CiscoDNA – Bluecat Gateway Integration Guideline

1. Setup Bluecat Gateway.
   Please refer the following document:
   bluecat_gateway_installation_guide_18.10.2.pdf
   Login **vpn.bluecatlabs.net** VPN and download cisco_dna.tar.gz:
   http://10.245.0.162:8081/repository/bluecatnw/com/bluecatnw/cisco_dna/cisco_dna.tar.gz

   Precondition: the container must be installed lib contains in ipam\requirements.txt first. Below is command to install lib for container.
   # sudo docker exec bluecat_gateway pip install netaddr --user
   # sudo docker container restart bluecat_gateway

   a. Access bluecat-gateway address and login.
   b. Select Administration\Workflow Export/Import item
   c. Click browse file and choose cisco_dna.tar.gz
   d. Click Import button.
   e. Restart bluecat_gateway container
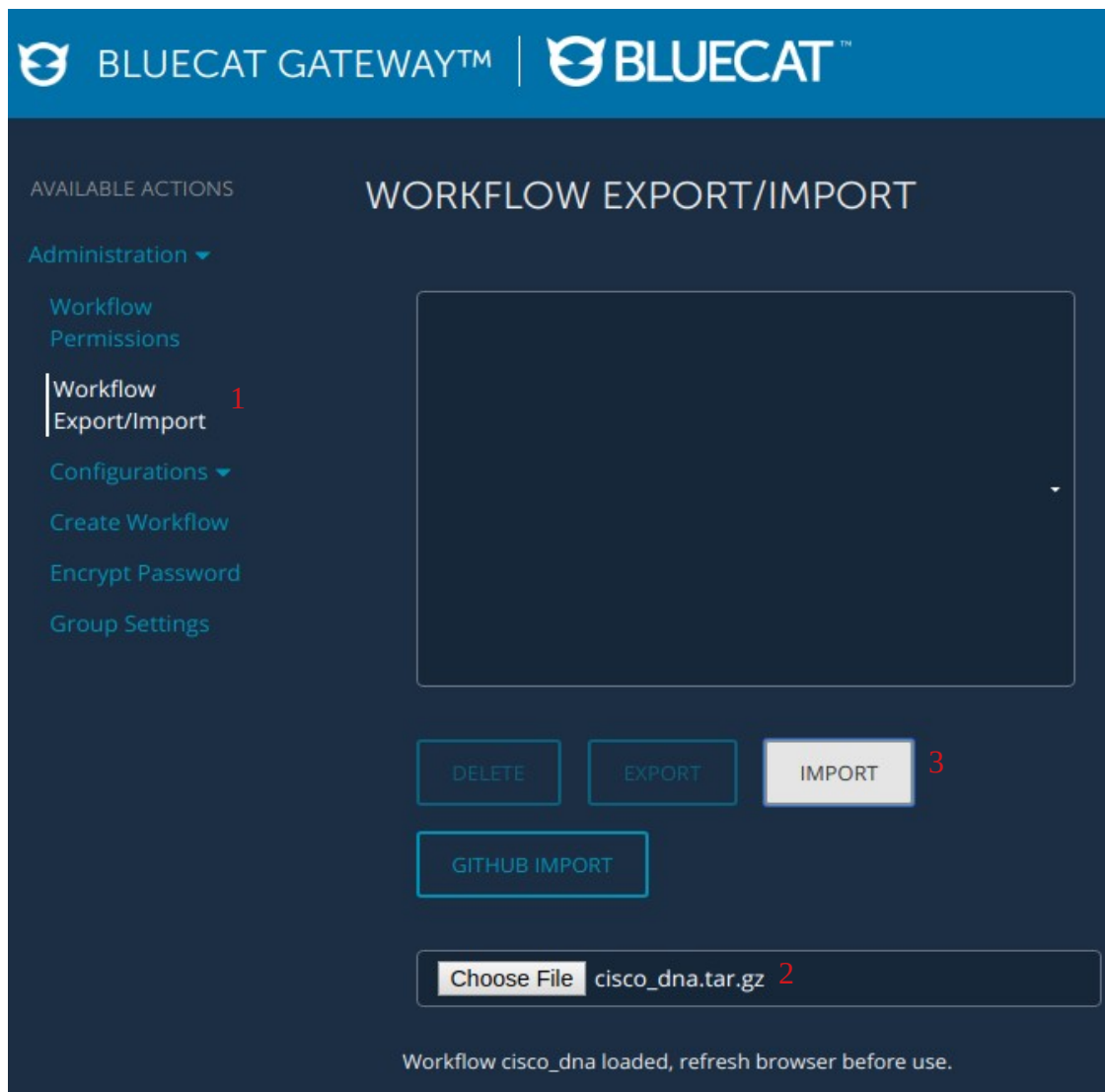
f. Re-login gateway and select Administration\Workflow Permissions item
g. Select ipam, then select ipam_page, select all in New Group Name field, click ADD.
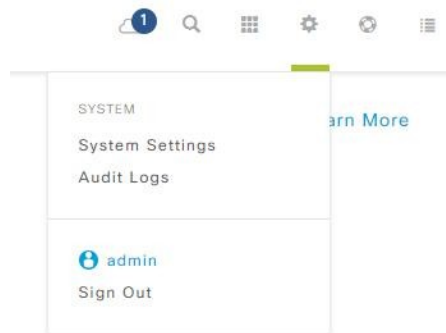
2. Setup CiscoDNA integrates BlueCat gateway
    a. Access Cisco DNA Center address and login
    b. Go to System Settings

