



# NetBrain® Integrated Edition 8.0

## Quick Setup Guide (NSX)

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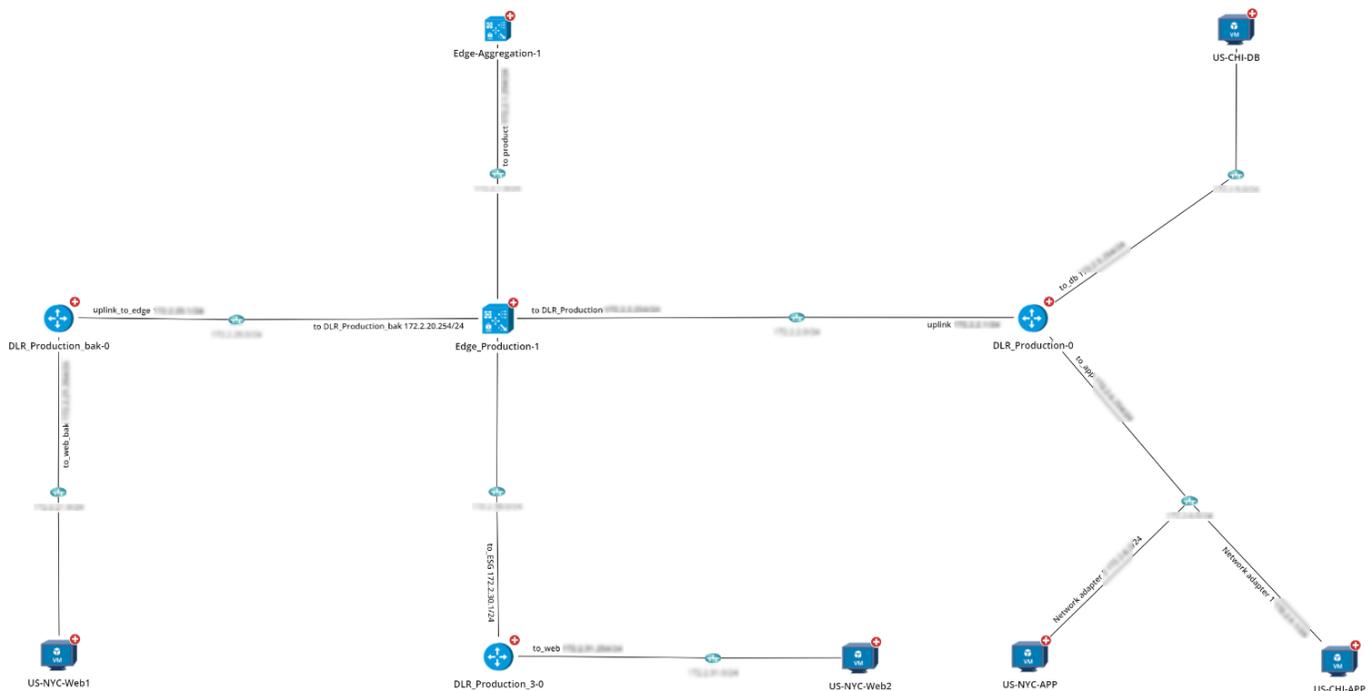
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# 1. Setting Up VMware NSX-V Networks

VMware NSX is the network virtualization platform for the Software-Defined Data Center (SDDC), which delivers networking and security entirely in software, abstracted from the underlying physical infrastructure. NetBrain can discover the networks based on VMware NSX-V (for vSphere) and visualize the NSX-V networks on dynamic maps.

**Example:** A Visualized Topology Map of an NSX-V Distributed Logical Router.



## 1.1. Allocating SDN License to Your NetBrain Tenant and Domain

Select an appropriate way to allocate SDN licenses to your tenant and domain.

