

VMware NSX Migration for VMware Cloud Director User Guide

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You can find the most up-to-date technical documentation on the VMware website at:

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About This Guide

1

This user guide provides information to migrate a service provider driven, organization Virtual Data Center (VDC) from VMware NSX[®] Data Center for vSphere[®] (NSX-V) backed provider VDC to organization VDC of NSX-T[™] Data Center backed provider VDC in a VMware Cloud Director[™] environment.

The VMware NSX[®] Migration for VMware Cloud Director[™] tool is an external automation tool to initiate and complete the migration process with the minimum downtime. The NSX Migration for VMware Cloud Director tool migrates the workload VMs and other Organization VDC objects to the same vCenter Server instance managed by VMware Cloud Director.

The NSX Migration for VMware Cloud Director tool is not a part of VMware Cloud Director installation and it executed externally.

Intended Audience

This guide is intended for VMware Cloud Director system administrators who want to migrate organization VDC of NSX Data Center for vSphere to organization VDC of NSX-T Data Center using the VMware Cloud Director. The information in this guide requires knowledge of VMware Cloud Director, NSX Data Center for vSphere, and NSX-T Data Center.

Acronyms and Abbreviation

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Abbreviations and acronyms are shortened forms of words or phrases. The following list of acronyms and abbreviation are used in this guide.

BGP

Border Gateway Protocol

DHCP

Dynamic Host Configuration Protocol

DLR

Distributed Logical Router

DNAT

Destination Network Address Translation

IPSEC

IP Security

NAT

Network Address Translation

OSPF

Open Shortest Path First

SNAT

Source NAT

Overview of NSX Migration for VMware Cloud Director

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The NSX Migration for VMware Cloud Director tool migrates the organization VDC of NSX Data Center for vSphere to organization VDC of NSX-T Data Center. During the migration process, edge nodes of the NSX-T Data Center act as a bridge between the source and target organization VDC networks. The bridge ensures the network layer 2 connectivity exists during the migration process.

IP addresses, routing, and other networking services are also migrated from the source to target edge gateway of organization VDC for minimum North-South network traffic disruption.

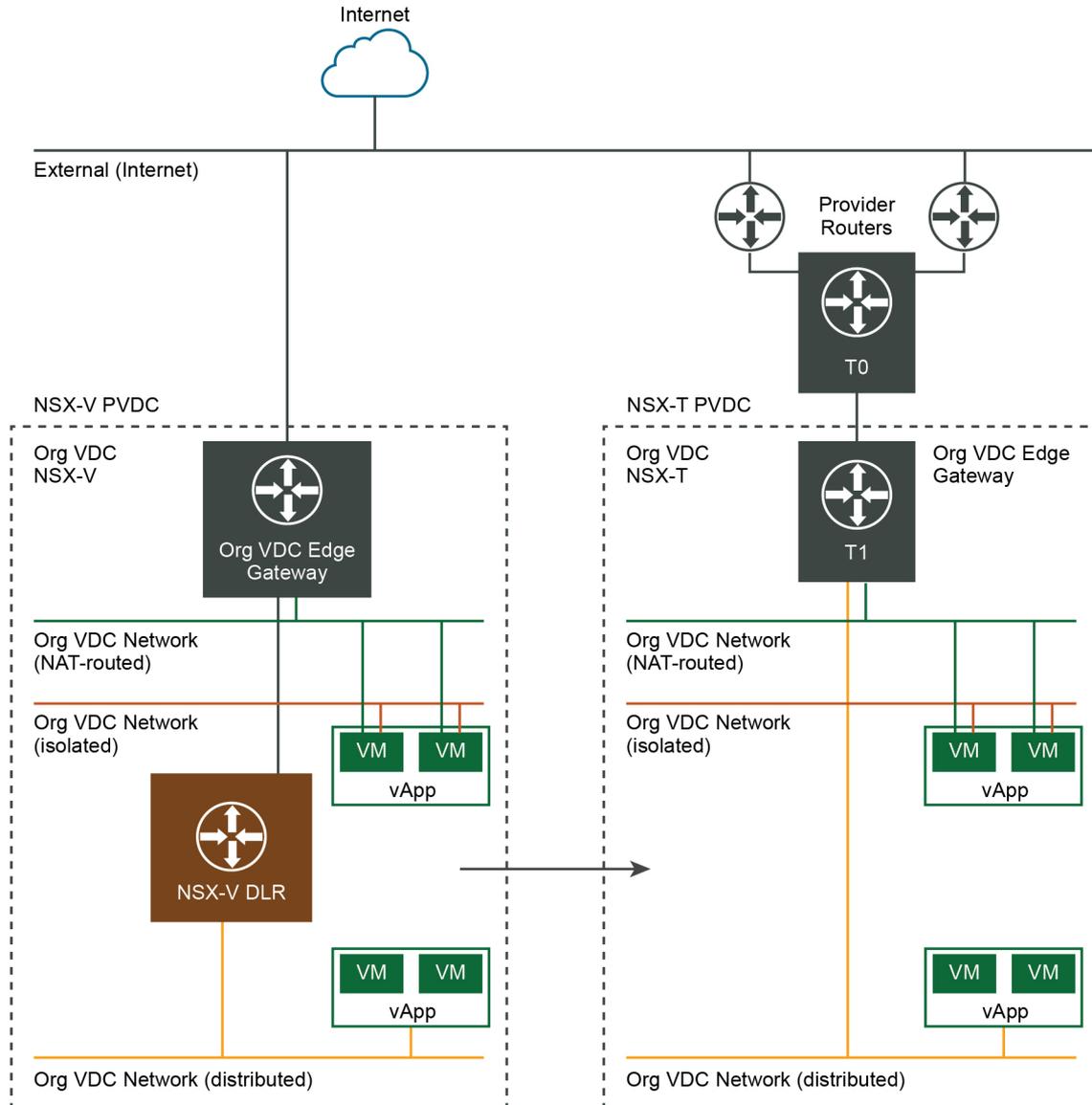
This chapter includes the following topics:

- [Workflow Architecture](#)
- [Supported Topology](#)
- [Compatibility Matrix](#)
- [Supported Features and Edge Gateway Services](#)
- [Unsupported Features and Edge Gateway Services](#)

Workflow Architecture

The following figure displays the NSX Migration for VMware Cloud Director tool workflow.

Figure 3-1. Architecture Design



Supported Topology

The NSX Migration for VMware Cloud Director tool supports the following topology.

- One Organization VDC per migration
- One edge gateway connected to one external network per organization VDC
- Routed including distributed and isolated organization VDC networks that are not shared and are backed by VXLAN or VLAN network pools
- 10 Organization VDC networks

Compatibility Matrix

The following table shows the version compatibility for the NSX Migration for VMware Cloud Director tool between NSX Data Center for vSphere, NSX-T Data Center, and VMware Cloud Director releases.

Table 3-1. NSX Migration for VMware Cloud Director Compatibility Matrix

| VMware Cloud Director | VMware NSX Data Center for vSphere | VMware NSX-T Data Center | VMware vSphere |
|------------------------------|---|---------------------------------|-----------------------|
| 10.1.2 | 6.4.6 and 6.4.8 | 2.5.1, 2.5.2, and 3.0.1 | 6.7 and 7.0 |

Supported Features and Edge Gateway Services

The NSX Migration for VMware Cloud Director supports several features and edge gateway services.

Supported Features

The NSX Migration for VMware Cloud Director tool supports the following features.

- Compute policies including VM placement and VM sizing policy
- Storage policies
- Catalog migration from organization VDC of NSX Data Center for vSphere to organization VDC of NSX-T Data Center including vApp templates and media
- Standalone VM
- VM with connected media
- VMs with snapshots
- Affinity and anti-affinity rules
- Routed including distributed and isolated Organization VDC networks
- vApps that are directly connected to the Organization VDC network
- Isolated vApp networks without the DHCP service

Supported Edge Gateway Services

The NSX Migration for VMware Cloud Director tool supports the following edge gateway services:

- User-defined firewall rules
 - User-defined firewall rules for source and target support IP, IPSET, and routed Organization VDC network objects
- NAT44 rules

- DHCP for non-isolated Organization VDC networks
- BGP configuration (requires Organization VDC dedicated target Tier-0 gateway)
- Policy-based IPSEC VPN with preshared keys and supported parameters for IPSEC
- IPSET in grouping objects
- DNS forwarding

Unsupported Features and Edge Gateway Services

The NSX Migration for VMware Cloud Director tool does not support some features and edge gateway services.

