



Installing Cisco VIM through Cisco VIM Unified Management

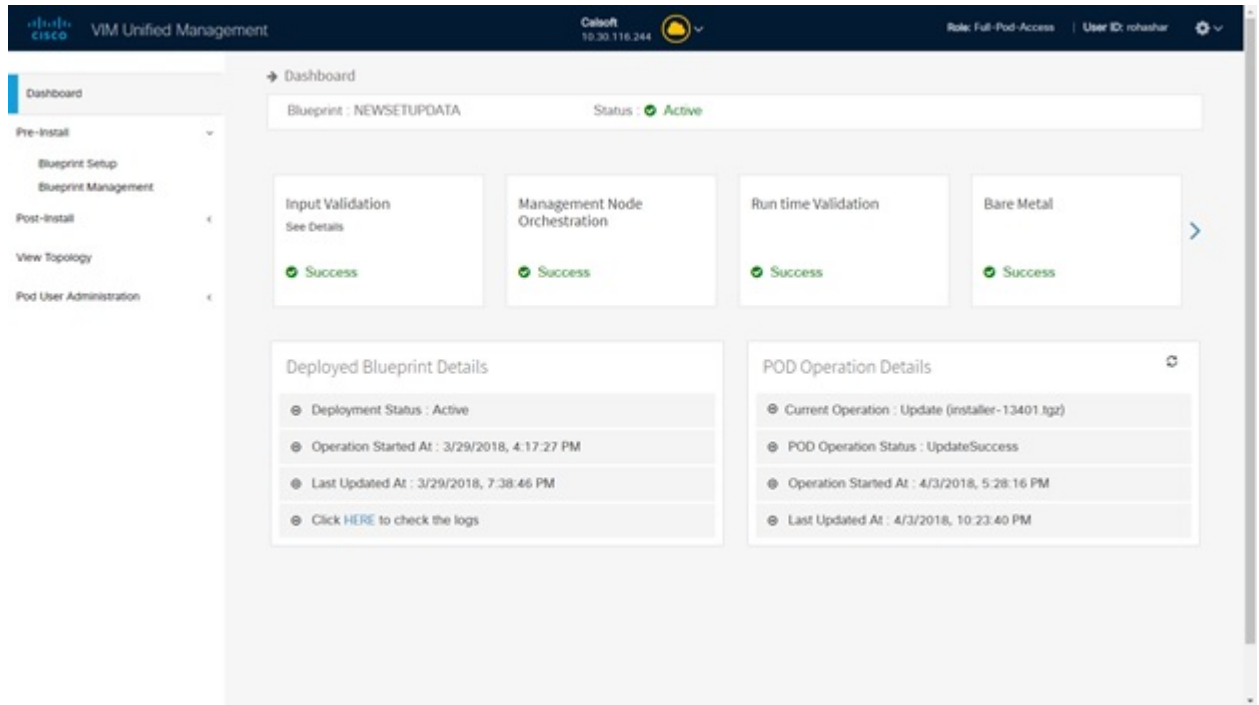
The VIM UM has an UI admin, who has the privilege to manage the UI offering. The Insight UI admin, has the rights to add the right users as Pod administrators. Post bootstrap, the URL for the UI will be: https://br_api:9000.

The following topics helps you to install and configure Cisco Virtual Infrastructure Manager with VIM Insight:

- [Unified Management Dashboard, on page 1](#)
- [Pods, on page 2](#)
- [Pod Administrator, on page 4](#)
- [Unified Management \(UM\) Administrator, on page 4](#)
- [Registering New Pod to Insight , on page 5](#)
- [Configuring OpenStack Installation, on page 9](#)
- [Post Installation Features for Active Blueprint, on page 63](#)

Unified Management Dashboard

When you login as UM admin, you will be redirected to the UM admin Dashboard.



The UM dashboard displays the following information about the pods it is currently managing:

Pod Status

- Active - Number of Pods which has health status OK (Example: Mgmt Node health of the pod is good).
- Inactive - Number of Pods whose health status is not good (Example: Mgmt Node health of the pod is not good).
- Total number of Pods - Number of Pods registered in the system.

Pod Users

- Total – Total number of users registered who are associated with at-least one Pod.
- Registered – Number of users who have completed the registration process and are associated with at-least one Pod.
- Active – Number of Online users who are associated with at-least one Pod.

You can see the list of Pod with its Pod name, description, IP address, location, Pod status along with the Total users and Active users of each pod. You can search for a Pod using Name, IP and location in the search option.

If you click **Get health of current nodes icon (spin)** it does the health check of the Pod.

Pods

Pods allows you to check the health status (indicated through green and red dot) of the pod respectively.

To fetch the latest health status, click **Refresh** which is at the upper right corner.

- Green dot – Pod is reachable and health is good.
- Red dot – Pod is not reachable.

Pod Users

The Pod Users page, gives you the details associated the pod, status (Online or Offline) and their Roles.

UM admin has the right to manage all Pod users in the system. The user with UM admin access can manage the following actions:

- Revoke User's permission from a specific Pod.
- Delete User from the system.

User Name	Email	IP Address	Role Name	Online	Action
Rohan R	rohashar@cisco.com	10.30.116.244	Full-Pod-Access	Online	↺
Rohan R	rohashar@cisco.com	172.28.123.204	Full-Pod-Access	Offline	↺
Rohan R	rohashar@cisco.com	10.30.117.238	Full-Pod-Access	Offline	↺
Rohan R	rohashar@cisco.com	10.23.229.228	Full-Pod-Access	Offline	↺

Revoking User

UM admin revokes the user's permission from a Pod by clicking **(undo)** icon. If the user is the only user with a Full-Pod-Access role for that particular Pod, then the revoke operation is not permitted. In this case, another user is granted with a Full-Pod-Access role for that Pod and then proceeds with revoking the old user.



Note If the user is revoked from the last associated Pod, then the user is deleted from the system.

Deleting Users

UM admin can delete any user from the system by clicking **X** from an Action column. The delete operation is not permitted if the user has Full-Pod-Access. In, such case another user is granted with *Full-Pod-Access* role for that Pod and then proceed with deleting the old user. UM admin must revoke respective permission first and then proceed further.

Pod Administrator

Pod admins are the users who has the permission to register new Pods in the system. UM admin can add any number of Pod admins in the system.

The screenshot shows the 'POD Administrators' page in the Cisco VIM Unified Management interface. The page title is 'POD Administrators' and it includes a 'Refresh' button and an 'Add Pod Administrator' button. Below the buttons, there is a table with the following data:

User Name	Email	Action
Rohan R	rohashar@cisco.com	
Aniket C	achothe@cisco.com	

At the bottom of the table, there is a pagination control showing '5 items per page'.

Adding Pod Admin

-
- Step 1** Log in as **UI Admin** and navigate to POD Administrator page.
- Step 2** Click **Add Pod Administrator** .
- Step 3** Enter the Email ID of the user.
- If email is already registered, then Username gets populated automatically.
 - If not registered, an email is sent to the user email ID.
- Step 4** Navigate to `https://br_api :9000`.
- Step 5** Enter the Email ID and the Password of the Pod Admin and click **Login as Pod User**, it redirects to the landing page. Now the Pod admin can register a new Pod.
-

Revoking Pod Admin

UM admin can revoke Pod admin's permission anytime. To revoke Pod admin permission for the user, click **undo** icon.



Note You cannot revoke self permission.

Unified Management (UM) Administrator

UM admins have the access to the UM profile. Only a UM admin can add another UM admin in the system. There should be at least one UM admin in the system.

Adding UM Admin

To add a UM admin perform the following steps.

-
- Step 1** Log in as **UI Admin** and navigate to UM Administrator page.
 - Step 2** Click **Add UM Administrator**.
 - Step 3** Enter the Email ID of the user.
 - If email is already registered then Username gets populated automatically.
 - If not registered, an email is sent to the user Email ID.
 - Step 4** Navigate to `https://br_api: 9000`.
 - Step 5** Enter the Email ID and the Password of the UM Admin and click **Log in as UM admin** it will redirect to UM dashboard.
-

Revoking UM Admin

UM admin can revoke another UM admin's permission. To revoke UM Admin permission for any user, click **undo** icon.



