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DNE DNA Center Rest-API with Postman Preparation

Overview

This section of the repository is built out in LAB form to guide you through the typical steps required to enable the various automation tasks delivered by DNA Center. This lab will give a postman collection and environment required to prepare the lab for the DNE event.

DCLOUD as a LAB

Overview

This section will explain which lab to utilize within the **DCLOUD** environment to run these labs. It will also discuss a customer POC environment and the steps necessary to successfully run these sections within a customer environment for localized testing.

SJC

Please use the following lab environment for the event.

[Cisco Enterprise Networks Hardware Sandbox](#)

Components

The DCLOUD session includes the following equipment:

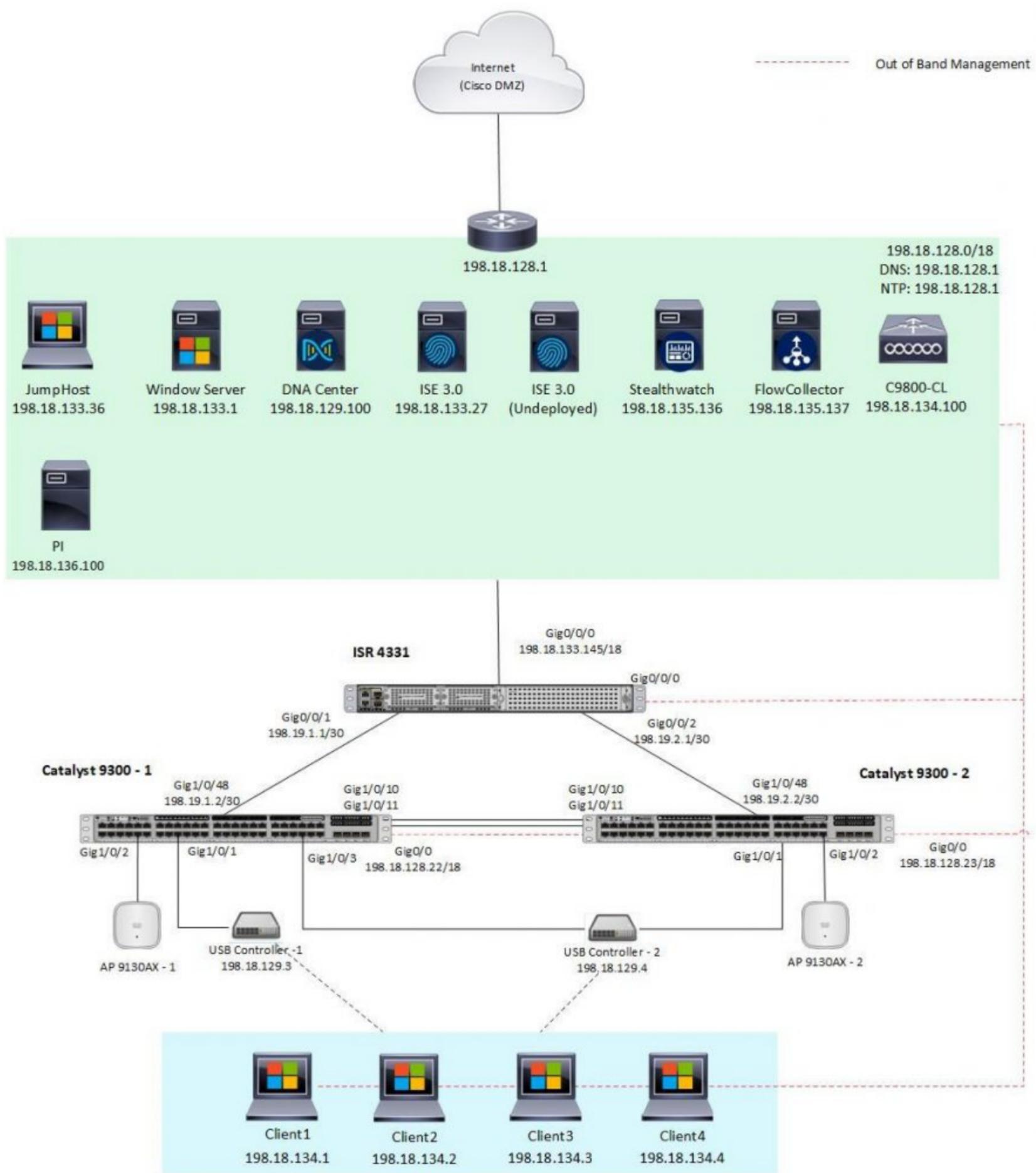
Virtual Machines:

- DNA Center 2.2.3.4 or better
- Identity Services Engine (ISE) 3.0 Patch 4 or better (deployed)
- Identity Services Engine (ISE) 3.0 (Not deployed)
- Stealthwatch 7.4.0 or better
- FlowCollector 7.4.0 or better
- Cisco Prime Infrastructure 3.10 or better
- Script Server – Ubuntu 20.04 or better
- Wireless LAN Controller – C9800 running IOS-XE Bengaluru 17.5.1 code or better
- Windows 10 Jump Host
- Windows Server 2019 – Can be configured to provide identity, DHCP, DNS, etc.
- Windows 10 Clients

Hardware Devices:

- ISR 4451 Router – 17.06.01a IOS-XE Code
- Catalyst 9300 Switch – 17.06.01 IOS-XE Code with Embedded Wireless Controller (EWC) and ThousandEyes Enterprise Agent
- 9130AX Access Points
- Silex Controllers (3 Wired NIC's and 1 Wireless NIC)

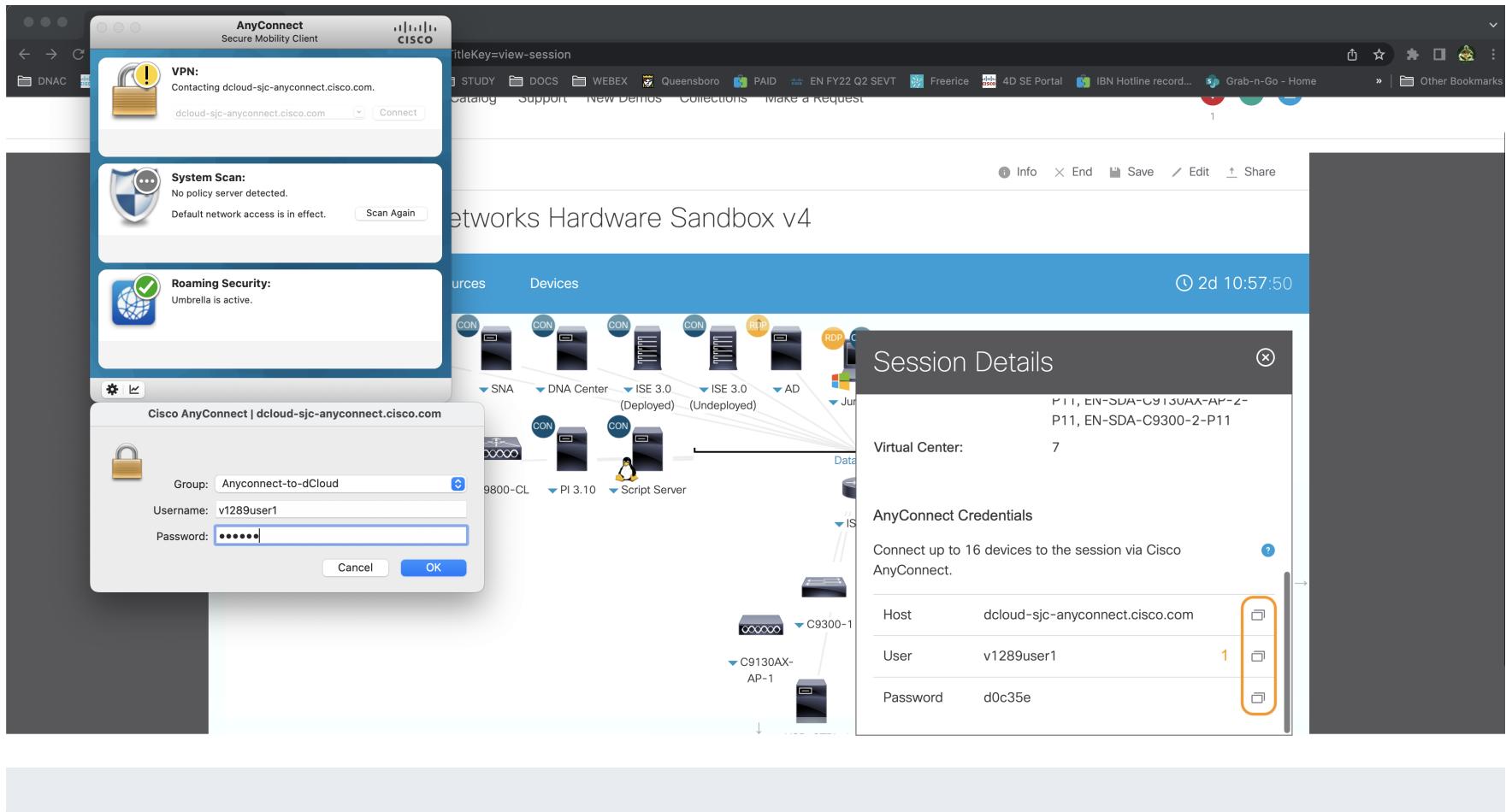
The lab environment that is available is depicted here:



DCLOUD LAB Preparation

dCLOUD VPN Connection

Use AnyConnect VPN to connect to dCLOUD. When connecting, look at the session details and copy the credentials from the session booked into the client to connect.



dCLOUD Service Optimization

The dCLOUD environment used in the lab need to be optimized prior to the session, and to do this we need to disable the following:

Servers



Enable status polling

► en-dnac-2_2_2_0



► en-pi



► Identity Services Engine



► ise_3_0



► en_fcnf_7_3



► en_smc_7_3



► EN-C9800-WLC



► ad1



► Automation



► en_ubuntu_20_04



► wkst1



► Client1_Win10



► Client2_Win10



► Client3_Win10



► Client4_Win10



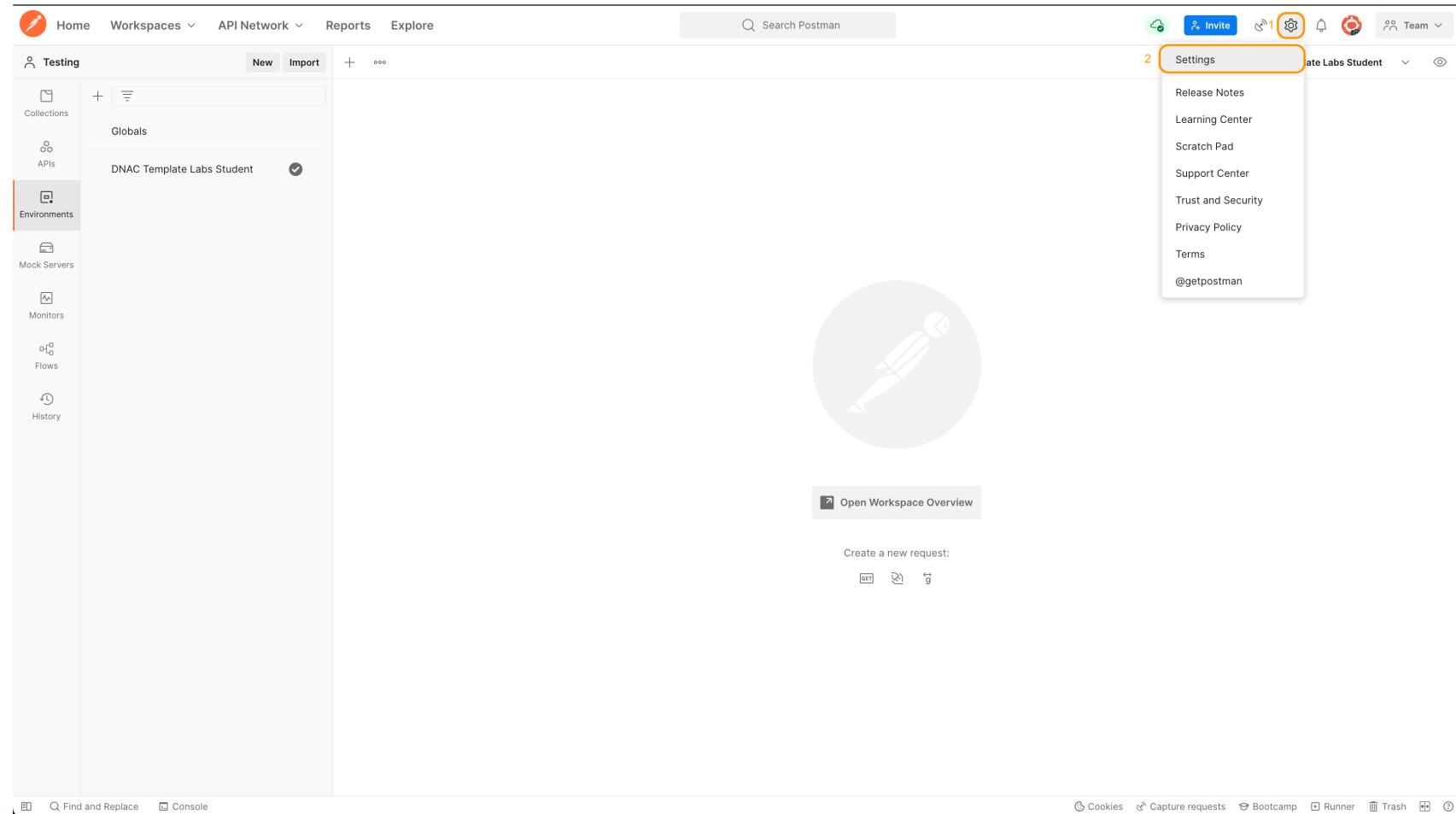
In order to accomplish this, use the drop down menu item by each that is shutdown in the image and click the shutdown link.