    c. Select Settings tab and click IP Address Manager
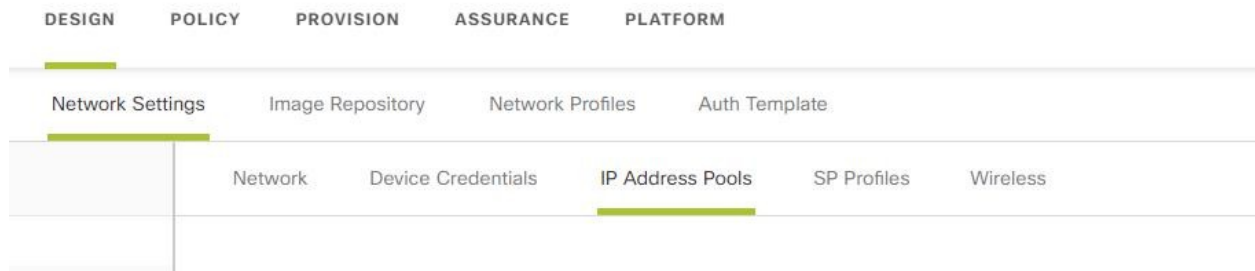   Select GENERIC provider and click to View select box to load view.

3. Using CiscoDNA UI.
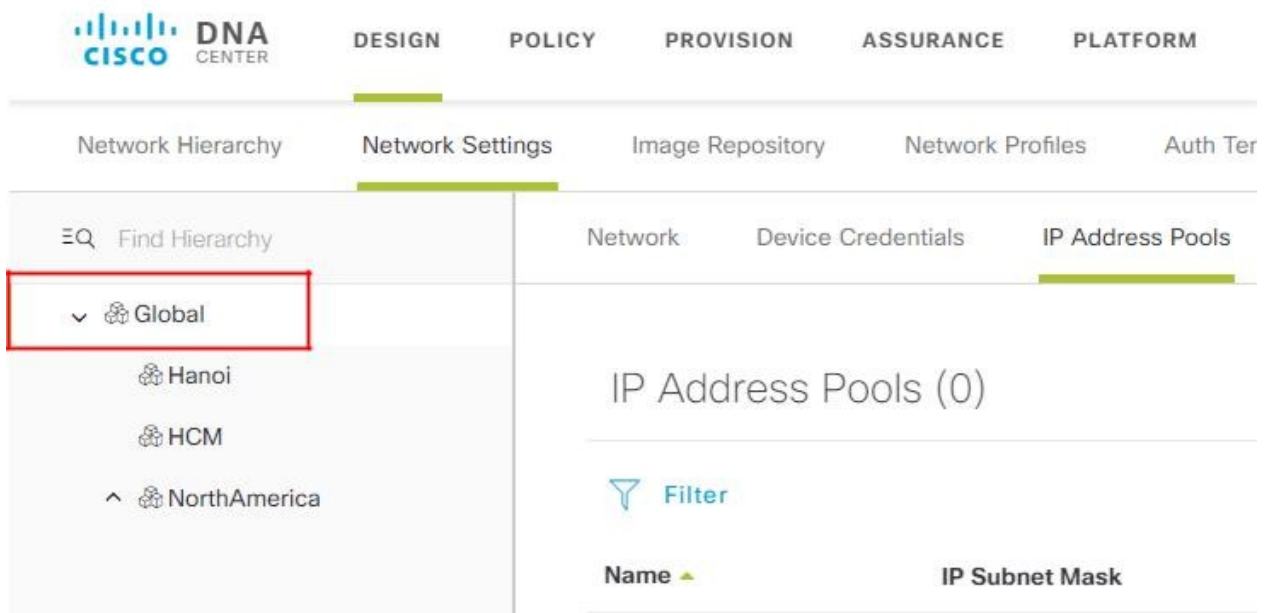   a. Create pool.
      There are two ways to create pool.
      # Using Import function to import existing pool in BAM
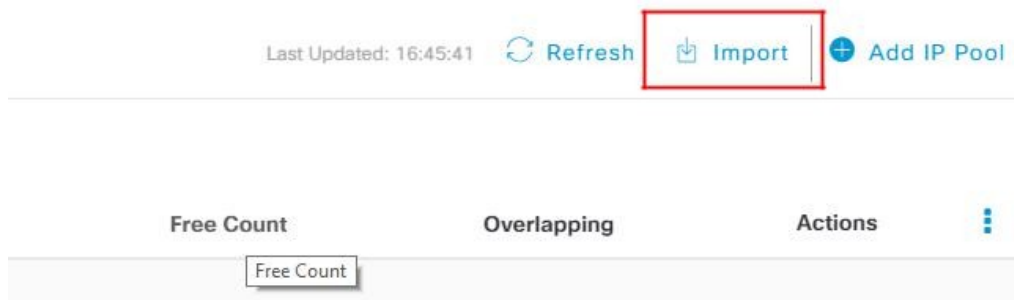   - Go to Design\Network Settings\IP Address Pools tab.