Note You cannot revoke a self's permission. You can revoke a user if the user is not associated with any pod. After, revoking the user is deleted from the system.

Registering New Pod to Insight

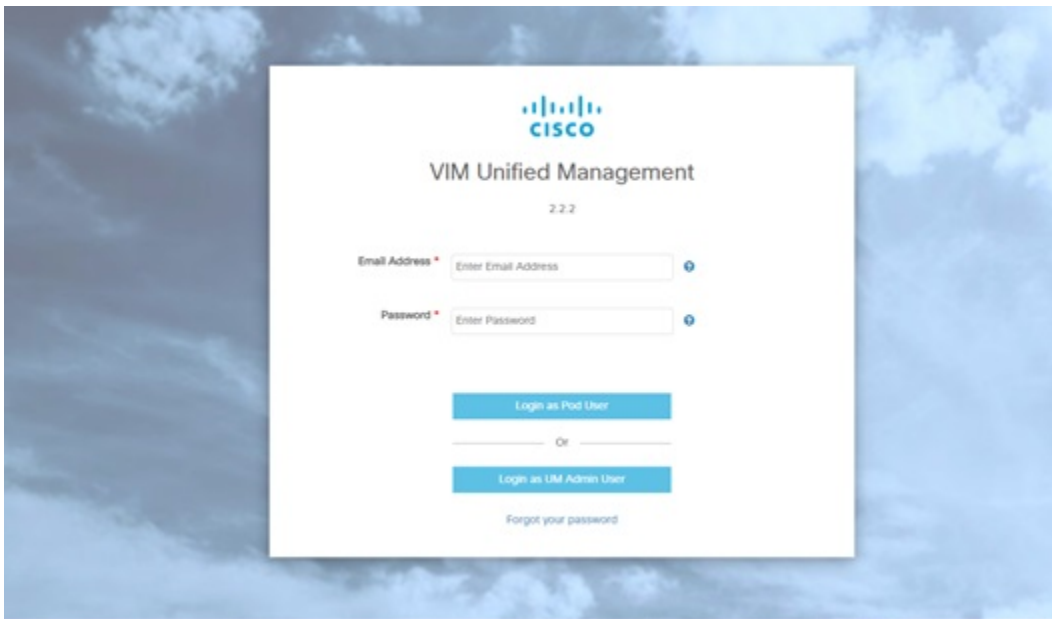
In this step the user registers a new pod.

Before you begin

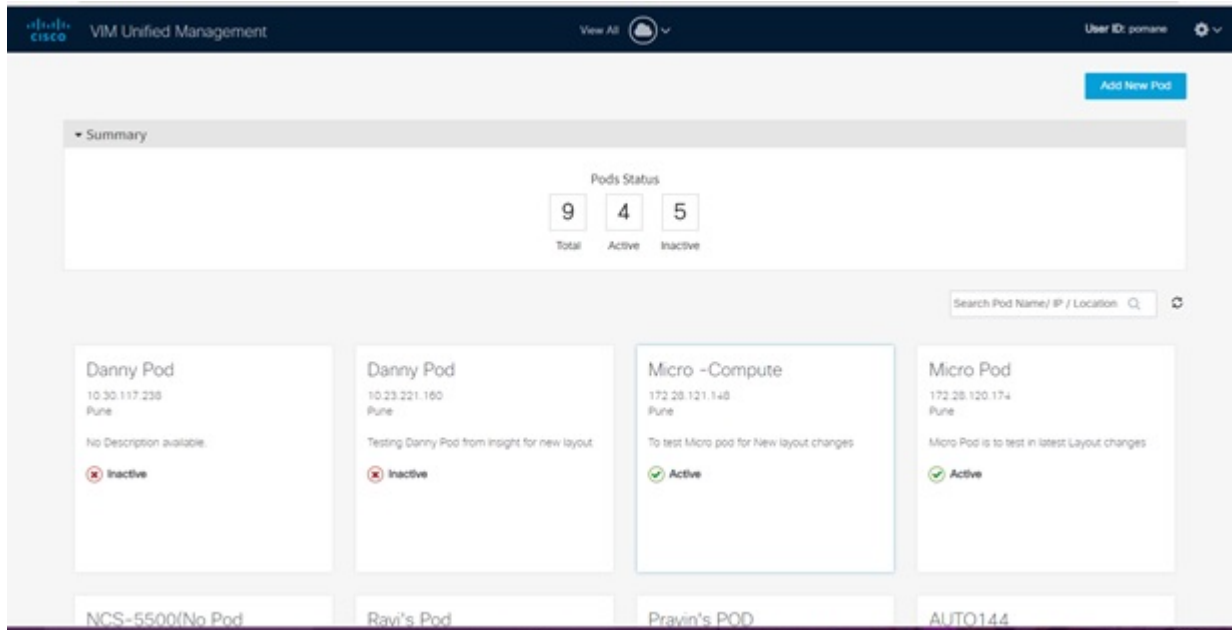
UI Admin has to register a Pod Admin to allow the user to access a pod.

Following are the steps required for UI Admin to register a Pod Admin:

-
- Step 1** Login as UI Admin and navigate to **Manage Pod Admin(s)** page.
- Step 2** Click **Add Pod Admin**.
- Step 3** Enter the Email ID of the user.
- a) If email is already registered then Username will be populated automatically.
 - b) If not registered, an email would be sent to the user Email ID.
- Step 4** Navigate to https://br_api:9000.

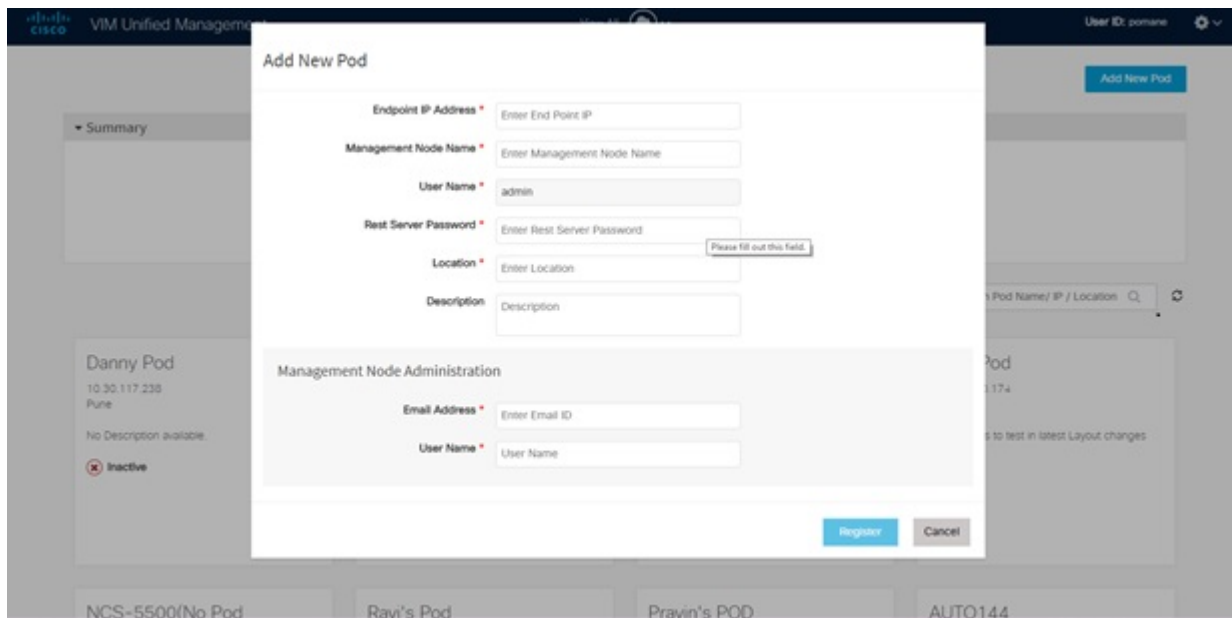


- Step 5** Enter the Email ID and the Password of the Pod Admin and click on “Login as Pod User”, then it will redirect to landing page.



