



Nexus Dashboard Orchestrator Brownfield Import of VRFs and Networks, Release 4.4.x

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Overview

The following sections describe the brownfield import use case scenario which will allow you to import existing NDFC fabric configurations, including fabrics that are part of a Multi-Fabric Domain (MSD), and to stretch those configurations across multiple greenfield or brownfield fabrics from a single location using Nexus Dashboard Orchestrator. The same use case is demonstrated in the [Cisco NDFC VRF and Network Configuration using Nexus Dashboard Orchestrator](#) video demo.

The examples in this chapter will use two different NDFC controllers where **Fabric-1** from the first NDFC is a single fabric, while **Fabric-2** and **Fabric-3** are part of an MSD and are managed by the second NDFC:

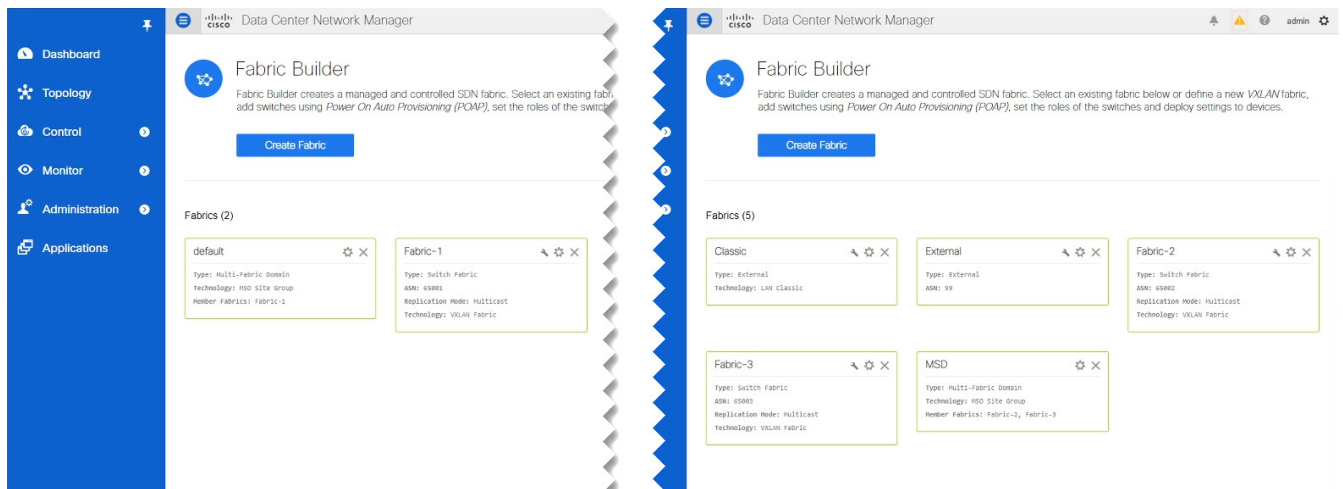


Figure 1. Fabric Builder

The following sections will detail how to import existing configuration, then stretch it from one fabric to another managed by different NDFCs, as well as how to deploy brand new VRFs and networks.

Prerequisites

Before you can import and manage VRFs and networks from the existing NDFC fabrics in your environment, you must have the following:

- Nexus Dashboard cluster deployed and the Nexus Dashboard Orchestrator service installed, as described in [Cisco Nexus Dashboard Deployment Guide](#) and [Cisco Nexus Dashboard Orchestrator Deployment Guide](#).
- Existing NDFC fabrics on-boarded in the Nexus Dashboard and enabled for management in the Nexus Dashboard Orchestrator GUI, as described in [Adding and Deleting Fabrics](#).
- Have the inter-fabric infrastructure configured and deployed, as described in [Configuring Infra for Cisco NDFC Fabrics](#).