         - Select Global node.

         - Click Import icon.

- Import IP Pools window opened
- Input Cidr and click Retrieve button.
- Select pools that want to import then click Import

Import IP Pools ✕

CIDR

16.0.0.0/8

Retrieve

Note: Enter a CIDR and click on Retrieve to get the list of IP Pools available to import from GENERIC.

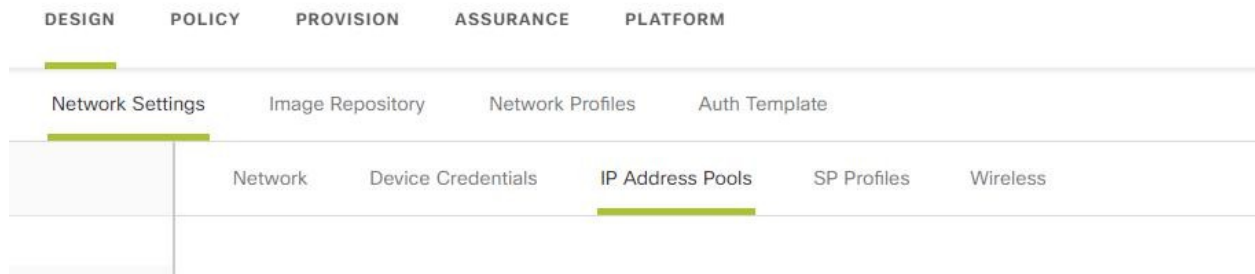☐ **Select All**

☑ 16.0.0.0/20

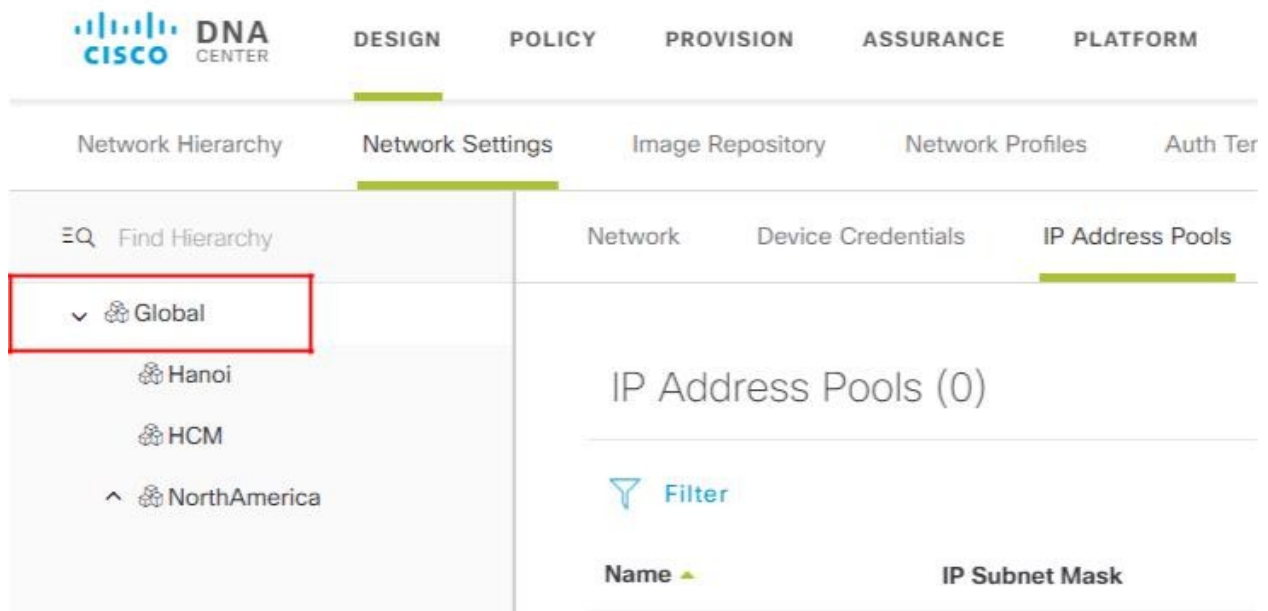Showing 1 of 1

Cancel **Import**
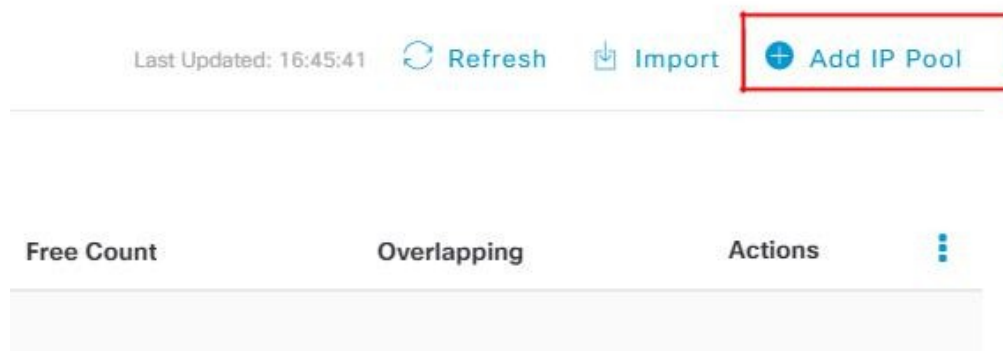