Unsupported Networking Features

- More than one Organization VDC edge gateway exists in the Source Organization VDC
- DHCP service enabled on the Source Organization VDC isolated network
- Shared Organization VDC network
- Organization VDC networks that are directly connected to external networks.
- Routed vApp networks
- vApps that are not connected through the routed vApp network.
- Distributed Firewall
- If the fencing mode is enabled on vApp

Unsupported Organization VDC Features

- Edge gateway firewall is in the disabled state
- Firewall rule with any of the following as source/target in Source Organization VDC:
 - Security groups
 - Internal
 - Gateway interfaces
 - Virtual Machine
 - TCP/UDP any port
- One to many DNAT rules
- OSPF dynamic routing
- Static routing
- DHCP bindings or DHCP relay
- IPSEC route-based VPN or with the certificate authentication

- SSL VPN
- L2 VPN
- Load balancing
- NAT and routing of IPv6

Unsupported Organization VDC Features

- Independent named disks
- Fast provisioning
- Suspended VM
- Empty vApps
- Migration of catalog media attached to a VM

Preparation for Installation

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To install and run the NSX Migration for VMware Cloud Director, your existing environment required certain configuration. You also require to create an edge cluster for bridging.

This chapter includes the following topics:

- [Environmental Prerequisites](#)
- [Prepare Edge Cluster Deployment for Bridging](#)

Environmental Prerequisites

Ensure that the preceding requirements are satisfied before you migrate the Organization VDC of NSX Data Center for vSphere to Organization VDC of NSX-T Data Center.

- The VMware Cloud Director with NSX Data Center for vSphere and provider VDC of NSX-T Data Center must be created
- The source NSX Data Center for vSphere and target NSX-T Data Center vSphere clusters must be in the same vCenter Server instance
- The port group of source and NSX-T Data Center Tier-0 gateway of target provider VDC external network must be in the same subnet. It should not have overlap IP pools as they are automatically adjusted during migration
- The source provider VDC hardware version must be either lower or same as that of target provider VDC hardware version
- A dedicated NSX-T Data Center edge cluster is required for bridge deployment in the NSX-V prepared vSphere cluster. This cluster can be accessed from the source Organization VDC network pool. Edge nodes in the edge cluster must be deployed using NSX-T Manager UI. It should not be deployed using OVA/OVF. In the edge cluster, the number of edge nodes must be equal or larger than the number of migrated Organization VDC networks.
- Dedicated NSX-T Data Center bridging transport zone
- On the vCenter Server, a dummy port group must be created and on the VMware Cloud Director, an external network must be created using the dummy port group. The NSX Migration for VMware Cloud Director tool uses the dummy port group to disconnect the edge gateway of source Organization VDC

- Target provider VDC must have the same storage policies as the source Organization VDC
- Target provider VDC must have the same VM placement policies as the source Organization VDC
- A VM that have a supported OS to run NSX Migration for VMware Cloud Director tool is created. This VM must have to VMware Cloud Director, NSX-T Data Center, and vCenter Server API endpoints
- Edge firewall rules must be configured only for routed Organization VDC networks
- Migrated media images are not attached to any VM during the Organization VDC cleanup step

Note Admin password of participating bridge cluster edge nodes must be same as the NSX-T Data Center manager password.

Prepare Edge Cluster Deployment for Bridging

You must configure a dedicated edge cluster with edge transport nodes. This cluster acts as a bridge between VXLAN and GENEVE overlay networks or between VLAN backed networks and GENEVE overlay networks. The bridge minimizes the network disruption during migration.

Procedure

- 1 Create the bridge transport zone using VLAN option:
 - a Navigate to: **System > Fabric > Transport Zones**.
 - b On the **Transport Zones** tab, click **+ Add**.
 - c Enter the information for the VLAN-based bridge transport zone and click **Add**.

The screenshot shows a 'New Transport Zone' configuration window. The fields are as follows:

- Name***: Bridge-TZ
- Description**: (Empty text box)
- N-VDS Name***: Bridge-nvds
- Host Membership Criteria**: Standard (For all hosts), Enhanced Datapath (For ESXi hosts with version 6.7 or above)
- Traffic Type**: Overlay, VLAN
- Uplink Teaming Policy Names**: (Empty text box)

Buttons: CANCEL, ADD

- 2 Deploy an edge VM on the NSX Data Center for the vSphere prepared cluster:
 - a Navigate to: **System > Fabric > Nodes**.
 - b On the **Edge Transport Nodes** tab, click **+ Add Edge VM**.

- c On the **Name and Description** page, enter the name, host name, and description for the edge VM and click **Next**.

- d On the **Credentials** page, set the password for the CLI and root users and click **Next**.

Note Ensure that the CLI and root user passwords are same as the NSX-T Manager password.

- e On the **Configure Deployment** page, enter the compute manager name.

- f Select the NSX Data Center for vSphere prepared hosts cluster for the edge VM deployment and click **Next**.

Add Edge VM

- 1 Name and Description
- 2 Credentials
- 3 Configure Deployment**
- 4 Configure Node Settings
- 5 Configure NSX

Configure Deployment

Compute Manager*

Cluster*

Resource Pool

Host

Datastore*

[Did not find expected? Try refresh to fetch latest datastores from System.](#)

CANCEL

- g On the **Configure Node Settings** page, select the **IP Assignment** as **Static**, enter the **Management** and **Default Gateway** IP addresses, and click **Next**.

Add Edge VM

- 1 Name and Description
- 2 Credentials
- 3 Configure Deployment
- 4 Configure Node Settings**
- 5 Configure NSX

Configure Node Settings

IP Assignment* DHCP Static

Management IP* 10.196.235.90/24

Default Gateway 10.196.235.253

Management Interface* tpm-net (Distributed VI...

Search Domain Names

DNS Servers

NTP Servers

CANCEL PREVIOUS NEXT

- h On the **Configure NSX** page, select the overlay transport zone, add the N-VDS details, and click **Finish**.

Add Edge VM

- 1 Name and Description
- 2 Credentials
- 3 Configure Deployment
- 4 Configure Node Settings
- 5 Configure NSX**

Configure NSX

Transport Zone* tpm-overlay-tz

OR Create New Transport Zone

+ ADD N-VDS

▼ New Node Switch

Edge Switch Name* tpm-nvds

Associated Transport Zones tpm-overlay-tz

Uplink Profile* tpm-dual-uplink-profile

OR Create New Uplink Profile

IP Assignment* Use IP Pool

IP Pool* tpm-tep-pool

OR Create and Use a new IP Pool

DPDK Fastpath Interfaces*

| | | | |
|----------|----------------------------|----|---|
| uplink-1 | trunk-pg (Distributed V... | 🗑️ | 🔗 |
| uplink-2 | trunk-pg (Distributed V... | 🗑️ | 🔗 |

CANCEL PREVIOUS FINISH

Note For the bridging, the number of deployed edge nodes must be larger or equal to the maximum number of Organization VDC networks in a migrated Organization VDC. The NSX Migration for VMware Cloud Director tool auto-configures the specific VXLAN or VLAN to Geneve bridging.

- 3 Create the edge cluster using the edge nodes created in previous steps:
 - a Navigate to: **System > Fabric > Nodes**.
 - b On the **Edge Cluster** tab, click **+ Add**.
 - c Provide the required information, select the required edge nodes from the **Available** column, and move it to the **Selected** column.

Note You can either select the default edge cluster profile or create an edge cluster profile.

- d Click **Add** to create a cluster.