Expanding on the example fabrics show in the "Overview" section above, after you configure the Infra settings for all fabrics, you will see the inter-fabric connectivity deployed to each NDFC:

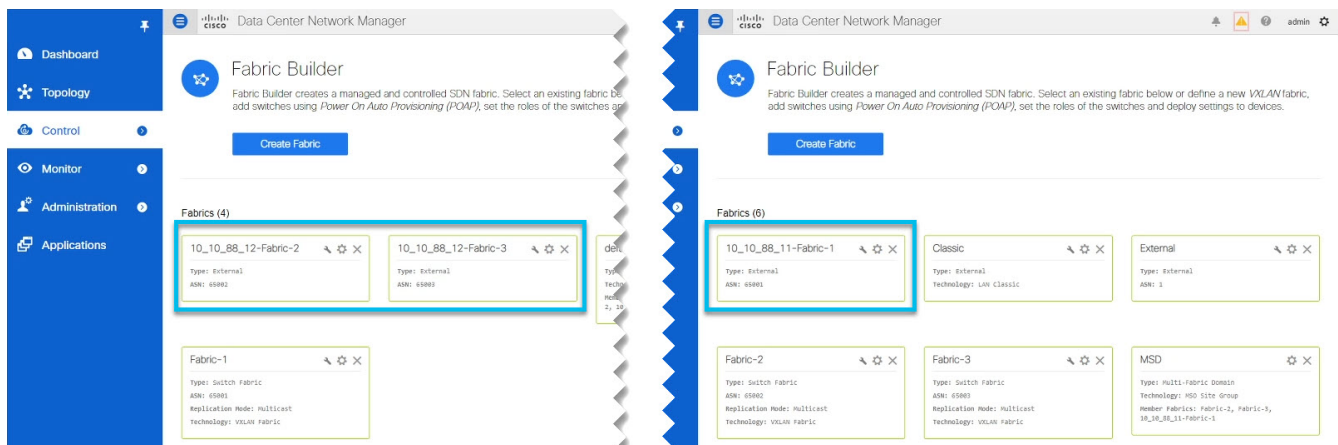


Figure 2. Fabric Builder 1

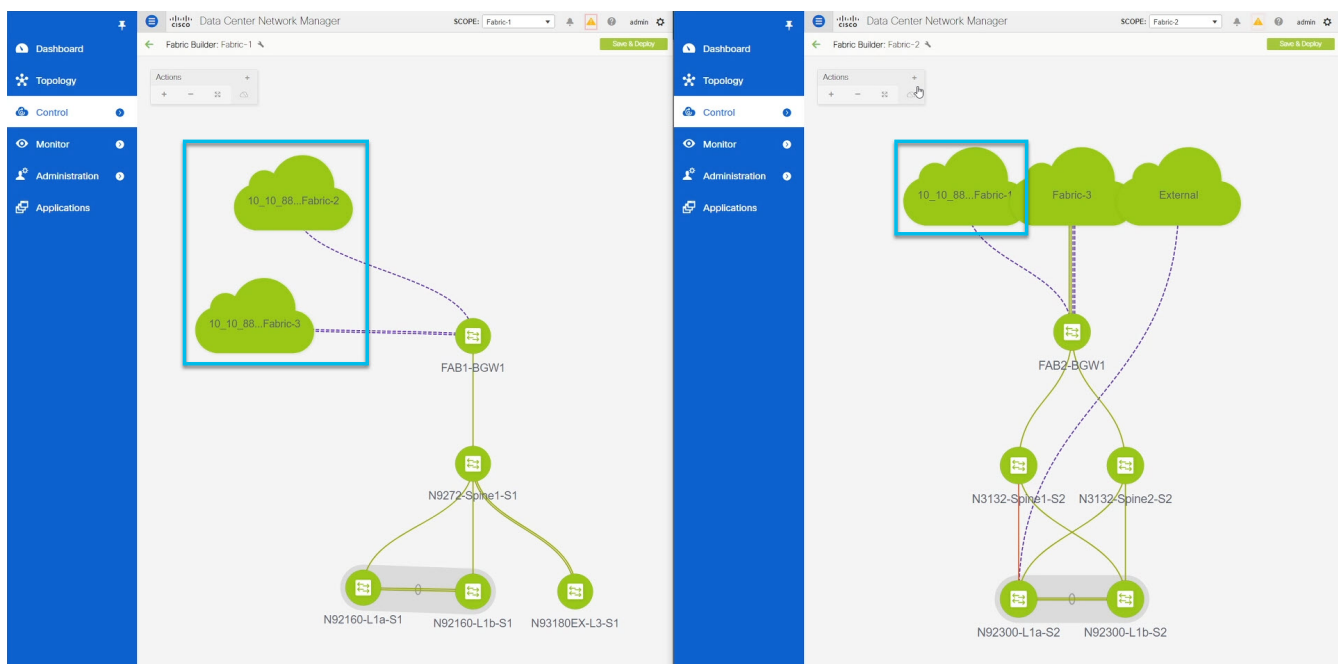


Figure 3. Fabric Builder 2

Create Schema and Templates for Importing Configuration

Before you begin:

- You must have reviewed and completed the prerequisites described in [Prerequisites](#).

This section describes how to create a schema and template where you will import existing and then create new configurations.

1. Log in to your Nexus Dashboard Orchestrator GUI.
2. Create a new schema.
 - a. From the left navigation pane, choose **Application Management > Schemas**.
 - b. On the Schemas page, click **Add Schema**.
 - c. In the schema creation dialog, provide the **Name** and optional description for the schema.

By default, the new schema is empty, so you need to add one or more templates.

3. Create a template.

We recommend creating two separate templates: one for the VRFs and one for Networks. The following two steps will describe how to create a template.

