

Versa Configuration Management

The Versa Networks lab environment consists of a fixed, pre-configured topology that will allow you to explore, configure, and manage Versa Networks CPEs by using Versa Director, the central management and orchestration platform for a Versa Secure SD-WAN solution. After completing this lab, you will be able to:

- Identify when a device configuration is in sync or out of sync with Versa Director
- Import and Export device configurations

In this lab, you will be assigned a single CPE device (Branch device) for configuration and monitoring.

The lab environment is accessed through a remote desktop connection. The remote desktop connection opens a remote workstation, where you will use various tools to navigate and configure the lab environment. The main tool you will use in this lab is Versa Director. Versa Director can be accessed by opening the Google Chrome browser on the Remote Desktop. There is a bookmark to the Versa Director device in the Google Chrome bookmark bar.

This lab environment is a shared environment. There may be up to 5 other students in the environment. Each student has their own remote desktop, but the Versa Director is shared. Because of the shared environment, you may see configuration templates, device groups, workflows, and devices that other students have created, or that have been pre-provisioned within Versa Director. It is important that you only modify the configuration components that are assigned to you by your instructor.

During certain lab parts, the lab guide will present sample output from the GUI or the CLI. The sample outputs are SAMPLES and represent the information as it appeared during the lab guide creation. Your output may vary in some ways (some devices may or may not be present, some routes may or may not be the same, etc.) Do not be alarmed if your results vary slightly from the results shown in the lab guide. The important thing is that the lab functions in the desired manner.

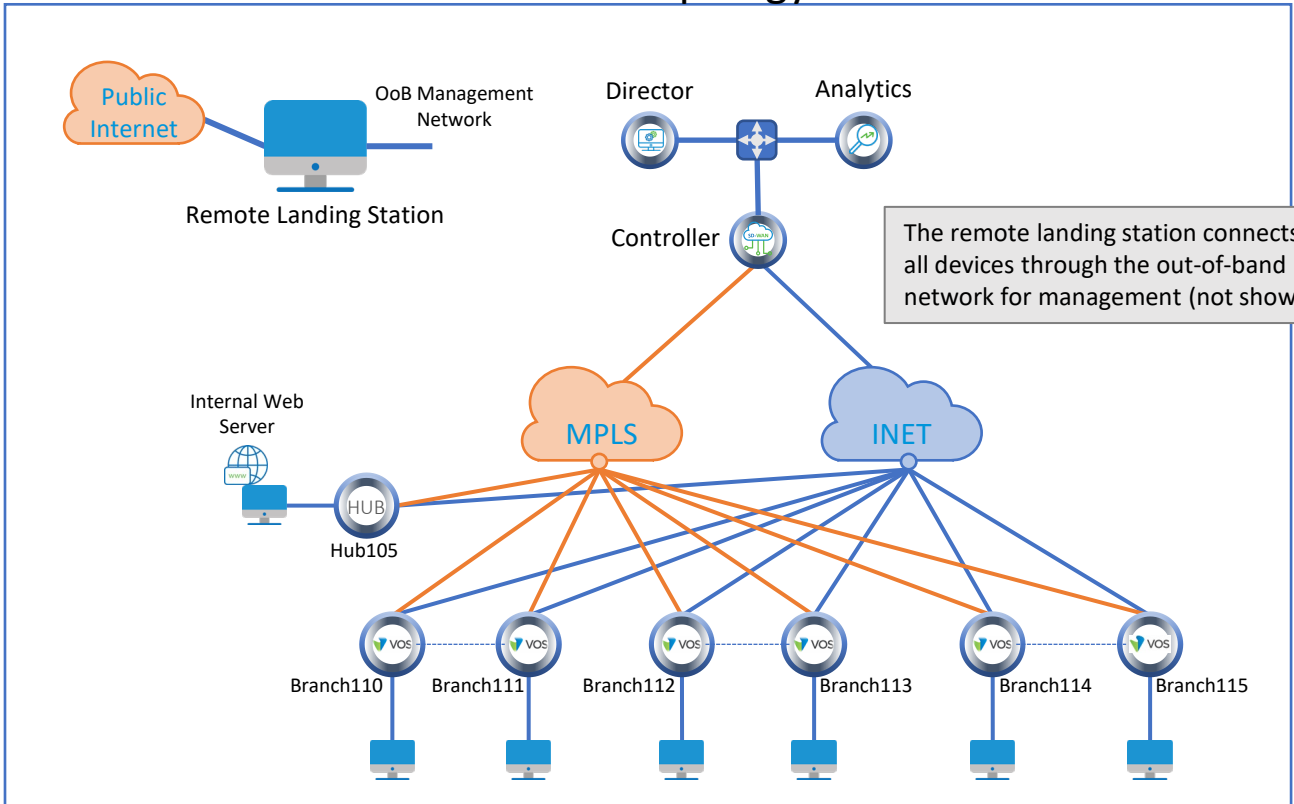
This lab guide will step you through some common tasks that are performed on Versa Director. After an introductory set of exercises, you will be asked to perform some basic tasks that will allow you to become more familiar with the environment. At the end of the lab guide you can find additional help on to how to complete the tasks, so if you have trouble with a task, please refer to the help section. If you still cannot accomplish the task, ask your instructor for assistance. In addition, you will see **hints** placed throughout the lab guide to help you along.