VIM Unified Management Landing Page provides list of all Pods associated with the user. It also displays the Pod status which contains pod count i.e. Active, Inactive & Total number of Pods. You can see the list of Pod with Pod name, description, IP address, location & Pod status. You can search a Pod using search option. If you click on “Get health of current nodes” icon (spin) each Pod health check call and it gives latest status of Pod. On click of any Pod it will redirect to dashboard page.

Step 6 Click **Add New Pod** to register a Pod.



Step 7 Enter the Add New Pod field values:

- Enter the Endpoint IP for the management node. Run time validation will check if the endpoint is already registered.

- Give the name or tag for the particular management node
- Enter the REST API Password (REST Password is present on the Pod at "/opt/cisco/ui_config.json")
- Provide the Location and the brief description about the management node (Max 200 characters are allowed).
- Enter the Email ID of the Pod Admin. Run time validation will check if the entered Email ID belong to the Pod Admin.
 1. Run time validation will check if the entered Email ID belong to the Pod Admin.
 2. If entered Email ID is not the Pod Admin's ID, then User is not registered as Pod Admin error is displayed.
 3. If entered Email ID is the Pod Admin's ID, then User-Name is auto-populated.
 4. Section to upload Management Node CA
 - Server certificate is located on management node at /var/www/mercury/mercury-ca.crt.
 - Validation to check the cert file size and extensions are handled.
 - Click on **Upload and Update** button.
 - If certificate file passes all the validation then a message would be visible "Uploaded Root CA Certificate).
 - Click **Register** and management node health validation would take place.

The screenshot shows a web form for registering a management node. The form is titled "Register Management Node" and is part of the Cisco VIM Insight interface. It contains several input fields: "Enter Pod Name ID", "Enter Management Node Name" (with "admin" entered), "Enter REST API Password", and "Description". Below these is a section titled "Management Node Administrator Details" with fields for "Enter Email ID" and "Enter User Name". At the bottom of the form are two buttons: "Register" (in green) and "Cancel" (in grey).

- If Management Node Validation fails due to invalid certificate, then Insight will delete the certificate from the uploaded path.
- If Management Node Validation fails due to Password mismatch, then password mismatch message will be displayed. The certificate will not be deleted hence you can fix the password then go ahead with the Registration.
- If Rest API service is down on the Management Node then error message "Installer REST API Service is not available" message would be visible.

Configuring OpenStack Installation

Before you begin

You need to create a Blueprint (B or C Series) to initiate OpenStack Installation through the VIM.

Step 1 In the navigation pane, choose **Pre-Install > Blueprint Setup**.

Step 2 To create a **B Series Blueprint**:

1. On the **Blueprint Initial Setup** page of the Cisco VIM Insight, complete the following fields:

Name	Description
Blueprint Name field	Enter blueprint configuration name.
Platform Type drop-down list	Choose one of the following platform types: <ul style="list-style-type: none"> • B-Series (By default) choose B series for this section. • C-Series
Tenant Network drop-down list	Choose one of the following tenant network types: <ul style="list-style-type: none"> • Linuxbridge/VXLAN • OVS/VLAN

Name	Description
Pod Type drop-down list	<p>Choose one of the following pod types:</p> <ul style="list-style-type: none"> • Fullon(By Default) • Micro • UMHC <p>Note UMHC pod type is only supported for OVS/VLAN tenant type.</p> <p>Note Pod type micro is supported for OVS/VLAN, ACI/VLAN, VPP/VLAN.</p>
Ceph Mode drop-down list	<p>Choose one of the following Ceph types:</p> <ul style="list-style-type: none"> • Dedicated • Central (By Default) - Not supported in Production
Optional Features and Services Checkbox	<p>Swiftstack, LDAP, Syslog Export Settings, Install Mode, TorSwitch Information, TLS, Nfvmon, Pod Name, VMTP, Nfvbench, Auto Backup, Heat, Keystone v3, Enable Esc Priv.</p> <p>If any one is selected, the corresponding section is visible in various Blueprint sections.</p> <p>By default all features are disabled except Auto Backup.</p>
Import Existing YAML file	<p>Click Browse button to import the existing yaml file.</p> <p>If you have an existing B Series YAML file you can use this feature to upload the file.</p> <p>Insight will automatically fill in the fields and if any mandatory field is missed then it gets highlighted in the respective section.</p>

2. Click **Physical Setup** to navigate to the **Registry Setup configuration** page. Fill in the following details for Registry Setup:

The screenshot shows the 'Create Blueprint configuration' page in the Cisco VIM Unified Management interface. The 'Physical Setup' tab is selected, and the 'Registry Setup' step is highlighted in the progress bar. The form contains the following fields:

- Registry User Name ***: Enter registry Username
- Registry Password ***: Enter registry password
- Registry Email ***: Enter registry email

Name	Description
Registry User Name text field	User-Name for Registry (Mandatory).
Registry Password text field	Password for Registry (Mandatory).
Registry Email text field	Email ID for Registry (Mandatory).

Once all mandatory fields are filled the **Validation Check Registry Page** will show a Green Tick.

3. Click **UCSM Common Tab** and complete the following fields:

The screenshot displays the 'Create Blueprint configuration' interface. The 'UCSM Common' step is active, showing the following fields:

- User name**: Disabled field with value 'admin'.
- Password**: Text input field.
- UCSM IP**: Text input field.
- QOS Policy Type**: Drop-down menu with 'NFVI' selected.
- Resource Prefix**: Text input field.
- Max VFI Count**: Text input field with value '20'.
- Enable VFI Performance**: Checkable checkbox.

Name	Description
User name disabled field	By default value is Admin.
Password text field	Enter Password for UCSM Common (Mandatory).
UCSM IP text field	Enter IP Address for UCSM Common(Mandatory).
Resource Prefix text field	Enter the resource prefix(Mandatory).
QOS Policy Type drop-down	Choose one of the following types: <ul style="list-style-type: none"> • NFVI (Default) • Media

Name	Description
Max VF Count text field	Select the Max VF Count. <1-54> Maximum VF count 54, default is 20. If VF performance is enabled we recommend you to keep MAX_VF_COUNT to 20 else may fail on some VICs like 1240.
Enable VF Performance optional checkbox	Default is false. Set to true to apply adaptor policy at VF level.
Enable Prov FI PIN optional checkbox	Default is false.
MRAID-CARD optional checkbox	Enables JBOD mode to be set on disks. Applicable only if you have RAID controller configured on Storage C240 Rack servers.
Enable UCSM Plugin optional checkbox	Visible when Tenant Network type is OVS/VLAN
Enable QoS Policy optional checkbox	Visible only when UCSM Plugin is enabled. If UCSM Plugin is disabled then this option is set to False.
Enable QOS for Port Profile optional checkbox	Visible only when UCSM Plugin is enabled.
SRIOV Multi VLAN Trunk optional grid	Visible when UCSM Plugin is enabled. Enter the values for network and vlans ranges. Grid can handle all CRUD operations like Add, Delete, Edit and, Multiple Delete.

4. Click **Networking** to advance to the networking section of the Blueprint:

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Name	Description
Domain Name field	Enter the domain name (Mandatory).
HTTP Proxy Server field	If your configuration uses an HTTP proxy server, enter the IP address of the server.
HTTPS Proxy Server field	If your configuration uses an HTTPS proxy server, enter the IP address of the server.
IP Tables on Management Pods	Specifies the list of IP Address with Mask.
NTP Server	Enter a maximum of four and minimum of one IPv4 and/or IPv6 addresses in the table.
Domain Name Server	Enter a maximum of three and minimum of one IPv4 and/or IPv6 addresses.