- [Allocating SDN Licenses to a New Tenant and Domain](#)
- [Allocating SDN Licenses to an Existing Tenant and Domain](#)

**Note:** Before continuing with the following steps, make sure your SDN license has been activated. Here is an example:

System Management Operations admin Log Out NetBrain

Home Page License Tenants User Accounts Front Server Controllers Email Settings Advanced Settings

Unbind Refresh Refresh By Email

Current License Term

**Basic License Information**

License Item	Value
License ID	17012
License Type	Subscription
Term	From 5/19/2019, 7:51:58 AM To 5/20/2020, 7:51:58 AM
Status	In Use
Maximum Node Count	32 (0 free for assignment)
CPU Processor Conversion Rate (Non-SDN)	1 CPU : 10 node(s)
Concurrent Seat Count	10

**Change Management Module License Information**

License Item	Value
Term	From 5/19/2019, 10:00:00 AM To 5/18/2020, 10:00:00 AM
Status	In Use

**SDN Module License Information**

License Item	Value
Term	From 5/19/2019, 10:00:00 AM To 5/19/2020, 10:00:00 AM
Status	In Use
Port Conversion Rate (SDN)	1 port : 0.5 node(s)
CPU Processor Conversion Rate (SDN)	1 CPU : 10 node(s)

## Allocating SDN Licenses to a New Tenant and Domain

1. Log in to the System Management page.
2. Select the **Tenants** tab, and click **Add**.

- Specify a tenant name and allocate a maximum number of nodes to the tenant.

**Add Tenant**

**Basic Information**

\* Tenant Name: License Demo ▶ Advanced options

Description:

\* Maximum Nodes: 15 (22 nodes available)

**Assign Users**

1 users with Tenant Access, 1 users with Tenant Admin

Authentication Type	Authentication Se...	User Group	Username	System Admin	Tenant Access	Tenant Admin
NetBrain	NetBrain	Local Group	admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Cancel OK

- Click **OK** to submit.
- Log in to the End User page.
- Select the tenant you created from the quick access toolbar, and click **New Domain**.

Current Domain: **SDN License** [Manage Domain](#)

Tenant: License Demo Search... Refresh

Tenant Name	Domain Name	Maximum Nodes	Description	Creator
License Demo	SDN License	10 (0 used)		admin

**New Domain** Cancel Apply

- Specify a domain name and allocate a maximum number of nodes to the domain.

Create Domain Wizard

\* Tenant Name: License Demo

\* Domain Name: Subscription License

\* Maximum Nodes: 3 (5 nodes available)

Description:

Three steps to build your domain:

Step 1: Define access credentials and proxies.

Step 2: Discover live network and build L3 topology.

Step 3: Assign privileges to users by defining the share policy.

Help

Next > Finish

- Click **Finish**.

## Allocating SDN Licenses to an Existing Tenant and Domain

- Log in to the System Management page.
- Select the **Tenants** tab, and select **Edit** from the drop-down list of the desired existing tenant.

System Management

Operations admin Log Out NetBrain

Home Page License Tenants User Accounts Front Server Controllers Email Settings Advanced Settings

+ Add Search... Refresh

Tenant Name	Maximum Nodes	Allowed Users	Description
Initial Tenant	10 (0 used)	1	This is the initial tenant
License Demo	15 (0 used)	1	

Edit Delete

- Allocate a maximum number of nodes to the tenant.

**Edit Tenant**

**Basic Information**

\* Tenant Name: Initial Tenant

Description: This is the initial tenant

\* Maximum Nodes: 10 (17 nodes available)

**Assign Users**

1 users with Tenant Access, 1 users with Tenant Admin

Authentication Type	Authentication Se...	User Group	Username	System Admin	Tenant Access	Tenant Admin
NetBrain	NetBrain	Local Group	admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Cancel OK

- Click **OK** to submit.
- Log in to the End User page.
- Select the existing tenant from the quick access toolbar, and select **Edit** from the drop-down list of the existing domain.