SSL Settings and disabling Validation

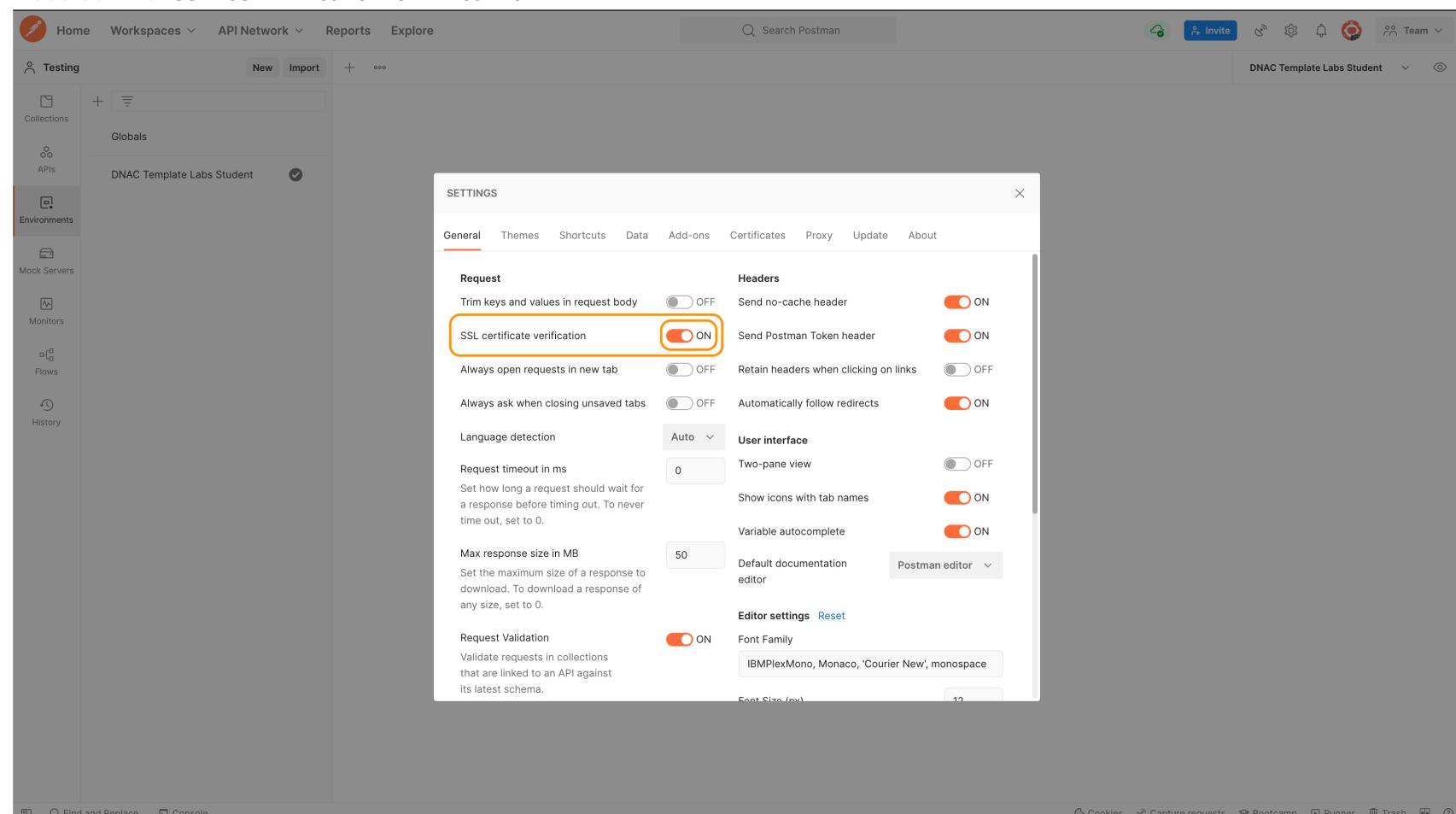
For lab purposes DNA Center utilizes a self signed certificate which would fail any validation precheck. In order to test in the lab we will therefore disable this setting.