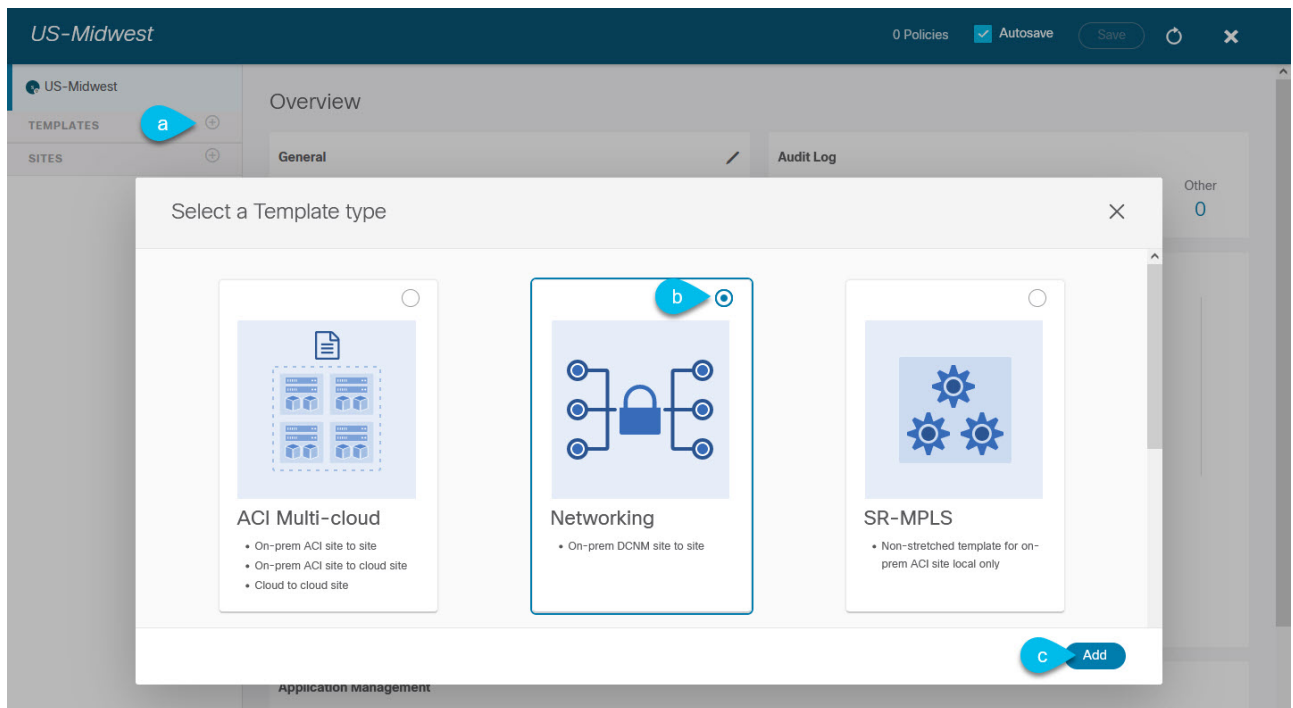


Figure 4. Template Type

- a. In the left sidebar under **Templates**, click the + sign to add a new template.
 - b. In the **Select a Template type** window, choose **Networking** for the template type.
 - c. Click **Add** to create the template.
