



NetBrain[®] Integrated Edition 8.0

Quick Setup Guide (ESXi)

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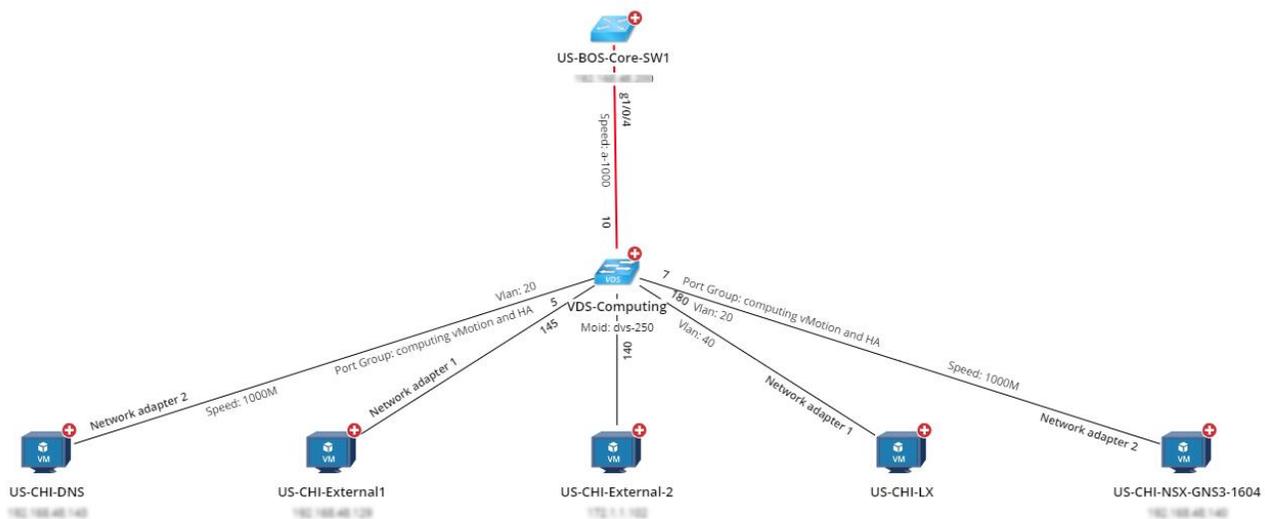
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1. Setting Up VMware Virtual Networks

The NetBrain system provides end-to-end visibility for VMware vCenter network resources as well as their physical and virtual relationships. With NetBrain, you can quickly understand a vCenter network in the following aspects:

- What you have in your vCenter network, such as ESXi hosts, VM hosts, virtual switches.
- The detail information about a vCenter network node, such as properties.
- The network design between vCenter network nodes, such as Layer 3 connection of VM hosts and their gateway devices, and the (parent/child) relationship between an ESXi host and vSwitch/VMs under the host.

Example: A Visualized Layer 2 Topology of a VDS



1.1. Discovering vCenter Data in NetBrain Domain

Prerequisites: A user account with the minimum **read-only** role is required to enable NetBrain to discover a vCenter network.

Note: Ensure to check the option **'Propagate to children'** when you create the Read-only account.

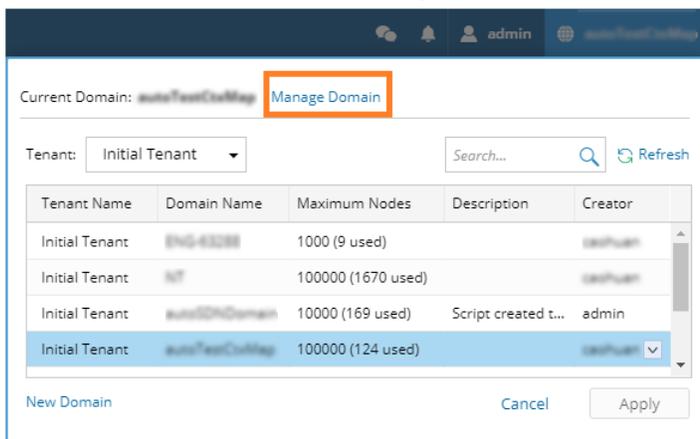
User/Group	Role	Defined In
VSPHERE.LOCAL\Administrator	Administrator	192.168.31.242
VSPHERE.LOCAL\Administrators	Administrator	Global Permission
VSPHERE.LOCAL\AutoUpdate	AutoUpdateUser	Global Permission
VSPHERE.LOCAL\customer.experience	Read-only	This object and its children
VSPHERE.LOCAL\NetBrainIT	Read-only	This object and its children
VSPHERE.LOCAL\vpzd-extension-fa3b188f-ce6c-41e6-907b-ddf57dfbac43	Administrator	Global Permission
VSPHERE.LOCAL\vpzd-fa3b188f-ce6c-41e6-907b-ddf57dfbac43	Administrator	Global Permission
VSPHERE.LOCAL\vsphere-webclient-fa3b188f-ce6c-41e6-907b-ddf57dfbac43	vSphere Client Solution User	Global Permission

To understand a VMware vCenter network, you need to first discover the network data model in a NetBrain domain.

1. Add a vCenter Controller

NetBrain retrieves VMware vCenter data through the vCenter Controller by using APIs. Follow the steps below to add a vCenter Controller and specify the address and user credentials to access the controller in the system.

- 1) Click the domain name from the quick access toolbar and select **Manage Domain**.