Add Edge Cluster ⓘ ×

Name*

Description

Edge Cluster Profile × ▾

Transport Nodes

Member Type ▾

| <input type="checkbox"/> Available (0) | <input checked="" type="checkbox"/> Selected (1) |
|--|--|
| <input type="text"/> | <input checked="" type="checkbox"/> tpm-edge03 |

Using the NSX Migration for VMware Cloud Director

5

The NSX Migration for VMware Cloud Director runs from the provider environment and has access to VMware Cloud Director, NSX-T Data Center, and vCenter Server. The NSX Migration for VMware Cloud Director tool is available as a tar.gz package for CentOS and Red Hat Enterprise Linux OS and .zip package for Microsoft Windows OS.

Procedure

- 1 Download the package to the CentOS, Red Hat Enterprise Linux, or Microsoft Windows machine.
- 2 Extract the contents of the packages:
 - On the CentOS or Red Hat Enterprise Linux machine, open the terminal and extract the tar.gz file by running the following command: `tar -xvf VMware-NSX-Migration-for-VMware-Cloud-Director-1.1.tar.gz`.
 - On the Windows machine, unzip the downloaded ZIP file.
- 3 Navigate to the `vcdNSXMigrator` directory.
- 4 Edit the `userInput.yml` file. To know more, see [User Input](#).
- 5 Run these commands to initiate the required process:
 - To initiate the migration process:

```
./vcdNSXMigrator --filepath <Path of userInput.yml file>
```

Figure 5-1. Initiation of Migration Process

```
[root@build-package-vm vcdNSXMigrator]# ./vcdNSXMigrator --filepath sampleUserInput.yml
2020-06-22 08:46:07,788 [vcdNSXMigrator]:[releaseVersion]:130 [INFO] | Build Version: v1.1
2020-06-22 08:46:07,788 [vcdNSXMigrator]:[releaseVersion]:131 [INFO] | Build Release Date: 2020-06-16
Please enter VMware Cloud Director Password:
Please enter NSX-T Password:
Please enter vCenter Password:
2020-06-22 08:46:21,315 [vcdNSXMigrator]:[_loginToVcd]:281 [INFO] | Login into the VMware Cloud Director - 10.196.235.17
2020-06-22 08:46:21,541 [vcdNSXMigrator]:[_loginToNsx]:297 [INFO] | Login into the NSX-T - 10.196.235.14
2020-06-22 08:46:21,570 [vcdNSXMigrator]:[_loginToVcenter]:315 [INFO] | Login into the vCenter - ops@n-tpm-wcsa.eng.vmware.com
2020-06-22 08:46:21,901 [vcdNSXMigrator]:[validateLogin]:371 [INFO] | Password file is saved at location: /root/Testing/vcdNSXMigrator/passFile
2020-06-22 08:46:21,901 [vcdNSXMigrator]:[run]:491 [INFO] | Started migration of NSX-V backed Org VDC to NSX-T backed.
2020-06-22 08:46:22,513 [vcdValidations]:[preMigrationValidation]:1915 [INFO] | Starting with PreMigration validation tasks
2020-06-22 08:46:22,514 [vcdValidations]:[preMigrationValidation]:1917 [INFO] | Validating NSX-T Bridge Uplink Profile does not exist
2020-06-22 08:46:22,543 [vcdValidations]:[preMigrationValidation]:1920 [INFO] | Validating Edge Cluster Exists in NSX-T and Edge Transport Nodes are not in use
2020-06-22 08:46:22,702 [vcdValidations]:[preMigrationValidation]:1923 [INFO] | Validating Transport Zone Exists in NSX-T
2020-06-22 08:46:22,860 [vcdValidations]:[preMigrationValidation]:1931 [INFO] | Validate whether target Org VDC already exists
2020-06-22 08:46:22,860 [vcdValidations]:[preMigrationValidation]:1935 [INFO] | Validate no empty tags exist in source org VDC
2020-06-22 08:46:23,118 [vcdValidations]:[preMigrationValidation]:1938 [INFO] | Validate suspended state VMs does not exist in any of the Source vApps
2020-06-22 08:46:23,369 [vcdValidations]:[preMigrationValidation]:1943 [INFO] | Validate vApps have no routed vApp Networks
2020-06-22 08:46:23,597 [vcdValidations]:[preMigrationValidation]:1947 [INFO] | Validating whether source Org VDC is fast provisioned
2020-06-22 08:46:23,630 [vcdValidations]:[preMigrationValidation]:1951 [INFO] | Getting the source External Network - v-edgenetwork details.
2020-06-22 08:46:23,698 [vcdValidations]:[preMigrationValidation]:1957 [INFO] | Getting the target External Network - tpm-externalnetwork details.
2020-06-22 08:46:23,762 [vcdValidations]:[preMigrationValidation]:1963 [INFO] | Getting the source Dummy External Network - Dummy-ext-net details.
2020-06-22 08:46:23,840 [vcdValidations]:[preMigrationValidation]:1969 [INFO] | Validating whether other Edge gateways are using dedicated external network
2020-06-22 08:46:23,865 [vcdValidations]:[preMigrationValidation]:1973 [INFO] | Getting the source Provider VDC - v-pvdc details.
2020-06-22 08:46:24,021 [vcdValidations]:[preMigrationValidation]:1978 [INFO] | Validate Source Network Pool is VXLAN or VLAN backed
2020-06-22 08:46:24,052 [vcdValidations]:[preMigrationValidation]:1982 [INFO] | Validate whether source Org VDC is NSX-V backed
2020-06-22 08:46:24,253 [vcdValidations]:[preMigrationValidation]:1986 [INFO] | Getting the target Provider VDC - t-pvdc details.
2020-06-22 08:46:24,403 [vcdValidations]:[preMigrationValidation]:1991 [INFO] | Validating Hardware version of Source Provider VDC: v-pvdc and Target Provider VDC:
```

- To initiate the cleanup:

```
./vcdNSX Migrator -filepath=<Path of userInput.yml file> --cleanup
```

Note For more information, see [Operation performed during Clean-Up](#).

- To initiate the precheck scan mode:

```
./vcdNSX Migrator -filepath=<Path of userInput.yml file> --preCheck
```