Using Add IP Pool function to create new pool

- Go to Design\Network Settings\IP Address Pools tab.

- Select Global node

- Click Add IP Pool icon

- Input IP Pool Name, IP Subnet, CIDR Prefix, Gateway IP Address.
- Select DHCP server, DNS server if any.
- Click Save button.

Add IP Pool   ✕

IP Pool Name *

create_pool_testing

IP Subnet *

10.0.0.0

CIDR Prefix

/8 (255.0.0.0)   ⌄

Gateway IP Address *

10.0.0.1|

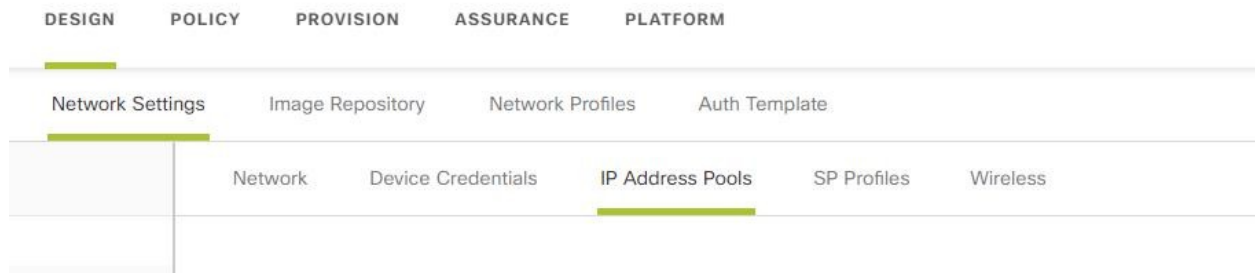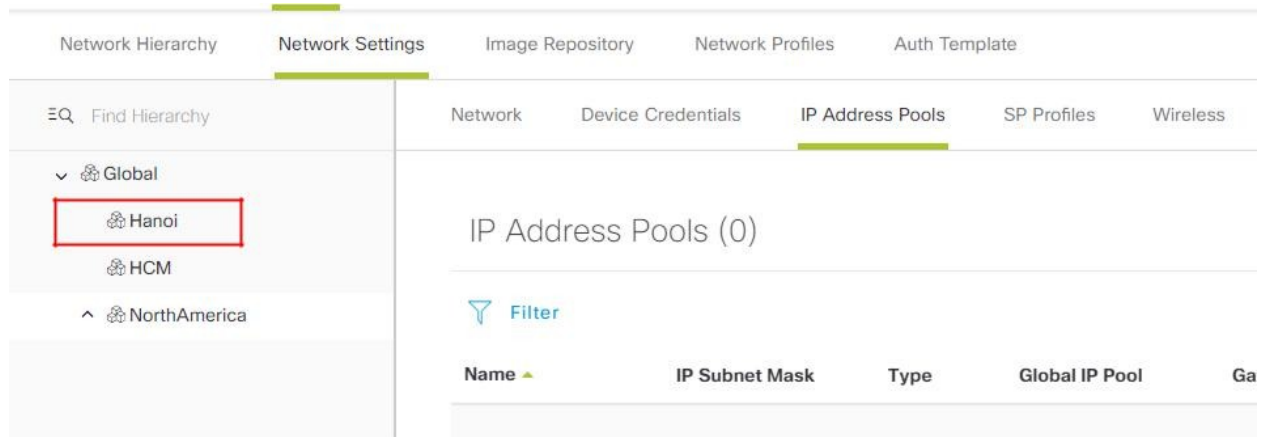DHCP Server(s)   ⌄