Name	Description
Network table	

Name	Description
	<p>Network table is pre-populated with segments. To add Networks you can either clear all the table using Delete All or click Edit icon for each segment and fill in the details.</p> <p>You can add, edit, or delete network information in the table:</p> <div data-bbox="930 516 1328 1041" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>Edit Network</p> <p>VLAN : * ? <input type="text" value="Enter VLAN"/></p> <p>Segment : * None Selected</p> <p>Subnet : * <input type="text" value="Enter Subnet"/></p> <p>IPv6 Subnet : <input type="text" value="Enter Subnet IPv6"/></p> <p>Gateway : * <input type="text" value="Enter Gateway Address"/></p> <p>IPv6 Gateway : <input type="text" value="Enter Gateway Address(IPV6)"/></p> <p>Pool : * <small>(Multiple pool ranges should be comma separated)</small> ? <input type="text" value="Enter IP Pool"/></p> <p>IPv6 Pool : <small>(Multiple pool ranges should be comma separated)</small> ? <input type="text" value="Enter IPv6 Pool"/></p> <p style="text-align: right;">Save Cancel</p> </div> <ul style="list-style-type: none"> Click + to enter new entries (networks) to the table. Specify the following fields in the Edit Entry to Networks dialog box.
Name	Description
VLAN field	Enter the VLAN ID. For Segment - Provider, the VLAN ID value is always "none".
Segment drop-down list	You can select any one segment from the dropdown list. <ul style="list-style-type: none"> API Management/Provision Tenant CIMC Storage External

Name	Description	
	Name	Description
		<ul style="list-style-type: none"> • Provider (optional) <p>Note Some segments do not need some of the values listed in the preceding points.</p>
	Subnet field	Enter the IPv4 address for the subnet.
	IPv6 Subnet field	Enter IPv6 address. This field will be available only for Management provision and API.
	Gateway field	Enter the IPv4 address for the Gateway.
	IPv6 Gateway field	Enter IPv6 gateway. This field will only available only for Management provision and API network.
	Pool field	Enter the pool information in the required format, for example: 10.30.1.1 or 10.30.1.1 to 10.30.1.12
	IPv6 Pool field	Enter the pool information in the required format, for example: 10.1.15-10.1.1.10,102.15-102.1.10 This field is only available for the Mgmt/Provision.
Click Save .		

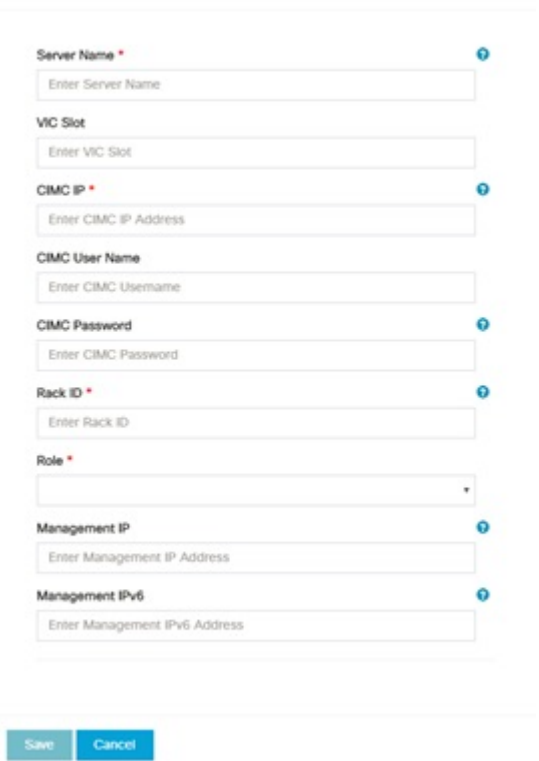
5. On the **Servers and Roles** page of the Cisco VIM Suite wizard, you will see a pre-populated table filled with Roles: Control, Compute and Block Storage (Only if CEPH Dedicated is selected in Blueprint Initial Setup).

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Cisco VIM Unified Management Version: 2.2.2

Name	Description
Server User Name field	Enter the username of the server.
Disable Hyperthreading	Default value is false. You can set it as true or false.

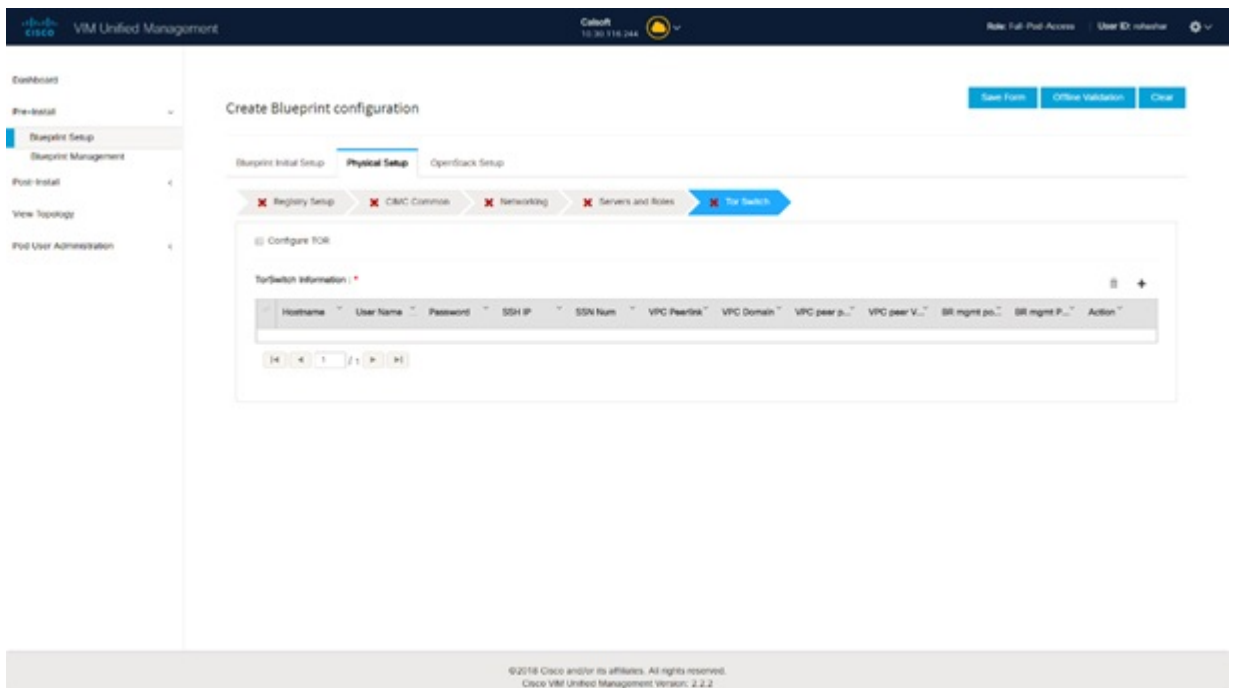
Name	Description	
Cobbler	Enter the Cobbler details in the following fields:	
	Name	Description
	Cobbler Timeout field	The default value is 45 min. This is an optional parameter. Timeout is displayed in minutes, and its value ranges from 30 to 120.
	Block Storage Kickstart field	Kickstart file for Storage Node.
	Admin Password Hash field	Enter the Admin Password. Password should be Alphanumeric. Password should contain minimum 8 characters and maximum of 32 characters.
	Cobbler Username field	Enter the cobbler username to access the cobbler server.
	Control Kickstart field	Kickstart file for Control Node.
	Compute Kickstart field	Kickstart file for Compute Node.
Cobbler Admin Username field	Enter the admin username of the Cobbler.	

