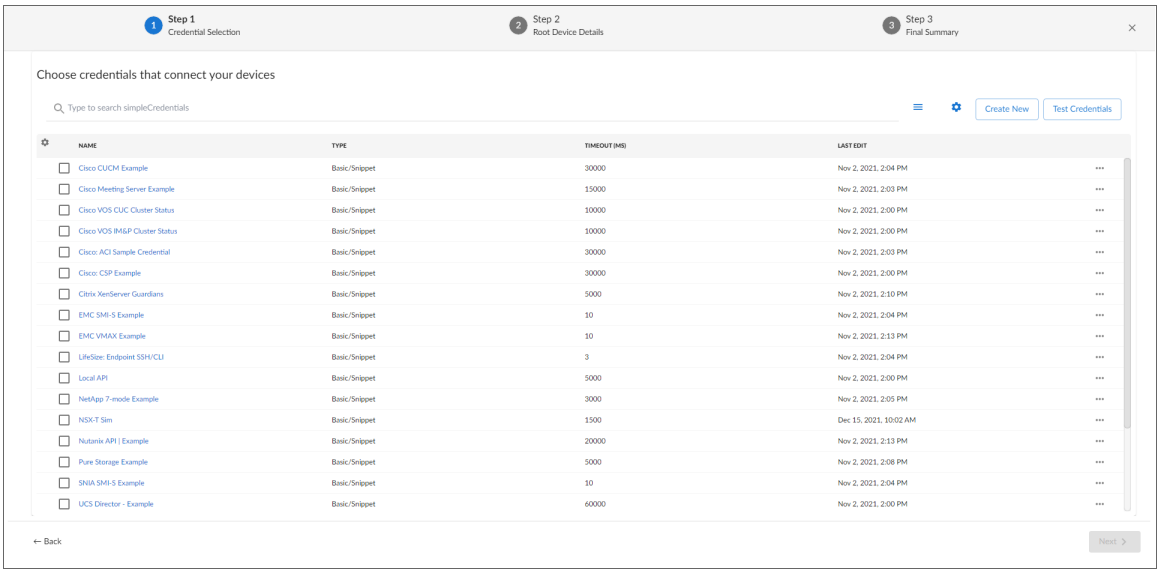
Discovering VMware NSX-T Component Devices

To create and run a discovery session that will discover a vCenter server, perform the following steps:

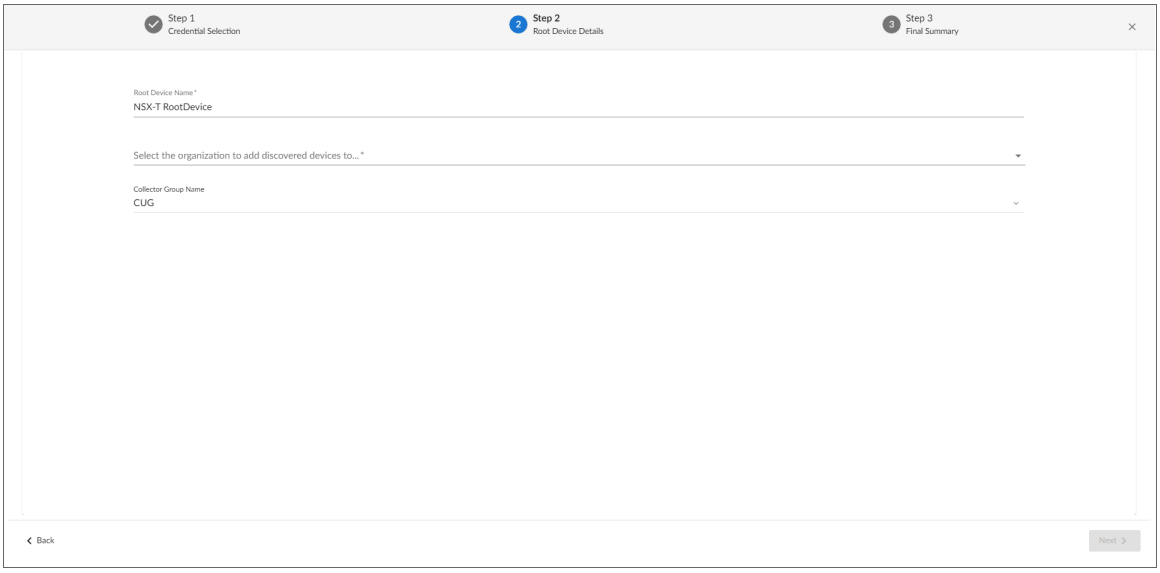
1. On the **Devices** page ( ) or the **Discovery Sessions** page (Devices > Discovery Sessions), click the **[Add Devices]** button. The **Select** page appears:



2. Click the **[VMware]** button.
3. Select the ***VMWare NSX-T*** radio button. Additional information about the requirements for discovery appears in the **General Information** pane to the right.
3. Click **[Select]**. The **Credential Selection** page appears:



4. On the **Credentials** page, locate and select the ***Basic/Snippet credential*** you created.
5. Click **[Next]**. The **Root Device Details** page appears:



6. Complete the following fields:

    - ***Root Device Name***. Type a name for the root device.

- ***Which collector will monitor these devices?***. Select an existing collector to monitor the discovered devices. Required.
- ***Collector Group Name***. Type a name for your collector group. Optional.
- ***Run after save***. Select this option to run this discovery session as soon as you click **[Save and Close]**.

7. Click **[Next]**. The **Final Summary** page appears and the discovery session runs.
8. When the discovery session is complete, click **[Close]**. The VMware NSX-T devices will be found on the **Devices** page.

Discovering VMware: NSX-T Component Devices in the SL1 Classic User Interface

To create and run a discovery session that will discover a vCenter server, perform the following steps:

1. Go to the **Discovery Control Panel** page (System > Manage > Classic Discovery).
2. Click the **[Create]** button to create a new discovery session. The **Discovery Session Editor** modal page appears.
3. Enter values in the following fields:

   - ***IP Address Discovery List***. Type the IP address for the VMware NSX-T service.
   - ***Other Credentials***. Select the *Basic/Snippet credential* that you created.
   - ***Discover Non-SNMP***. Select this checkbox.
   - ***Model Devices***. Select this checkbox.
   - ***Apply Device Template***. Select the *device template* that you created for VMware NSX-T.

4. Optionally, you can enter values in the other fields on this page. For more information about the other fields on this page, see the ***Discovery & Credentials*** manual.
5. Click the **[Save]** button and then close the **Discovery Session Editor** modal page.
6. The discovery session you created will appear at the top of the **Discovery Control Panel** page. Click its lightning-bolt icon () to run the discovery session.
7. The **Discovery Session** window appears. When the VMware NSX-T service is discovered, click its device icon () to view the **Device Properties** page for the VMware NSX-T service.

Verifying Discovery and Dynamic Application Alignment

To verify that SL1 has automatically aligned the correct Dynamic Applications during discovery:

1. After the discovery session has completed, go to the **Devices** page—or the **Device Manager** (Registry > Devices > Device Manager) page in the SL1 classic user interface—and find the device(s) you discovered. When you have located the device, click on its name or click on its edit icon () if you are in the SL1 classic user interface.

2. Click the **[Collections]** tab.
3. All applicable Dynamic Applications for the VMware NSX-T devices are automatically aligned during discovery.

> **NOTE:** It can take several minutes after the discovery session has completed for Dynamic Applications to appear in the **Dynamic Application Collections** page.