DNS Server(s)   ⌄

☐ Overlapping

Cancel   Save

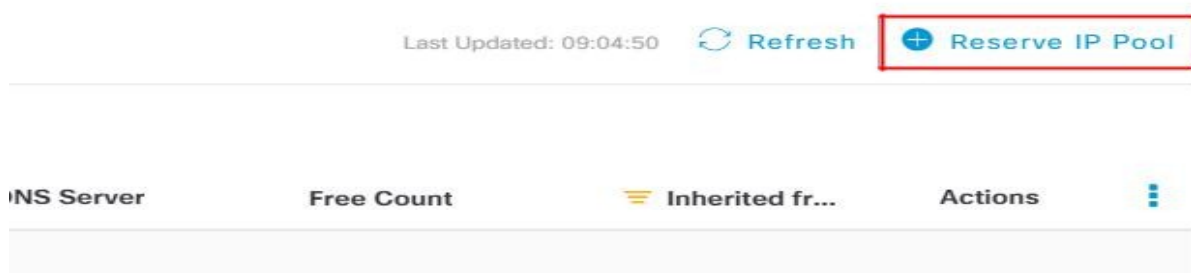b. Create Sub-pool
   Precondition: Global pool had been created.
   - Go to Design\Network Settings\IP Address Pools tab.

| DESIGN | POLICY | PROVISION | ASSURANCE | PLATFORM |

| Network Settings | Image Repository | Network Profiles | Auth Template |

| Network | Device Credentials | IP Address Pools | SP Profiles | Wireless |

- Select sub node under Global. If not then create.

| Network Hierarchy | Network Settings | Image Repository | Network Profiles | Auth Template |

EQ Find Hierarchy

| Network | Device Credentials | IP Address Pools | SP Profiles | Wireless |

∨ Global

Hanoi

HCM

∧ NorthAmerica

IP Address Pools (0)

Filter

| Name ▲ | IP Subnet Mask | Type | Global IP Pool | Ga |

- Click Reserve IP Pool icon

Last Updated: 09:04:50   Refresh   ⊕ Reserve IP Pool

| NS Server | Free Count | Inherited fr... | Actions | ⋮ |

- Input IP Pool Name
- Select Type is Generic
- Select Global IP Pool
- Input IP Subnet, CIDR Prefix
- Input Gateway if any.
- Select DHCP server, DNS server if any.
- Click Reserve button.