Follow these steps:

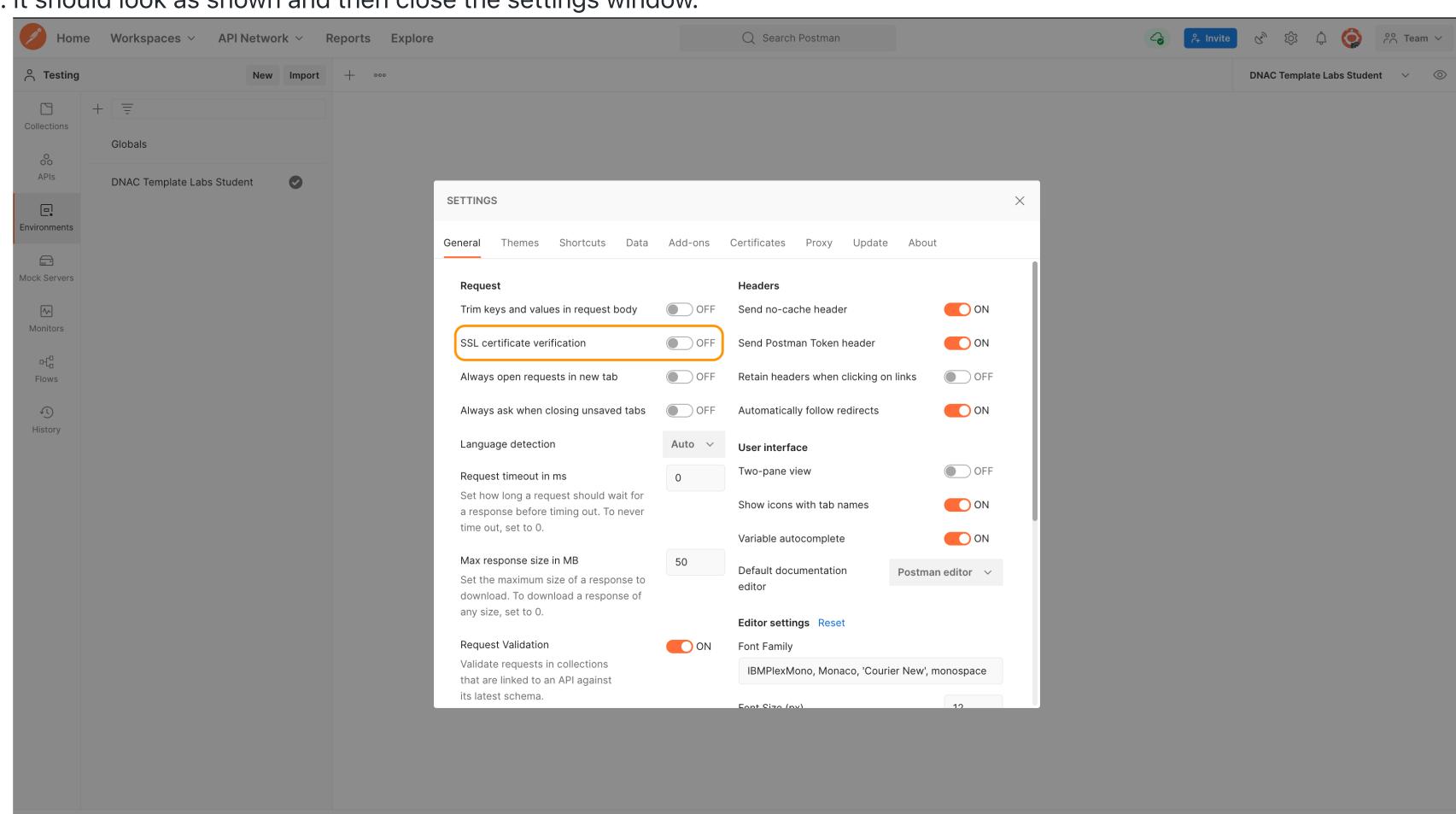
1. Click the settings gear icon on the top right of postman to select settings.