Current Domain: **Subscription License** Manage Domain

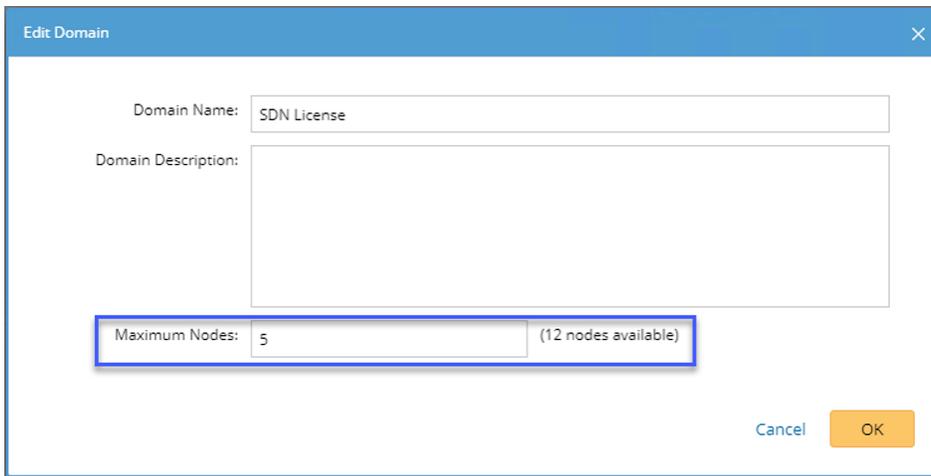
Tenant: License Demo

Tenant Name	Domain Name	Maximum Nodes	Description	Creator
License Demo	SDN License	10 (0 used)		admin
License Demo	Subscription Lic...	3 (0 used)		

Open Domain in new tab  
Edit  
Delete

New Domain Cancel Apply

7. Specify a domain name and allocate a maximum number of nodes to the domain.



Domain Name: SDN License

Domain Description:

Maximum Nodes: 5 (12 nodes available)

Cancel OK

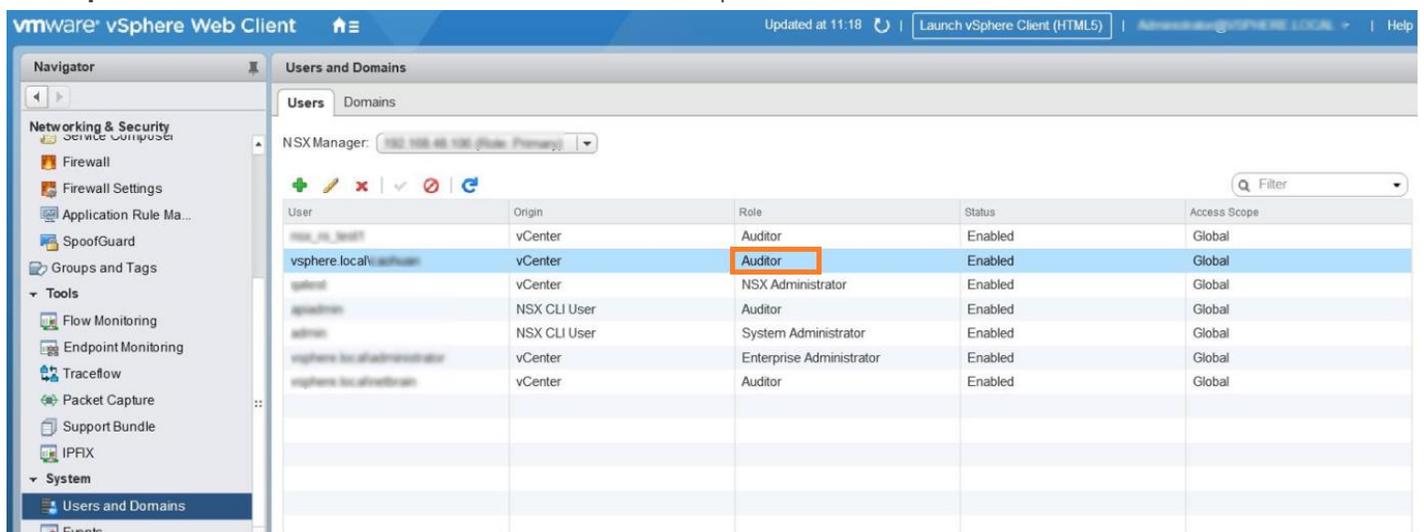
8. Click **OK**.