Reserve IP Pool ×

IP Pool Name *

sub_pool

Type

Generic ⌄

Global IP Pool *

16.0.0.0_20 (16.0.0.0/20) × ⌄

CIDR Notation / No. of IP Addresses *

16.0.0.0   /24 (255.255.255.0) ⌄   **OR**   No. of IP Addresses

Gateway IP Address

16.0.0.2

DHCP Server(s) ⌄

DNS Server(s) ⌄

☐ Overlapping

Cancel   **Reserve**

c. Assign IP Address
   - Precondition: Client plugin was installed. The suggested plugin is Servistate HTTP Editor and REST API Client
   - Login to DNAC and open plugin in another tab
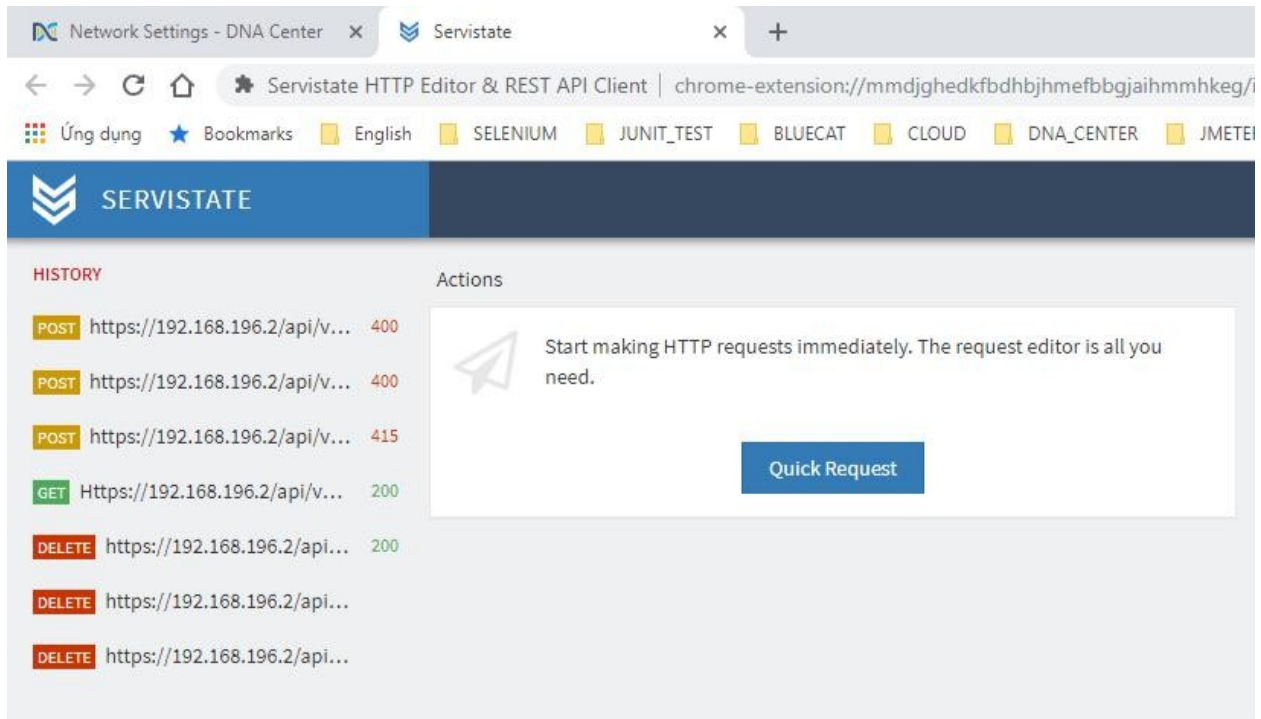
   - Click Quick Request button to open GUI
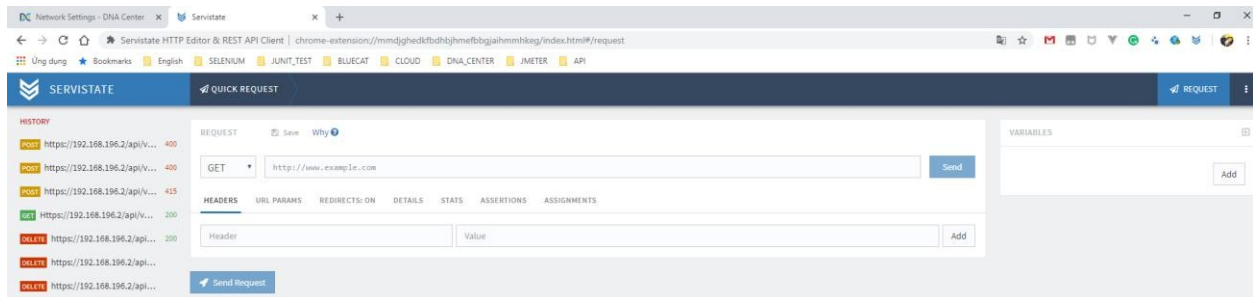
- Get pool_id by send Get quest like below:
https://<DNAC address>/api/v2/ippool?
ipPoolName=<pool_name>

- Send Post request:
https://<DNAC address> /api/v1/maintenance/assignip/<poolid>
Below is the payload:
{