4. Provide the name and the tenant for the template.

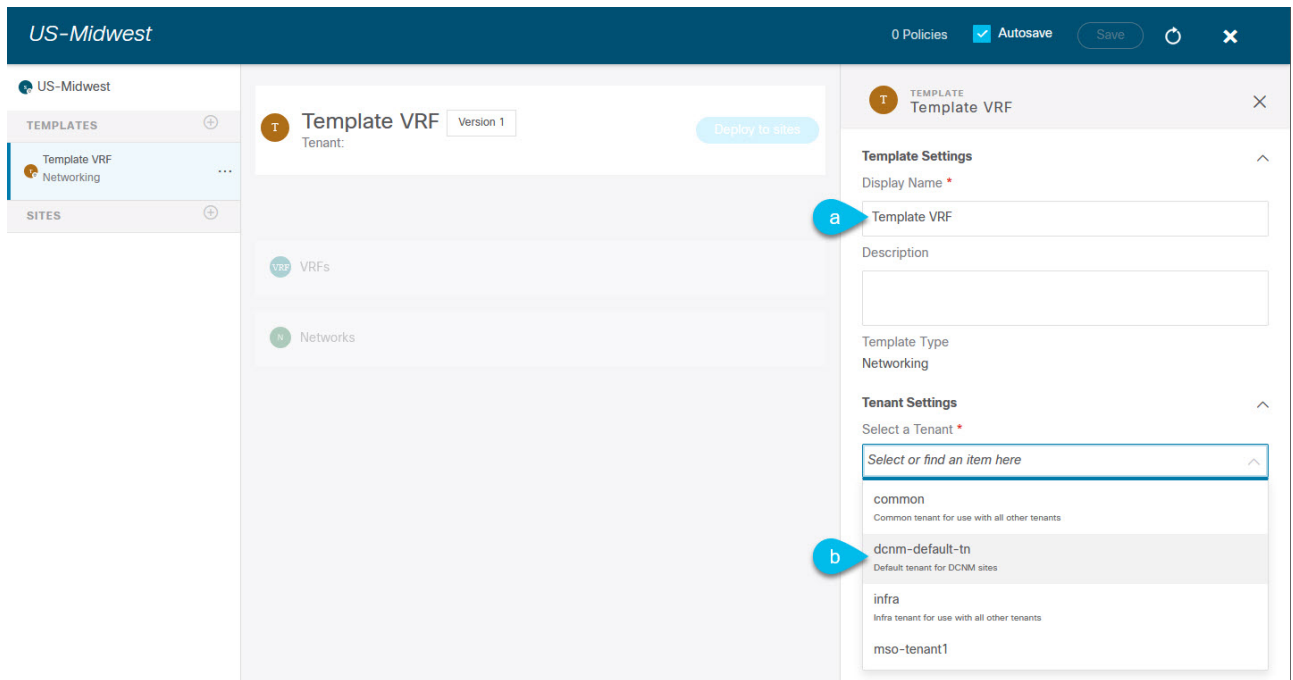


Figure 5. Template Settings

- a. In the right sidebar, specify the **Display Name** for the template.
- b. From the **Select a Tenant** dropdown, select the **dcnm-default-tn** tenant.