Figure 5-2. Precheck

```
root@build-package-vm vcdNSX Migrator# ./vcdNSX Migrator -filepath sampleUserInput.yml --preCheck --passwordFile passfile
2020-06-22 08:52:13,679 [vcdNSX Migrator]:[releaseVersion]:130 [INFO] | Build Version: v1.1
2020-06-22 08:52:13,680 [vcdNSX Migrator]:[releaseVersion]:131 [INFO] | Build Release Date: 2020-06-16
2020-06-22 08:52:13,827 [vcdNSX Migrator]:[_loginToVcd]:281 [INFO] | Login into the VMware Cloud Director - 10.196.235.17
2020-06-22 08:52:14,060 [vcdNSX Migrator]:[_loginToNsxt]:297 [INFO] | Login into the NSX-T - 10.196.235.14
2020-06-22 08:52:14,090 [vcdNSX Migrator]:[_loginToVcenter]:315 [INFO] | Login into the vCenter - cpsbu-tpm-vc5a.eng.vmware.com
2020-06-22 08:52:14,674 [vcdNSX MigratorAssessmentMode]:[checkOrgDetails]:50 [INFO] | Getting NSX-V backed Org VDC demo-bikash details
2020-06-22 08:52:15,176 [vcdNSX MigratorAssessmentMode]:[checkOrgDetails]:54 [INFO] | Getting NSX-V backed Provider VDC v-pvdc details
2020-06-22 08:52:15,331 [vcdNSX MigratorAssessmentMode]:[checkOrgDetails]:59 [INFO] | Getting NSX-T backed Provider VDC t-pvdc details
2020-06-22 08:52:15,474 [vcdNSX MigratorAssessmentMode]:[initializePreCheck]:73 [INFO] | Starting NSX-V migration to NSX-T backed in Assessment mode
2020-06-22 08:52:15,474 [vcdNSX MigratorAssessmentMode]:[initializePreCheck]:74 [INFO] | Getting NSX-V backed Org VDC network details
2020-06-22 08:52:15,474 [vcdNSX MigratorAssessmentMode]:[initializePreCheck]:76 [INFO] | Getting NSX-V backed Provider VDC External network v-edgenetwork details
2020-06-22 08:52:15,474 [vcdNSX MigratorAssessmentMode]:[initializePreCheck]:76 [INFO] | Getting NSX-V backed Provider VDC External network tpm-externalnetwork detail
s
2020-06-22 08:52:15,474 [vcdNSX MigratorAssessmentMode]:[initializePreCheck]:80 [INFO] | Getting NSX-V backed Provider VDC External network Dummy-ext-net details
2020-06-22 08:52:15,636 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating NSX-T Bridge Uplink Profile does not exist
2020-06-22 08:52:15,669 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating Edge Cluster exists in NSX-T and Edge Transport Nodes are not in use
2020-06-22 08:52:15,823 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating Transport Zone exists in NSX-T
2020-06-22 08:52:15,856 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating if target OrgVDC do not exists
2020-06-22 08:52:15,857 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating if empty vApps do not exist in source org VDC
2020-06-22 08:52:16,089 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating VMs in suspended state do not exists any source vApps
2020-06-22 08:52:16,337 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating VMs in vApp are not connected to media
2020-06-22 08:52:16,574 [vcdValidations]:[validateVappVmsMediaNotConnected]:1855 [INFO] | Validated successfully no vApp/s has VM/s with media connected
2020-06-22 08:52:16,574 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating vApps do not have routed vApp networks
2020-06-22 08:52:16,817 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating whether source Org VDC is fast provisioned
2020-06-22 08:52:16,849 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating whether Edge gateways are using dedicated external network
2020-06-22 08:52:16,868 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating Source Network Pool is VXLAN or VLAN backed
2020-06-22 08:52:16,893 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating whether source Org VDC is NSX-V backed
2020-06-22 08:52:17,096 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating Target Provider VDC is enabled
2020-06-22 08:52:17,128 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating Hardware version of Source Provider VDC: v-pvdc and Target Provider VDC: t-pvdc
2020-06-22 08:52:17,128 [vcdNSX MigratorAssessmentMode]:[run]:152 [INFO] | Validating if fencing is enable on vApps in source OrgVDC
```

Note For more information, see [Precheck](#).

- To initiate the rollback:

```
./vcdNSX Migrator -filepath=<Path of userInput.yml file> --rollback
```

Note For more information, see [Rollback](#).

- To initiate tool execution with the saved passwords:

```
./vcdNSX Migrator -filepath=<Path of userInput.yml file> --passwordFile
```

Note For more information, see [Password file](#).

- To view the list of supported commands:

```
./vcdNSX Migrator --help
```

Note If the migration fails, the NSX Migration for VMware Cloud Director tool exits automatically. You can either remediate and rerun the migration, or perform the rollback. The NSX Migration for VMware Cloud Director tool will run from the last point of failure. During the remediation process, do not make any changes to the operation performed by the NSX Migration for VMware Cloud Director tool.

User Input

The NSX Migration for VMware Cloud Director supports only VMware Cloud Director and NSX-T integrated authentication. This section provides information about each editable field within the `userInput.yml` file.

- 1 Create the `userInput.yml` file with keys in the `SampleUserInput.yml` file.
- 2 Fill the data in the `userInput.yml` file as provided in the `sampleUserInput.yml` available in the `.tar.gz` file.

Table 5-1. Fields in the userInput.yml file

| Key | Option | Description | Type | Example |
|------------------------------------|-----------|--|---------|--|
| <code>ipAddress</code> | Mandatory | Enter the IP address or FQDN of VMware Cloud Director. | String | <code>10.10.20.1</code> or <code>vcdcell01.vmware.com</code> |
| <code>username</code> | Mandatory | Enter the user name. | String | <code>administrator</code> |
| <code>verify</code> | Mandatory | If set to True the tool validates the certificate. | Boolean | <code>True, False</code> |
| <code>OrgName</code> | Mandatory | Enter the name of organization that is already created. | String | <code>Acme</code> |
| <code>Source OrgVDCName</code> | Mandatory | Enter the name of the source organization VDC which is migrated. | String | <code>v-AcmeOVDC</code> |
| <code>NSX-T ProviderVDCName</code> | Mandatory | Enter the name of provider VDC of NSX-T Data Center. | String | <code>t-pvdc</code> |
| <code>NSX-T ExternalNetwork</code> | Mandatory | Enter the name of the external network to which provider VDC is connected. Note One external network is supported. | String | <code>tpm-externalnetwork</code> |
| <code>NSX-V ProviderVDCName</code> | Mandatory | Enter the name of the NSX Data Center for vSphere backed Provider VDC. | String | <code>v-pvdc</code> |
| <code>NSX-V ExternalNetwork</code> | Mandatory | Enter the name of the external network to which provider VDC is connected. | String | <code>v-edgenetwork</code> |

Table 5-1. Fields in the userInput.yml file (continued)

| Key | Option | Description | Type | Example |
|-------------------------------|-----------|--|---------|---------------------------------------|
| NSX-V DummyExternalNetwork | Mandatory | Enter the name of the dummy external network to be attached to the source edge gateway. | String | Dummy-ext-net |
| NSX-T ipAddress | Mandatory | Enter the IP address or FQDN of NSX-T Data Center. | String | 10.10.20.1 or nsx-tmanager.vmware.com |
| NSX-T User name | Mandatory | Enter the NSX-T Data Center admin user name. | String | admin |
| verify | Mandatory | If set to True, the tool validates the certificate. | Boolean | True,False |
| NSX-T EdgeClusterName | Mandatory | Enter the name of the bridge Edge cluster. | String | Bridge-edge-cluster1 |
| NSX-T TransportZoneName | Mandatory | Enter the name of NSX-T Data Center transport zone. | String | Bridge-TZ |
| vCenter ipAddress | Mandatory | Enter the IP address or FQDN of vCenter server. | String | 10.10.20.1 or vcsa.vmware.com |
| vCenter username | Mandatory | Enter the user name of vCenter Server. | String | administrator@vsphere.local |
| verify | Mandatory | If set to True, the tool validates the certificate. | Boolean | True, False |
| CertificatePath | Mandatory | Provide a path to a .pem file with all the component certificates or their CA certificates. If the verify option is set to True then validates the component certificates. | String | /root/vcdNSXMigrator/caCert.pem |
| MaxThreadCount | Optional | Number of threads to be used for parallel processing. | Integer | 75 |
| TimeoutForVappMigration | Optional | Time out to be used for the vApp migration task in seconds | Integer | 3600 |

Precheck

In the precheck mode of VMware NSX Migration for VMware Cloud Director tool, verify the source Organization VDC configuration. After the precheck mode run is completed, a summary log is generated. This log file has all the unsupported configuration information in the tabular format. Update and remediate the configuration as required, then run the precheck mode again to verify the Organization VDC configuration is supported.

The precheck mode creates main and summary precheck log files in the following format:

- For Main log: VCD-NSX-Migrator-preCheck-Log-DD-MM-YYYY-HH-MM-SS
- For Summary log: VCD-NSX-Migrator-preCheck-Summary-DD-MM-YYYY-HH-MM-SS

Figure 5-3. Precheck

```
Start Time: 11-08-2020-10-41-39
Organization VDC: Test-vdc
```

| Validation Name | Exception | Status |
|---|--|--------|
| Validating Edge Cluster exists in NSX-T and Edge Transport Nodes are not in use | Transport Node: tpm-edge03,tpm-edge05 already in use | Failed |

Password file

The NSX Migration for VMware Cloud Director tool generates a password file after the authentication to all components is successful in the first run. This password file location is displayed in the terminal. You can use this file for the next subsequent run of the NSX Migration for VMware Cloud Director tool. You can move the password file to a custom location and then use this path to run the migration again. The password changes are updated in the same file unless you provides a different location for the password file.