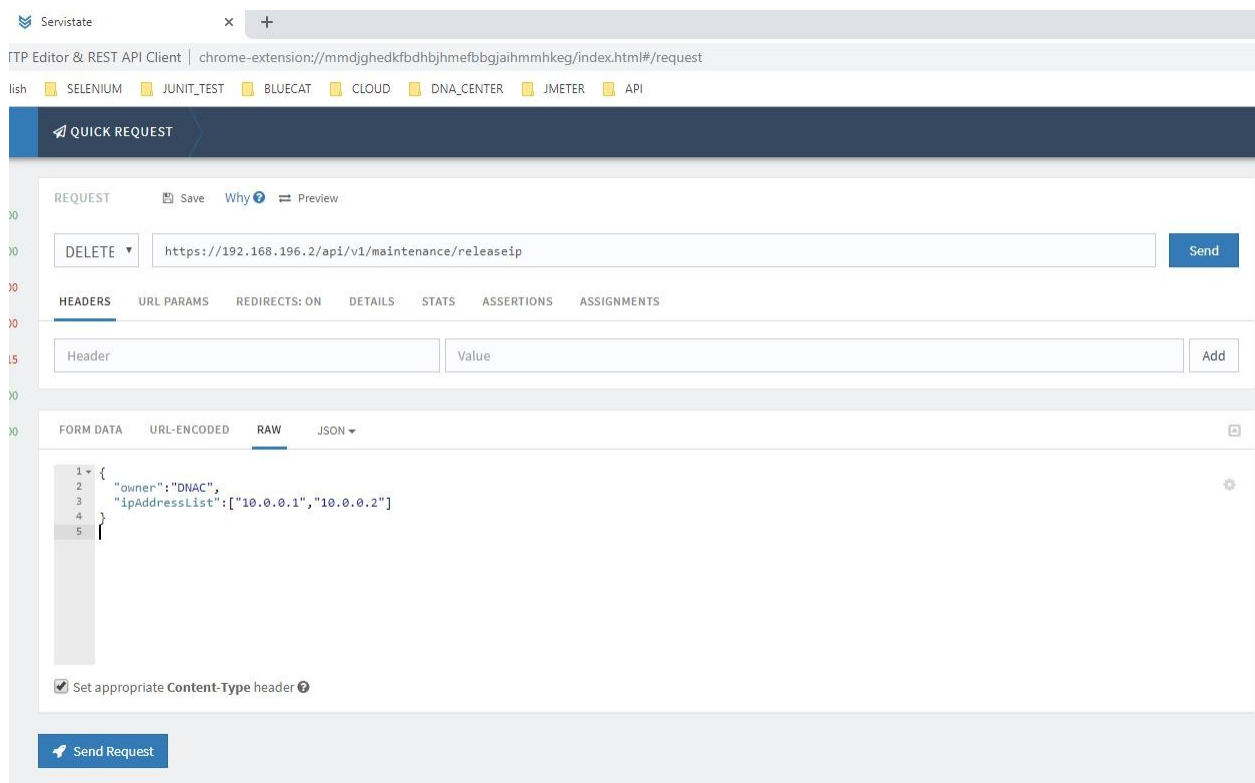   "owner":"DNAC",

   "numberOfAddresses":2

}

d. Release IP Address
- Precondition: Rest Client plugin was installed
- Open Rest Client
- Send Delete request

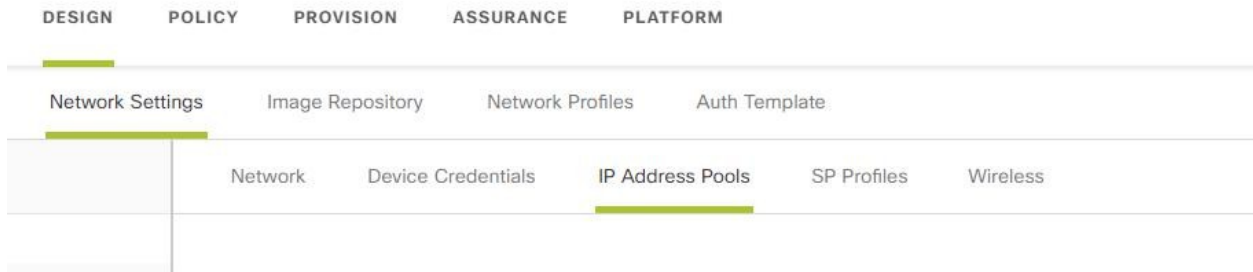https://<DNAC address>/api/v1/maintenance/releaseip

Below is the payload

{

  "owner":"DNAC",

  "ipAddressList":["10.0.0.0 ", "10.0.0.01"]

}

e. Release Sub-pool
   Precondition: All IP addresses under sub-pool must be released first
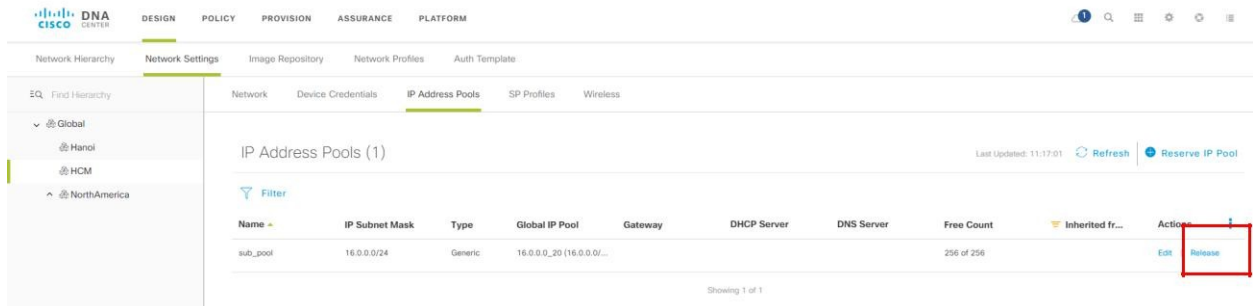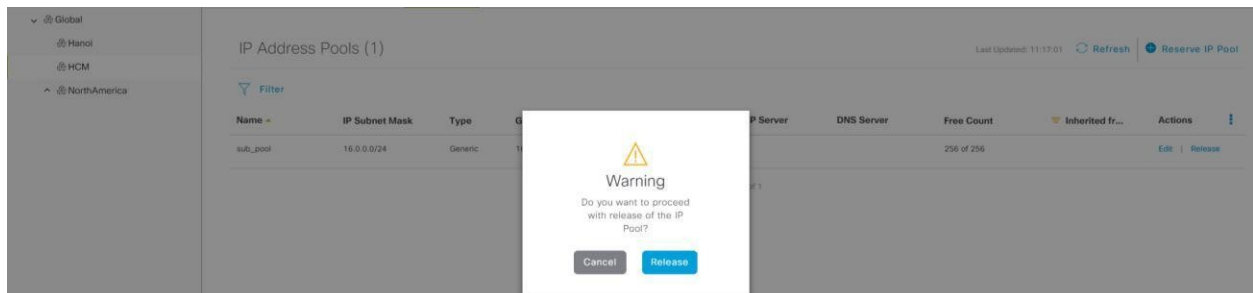   - Go to Design\Network Settings\IP Address Pools tab.