Look for these hints to help you in the labs

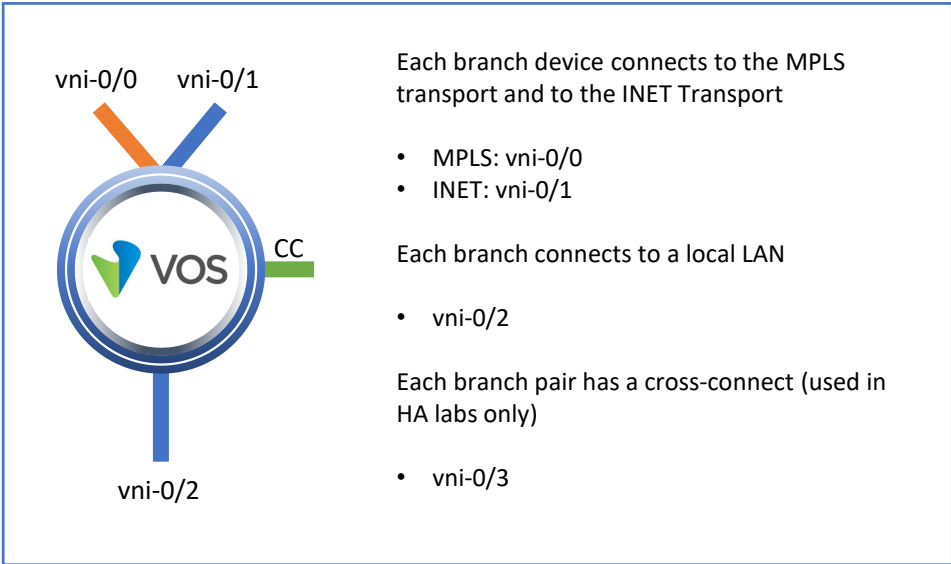
The goal of this and all lab exercises is to help you gain additional skills and knowledge. Because of this, the lab guide contains additional instruction to supplement the student guides.

Now that we've discussed what is expected, let's get started!

Lab Topology



The remote landing station connects to all devices through the out-of-band network for management (not shown).



Each branch device connects to the MPLS transport and to the INET Transport

- MPLS: vni-0/0
- INET: vni-0/1

Each branch connects to a local LAN

- vni-0/2

Each branch pair has a cross-connect (used in HA labs only)

- vni-0/3

Remember this! You will use it a lot!

Versa Director Login: **labuserXYZ** (e.g. **labuser110**, **labuser111**, etc.)
 Versa Director Password: **Versa@123**

Branch OoB Login: **versa**
 Branch OoB Password: **versa123**

Testing Host Login: **labuserXYZ** (e.g. **labuser110**, **labuser111**, etc.)
 Testing Host Password: **versa123**

Interface Addresses

CPE	vni-0/0	vni-0/1	vni-0/2
Branch110	192.168.19.110/24	192.168.20.110/24	172.16.110.1/24
Branch111	192.168.19.111/24	192.168.20.111/24	172.16.111.1/24
Branch112	192.168.19.112/24	192.168.20.112/24	172.16.112.1/24
Branch113	192.168.19.113/24	192.168.20.113/24	172.16.113.1/24
Branch114	192.168.19.114/24	192.168.20.114/24	172.16.114.1/24
Branch115	192.168.19.115/24	192.168.20.115/24	172.16.115.1/24
MPLS Gateway	192.168.19.3		
INET Gateway		192.168.20.3	

Controller Addresses

MPLS	MPLS Gateway	INET	INET Gateway
192.168.17.3/24	192.168.17.1	192.168.18.3/24	192.168.18.1

Exercise 1: Connect to the remote lab environment

The first lab exercise is to become familiar with how to connect to the remote lab environment. Your instructor should have reviewed the following information with you prior to starting:

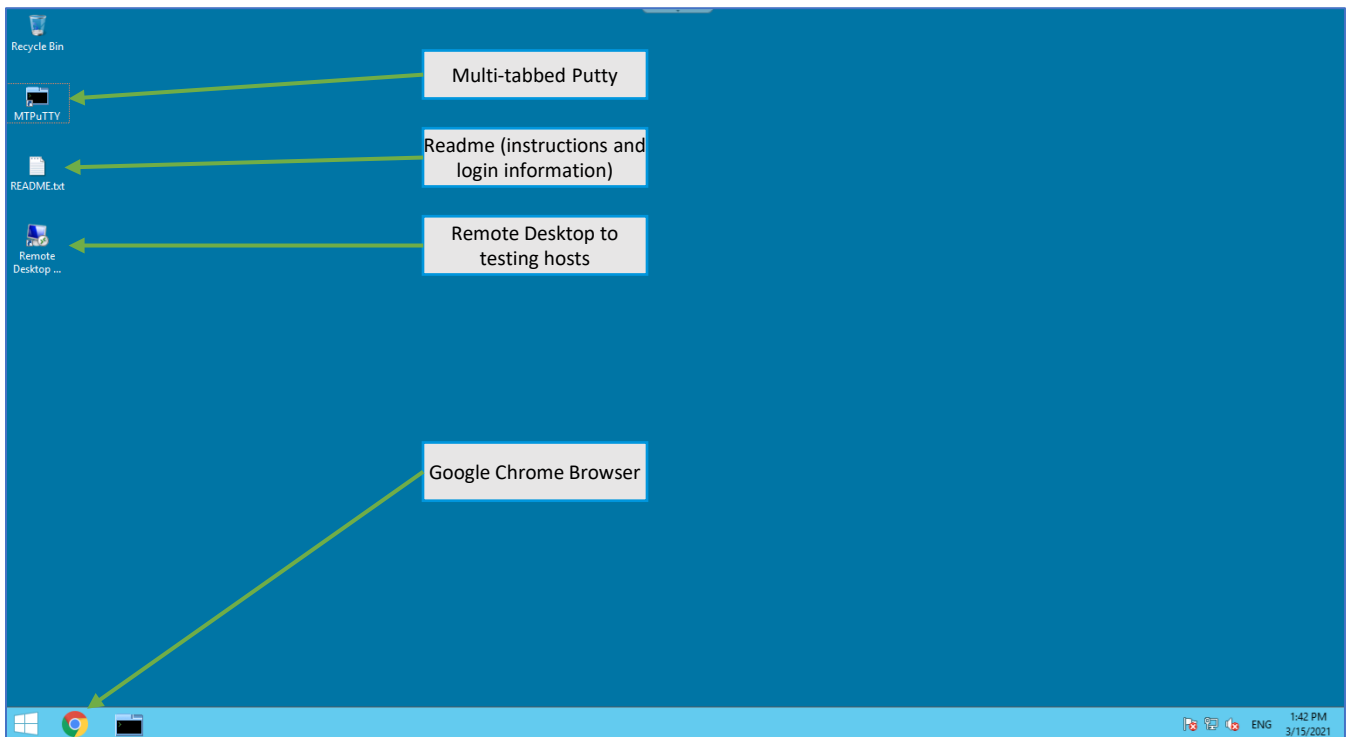
- Branch/Node/CPE Assignment
- Remote Lab Access

If you have not yet been assigned a branch device, please contact the instructor as this is a shared environment, and each student will configure and monitor a specific branch node.

Question: What node is assigned to you in the lab topology? _____

Follow the instructions provided by your instructor to connect to the remote lab environment.

Once you have started your remote desktop session, you will be presented with the remote desktop:



On the remote desktop, open the Google Chrome browser window. The Google Chrome browser window contains a bookmark to the Versa Director. Log into the Versa Director with the username associated with your assigned branch device:

CPE	Username	Password
Branch110	labuser110	Versa@123
Branch111	labuser111	Versa@123
Branch112	labuser112	Versa@123
Branch113	labuser113	Versa@123
Branch114	labuser114	Versa@123
Branch115	labuser115	Versa@123

Lab Exercise Overview

In this lab you will perform various tasks. You will begin by verifying that your device configuration is synchronized with the configuration on Versa Director. A flow of the lab exercises is:

Examine the device Sync State and verify that the configuration is in synch

Create a backup (export) of the device configuration

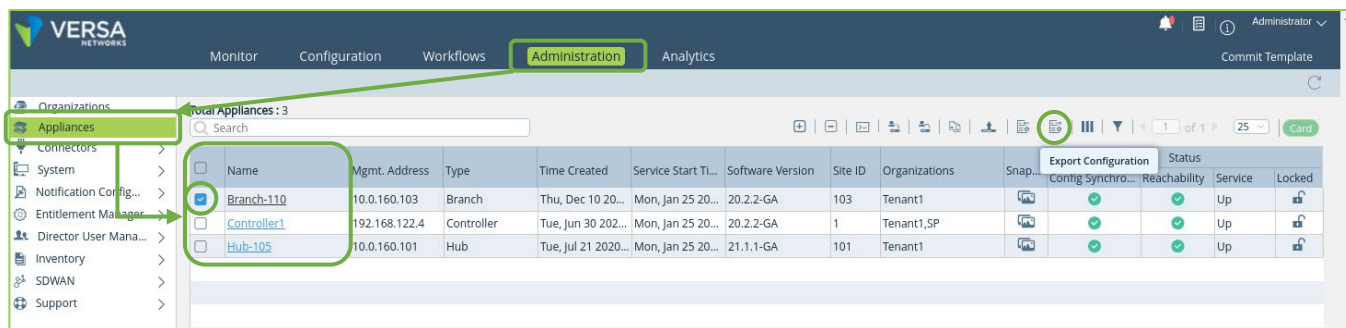
Modify a parameter in the device configuration using Appliance Context Mode

Examine the Sync State and verify that the configuration is out of sync

Import the device configuration to resolve the out-of-sync state

Exercise 2: Create A Backup of the Device Configuration (Export)

Open the Administration > Appliances dashboard in Versa Director. Locate your appliance in the Appliances table and check the box next to the appliance, then click the Export Configuration button to export the configuration to a text file. The file will be saved in the remote desktop Downloads folder.



Exercise 3: Manually modify your device configuration (in Appliance Context mode)

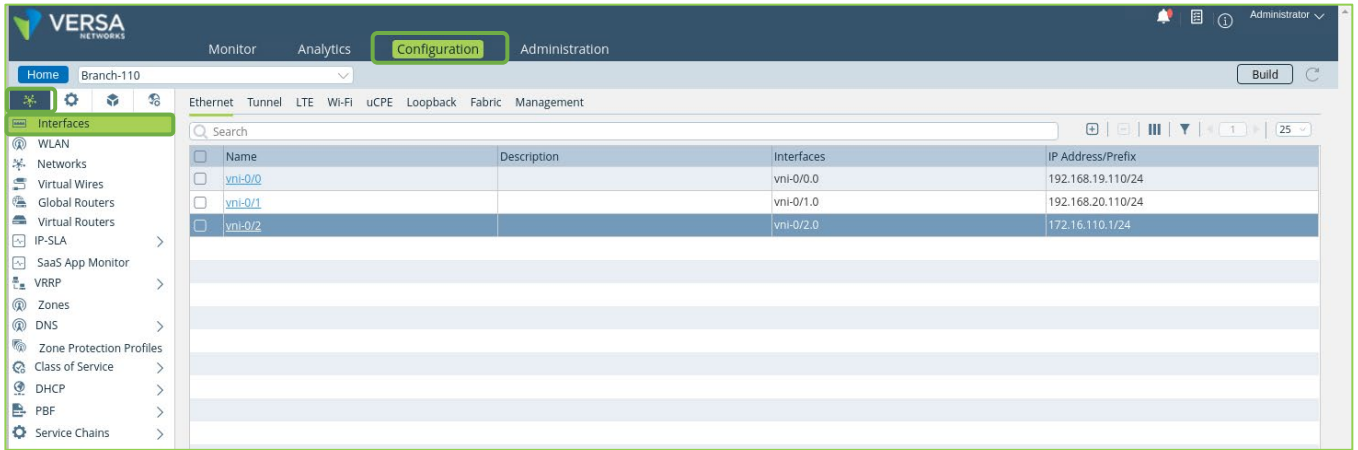
In this part you will change the LAN IP address of your device to a different address. This simulates a wrong or changed configuration on a port that will not impact your CPE to Director connectivity.

IMPORTANT

You are changing the IP address of a port on your device. Be sure you DO NOT CHANGE the WAN port addresses, as this will impact your ability to communicate with Versa Director.