Figure 5-4. Password file

```
[root@build-package-vm vcdNSXMigration]# ./vcdNSXMigration --filepath sampleUserInput.yml --passwordFile passfile
2020-06-22 08:47:28,635 [vcdNSXMigration]:[releaseVersion]:130 [INFO] | Build Version: v1.1
2020-06-22 08:47:28,635 [vcdNSXMigration]:[releaseVersion]:131 [INFO] | Build Release Date: 2020-06-16
2020-06-22 08:47:28,783 [vcdNSXMigration]:[_loginToVcd]:281 [INFO] | Login into the VMware Cloud Director - 10.196.235.17
2020-06-22 08:47:28,997 [vcdNSXMigration]:[_loginToNsxt]:297 [INFO] | Login into the NSX-T - 10.196.235.14
2020-06-22 08:47:29,027 [vcdNSXMigration]:[_loginToVcenter]:315 [INFO] | Login into the vCenter - cpsbu-tpm-vcsa.eng.vmware.com
2020-06-22 08:47:29,310 [vcdNSXMigration]:[run]:491 [INFO] | Started migration of NSX-V backed Org VDC to NSX-T backed.
2020-06-22 08:47:29,824 [vcdValidations]:[preMigrationValidation]:1915 [INFO] | Starting with PreMigration validation tasks
2020-06-22 08:47:29,824 [vcdValidations]:[preMigrationValidation]:1917 [INFO] | Validating NSX-T Bridge Uplink Profile does not exist
2020-06-22 08:47:29,853 [vcdValidations]:[preMigrationValidation]:1920 [INFO] | Validating Edge Cluster Exists in NSX-T and Edge Transport Nodes are not in use
2020-06-22 08:47:30,006 [vcdValidations]:[preMigrationValidation]:1923 [INFO] | Validating Transport Zone Exists in NSX-T
2020-06-22 08:47:30,153 [vcdValidations]:[preMigrationValidation]:1931 [INFO] | Validate whether target Org VDC already exists
2020-06-22 08:47:30,153 [vcdValidations]:[preMigrationValidation]:1935 [INFO] | Validate no empty vapps exist in source org VDC
2020-06-22 08:47:30,386 [vcdValidations]:[preMigrationValidation]:1939 [INFO] | Validate suspended state VMs does not exist in any of the Source vApps
2020-06-22 08:47:30,621 [vcdValidations]:[preMigrationValidation]:1943 [INFO] | Validate vApps have no routed vApp Networks
2020-06-22 08:47:30,858 [vcdValidations]:[preMigrationValidation]:1947 [INFO] | Validating whether source Org VDC is fast provisioned
2020-06-22 08:47:30,892 [vcdValidations]:[preMigrationValidation]:1951 [INFO] | Getting the source External Network - v-edgenetwork details.
2020-06-22 08:47:30,954 [vcdValidations]:[preMigrationValidation]:1957 [INFO] | Getting the target External Network - tpm-externalnetwork details.
2020-06-22 08:47:31,019 [vcdValidations]:[preMigrationValidation]:1963 [INFO] | Getting the source dummy External Network - Dummy-ext-net details.
2020-06-22 08:47:31,084 [vcdValidations]:[preMigrationValidation]:1969 [INFO] | Validating whether other Edge gateways are using dedicated external network
2020-06-22 08:47:31,106 [vcdValidations]:[preMigrationValidation]:1973 [INFO] | Getting the source Provider VDC - v-pvdc details.
2020-06-22 08:47:31,261 [vcdValidations]:[preMigrationValidation]:1978 [INFO] | Validate Source Network Pool is VXLAN or VLAN backed
2020-06-22 08:47:31,285 [vcdValidations]:[preMigrationValidation]:1982 [INFO] | Validate whether source Org VDC is NSX-V backed
2020-06-22 08:47:31,493 [vcdValidations]:[preMigrationValidation]:1986 [INFO] | Getting the target Provider VDC - t-pvdc details.
2020-06-22 08:47:31,645 [vcdValidations]:[preMigrationValidation]:1991 [INFO] | Validating Hardware version of Source Provider VDC: v-pvdc and Target Provider VDC: t-pvdc
2020-06-22 08:47:31,645 [vcdValidations]:[preMigrationValidation]:1995 [INFO] | Validating Target Provider VDC t-pvdc is enabled
```

Rollback

If the NSX Migration for VMware Cloud Director tool fails, user can perform manual rollback.

Operations Performed during the Rollback

The following operations performed during the rollback process:

- Enables or disables the NSX Data Center for vSphere backed Organization VDC (state before migration)
- Enables or disables the affinity rules (state before migration)
- Enables or disables the promiscuous mode and forged transmits on source Organization VDC networks (state before migration)
- Clears the NSX-T Data Center bridging
- Deletes the target NSX-T Data Center backed Organization VDC networks
- Deletes the target NSX-T Data Center backed edge gateway
- Deletes the target NSX-T Data Center backed Organization VDC
- Removes the allocated IP's from target external network added during migration
- Configures the DHCP services on the source edge gateway.
- Configures the IPSEC services on the source edge gateway.
- Disconnects the dummy-uplink from the source edge Gateway
- Reconnects the source edge gateway from the external network
- Deletes metadata from the source Organization VDC

Limitation of Rollback

If the vApps or standalone VMs have been partially migrated to the target NSX-T backed Organization VDC, rollback does not migrate those vApps and standalone VMs automatically. In such cases, you must perform a manual rollback. See [Manual Rollback](#).

After you have manually migrated the the partially migrated vApps and VMs to NSX Data Center for vSphere backed Organization VDC, run the rollback of NSX Migration for VMware Cloud Director tool using **—rollback**.

Figure 5-5. Rollback

```
[root@build-package-vm vcdNSXMigration]# ./vcdNSXMigration --filepath sampleUserInput.yml --passwordFile passfile --rollback
2020-06-22 05:44:31,795 [vcdNSXMigration]:[releaseVersion]:130 [INFO] | Build Version: v1.1
2020-06-22 05:44:31,795 [vcdNSXMigration]:[releaseVersion]:131 [INFO] | Build Release Date: 2020-06-16
2020-06-22 05:44:31,948 [vcdNSXMigration]:[_loginToVcd]:281 [INFO] | Login into the VMware Cloud Director - 10.196.235.17
2020-06-22 05:44:32,185 [vcdNSXMigration]:[_loginToNsxt]:297 [INFO] | Login into the NSX-T - 10.196.235.14
2020-06-22 05:44:32,230 [vcdNSXMigration]:[_loginToVcenter]:315 [INFO] | Login into the vCenter - cpsbu-tpm-vcsa.eng.vmware.com
2020-06-22 05:44:33,142 [rollback]:[perform]:138 [INFO] | Performing rollback
2020-06-22 05:44:33,142 [vcdValidations]:[enableSourceOrgVdc]:1651 [INFO] | RollBack: Enabling Source Org-Vdc
2020-06-22 05:44:33,142 [nsxtOperations]:[clearBridging]:470 [INFO] | RollBack: Clearing NSX-T Bridging
2020-06-22 05:44:34,724 [vcdOperations]:[disablePromiscModeForgedTransmit]:2507 [INFO] | RollBack: Disabling the Promiscuous Mode and Forged Mode
2020-06-22 05:45:06,545 [vcdOperations]:[deleteOrgVDCNetworks]:259 [INFO] | RollBack: Deleting Target Org VDC Networks
2020-06-22 05:45:37,394 [vcdOperations]:[deleteNsxtBackedOrgVDCEdgeGateways]:339 [INFO] | RollBack: Deleting Target Edge Gateway
2020-06-22 05:45:47,668 [vcdOperations]:[deleteOrgVDC]:226 [INFO] | RollBack: Deleting Target Org-Vdc
2020-06-22 05:45:57,966 [vcdOperations]:[resetTargetExternalNetwork]:2122 [INFO] | RollBack: Reset the target external network
2020-06-22 05:46:08,277 [vcdValidations]:[deleteMetadata]:290 [INFO] | RollBack: Deleting metadata from source org vdc
```

Manual Rollback

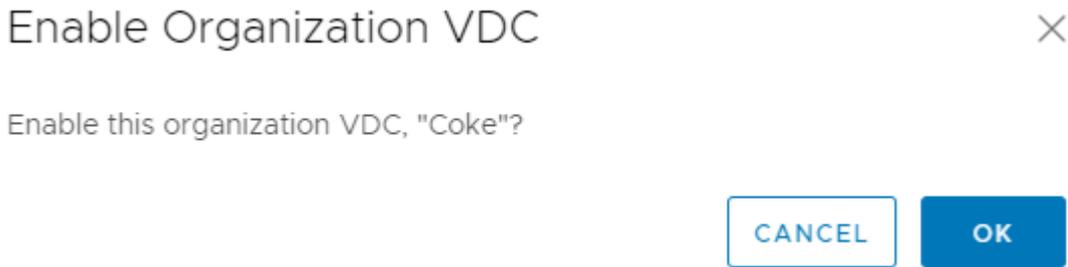
You can also perform the rollback process manually.