Name	Description
Add Entry to Servers and Roles	

Name	Description																
	<p>Click Edit or + to add a new server and role to the table.</p> <p>Server And Roles</p>  <table border="1"> <tr> <td data-bbox="886 1167 1187 1224">Server Name</td> <td data-bbox="1192 1167 1487 1224">Enter a server name</td> </tr> <tr> <td data-bbox="886 1230 1187 1314">Server Type drop-down list</td> <td data-bbox="1192 1230 1487 1314">Choose Blade or Rack from the drop-down list.</td> </tr> <tr> <td data-bbox="886 1320 1187 1371">Rack ID</td> <td data-bbox="1192 1320 1487 1371">The Rack ID for the server.</td> </tr> <tr> <td data-bbox="886 1377 1187 1428">Chassis ID</td> <td data-bbox="1192 1377 1487 1428">Enter a Chassis ID.</td> </tr> <tr> <td data-bbox="886 1434 1187 1518">If Rack is chosen, the Rack Unit ID field is displayed.</td> <td data-bbox="1192 1434 1487 1518">Enter a Rack Unit ID.</td> </tr> <tr> <td data-bbox="886 1524 1187 1608">If Blade is chosen, the Blade ID field is displayed.</td> <td data-bbox="1192 1524 1487 1608">Enter a Blade ID.</td> </tr> <tr> <td data-bbox="886 1614 1187 1761">Select the Role from the drop-down list.</td> <td data-bbox="1192 1614 1487 1761">If Server type is Blade then select Control and Compute. If server is Rack then select Block Storage.</td> </tr> <tr> <td data-bbox="886 1768 1187 1852">Management IP</td> <td data-bbox="1192 1768 1487 1852">It is an optional field but if provided for one server then it is mandatory to provide</td> </tr> </table>	Server Name	Enter a server name	Server Type drop-down list	Choose Blade or Rack from the drop-down list.	Rack ID	The Rack ID for the server.	Chassis ID	Enter a Chassis ID.	If Rack is chosen, the Rack Unit ID field is displayed.	Enter a Rack Unit ID.	If Blade is chosen, the Blade ID field is displayed.	Enter a Blade ID.	Select the Role from the drop-down list.	If Server type is Blade then select Control and Compute . If server is Rack then select Block Storage .	Management IP	It is an optional field but if provided for one server then it is mandatory to provide
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Management IP	It is an optional field but if provided for one server then it is mandatory to provide																

Name	Description	
		details for other Servers as well.
	Management IPv6	Enter the Management IPv6 Address.
	Click Save .	

- Click **ToR Switch** checkbox in **Blueprint Initial Setup** to enable the **TOR SWITCH** configuration page. It is an **Optional** section in Blueprint Setup but once all the fields are filled it is a part of the Blueprint.



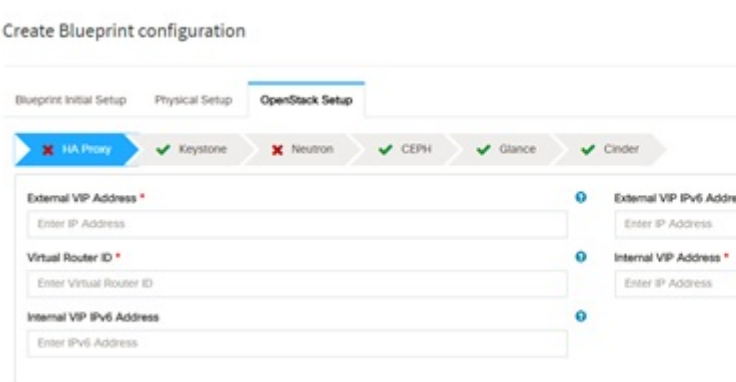
Name	Description
Configure ToR optional checkbox.	Enabling this checkbox, changes the configure ToR section from false to true.

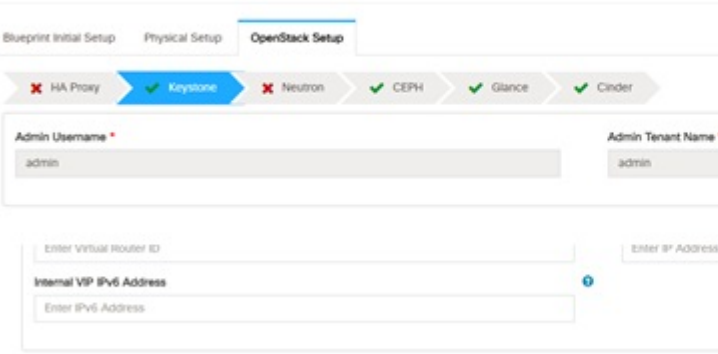
Name	Description
ToR Switch Information mandatory table.	

Name	Description																
	<p>Click (+) to add information for ToR Switch.</p> <p>Switch Details</p> <div style="border: 1px solid #ccc; padding: 10px;"> <p>Hostname * ?</p> <input type="text" value="Enter Switch Hostname"/> <p>Username * ?</p> <input type="text" value="Enter Switch Username"/> <p>Password * ?</p> <input type="text" value="Enter Password"/> <p>SSH-IP * ?</p> <input type="text" value="Enter IP Address"/> <p>SSN Num ?</p> <input type="text" value="Enter SSN Num"/> <p>VPC Peer Keepalive ?</p> <input type="text" value="Enter IP Address"/> <p>VPC Domain ?</p> <input type="text" value="Enter VPC Domain"/> <p>VPC Peer Port Info ?</p> <input type="text" value="Enter VPC Port"/> <p>VPC Peer VLAN Info ?</p> <input type="text" value="Enter VPC VLAN Info"/> <p>BR Management Port Info ?</p> <input type="text" value="Enter BR Port Info"/> <p>BR Management PO Info ?</p> <input type="text" value="Enter BR PO Info"/> <p style="text-align: right;"> <input type="button" value="Save"/> <input type="button" value="Cancel"/> </p> </div>																
	<table border="1"> <thead> <tr> <th data-bbox="875 1369 1200 1417">Name</th> <th data-bbox="1200 1369 1515 1417">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="875 1417 1200 1476">Hostname</td> <td data-bbox="1200 1417 1515 1476">ToR switch hostname.</td> </tr> <tr> <td data-bbox="875 1476 1200 1535">Username</td> <td data-bbox="1200 1476 1515 1535">ToR switch username.</td> </tr> <tr> <td data-bbox="875 1535 1200 1593">Password</td> <td data-bbox="1200 1535 1515 1593">Tor switch password.</td> </tr> <tr> <td data-bbox="875 1593 1200 1652">SSH IP</td> <td data-bbox="1200 1593 1515 1652">ToR switch SSH IP Address.</td> </tr> <tr> <td data-bbox="875 1652 1200 1711">SSN Num</td> <td data-bbox="1200 1652 1515 1711">ToR switch ssn num.</td> </tr> <tr> <td data-bbox="875 1711 1200 1795">VPC Peer Keepalive</td> <td data-bbox="1200 1711 1515 1795">Peer Management IP. You do not define if there is no peer.</td> </tr> <tr> <td data-bbox="875 1795 1200 1860">VPC Domain</td> <td data-bbox="1200 1795 1515 1860">Do not define if peer is absent.</td> </tr> </tbody> </table>	Name	Description	Hostname	ToR switch hostname.	Username	ToR switch username.	Password	Tor switch password.	SSH IP	ToR switch SSH IP Address.	SSN Num	ToR switch ssn num.	VPC Peer Keepalive	Peer Management IP. You do not define if there is no peer.	VPC Domain	Do not define if peer is absent.
Name	Description																
Hostname	ToR switch hostname.																
Username	ToR switch username.																
Password	Tor switch password.																
SSH IP	ToR switch SSH IP Address.																
SSN Num	ToR switch ssn num.																
VPC Peer Keepalive	Peer Management IP. You do not define if there is no peer.																
VPC Domain	Do not define if peer is absent.																