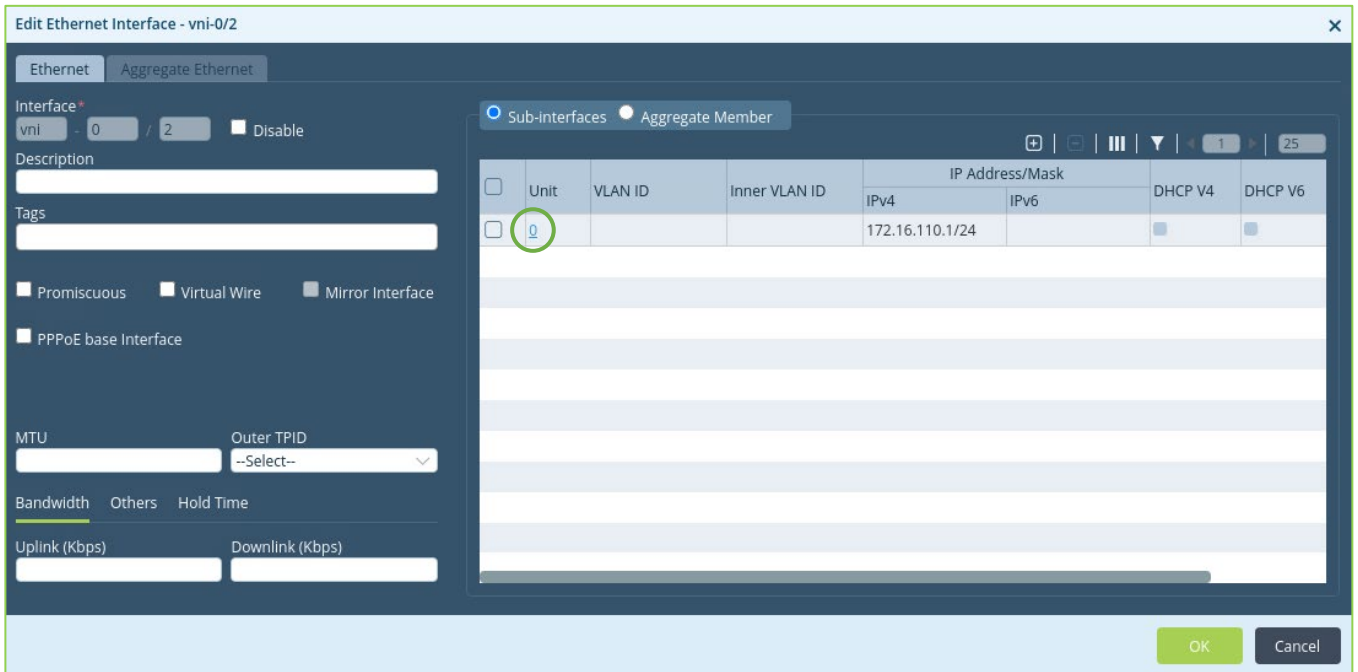
In the Administration > Appliances dashboard, click on your device name to open the Appliance Context mode. This will allow you to directly modify the configuration of the device.

In the Appliance Context mode, click the Configuration tab to view the device configuration.



Select the Interfaces item in the left-side Configuration menu to display the interface configuration.

Locate the vni-0/2 interface. The vni-0/2 interface is the logical port that is mapped to the local LAN. Click the vni-0/2 interface to open the interface configuration.



In the vni-0/2 interface configuration window, locate the Unit 0 (sub-interface 0) in the table. Note the IP address assigned to the interface.

Click the Unit 0 to modify the sub-interface.

Edit Sub-interface
✕

Unit*

VLAN ID

Inner VLAN ID

Disable

Description

MTU

Interface Mode

IPv4

IPv6

Static Address

Static Address

<input type="checkbox"/> IP Address/Mask	+ -
<input type="checkbox"/> 172.16.110.1/24	

DHCP V4

Route Preference

Disable Broadcast Flag

Reachability Monitor

Enable ICMP

Interval

Threshold

FQDN

Directed Broadcast

SLA Endpoint

Static ARP

VRRP

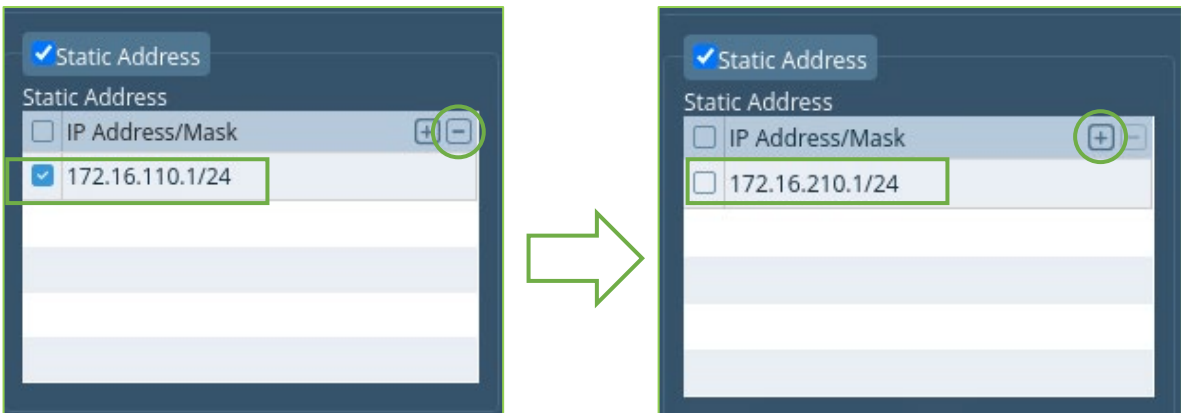
Standby

Subnet Address/Mask*	Host IP Address*	MAC Address*	
<input type="text" value="--Select--"/>	<input type="text"/>	<input type="text"/>	+
No Records to Display			