Procedure

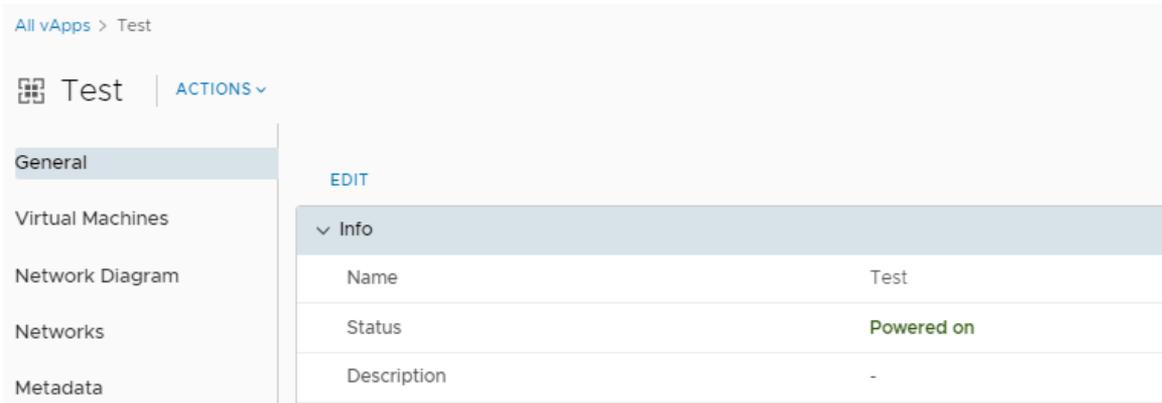
- 1 Enable the NSX-V backed Organization VDC:
 - a Navigate to **Cloud Resources > Organization VDCs**.
 - b Select the NSX-V backed Organization VDC, click **Enable**.

| Name | Status | State | Allocation Model | Organization | Backing Type | |
|---------------------------------------|--------|-------|------------------|---------------|--------------|-------|
| <input checked="" type="radio"/> Coke | ⓘ | ⊙ | Disabled | Pay-As-You-Go | Coke | NSX-V |
| <input type="radio"/> Coke-t | ⓘ | ⊙ | Enabled | Pay-As-You-Go | Coke | NSX-T |
| <input type="radio"/> test123 | ⓘ | ⊙ | Enabled | Pay-As-You-Go | Coke | NSX-V |

- c On the pop-up window, click **OK** to enable the Organization VDC.



- 2 Rename the target vApps by appending v2T in the vApp name:
 - a On the **All vApp** page, select the Test vApp.
 - b On the **General** page, click **Edit**.



- c In the **Name** field, append -v2T.

vApp Test

Name * Test-v2t

Description

DISCARD SAVE

- d Click **Save** to update the vApp details.

All vApps > Test

Test-v2t ACTIONS

General

Virtual Machines

Network Diagram

Networks

Metadata

Sharing

EDIT

Info

| | |
|-------------|------------|
| Name | Test-v2t |
| Status | Powered on |
| Description | - |
| Data center | Coke-t |

Note Repeat the above steps for all the vApps.

- 3 On the NSX-V Organization VDC, create a placeholder with the original vApp name of target Organization VDC.