2. Deselect the SSL certificate verification



3. It should look as shown and then close the settings window.



Postman Collection and Environment Import

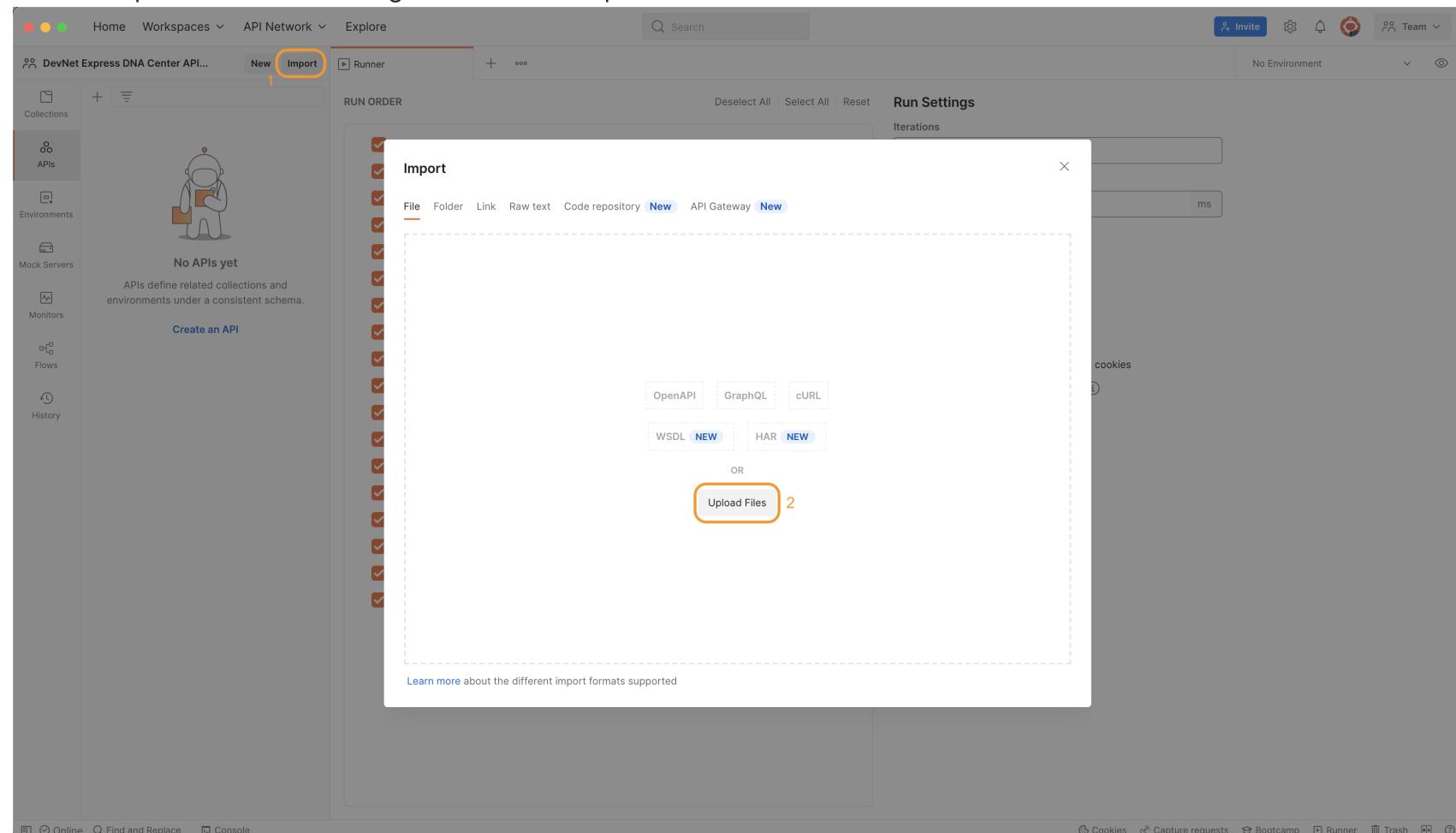
To prepare Postman for the lab please download the following collection and environment zip file and upload them into Postman. Download the following Student Collection which includes 6 collections and one environment. To do this right click and open this link in a new tab to download them:

1. Please download the following Instructors bundle. [Instructor-Collection](#)

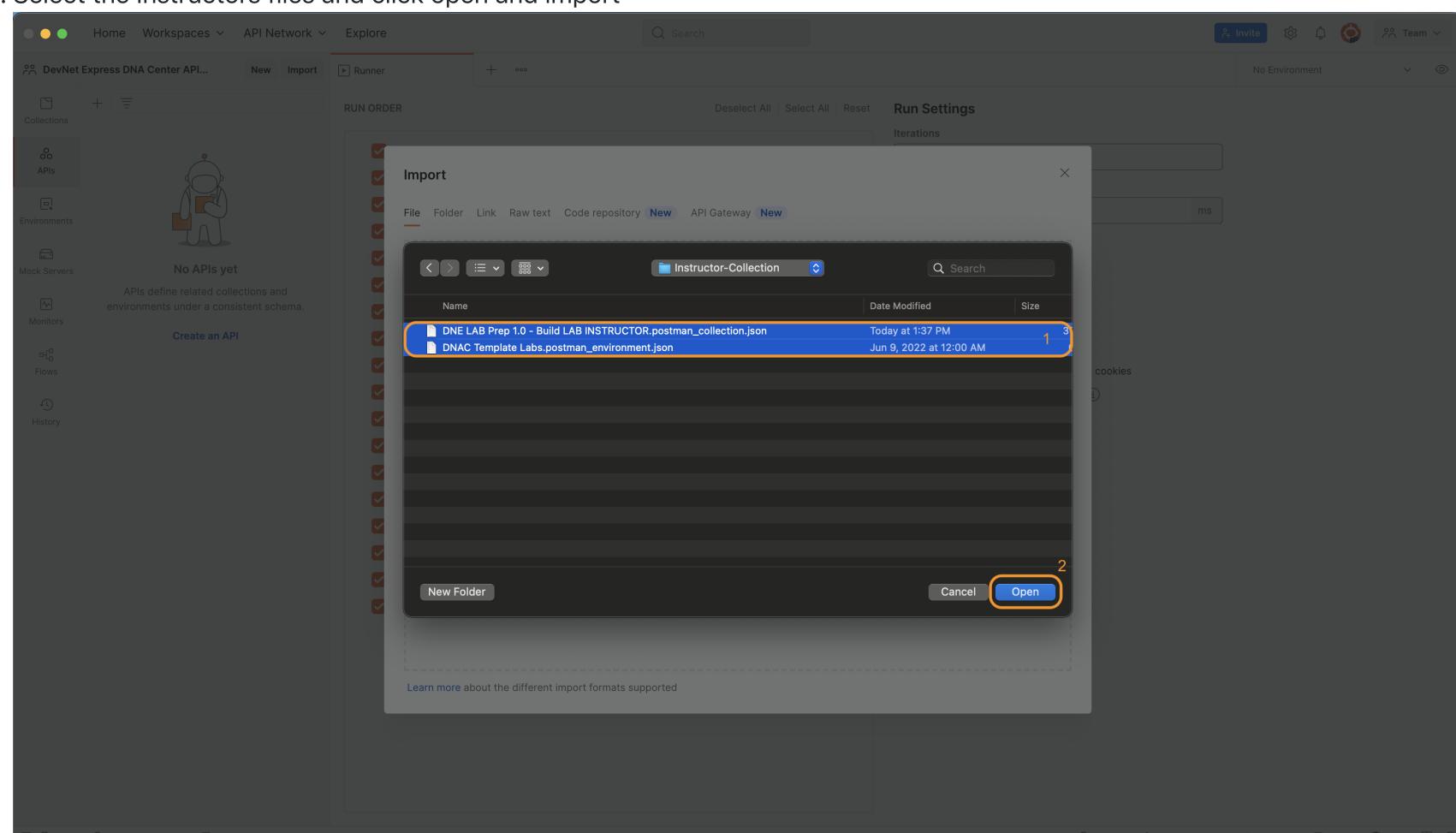
Once the file has been downloaded uncompress/unzip it and import all the files into Postman.