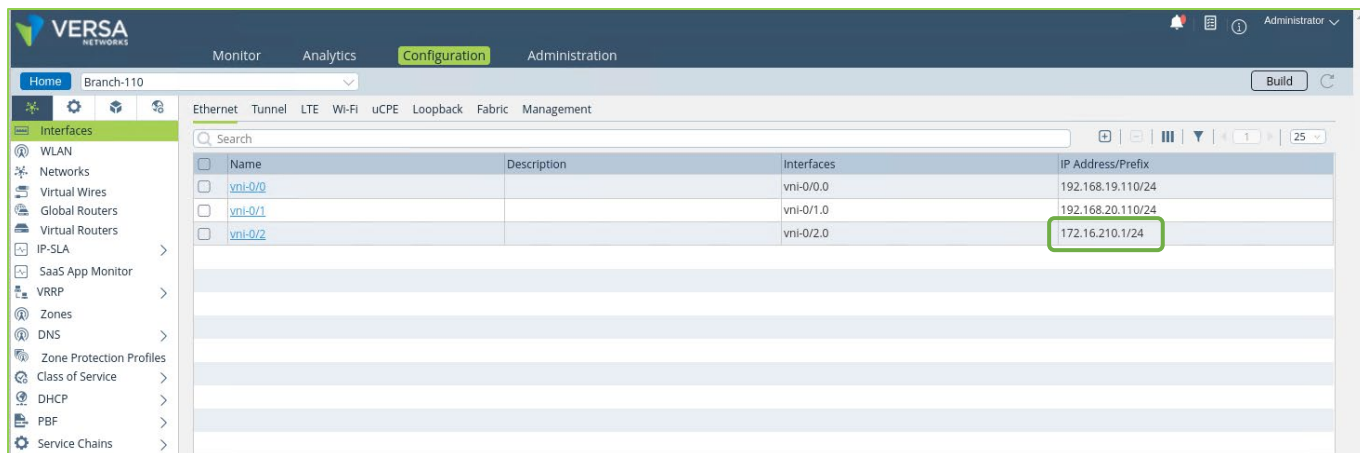
OK

Cancel

In the Edit Sub-Interface window, locate the Static IPv4 Address box. The interfaces in VOS can have multiple IP addresses assigned to the same interface. Remove the existing sub-interface IP address and add a new address that is incorrect. You can choose any IPv4 address in the 172.16.xxx.yyy/24 range that is different from the one that is originally configured on your device, then click OK.



Because you are in Appliance Context mode, the changes will take place immediately. Continue to click the OK buttons until you have returned to the main Interfaces dashboard. Verify that your change was applied in the Interfaces table.



The screenshot shows the Versa Networks Configuration page for Branch-110. The 'Configuration' tab is active. The 'Interfaces' table is displayed with the following data:

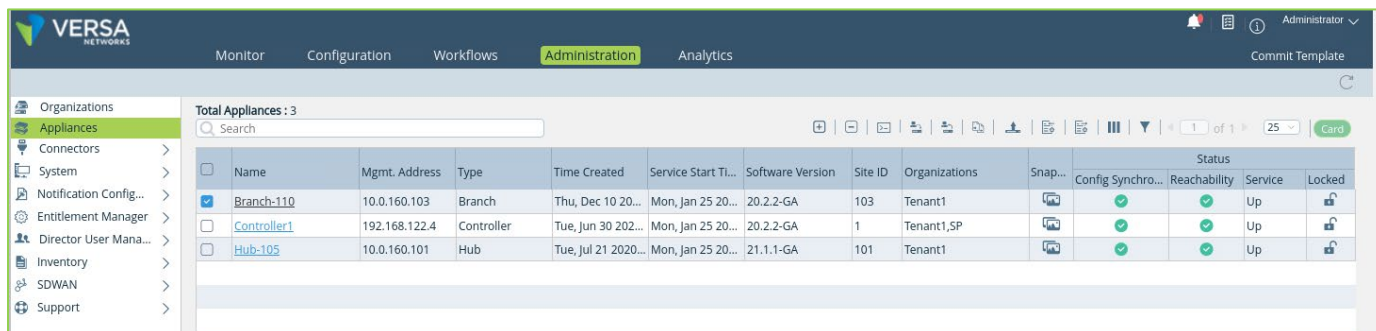
Name	Description	Interfaces	IP Address/Prefix
<input type="checkbox"/> vni-0/0		vni-0/0.0	192.168.19.110/24
<input type="checkbox"/> vni-0/1		vni-0/1.0	192.168.20.110/24
<input type="checkbox"/> vni-0/2		vni-0/2.0	172.16.210.1/24

Exercise 4: Reload the saved configuration file to fix the address change

In this part you will reload the saved configuration to your device to reset the change you just made. This is done through the main Administration > Appliances dashboard.