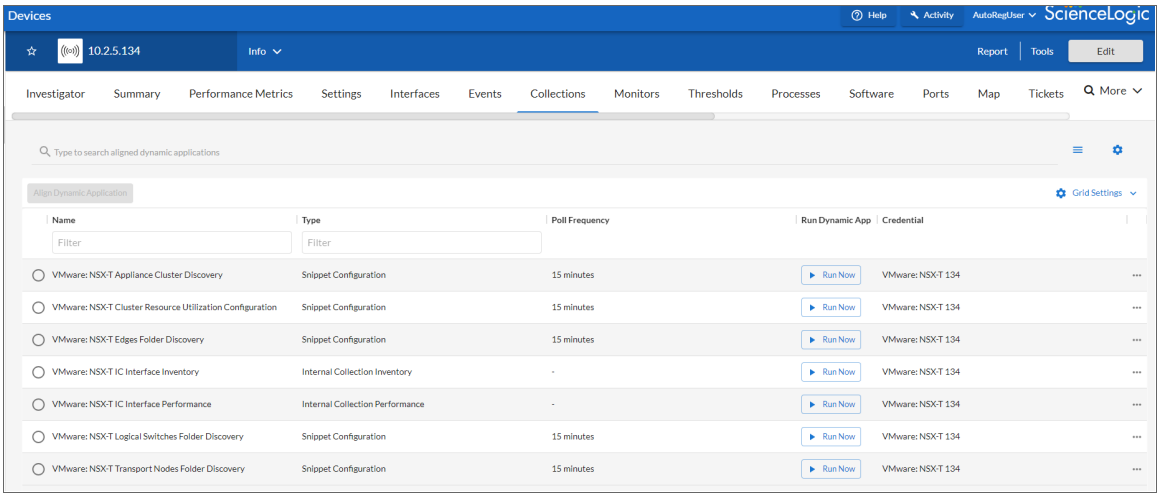
To verify alignment of the VMware NSX-T Dynamic Applications:

1. After discovery has completed, go to the **Discovery Logs** page (Devices > Discovery Sessions > click the Actions button ··· for that session > click Show Logs) and click on the IP address of the device. If you are in the SL1 classic user interface, click the device icon for the VMware NSX-T device ().
2. From the **Device Investigator** page for the VMware NSX-T device, or the **Device Properties** page if you are in the SL1 classic user interface, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.

> **NOTE:** It can take several minutes after the discovery session has completed for Dynamic Applications to appear in the **Dynamic Application Collections** page.

You should see the following Dynamic Application aligned to the root device:

- VMware: NSX-T Appliance Cluster Discovery
- VMware: NSX-T Cluster Resource Utilization Configuration
- VMware: NSX-T Edges Folder Discovery
- VMware: NSX-T Logical Switches Folder Discovery
- VMware: NSX-T Transport Nodes Folder Discovery
- VMware: NSX-T IC Interface Inventory
- VMware: NSX-T IC Interface Performance



The appropriate Dynamic Applications will align to the child devices based on their device class:

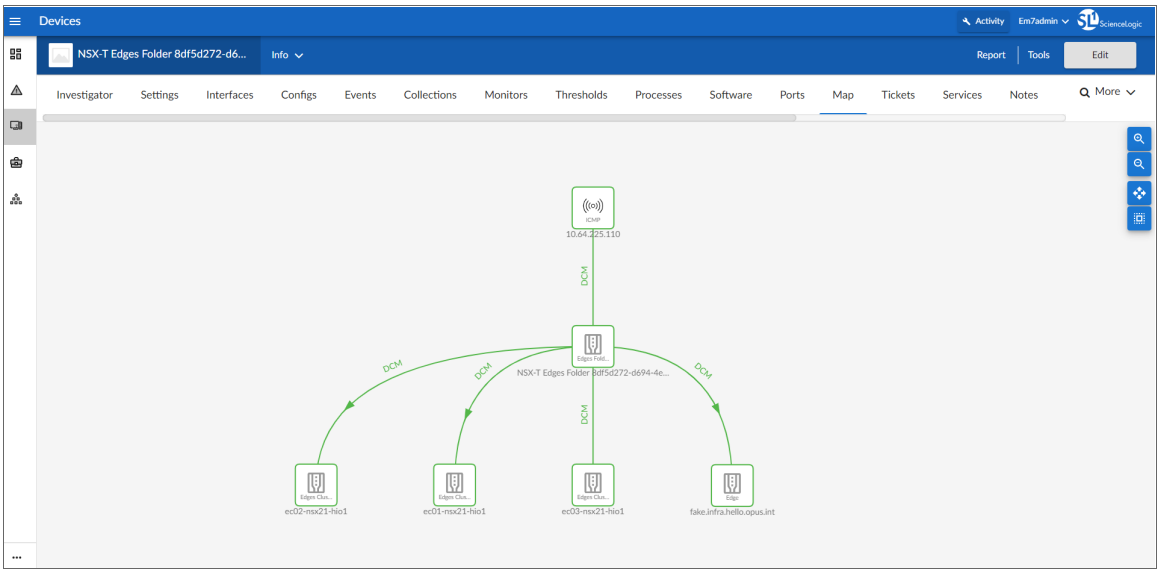
Device Class	Dynamic Applications
Appliance Cluster	VMware: NSX-T Appliance Cluster Configuration VMware: NSX-T Appliance Discovery
Appliance	VMware: NSX-T Appliance Interface Performance VMware: NSX-T Appliance Configuration VMware: NSX-T Appliance Interface Configuration
Edges Folder	VMware: NSX-T Edge Cluster Discovery VMware: NSX-T Edge Node (Non-Clustered) Discovery
Edges Cluster	VMware: NSX-T Edge Cluster Configuration VMware: NSX-T Edge Node (Clustered) Discovery VMware: NSX-T Tier 0 Gateway Discovery