## 1.2. Discovering NSX-V Network in NetBrain Domain

NetBrain can discover the following components of an NSX-V network via restful APIs, and then build network topology based on the retrieved data.

- NSX Manager
- NSX Controller
- Logical Switch
- Distributed Logical Router
- NSX Edge

**Prerequisites:** A user account with the **Auditor** role is required to enable NetBrain to discover an NSX-V network.



User	Origin	Role	Status	Access Scope
vsphere.local\vsphere	vCenter	Auditor	Enabled	Global
vsphere.local\administrator	vCenter	<b>Auditor</b>	Enabled	Global
vsphere.local\vsphere	vCenter	NSX Administrator	Enabled	Global
vsphere.local\vsphere	vCenter	Auditor	Enabled	Global
vsphere.local\vsphere	vCenter	NSX CLI User	Enabled	Global
vsphere.local\vsphere	vCenter	NSX CLI User	Enabled	Global
vsphere.local\administrator	vCenter	Enterprise Administrator	Enabled	Global
vsphere.local\vsphere	vCenter	Auditor	Enabled	Global

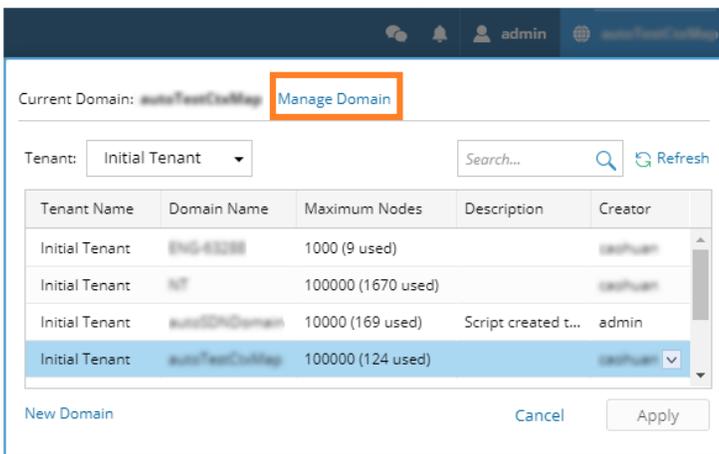
**Note:** This configuration for NSX-V user role is required on the vCenter where the NSX Manager is registered to.

To understand an NSX-V network, you need to first discover the network data model in a NetBrain domain.