Click the Home button in the top-left corner to exit Appliance Context mode, then navigate to Administration > Appliances.

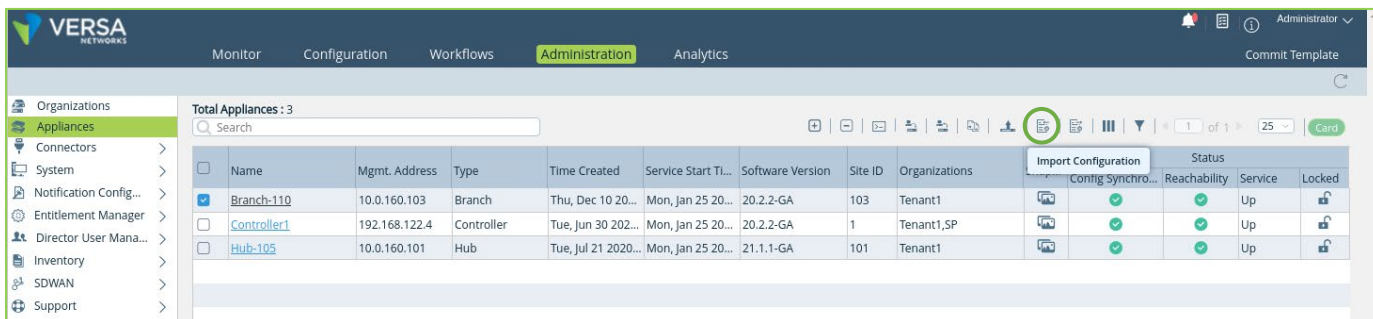
In the Administration > Appliances dashboard, locate your device in the table and check the box next to your device.



The screenshot shows the Versa Networks Administration page for Branch-110. The 'Administration' tab is active. The 'Appliances' dashboard is displayed with the following data:

Name	Mgmt. Address	Type	Time Created	Service Start Ti...	Software Version	Site ID	Organizations	Snap...	Config Synchrono...	Reachability	Service	Locked
<input checked="" type="checkbox"/> Branch-110	10.0.160.103	Branch	Thu, Dec 10 20...	Mon, Jan 25 20...	20.2.2-GA	103	Tenant1				Up	
<input type="checkbox"/> Controller1	192.168.122.4	Controller	Tue, Jun 30 202...	Mon, Jan 25 20...	20.2.2-GA	1	Tenant1,SP				Up	
<input type="checkbox"/> Hub-105	10.0.160.101	Hub	Tue, Jul 21 2020...	Mon, Jan 25 20...	21.1.1-GA	101	Tenant1				Up	

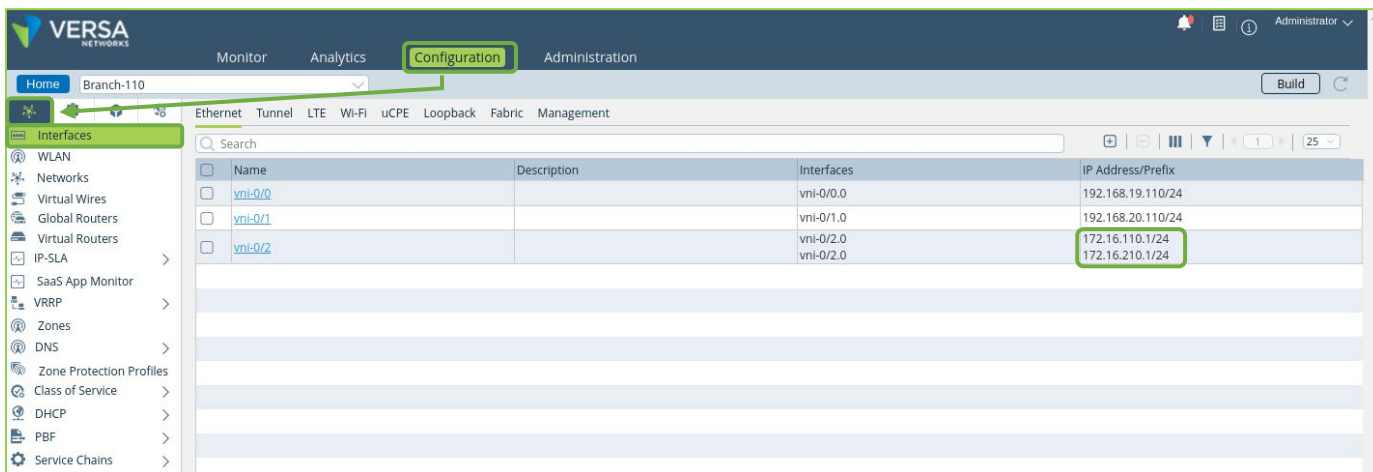
After you have marked the box next to your device, click on the Import Configuration button and browse to the Downloads folder. Locate the configuration file that was saved by the export process (device-name.cfg file). Click OK and you should see a message that indicates that the configuration file was imported.