This tenant is created in NDO by default specifically for defining objects and configurations for NDFC fabrics

5. Repeat the pervious two steps to create a second template.

In this release, we recommend creating separate templates for VRFs and Networks within each schema and then deploying the VRF templates first, followed by the templates that contain Networks. This way any VRFs required by the networks will be already created when you push Network configuration to the fabrics.

Similarly, when undeploying multiple networks and VRFs, we recommend undeploying the Networks template first, followed by the VRF templates. This will ensure that when VRFs are undeployed, there will be no conflicts with any existing Networks still using them.

6. In the top right corner of the schema view, click **Save** to save the schema and template.

You must save the schema and template you created before you can import configuration.

Importing Schema Elements From NDFC Fabrics

Before you begin:

- You must have associated the template with the existing fabrics as described in the previous section.

This section describes how to import configuration from existing fabrics.

1. In the main pane click the **Import** button and select the **Fabric** from which you want to import.

You can import from one fabric at a time, so you will repeat these steps for each fabric.

2. In the **Import from <fabric-name>** window that opens, select one or more VRFs.

Import from Fabric-2		×
POLICY TYPE	☐ VRF	☐ INCLUDE RELATIONS
VRF	0 out of 4	☒ CORP-11
NETWORK	2 out of 4	☐ CORP-1
		☐ ENG-1
		☒ ENG-11
		c Import

Figure 6. Import

- a. In the import screen, you can select all or some of the existing objects.

In the example above, we import **ENG-11** and **CORP-11** networks from **Fabric-2** which is part of the MSD.



The names of the objects imported into the Nexus Dashboard Orchestrator must be unique across all fabrics. Importing different objects with duplicate names will cause a schema validation error and the import to fail. If you want to import objects that have the same name, you must first rename them.

- b. Ensure that the **Include Relations** box is unchecked.

You will import the VRFs separately into the second template.

c. Click **Import** to import the objects.

3. Repeat the steps to import Networks from other fabrics.

If you select the template under the fabric from which you imported (**Fabric-2** in this example), the networks will have switch and port configuration already created as they were imported from that fabric. However, if you select the template under a different fabric (**Fabric-3**), where the same networks also exist, the switch configuration will be empty.

To get the interface configuration for the networks we imported, we import the same networks again from the other fabric.

4. Select the second template and repeat previous two steps to import all required VRFs.

As best practice, you will use one of the templates to import the VRF configuration from your fabrics and the other template to import the Network configuration.

Deploying Template and Making Changes

Before you begin:

You must have the configuration imported as described in the previous section.

This section describes how to deploy the imported configuration to the fabric where it doesn't yet exist.

1. In the left sidebar, select the template you want to deploy.

Following the same example, you can use the NDFC UI to verify that the networks and VRFs you have imported from **Fabric-2** and **Fabric-3** do not yet exist in **Fabric-1**.