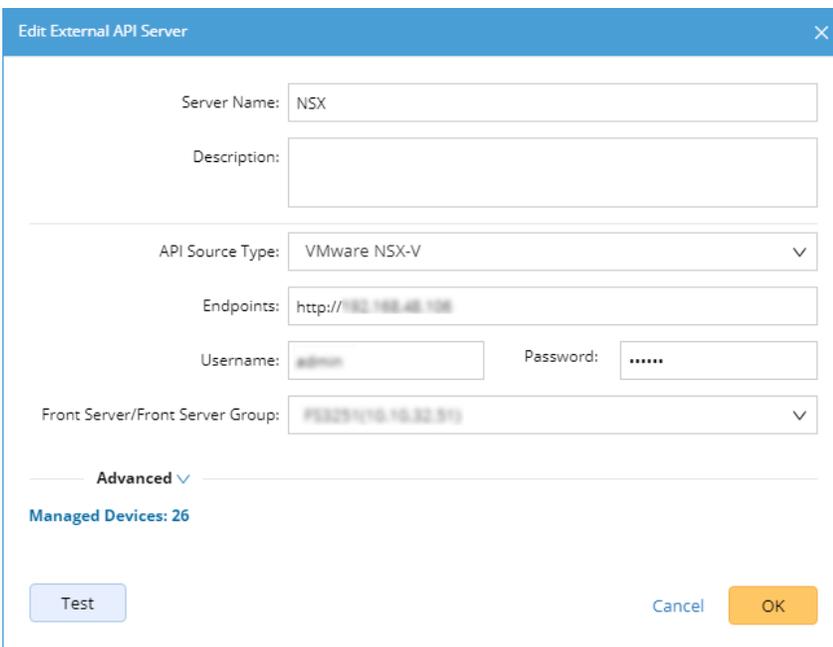
## 1. Add an NSX Manager

NetBrain retrieves NSX-V data through the NSX Manager by using APIs. Follow the steps below to add an NSX Manager and specify the address and user credentials to access the manager 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.



- 4) Enter a unique name in the **Server Name** field.
- 5) Select **VMware NSX-V** from the **API Source Type** drop-down menu.
- 6) In the **Endpoints** field, enter the URL of the NSX Manager.
- 7) Enter the username and password to access the NSX Manager. If more parameters are required when you access the manager or request data from the 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 NSX-V Network

**Note:** An NSX Manager is registered with a vCenter system. The corresponding vCenter Controller must be discovered before discovering the NSX-V Manager. For more information regarding how to discover vCenter, refer to NetBrain Quick Setup Guide (ESXi).

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

The screenshot shows the 'Domain Management' page with the 'Discover' tab selected. The 'Discover' section is active, showing configuration options for discovering devices via SNMP/CLI or API. The 'Discover Devices via API' section is selected, and 'NSX' is chosen as the API source. The 'Stop Discovery' button is visible, indicating the process is in progress. A status bar at the bottom shows the progress of the discovery, including the number of IP addresses discovered and the time elapsed.

**Domain Management** Tenant: Initial Tenant

Start Page Discover X

**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: e.g. 10.10.10.1; NY\_R1 Import IP List

Discover Devices via **API** + Select API Servers Unselect All

API Servers: NSX

Advanced Options

Executing additional operations... Elapsed Time: [00:00:17].  
Discovered 1 IP addresses, found 26 devices within 00:00:31.

Discovery Report Execution Log Plugin Log

Discovery Summary License Details

NSX Distributed...	NSX Edge Securi...	NSX Manager	NSX Controller	NSX Logical Swit...
6	5	1	3	11

**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 NSX-V Data in NetBrain through Benchmark](#) for details.

### 1.3. Auto-Updating NSX-V Data in NetBrain through Benchmark

The discovery only retrieves basic data of your NSX-V 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 NSX-V in your NetBrain Domain.

1. On the Start Page, click **Schedule Task**.
2. On the **Schedule Discovery/Benchmark Task** 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 an NSX-V server.

The screenshot shows the 'Device Scope' configuration page. On the left, under 'Select Device', there are radio buttons for 'All Devices', 'Device Group', and 'Site'. Below these are several device categories with counts: Load Balancer(1), Unclassified Device(1), L3 Switch(13), Router(6), Firewall(5), and End System(26). On the right, under 'Select external API servers to retrieve data of SDN nodes', there is a table with columns: API Source Type, Server Name, Endpoint, and Description. The table contains two rows: 'VMware vCenter' with 'Vcenter1' and 'https://192.168.486.100', and 'VMware NSX-V' with 'NSX' and 'https://192.168.486.100'. The 'VMware NSX-V' row is selected with a checkmark in the first column.

API Source Type	Server Name	Endpoint	Description
<input type="checkbox"/>	VMware vCenter	Vcenter1	https://192.168.486.100
<input checked="" type="checkbox"/>	VMware NSX-V	NSX	https://192.168.486.100

5. On the **Retrieve Live Data** tab, select the **VMware NSX-V** checkbox.

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

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

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

Enable	Operation Name
<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
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\NSX Relationship of Components Visual Space
<input checked="" type="checkbox"/>	Visual Space Templates\Built-in Visual Space Templates\NSX Transport Zone View Network Visual Space

7. Click **Submit**.