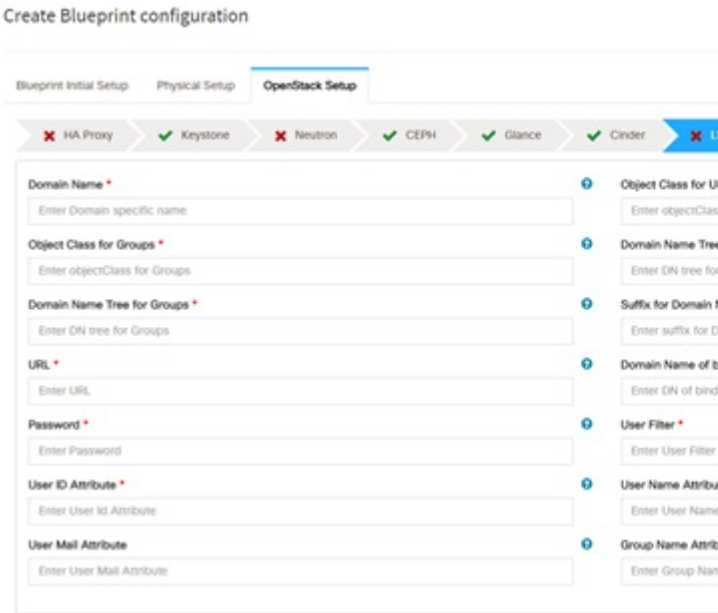
Name	Description	
	VPC Peer Port Info	Interface for vpc peer ports.
	BR Management Port Info	Management interface of management node.
	BR Management PO Info	Port channel number for management interface of management node.
	ClickSave.	
On clicking save button, Add ToR Info Connected to Fabric field will be visible.	Port Channel field.	Enter the Port Channel input.
	Switch Name field.	Enter the Port number.

7. Click **OpenStack Setup** tab to advance to the OpenStack Setup Configuration page. On the **OpenStack Setup** page of the Cisco VIM Insight wizard, complete the following fields:

Name	Description										
HA Proxy	<p>Fill in the following details:</p>  <p>The screenshot shows the 'OpenStack Setup' tab selected in a wizard. Below the tab are progress indicators for 'HA Proxy' (with a red X), 'Keystone' (with a green check), 'Neutron' (with a red X), 'CEPH' (with a green check), 'Glance' (with a green check), and 'Cinder' (with a green check). The 'HA Proxy' section contains three input fields: 'External VIP Address *' (with a sub-field 'Enter IP Address'), 'Virtual Router ID *' (with a sub-field 'Enter Virtual Router ID'), and 'Internal VIP IPv6 Address' (with a sub-field 'Enter IPv6 Address'). To the right of these fields are labels for 'External VIP IPv6 Address', 'Internal VIP Address *', and 'Enter IP Address'.</p> <table border="1"> <tbody> <tr> <td>External VIP Address field</td> <td>Enter IP address of External VIP.</td> </tr> <tr> <td>External VIP Address IPv6 field</td> <td>Enter IPv6 address of External VIP.</td> </tr> <tr> <td>Virtual Router ID field</td> <td>Enter the Router ID for HA.</td> </tr> <tr> <td>Internal VIP Address IPv6 field</td> <td>Enter IPv6 address of Internal IP.</td> </tr> <tr> <td>Internal VIP Address field</td> <td>Enter IP address of Internal VIP.</td> </tr> </tbody> </table>	External VIP Address field	Enter IP address of External VIP.	External VIP Address IPv6 field	Enter IPv6 address of External VIP.	Virtual Router ID field	Enter the Router ID for HA.	Internal VIP Address IPv6 field	Enter IPv6 address of Internal IP.	Internal VIP Address field	Enter IP address of Internal VIP.
External VIP Address field	Enter IP address of External VIP.										
External VIP Address IPv6 field	Enter IPv6 address of External VIP.										
Virtual Router ID field	Enter the Router ID for HA.										
Internal VIP Address IPv6 field	Enter IPv6 address of Internal IP.										
Internal VIP Address field	Enter IP address of Internal VIP.										

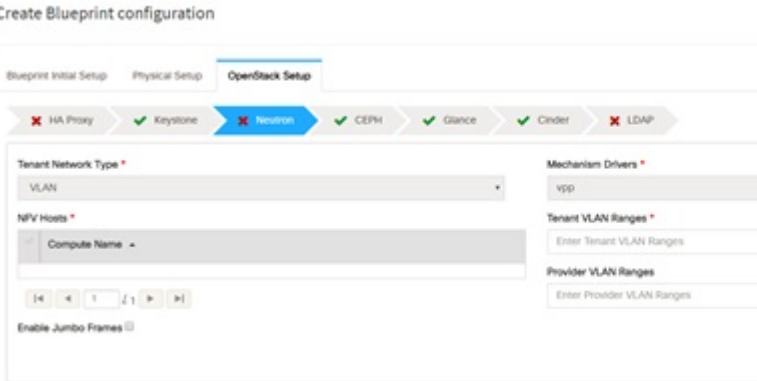
Name	Description				
<p>Keystone</p>	<p>Pre-populated field values. This option would always be true.</p> <p>Create Blueprint configuration</p>  <table border="1" data-bbox="885 829 1526 924"> <tr> <td>Admin Username field</td> <td>admin</td> </tr> <tr> <td>Admin Tenant Name field</td> <td>admin</td> </tr> </table>	Admin Username field	admin	Admin Tenant Name field	admin
Admin Username field	admin				
Admin Tenant Name field	admin				

Name	Description
LDAP (Only if Keystonev3 is enabled) Note This option is only available with Keystone v3	

Name	Description																		
	<p>This is available only when Keystone v3 and LDAP both are enabled under Optional Features and Services in Blueprint Initial Setup.</p>  <table border="1" data-bbox="885 1071 1526 1837"> <tr> <td>Domain Name field</td> <td>Enter name for Domain name.</td> </tr> <tr> <td>Object Class for Users field</td> <td>Enter a string as input.</td> </tr> <tr> <td>Object Class for Groups field</td> <td>Enter a string.</td> </tr> <tr> <td>Domain Name Tree for Users field</td> <td>Enter a string.</td> </tr> <tr> <td>Domain Name Tree for Groups field</td> <td>Enter a string.</td> </tr> <tr> <td>Suffix for Domain Name field</td> <td>Enter a string.</td> </tr> <tr> <td>URL field</td> <td>Enter a URL with ending port number.</td> </tr> <tr> <td>Domain Name of bind user field</td> <td>Enter a string.</td> </tr> <tr> <td>Password field</td> <td>Enter Password as string format.</td> </tr> </table>	Domain Name field	Enter name for Domain name.	Object Class for Users field	Enter a string as input.	Object Class for Groups field	Enter a string.	Domain Name Tree for Users field	Enter a string.	Domain Name Tree for Groups field	Enter a string.	Suffix for Domain Name field	Enter a string.	URL field	Enter a URL with ending port number.	Domain Name of bind user field	Enter a string.	Password field	Enter Password as string format.
Domain Name field	Enter name for Domain name.																		
Object Class for Users field	Enter a string as input.																		
Object Class for Groups field	Enter a string.																		
Domain Name Tree for Users field	Enter a string.																		
Domain Name Tree for Groups field	Enter a string.																		
Suffix for Domain Name field	Enter a string.																		
URL field	Enter a URL with ending port number.																		
Domain Name of bind user field	Enter a string.																		
Password field	Enter Password as string format.																		

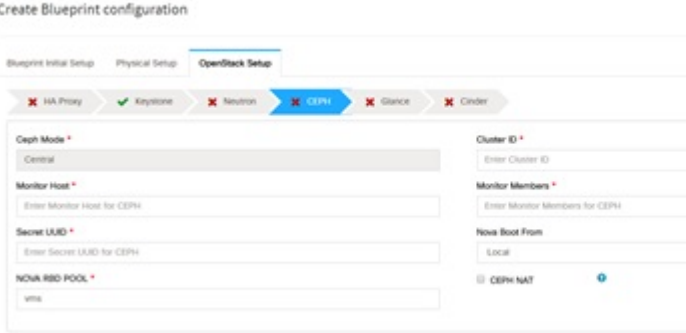

Name	Description	
	User Filter field	Enter filter name as string.
	User ID Attribute field	Enter a string.
	User Name Attribute field	Enter a string.
	User Mail Attribute field	Enter a string.
	Group Name Attribute field	Enter a string.