New vApp

Name * Test

Description

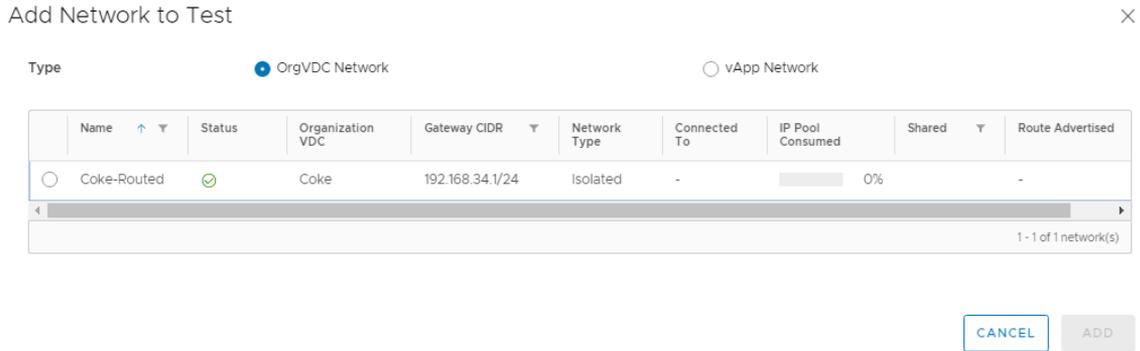
Power on

Virtual Machines OS Compute

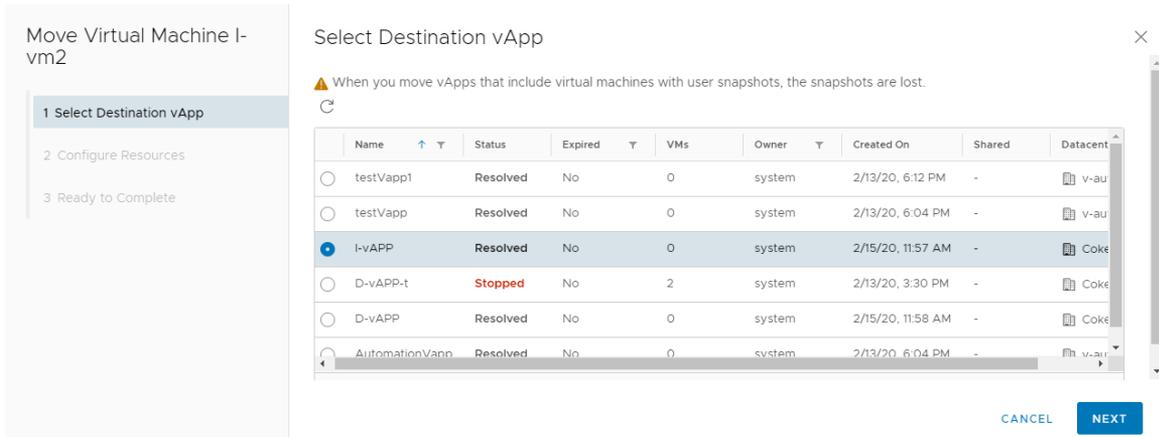
ADD VIRTUAL MACHINE

CANCEL CREATE

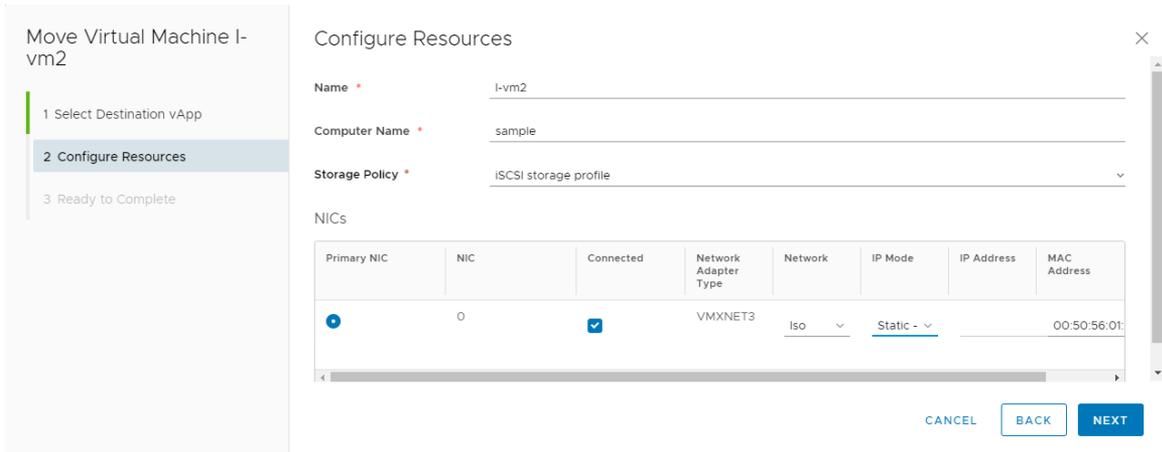
- 4 Add Networks to the source Organization VDC placeholder vApps:
 - a On the vApp, from the **Action** drop-down menu, select **Add Network**.
 - b Select the **Organization VDC network** option.
 - c Select the Organization VDC network and click **Add**.



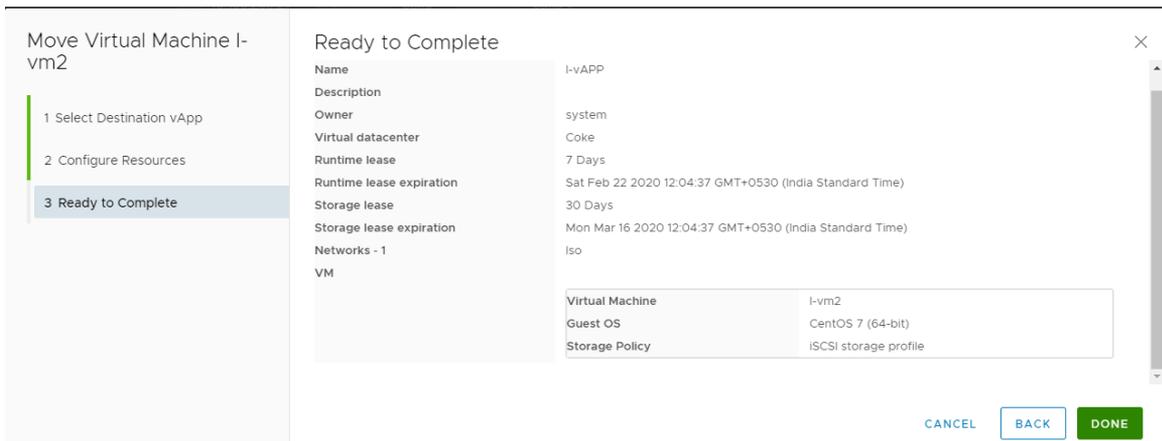
- 5 Migrate the VMs back to the NSX Data Center for vSphere backed Organization VDC.
 - a Go to NSX-T Data Center backed Organization VDC and click **Virtual Machines**.
 - b Select the VM that you want to migrate to NSX Data Center for vSphere backed Organization VDC.
 - c From the **Action** drop-down menu, select **Move to**.
 - d In the **Select Destination vApp** page, select the vApp in the NSX Data Center for vSphere backed Organization VDC, and click **Next**.



- e In the **Configure Resources** page, provide all the required information and click **Next**.



- f In the **Ready to Complete** page, verify the provided information and click **Done**.



- g Repeat the steps to migrate all the vApp VMs in the NSX Data Center for vSphere backed Organization VDC.

Working with Logs

The logger has two stream handlers to log the migration-related tasks in the log file and the command-line console.

The following logging levels are used:

- Debug
- Info
- Error

You can view the log files on the following path:

<directory>\logs\VCD-NSX-Migrator-Main-DD-MM-YYYY-HH-MM-SS.log

Additionally, a separate log file `VCD-NSX-Migrator-Main.log` is created to capture the summary logs for NSX Data Center for vSphere Organization VDC, NSX-T Data Center Organization VDC and its networks, edge gateways, vApps, and so on, as per the following format:

```
YYYY-MM-DD HH:MM:SS [ModuleName]:[FunctionName]:<LineNo> [LOG LEVEL] | <Log Message>
```

Figure 5-6. Migration Logs

```
VCD-NSX-Migrator-preCheck-Log-23-06-2020-18-11-57 - Notepad
File Edit Format View Help
2020-06-23 18:11:59,038 [connectionpool]:[_make_request]:433 [DEBUG] | https://10.196.235.27:443 "GET /api/admin/org/829db5ea-e2fd-4831-b64e-68b020fa210c HTTP/1.1" 200
2020-06-23 18:11:59,054 [vcdValidations]:[getOrgVDCUrl]:404 [DEBUG] | Organization VDC Test-A url https://10.196.235.27/api/admin/vdc/bd623ce4-7dd9-40a3-8670-b400f882b1ae
2020-06-23 18:11:59,054 [connectionpool]:[_new_conn]:937 [DEBUG] | Starting new HTTPS connection (1): 10.196.235.27:443
2020-06-23 18:11:59,132 [connectionpool]:[_make_request]:433 [DEBUG] | https://10.196.235.27:443 "GET /api/admin/vdc/bd623ce4-7dd9-40a3-8670-b400f882b1ae HTTP/1.1" 200
2020-06-23 18:11:59,132 [vcdValidations]:[getOrgVDCDetails]:431 [DEBUG] | Retrieved Organization VDC Test-A details successfully
2020-06-23 18:11:59,132 [vcdNSXMigratorAssessmentMode]:[checkOrgDetails]:54 [INFO] | Getting NSX-V backed Provider VDC v-pvdc details
```

Error and Exception Handling

At the task or subtask level, an exception is raised if any error occurs during migration. The handled exception method is explained in this section.

The NSX Migration for VMware Cloud Director handles exceptions that occur in task or subtasks and logs the traceback in the log file for debugging. The exception error appears on the console so that providers can identify the failure.

If any known warning occurs during the migration process, the NSX Migration for VMware Cloud Director ignores it and proceeds with the migration. The warning messages are displayed in the console to inform the provider that these warnings are ignored.

Operation performed during Clean-Up

The clean-up is performed after the correct functionality of the migrated workloads are verified. This section provides a list of operations that are performed during the clean-up process.

- Check for Media attached to any VM in target Organization VDC.

Note The clean-up script will fail if a media is attached to a VM that needs to migrate. You must manually eject the media and rerun the clean-up script.

- Migrate the NSX Data Center for vSphere backed catalog items to NSX-T Data Center backed Organization VDC
- Remove the bridging configuration from NSX-T Data Center
- Delete the Organization VDC networks of NSX Data Center for vSphere
- Delete the edge gateway of NSX Data Center for vSphere
- Delete the Organization VDC of NSX Data Center for vSphere
- Rename the Organization VDC networks of NSX-T Data Center
- Rename the Organization VDC of NSX-T Data Center

- Remove the NSX Data Center for vSphere backed edge gateway allocated IPs from NSX Data Center for vSphere backed external network

Note The Target Organization VDC must be in the Enabled state to move the media and templates.