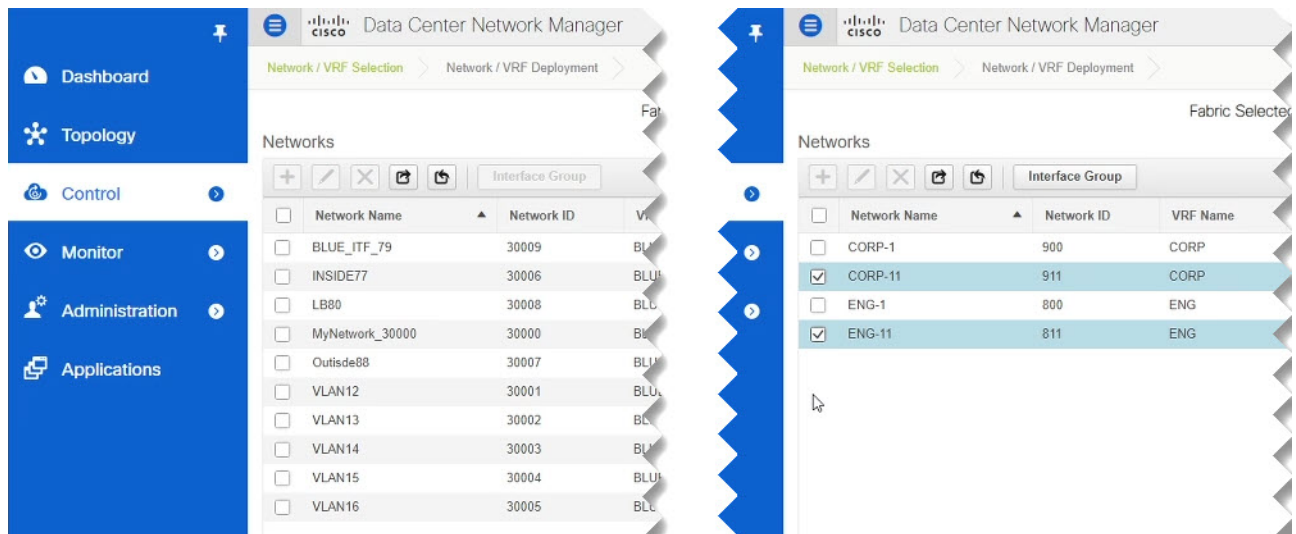


Figure 7. Deploy Template

2. In the top right of the template edit view, click **Deploy to fabrics**.

The **Deploy to Fabrics** window opens that shows the summary of the objects to be deployed.

3. Click **Deploy** to deploy the template.

Since this is the first time you are deploying this template, the **Deploy to Fabrics** summary will show the configuration difference that will be deployed to fabrics.

It may take a few minutes for the configuration to get deployed. After you see a confirmation message in the NDO GUI, you can verify that the configuration was deployed using the NDFC UI:

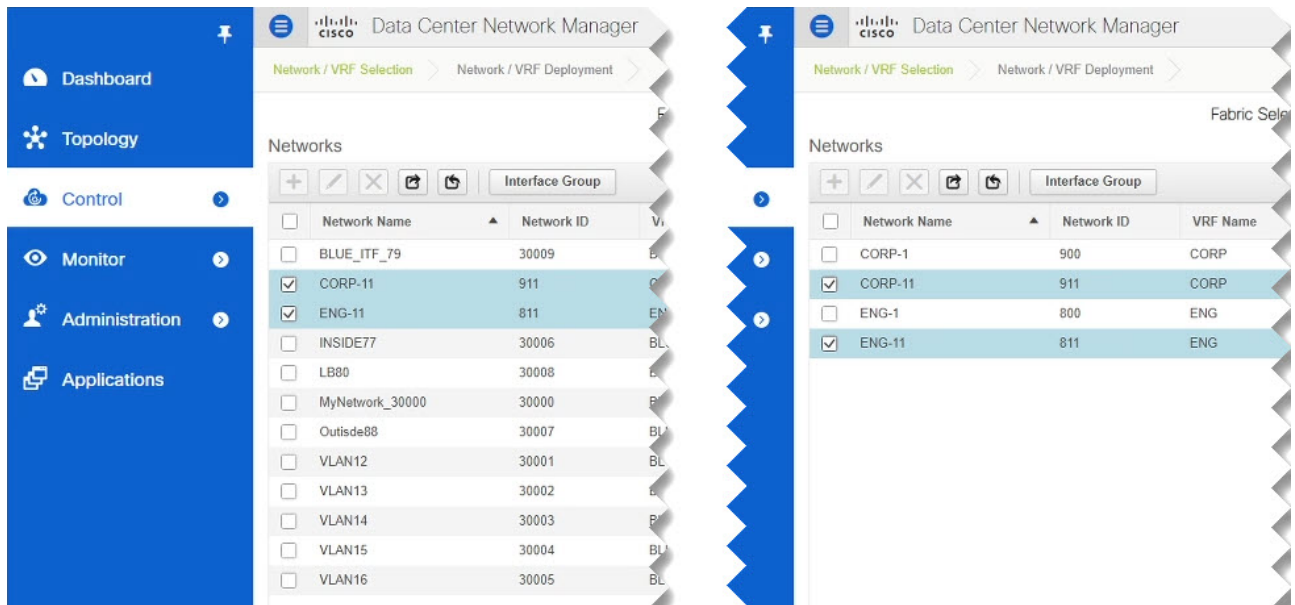


Figure 8. Deploy to Fabrics

4. Assign switch ports to the new network.

We have verified that the network you imported from **Fabric-2** and **Fabric-3** was deployed to **Fabric-1**, we need to assign one or more switch ports to it for **Fabric-1**.

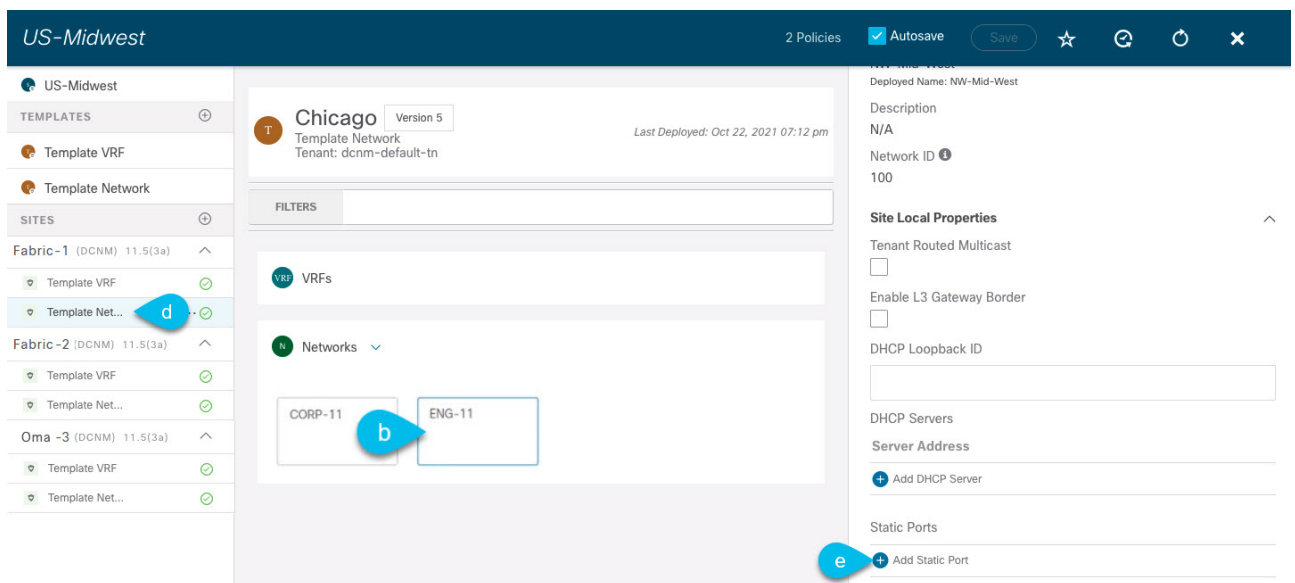


Figure 9. Deploy

- Select the template under **Fabric-1**.
- Select the Network we deployed.
- In the right sidebar, click **Add Static Ports**.

In the **Add Static Port** window that opens, select the switch and the port to which you want to assign the network's VLAN. Then click **Save**.

5. Save and redeploy the template with the new configuration changes.

You can once again verify the change by navigating back to the NDFC GUI and refreshing the Networks page. The status of the network will go from **NA** to **In Progress** to **Deployed**.

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