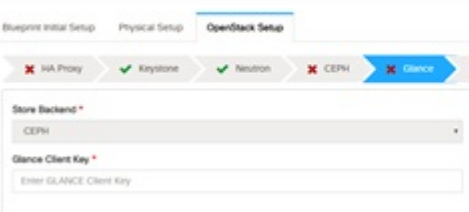
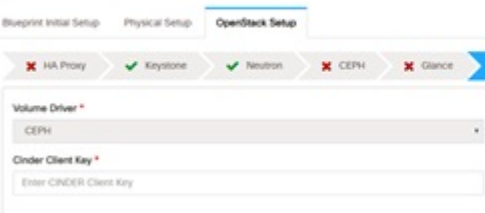
Name	Description
Neutron	

Name	Description
	<p>Neutron fields would change on the basis of Tenant Network Type Selection from Blueprint Initial Setup. Following are the options available for Neutron for OVS/VLAN:</p>  <p>Tenant Network Type field</p> <p>Auto Filled based on the Tenant Network Type selected in the Blueprint Initial Setup page.</p> <p>Mechanism Drivers field</p> <p>Auto Filled based on the Tenant Network Type selected in Blueprint Initial Setup page.</p> <p>NFV Hosts field</p> <p>Auto filled with the Compute you added in Server and Roles.</p> <p>If you select All in this section NFV_HOSTS: ALL will be added to the Blueprint or you can select one particular compute. For Eg: NFV_HOSTS: compute-server-1, compute-server-2.</p> <p>Tenant VLAN Ranges field</p> <p>List of ranges separated by comma form start:end.</p> <p>Provider VLAN Ranges field</p> <p>List of ranges separated by comma form start:end.</p> <p>VM Hugh Page Size (available for NFV_HOSTS option) field</p> <p>2M or 1G</p>

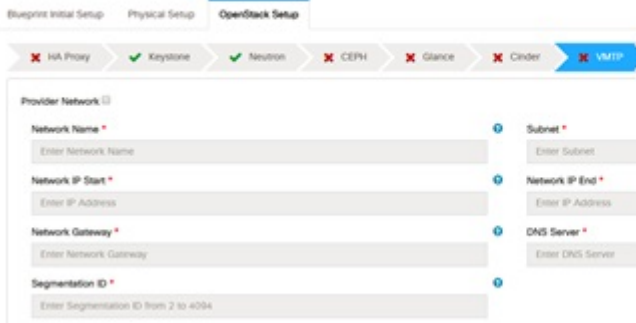

Name	Description		
	<table border="1"><tr><td data-bbox="886 287 1203 331">Enable Jumbo Frames field</td><td data-bbox="1208 287 1521 331">Enable the checkbox</td></tr></table> <p data-bbox="878 348 1521 411">For Tenant Network Type Linux Bridge everything remains the same but Tenant VLAN Ranges will be removed.</p>	Enable Jumbo Frames field	Enable the checkbox
Enable Jumbo Frames field	Enable the checkbox		

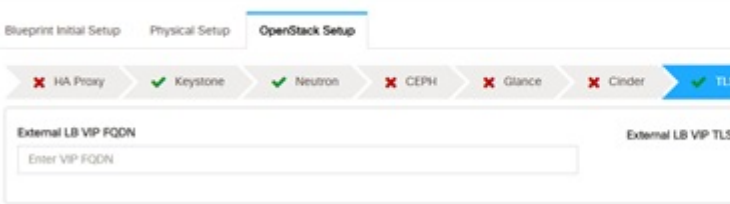
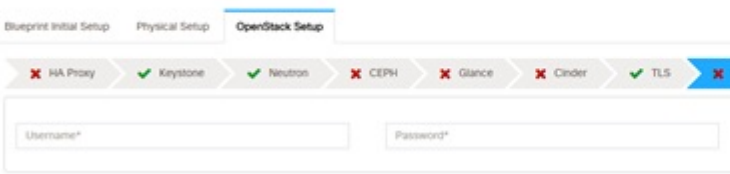
Name	Description
CEPH	

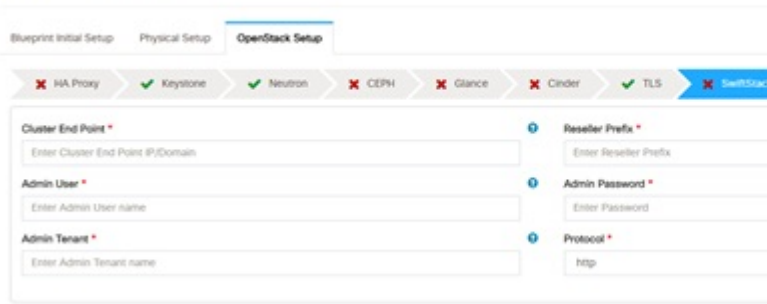
Name	Description																
	<p>1. 1. When Object Storage Backend is selected Central in blueprint initial setup.</p>  <p>The screenshot shows the 'OpenStack Setup' step in a wizard. The progress bar indicates that HA Proxy, Keystone, Neutron, and CEPH are completed, while Glance and Cinder are pending. The CEPH configuration section includes fields for: <ul style="list-style-type: none"> CEPH Mode: Central Monitor Host: Enter Monitor Host for CEPH Secret UUID: Enter Secret UUID for CEPH NOVA RBD POOL: vms Cluster ID: Enter Cluster ID Monitor Members: Enter Monitor Members for CEPH Nova Boot From: Local CEPH NAT: <input type="checkbox"/> </p> <table border="1" data-bbox="927 751 1524 1289"> <tbody> <tr> <td>CEPH Mode</td> <td>By default Central.</td> </tr> <tr> <td>Cluster ID</td> <td>Enter Cluster ID.</td> </tr> <tr> <td>Monitor Host</td> <td>Enter Monitor Host for CEPH</td> </tr> <tr> <td>Monitor Members</td> <td>Enter Monitor Members for CEPH</td> </tr> <tr> <td>Secret UUID</td> <td>Enter Secret UUID for CEPH</td> </tr> <tr> <td>NOVA Boot from</td> <td>Drop down selection. You can choose CEPH or local.</td> </tr> <tr> <td>NOVA RBD POOL</td> <td>Enter NOVA RBD Pool (default's to vms)</td> </tr> <tr> <td>CEPH NAT</td> <td>Optional, needed for Central Ceph and when mgmt network is not routable</td> </tr> </tbody> </table> <p>2. 2. When Object Storage Backend is selected Dedicated in blueprint initial setup.</p>  <p>The screenshot shows the 'OpenStack Setup' step with CEPH mode set to 'Dedicated'. The progress bar shows HA Proxy, Keystone, Neutron, CEPH, Glance, and Cinder completed, with LDAP pending. The CEPH configuration section includes: <ul style="list-style-type: none"> CEPH Mode: Dedicated Nova Boot From: Local </p> <ul style="list-style-type: none"> • CEPH Mode: By default Dedicated. • NOVA Boot: From drop down selection you can choose CEPH or local. <p>3. 3. When Object Storage Backend is selected NetApp in blueprint initial setup.</p>	CEPH Mode	By default Central.	Cluster ID	Enter Cluster ID.	Monitor Host	Enter Monitor Host for CEPH	Monitor Members	Enter Monitor Members for CEPH	Secret UUID	Enter Secret UUID for CEPH	NOVA Boot from	Drop down selection. You can choose CEPH or local.	NOVA RBD POOL	Enter NOVA RBD Pool (default's to vms)	CEPH NAT	Optional, needed for Central Ceph and when mgmt network is not routable
CEPH Mode	By default Central.																
Cluster ID	Enter Cluster ID.																
Monitor Host	Enter Monitor Host for CEPH																
Monitor Members	Enter Monitor Members for CEPH																
Secret UUID	Enter Secret UUID for CEPH																
NOVA Boot from	Drop down selection. You can choose CEPH or local.																
NOVA RBD POOL	Enter NOVA RBD Pool (default's to vms)																
CEPH NAT	Optional, needed for Central Ceph and when mgmt network is not routable																