Figure 5-7. Clean-Up

```
[root@build-package-vm vcdNSX Migrator]# ./vcdNSX Migrator --filepath sampleUserInput.yml --passwordFile passfile --cleanup
2020-06-22 08:54:58,786 [vcdNSX Migrator]:[releaseVersion]:130 [INFO] | Build Version: v1.1
2020-06-22 08:54:58,786 [vcdNSX Migrator]:[releaseVersion]:131 [INFO] | Build Release Date: 2020-06-16
2020-06-22 08:54:58,938 [vcdNSX Migrator]:[_loginToVcd]:281 [INFO] | Login into the VMware Cloud Director - 10.196.235.17
2020-06-22 08:54:59,171 [vcdNSX Migrator]:[_loginToNsxt]:297 [INFO] | Login into the NSX-T - 10.196.235.14
2020-06-22 08:54:59,201 [vcdNSX Migrator]:[_loginToVcenter]:315 [INFO] | Login into the vCenter - cpsbu-tpm-vcsa.eng.vmware.com
2020-06-22 08:54:59,382 [vcdNSX MigratorCleanup]:[run]:42 [INFO] | Getting the Organization Coke details.
2020-06-22 08:54:59,441 [vcdNSX MigratorCleanup]:[run]:46 [INFO] | Getting the source Provider VDC - v-pvdc details.
2020-06-22 08:54:59,498 [vcdNSX MigratorCleanup]:[run]:50 [INFO] | Getting the source Organization VDC demoC-bikash details.
2020-06-22 08:54:59,866 [vcdNSX MigratorCleanup]:[run]:54 [INFO] | Validating whether source Org VDC is NSX-V backed
2020-06-22 08:55:00,115 [vcdNSX MigratorCleanup]:[run]:61 [INFO] | Getting the target Provider VDC - t-pvdc details.
2020-06-22 08:55:00,168 [vcdNSX MigratorCleanup]:[run]:65 [INFO] | Getting the target Organization VDC demoC-bikash-t details.
```

Scalability

The scalability table shows the number of vApp migrated and average time taken for per vApp migration. These records were tested with vSphere 7.0 NSXV 6.4.8 and VCD 10.1.2.

| No of vApp | No. Of VM in each vApp | Per vApp Size | Thread count in User YAML | Per vApp migration Timeout in User YAML (Seconds) | Comments |
|------------|------------------------|---------------|---------------------------|---|-------------------------|
| 1 | 1 | 33 GB | 1 | 300 | With Storage vMotion |
| 1 | 4 | 132 GB | 1 | 300 | With Storage vMotion |
| 2 | 10 | 330 GB | 2 | 800 | With Storage vMotion |
| 5 | 20 | 660 GB | 5 | 9000 | With Storage vMotion |
| 5 | 20 | 660 GB | 5 | 1000 | Without Storage vMotion |

Note

- The total time for vApp migration depends on your network latency and bandwidth.
- If the time out for the migration is less than the vApp migration time, the NSX migration for VMware Cloud Director tool fails and exits.
 - If the migration tool exits and VM is migrating on the vCenter Server, update the time out in the UserInput.yaml file. You can start the migration of remaining VMs from the same point after the VM migrated.

NSX-T IPSEC Supported Parameters

6

The following table lists the supported NSX-T IPSEC parameters and their supported values.

| IPSEC Parameters | Supported Values |
|----------------------|----------------------------|
| Encryption Algorithm | AES 256 |
| Authentication | PSK |
| Diffie-Hellman Group | DH2, DH5, DH14, DH15, DH16 |
| Digest Algorithm | SHA1 |
| IKE Option | IKE v1, IKE v2, IKE Flex |
| Session Type | Policy-Based Session |

This chapter includes the following topics:

- [Migration Process Workflow](#)

Migration Process Workflow

During the migration process, the NSX migration for VMware Cloud Director tool performs the following operations.

- 1 Fetch the metadata from the source Organization VDC
- 2 Verify whether the bridge uplink profile (host switch profile) is available in the NSX-T Data Center.
- 3 Verify whether the edge transport nodes used for bridging are in use.
- 4 Verify whether the edge transport zone is in use.
- 5 Verify whether the target Organization VDC exists.
- 6 Verify whether the empty vApps exist.
- 7 In the NSX Data Center for vSphere backed Organization VDC, Verify whether the VMs are not in the suspended state in the vApps.
- 8 For the NSX Data Center for vSphere backed Organization VDC, Verify whether the vApp routed network does not exist in the vApps.

- 9 Verify whether the NSX Data Center for vSphere backed Organization VDC is fast provisioned.
- 10 Verify whether other external gateways are using external network.
- 11 Verify whether the source external network pool is VXLAN/VLAN backed.
- 12 Verify whether the source Organization VDC is backed by NSX Data Center for vSphere.
- 13 Verify whether the hardware version of source provider VDC and target provider VDC for compatibility checks.
- 14 Verify whether the target provider VDC is enabled.
- 15 Disable the NSX Data Center for vSphere backed Organization VDC.
- 16 Verify whether in the NSX-T Data Center backed provider VDC, the placement policies are available for NSX Data Center for the vSphere backed Organization VDC.
- 17 Verify whether the NSX Data Center for vSphere backed Organization VDC and NSX-T Data Center backed Provider VDC are having storage profiles.
- 18 Verify whether the source Organization VDC storage profiles are available in target provider VDC and are enabled in target provider VDC.
- 19 Verify whether the external network of the NSX Data Center for vSphere and the external network of the NSX-T Data Center are in same subnets.
- 20 Disable the affinity rules for the NSX Data Center for vSphere backed Organization VDC.
- 21 In the NSX Data Center for vSphere, Verify whether the single edge gateway is available for the Organization VDC.
- 22 In the NSX Data Center for vSphere, Verify whether the DHCP is enabled for Organization VDC isolated networks.
- 23 In the NSX Data Center for vSphere, Verify whether the Organization VDC networks are not shared.
- 24 In the NSX Data Center for vSphere, Verify whether the Organization VDC networks are of type direct.
- 25 Verify in the sub-allocated IP pool of source edge gateway, the external IPs are added.
- 26 Verify in the source Organization VDC, fencing is enabled on the vApps.
- 27 Verify the edge gateway services of NSX Data Center for vSphere backed Organization VDC are supported in NSX-T Data Center backed Organization VDC.
- 28 Verify whether the NSX Data Center for vSphere backed Organization VDC have independent disks attached.
- 29 Verify the media is not connected to any VMs in vApp.
- 30 Verify the NSX Data Center for vSphere backed Organization VDC networks count is greater than the number of edge transport nodes participating in bridging.

- 31 Create the NSX-T Data Center backed Organization VDC.
- 32 Apply the VM placement policy on the NSX-T Data Center backed Organization VDC.
- 33 Apply the VM sizing policy on the NSX-T Data Center backed Organization VDC.
- 34 Create the ACL on the NSX-T Data Center backed Organization VDC.
- 35 Create the edge gateway on the NSX-T Data Center backed Organization VDC.
- 36 Create the Organization VDC network on the NSX-T Data Center backed Organization VDC.
- 37 Disconnect the NSX-T Data Center backed Organization VDC networks from the edge gateway.
- 38 Enable the promiscuous mode and forged transmit on source Organization VDC networks.
- 39 Create the bridge endpoint profile on the NSX-T Data Center.
- 40 Create the bridge uplink profile (host switch profile).
- 41 Add the bridge transport zone to edge transport nodes.
- 42 Attach the bridge endpoint profile to Organization VDC networks of NSX-T Data Center backed Organization VDC.
- 43 Get the NSX Data Center for vSphere backed edge gateway mac address for NSX Data Center for vSphere backed Organization VDC routed networks.
- 44 Log in to the NSX-T Data Center edge transport nodes to validate the bridge connectivity. It broadcasts the NSX Data Center for vSphere backed Organization VDC routed networks to edge gateway interface mac address.
- 45 Configure the NSX-T Data Center backed Organization VDC edge gateway services excluding DHCP service.
- 46 Disconnect the NSX Data Center for vSphere backed Organization VDC networks from edge gateway.
- 47 Connect the dummy uplink interface to the NSX Data Center for vSphere backed edge gateway.
- 48 Disconnect the NSX Data Center for vSphere backed Organization VDC edge gateway uplink from external network.
- 49 Reconnect the NSX-T Data Center backed Organization VDC networks.
- 50 Configure the DHCP service on NSX-T Data Center backed Organization VDC edge gateway.
- 51 Configure firewall security group for target Organization VDC networks.
- 52 Reconnect the NSX-T Data Center backed Edge gateway to Tier-0 router.
- 53 Move the vApp from source Organization VDC to target Organization VDC.
- 54 Enable the NSX-T Data Center backed Organization VDC affinity rules.