Device Class	Dynamic Applications
Edge	VMware: NSX-T Transport Node File System Performance VMware: NSX-T Edge Node (Clustered) Configuration VMware: NSX-T Transport Node Interface Performance VMware: NSX-T Transport Node Performance VMware: NSX-T Transport Node BFD Tunnel Config VMware: NSX-T Transport Node Configuration VMware: NSX-T Transport Node Interface Configuration
Logical Switches Folder	VMware: NSX-T Logical Switch Discovery VMware: NSX-T Logical Switches Configuration
Logical Switch	VMware: NSX-T Logical Switch Performance
Transport Nodes Folder	VMware: NSX-T Load Balancer Discovery VMware: NSX-T Transport Node Discovery
Load Balancer	VMware: NSX-T Load Balancer Performance VMware: NSX-T Load Balancer Configuration
Tier 0	VMware: NSX-T BGP Neighbors Performance VMware: NSX-T Tier 0 Gateway Interface Performance VMware: NSX-T BGP Neighbors Configuration VMware: NSX-T Balancer Discovery VMware: NSX-T Tier 0 Gateway Configuration VMware: NSX-T Tier 0 Gateway Interface Configuration VMware: NSX-T Tier 1 Gateway Discovery
Tier 1 Gateway	VMware: NSX-T Load Balancer Discovery VMware: NSX-T Tier 1 Gateway Configuration
Transport Node	VMware: NSX-T Transport Node File System Performance VMware: NSX-T Transport Node Interface Performance VMware: NSX-T Transport Node Performance VMware: NSX-T Transport Node BFD Tunnel Config VMware: NSX-T Transport Node Configuration VMware: NSX-T Transport Node Interface Configuration