Follow these steps:

1. Within postman click the import button and an import window will appear
2. Click the upload file button to begin the files select process



3. Select the Instructors files and click open and import



4. Confirm the environment is present and set it active

The screenshot shows the DevNet Express DNA Center API interface. In the left sidebar, the 'Environments' tab is selected and highlighted with an orange box and the number '1'. To the right of the sidebar, the main area displays the 'DNAC Template Labs' environment. A button labeled 'Set active' is highlighted with an orange box and the number '2'. The top navigation bar includes 'Home', 'Workspaces', 'API Network', and 'Explore'.

This screenshot shows the same DevNet Express DNA Center API interface, but now the 'DNAC Template Labs' environment is selected and highlighted with an orange box and the number '1' in the sidebar. The main area and top navigation bar remain the same as the previous screenshot.

5. Confirm the Collection is present and then start the collection runner

This screenshot shows the DevNet Express DNA Center API interface with the 'Collections' tab selected in the sidebar, highlighted with an orange box and the number '1'. A context menu is open over a collection named 'DNE LAB Prep 1.0 - Build LAB INSTRU...', with the 'Run collection' option highlighted by an orange box and the number '2'. The 'RUN ORDER' panel on the right lists numerous API requests, many of which are checked, and the 'Run Settings' panel on the right contains various configuration options. An orange box labeled '3' highlights the list of requests in the 'RUN ORDER' panel, and another orange box labeled '4' highlights the 'Run DNE LAB Prep 1.0 - Build LA...' button in the 'Run Settings' panel.

6. Verify all of the Collection ran successfully

The screenshot shows the DevNet Express DNA Center API interface. On the left, there's a sidebar with categories like Collections, APIs, Environments, Mock Servers, Monitors, Flows, and History. The main area displays a test run titled "DNE LAB Prep 1.0 - Build LAB INSTRU...". It shows a summary of 35 passed tests, 0 failed, and 0 skipped. Below this, a detailed log of API requests is listed, each with a status (Pass or Fail), a message, the API endpoint, and response details (status code, ms, KB). The log includes various actions such as creating a token, areas, buildings, floors, and devices, as well as managing discovery tasks and sites. A large orange rectangle highlights the first few items in the log.

Action	Status	Message	Endpoint	Response
POST DNAC Token	Pass	Discovery Created		200 OK 88 ms 1.027 KB
POST Create Area	Pass	Body has taskId		200 OK 170 ms 1.041 KB
POST Create Building	Pass	Discovery Id acquired		202 Accepted 106 ms 865 B
POST Create Floor	Pass	Device IP acquired		202 Accepted 73 ms 801 B
GET Get Global SiteID	Pass	Discovered device assigned to site		200 OK 90 ms 1.027 KB
POST Create Settings	Pass	Discovery Created		200 OK 162 ms 1.045 KB
POST Create Credentials	Pass	Body has taskId		202 Accepted 111 ms 865 B
GET Get Credentials	Pass	Discovery Id acquired		200 OK 129 ms 5.378 KB
POST Assign Credentials	Pass	Device IP acquired		
GET Get Global Credentials CLI	Pass	Add Discovered Devices to Site		
GET Get Global Credentials SNMP RO	Pass	Discovered device assigned to site		
GET Get Global Credentials SNMP RW	Pass	Get Devices		
GET Get Global Credentials NETCONF	Pass	Device list acquired		
POST Create Discovery	Pass			
GET Get Discovery From Task	Pass			
GET Get Discovery Devices	Pass			
POST Add Discovered Devices to Site	Pass			
GET Get Devices	Pass			

7. Check the following on DNA Center:

- i. Hierarchy
- ii. Settings
- iii. Credentials
- iv. Telemetry
- v. Discoveries
- vi. Inventory

Summary

At this point DNA Center should be set up and ready for the attendees.

Disclaimer

Various labs are designed for use in the **DCLOUD** environment but can be used elsewhere. The environment allows for use with a web-based browser client for VPN-less connectivity, access as well as AnyConnect VPN client connectivity for those who prefer it. The labs are hosted out of our San Jose and RTP Facilities and so you would choose sessions from either US East or US West. Choose the Cisco Enterprise Network Sandbox v4 or greater To access this or any other content, including demonstrations, labs, and training in Cloud please work with your Cisco Account team or Cisco Partner Account Team directly. Your Account teams will make sure the session is scheduled and shared for you to use. Once booked follow the guide within Github to complete the tasks adhering to the best practices of the dCLOUD environment.