- 2) In the Domain Management page, select **Operations > Discover Settings > API Server Manager** from the quick access toolbar.

- 3) Click **Add** on the **API Server Manager** tab.

The screenshot shows a dialog box titled "Edit External API Server". It contains the following fields and controls:

- Server Name: Vcenter1
- Description: (empty)
- API Source Type: VMware vCenter
- Endpoints: https:// 92.198.48.105
- Username: administrator@esxi
- Password: (masked with dots)
- Front Server/Front Server Group: FS329110.10.32.91
- Advanced: (dropdown arrow)
- Managed Devices: 0
- Buttons: Test, Cancel, OK

- 4) Enter a unique name in the **Server Name** field.
- 5) Select **VMware vCenter** from the **API Source Type** drop-down menu.
- 6) In the **Endpoints** field, enter the URL of the vCenter Controller.
- 7) Enter the username and password to access the vCenter Controller. If more parameters are required when you access the vCenter Controller, you can click **Advanced** to configure the keys (parameter names) and values.
- 8) Select a Front Server or Front Server Group.

Note: Make sure that the port 7068 of the server where your NetBrain Front Server is installed is not occupied by other applications because this port is used by service components of a Front Server to communicate with each other.

- 9) Click **OK**.

2. Discover Your VMware Virtual Network

- 1) In the Domain Management page, select **Operations > Discover** from the quick access toolbar.
- 2) Click **Select API Servers** and select **Vcenter1** that you have configured.

3) Click **Start Discovery**.

Domain Management

Start Page Discover

Discover View Historical Result: [Select](#)

Discover Devices via **SNMP/CLI** [Network Settings](#)

Method: Discover via Seed Routers Scan IP Range Access Mode: **SNMP and SSH/Telnet** Discovery Depth: **30**

IP/Hostname: [Import IP List](#)

Discover Devices via **API** [+ Select API Servers](#) [Unselect All](#)

API Servers:

[Advanced Options](#) [Start Discovery](#)

✓ Discovery is completed. **For troubleshooting, please Contact NetBrain.**

Discovered 1 IP addresses, found 39 devices within 00:00:26. Finished additional operations within 00:00:48.

[Discovery Report](#) [Execution Log](#) [Plugin Log](#)

[Discovery Summary](#) [License Details](#)

VM Host	vSphere Stand...	vSphere Distrib...
33	3	3

Note: The SDN discovery only retrieves basic data of your network and builds L3 topology. After the discovery, you need to execute a benchmark task to retrieve all data and build all components, including visual spaces and data views. See [Auto-Updating vCenter Data in NetBrain through Benchmark](#) for details.

1.2. Auto-Updating vCenter Data in NetBrain through Benchmark

The discovery only retrieves basic data of your vCenter network and builds L3 topology. After the discovery, you need to execute a benchmark task to retrieve all data and build all components, including visual spaces and data views.

Example: Benchmark VMware vCenter in a NetBrain Domain.

1. On the Start Page, click **Schedule Task**.
2. On the **Schedule Discovery/Benchmark** tab, click **Add Benchmark Task**.
3. On the **Frequency** tab, define the task frequency.

4. On the **Device Scope** tab, check the **Select external API servers to retrieve data of SDN nodes** check box, and select a vCenter server.

Frequency > **Device Scope** > Retrieve Live Data > CLI Commands > Additional Operations after Benchmark > Plugins > Summary

Select Device

Select external API servers to retrieve data of SDN nodes

API Source Type	Server Name	Endpoint	Description
<input checked="" type="checkbox"/> VMware vCenter	Vcenter1	https://192.168.48.100	
<input type="checkbox"/> VMware NSX-V	NSX	https://192.168.48.100	

5. On the **Retrieve Live Data** tab, select the **VMware vCenter** checkbox.

Frequency > Device Scope > **Retrieve Live Data**

Stop retrieving after Hours Minutes

- VMware NSX-V
 - Basic Data
- Cisco ACI
 - Basic Data
- VMware vCenter
 - Basic Data
- Versa SD-WAN
 - Basic Data
- VMware VeloCloud SD-WAN
 - Basic Data
- AVI
 - Basic Data
- ACI MSO
 - Basic Data
- Viptela SD-WAN
 - Basic Data
- Ruckus SmartZone
 - Basic Data

6. On the **Additional Operation After Benchmark** tab, select all the check boxes in the **Build Topology** and **Rebuild Visual Space** areas.

Frequency > Device Scope > Retrieve Live Data > CLI Commands > **Additional Operations after Benchmark** > Plugins > Summary

Build Topology

Enable	Operation Name
<input checked="" type="checkbox"/>	IPv4 L3 Topology
<input checked="" type="checkbox"/>	IPv6 L3 Topology
<input checked="" type="checkbox"/>	L2 Topology
<input checked="" type="checkbox"/>	L3 VPN Tunnel
<input checked="" type="checkbox"/>	Logical Topology

System Operations

Enable	Operation Name
<input checked="" type="checkbox"/>	Recalculate Dynamic Device Groups
<input checked="" type="checkbox"/>	Recalculate Site
<input checked="" type="checkbox"/>	Recalculate MPLS Virtual Route Tables
<input checked="" type="checkbox"/>	Build Default Device Data View

Rebuild Visual Space

Enable	Operation Name
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\ACI Application
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\ACI Overlay
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\ESXi Host to Network
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\ESXi Physical and Virtual Relationship

7. Click **Submit**.