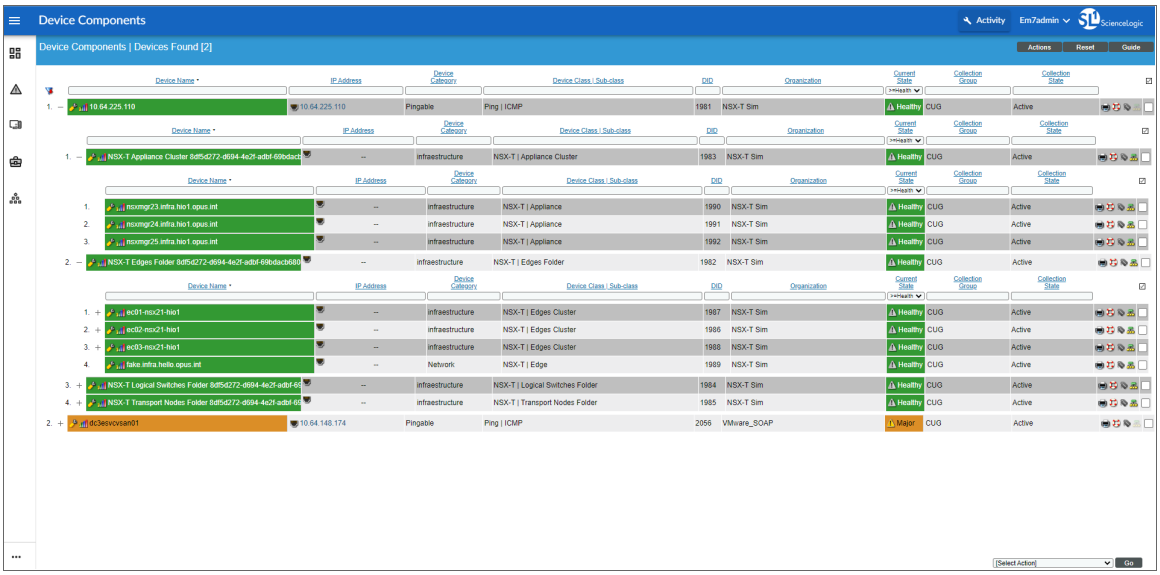
Viewing VMware NSX-T Component Devices

In addition to the **Devices** page, you can view your VMware NSX-T devices in the following places in the user interface:

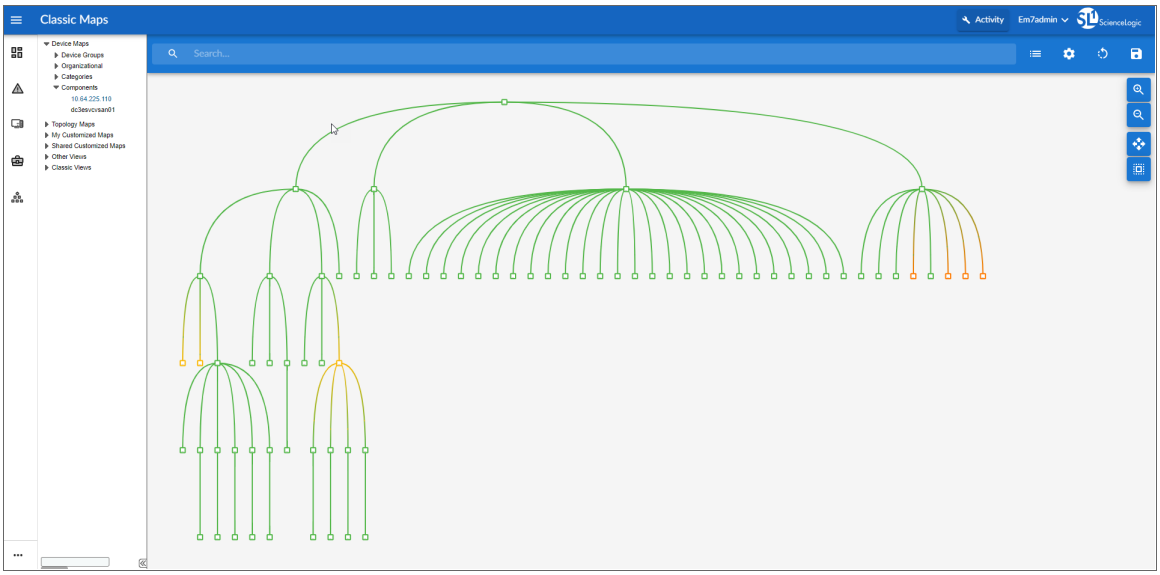
- The **Device Investigator** Map page (click **Map** in the **Device Investigator** page) displays a map of a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the listed devices reloads the page to make the selected device the primary device.



- The **Device Components** page (Devices > Device Components) displays a list of all root devices and component devices discovered by SL1. The **Device Components** page displays all root devices and component devices in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with a VMware NSX-T device, find the device and click its plus icon (+).



- The **Component Map** page (Classic Maps > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. SL1 automatically updates the **Component Map** as new component devices are discovered. The platform also updates each map with the latest status and event information. To view the map for a VMware NSX-T device, go to the **Component Map** page and select the map from the list in the left NavBar. To learn more about the **Component Map** page, see the ***Maps*** manual.



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