After you have marked the box next to your device, click on the Import Configuration button and browse to the Downloads folder. Locate the configuration file that was saved by the export process (device-name.cfg file). Click OK and you should see a message that indicates that the configuration file was imported.

Next you will verify that the configuration was imported.

Click your device in the Appliances table to open the Appliance Context mode for your device. In Appliance Context mode, navigate to Configuration > Networking > Interfaces



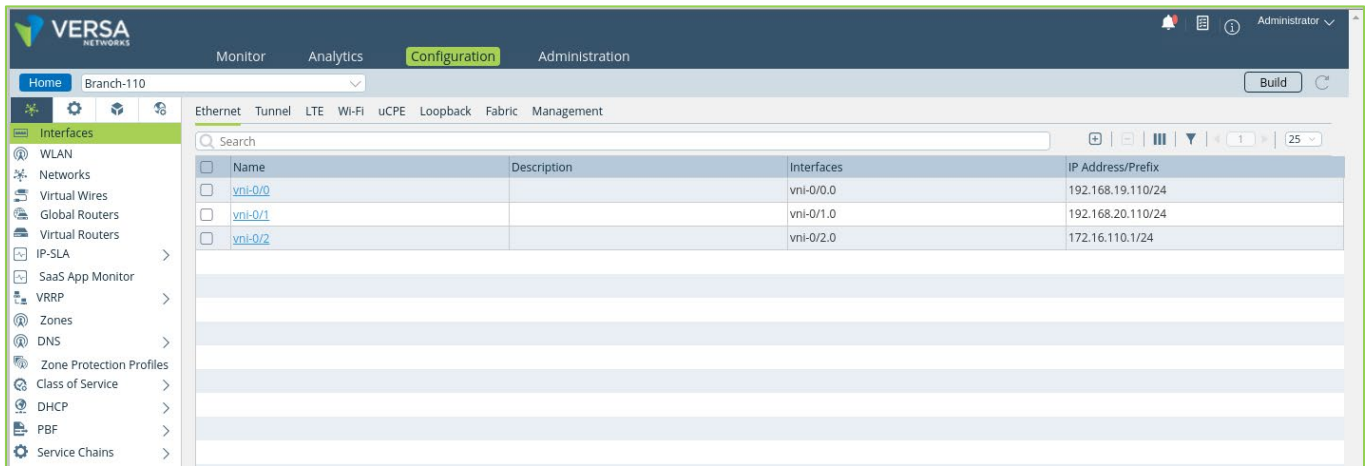
Note that 2 IP addresses are present: the misconfigured interface address and the imported (correct) interface address. This is because the configuration import process acts as a “merge” operation. If conflicting values are present in the configuration, the imported value over-writes the old value. If multiple values are supported in part of a configuration, then imported value is added to the configuration.

Remove the incorrect IP address from the interface.

Open the vni-0/2 interface, then edit the sub-interface that contains the IP addresses.

Select the incorrect address and click the – button to delete the interface.

Click OK until you reach the Interfaces configuration dashboard. Verify that the incorrect interface has been removed.



The screenshot shows the Versa Networks Configuration Management interface. The top navigation bar includes Monitor, Analytics, Configuration (highlighted), and Administration. The left sidebar lists various configuration categories, with Interfaces selected. The main content area displays a table of interfaces:

Name	Description	Interfaces	IP Address/Prefix
<input type="checkbox"/> vni-0/0		vni-0/0.0	192.168.19.110/24
<input type="checkbox"/> vni-0/1		vni-0/1.0	192.168.20.110/24
<input type="checkbox"/> vni-0/2		vni-0/2.0	172.16.110.1/24



STOP! Notify your instructor that you have completed this lab.