   - Select sub node under Global.

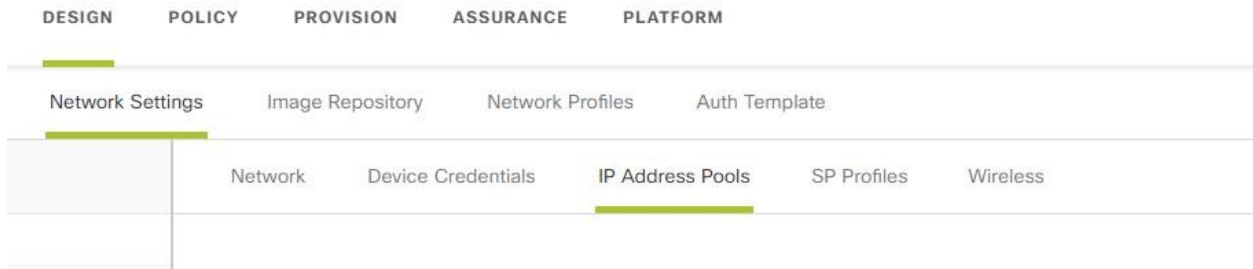   - Click Release icon on row contains sub-pool want to be released

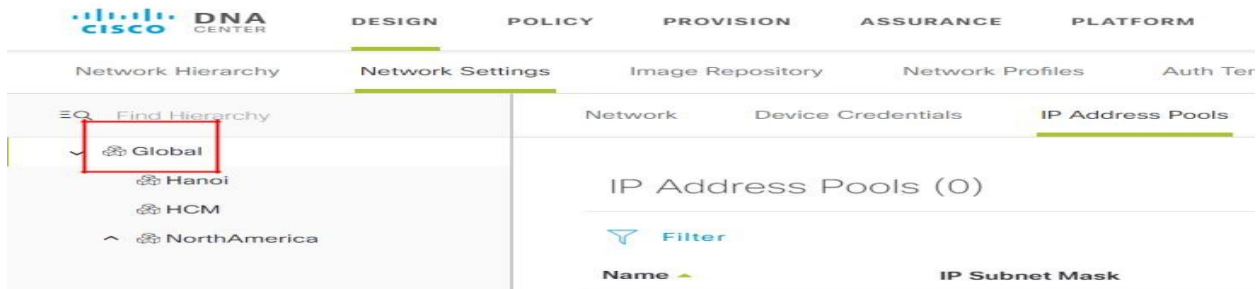
   - Click Release button on Confirm popup.

f. Release Pool

Precondition: All sub-pool under Global must be released first.
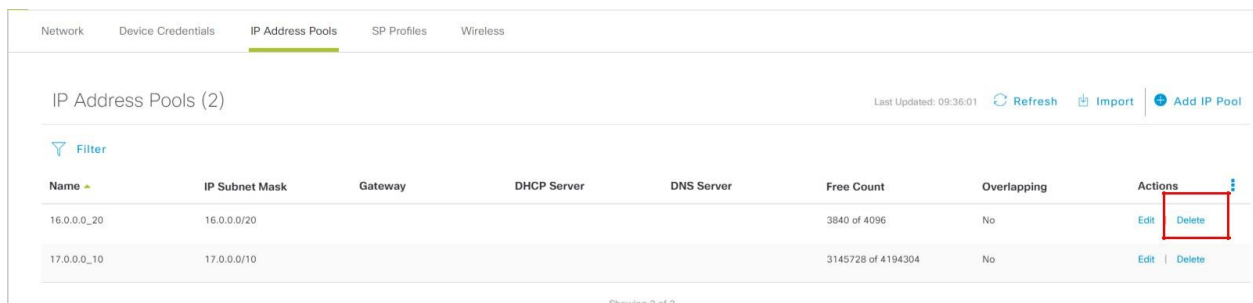
- Go to Design\Network Settings\IP Address Pools tab.

- Select Global.

- Click Delete icon on row contains pool to be deleted

- Click Delete button on Confirm popup.