Name	Description
	<p>Create Blueprint configuration</p>  <p>The screenshot shows the 'OpenStack Setup' step of a blueprint configuration wizard. It features a progress bar with steps: HA Proxy (failed), Keystone (success), Neutron (success), Ceph (selected), and NetApp (failed). Below the progress bar, the 'Ceph Mode' dropdown is set to 'netapp'.</p>
<p>GLANCE</p>	<p>1. When Object Storage Backend is selected Central in blueprint initial setup.</p> <p>Create Blueprint configuration</p>  <p>The screenshot shows the 'OpenStack Setup' step with 'Glance' selected in the progress bar. The 'Store Backend' dropdown is set to 'CEPH', and the 'Glance Client Key' field is empty. The 'Glance RBD Pool' dropdown is set to 'images'.</p>
<p>CINDER</p>	<p>By default Populated for CEPH Dedicated with Volume Driver value as CEPH.</p> <p>Create Blueprint configuration</p>  <p>The screenshot shows the 'OpenStack Setup' step with 'Cinder' selected in the progress bar. The 'Volume Driver' dropdown is set to 'CEPH', and the 'Cinder Client Key' field is empty. The 'Cinder RBD Pool' dropdown is set to 'volumes'.</p>

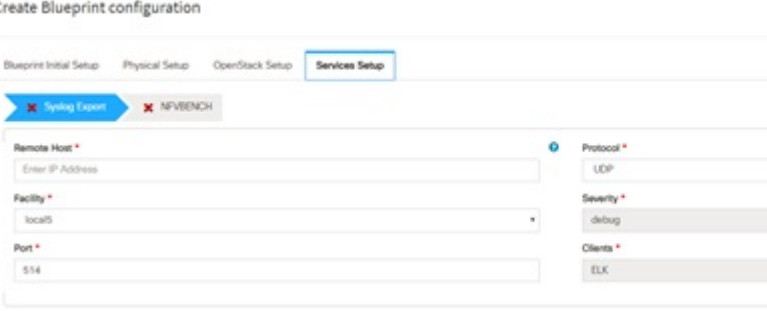
Name	Description
VMTP VMTP optional section will only be visible once VMTP is selected from Blueprint Initial Setup.	

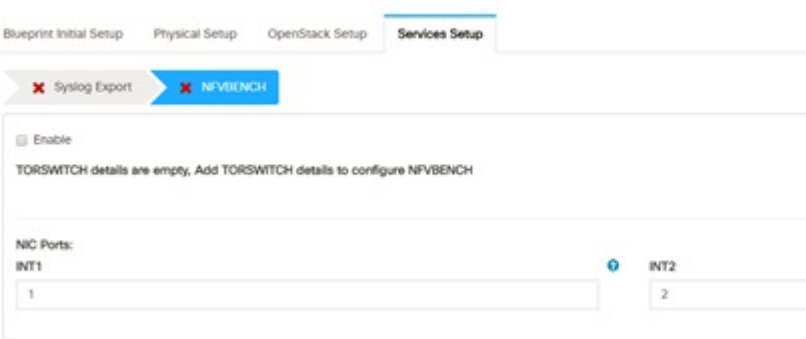
Name	Description														
	<p>Check one of the check boxes to specify a VMTP network:</p> <ul style="list-style-type: none"> • Provider Network • External Network <p>For the Provider Network complete the following:</p> <p>Create Blueprint configuration</p>  <table border="1"> <tr> <td data-bbox="846 930 1166 1018">Network Name field</td> <td data-bbox="1166 930 1489 1018">Enter the name for the external network.</td> </tr> <tr> <td data-bbox="846 1018 1166 1106">Subnet field</td> <td data-bbox="1166 1018 1489 1106">Enter the Subnet for Provider Network.</td> </tr> <tr> <td data-bbox="846 1106 1166 1194">Network IP Start field</td> <td data-bbox="1166 1106 1489 1194">Enter the starting floating IPv4 address.</td> </tr> <tr> <td data-bbox="846 1194 1166 1283">Network IP End field</td> <td data-bbox="1166 1194 1489 1283">Enter the ending floating IPv4 address.</td> </tr> <tr> <td data-bbox="846 1283 1166 1371">Network Gateway field</td> <td data-bbox="1166 1283 1489 1371">Enter the IPv4 address for the Gateway.</td> </tr> <tr> <td data-bbox="846 1371 1166 1459">DNS Server field</td> <td data-bbox="1166 1371 1489 1459">Enter the DNS server IPv4 address.</td> </tr> <tr> <td data-bbox="846 1459 1166 1518">Segmentation ID field</td> <td data-bbox="1166 1459 1489 1518">Enter the segmentation ID.</td> </tr> </table> <p>For External Network fill in the following details:</p> 	Network Name field	Enter the name for the external network.	Subnet field	Enter the Subnet for Provider Network.	Network IP Start field	Enter the starting floating IPv4 address.	Network IP End field	Enter the ending floating IPv4 address.	Network Gateway field	Enter the IPv4 address for the Gateway.	DNS Server field	Enter the DNS server IPv4 address.	Segmentation ID field	Enter the segmentation ID.
Network Name field	Enter the name for the external network.														
Subnet field	Enter the Subnet for Provider Network.														
Network IP Start field	Enter the starting floating IPv4 address.														
Network IP End field	Enter the ending floating IPv4 address.														
Network Gateway field	Enter the IPv4 address for the Gateway.														
DNS Server field	Enter the DNS server IPv4 address.														
Segmentation ID field	Enter the segmentation ID.														

Name	Description												
	<table border="1"> <tr> <td data-bbox="889 289 1203 365">Network Name field</td> <td data-bbox="1211 289 1515 365">Enter the name for the external network.</td> </tr> <tr> <td data-bbox="889 373 1203 449">Subnet field</td> <td data-bbox="1211 373 1515 449">Enter the Subnet for External Network.</td> </tr> <tr> <td data-bbox="889 457 1203 533">Network IP Start field</td> <td data-bbox="1211 457 1515 533">Enter the starting floating IPv4 address.</td> </tr> <tr> <td data-bbox="889 541 1203 617">Network IP End field</td> <td data-bbox="1211 541 1515 617">Enter the ending floating IPv4 address.</td> </tr> <tr> <td data-bbox="889 625 1203 701">Network Gateway field</td> <td data-bbox="1211 625 1515 701">Enter the IPv4 address for the Gateway.</td> </tr> <tr> <td data-bbox="889 709 1203 785">DNS Server field</td> <td data-bbox="1211 709 1515 785">Enter the DNS server IPv4 address.</td> </tr> </table>	Network Name field	Enter the name for the external network.	Subnet field	Enter the Subnet for External Network.	Network IP Start field	Enter the starting floating IPv4 address.	Network IP End field	Enter the ending floating IPv4 address.	Network Gateway field	Enter the IPv4 address for the Gateway.	DNS Server field	Enter the DNS server IPv4 address.
Network Name field	Enter the name for the external network.												
Subnet field	Enter the Subnet for External Network.												
Network IP Start field	Enter the starting floating IPv4 address.												
Network IP End field	Enter the ending floating IPv4 address.												
Network Gateway field	Enter the IPv4 address for the Gateway.												
DNS Server field	Enter the DNS server IPv4 address.												
<p>TLS This optional section will only be visible once TLS is selected from Blueprint Initial Setup Page.</p>	<p>TLS has two options:</p> <p>Create Blueprint configuration</p>  <ul style="list-style-type: none"> • External LB VIP FQDN - -Text field. • External LB VIP TLS True/False. By default this option is false. 												
<p>Under the OpenStack setup tab, Vim_admins tab will be visible only when Vim_admins is selected from the Optional Features & Services under the Blueprint Initial setup tab</p>	<p>Following are the field descriptions for VIM Admins:</p> <p>Create Blueprint configuration</p>  <ul style="list-style-type: none"> • User Name - Text field. • Password -Password field. Admin hash password should always start with \$6. 												

Name	Description												
<p>SwiftStack optional section will be visible once SwiftStack is selected from Blueprint Initial Setup Page. SwiftStack is only supported with KeyStonev2 . If you select Keystonev3, swiftstack will not be available for configuration.</p>	<p>Following are the options that needs to be filled for SwiftStack:</p> <p>Create Blueprint configuration</p>  <table border="1" data-bbox="846 772 1484 1348"> <tbody> <tr> <td data-bbox="846 772 1166 884">Cluster End Point field</td> <td data-bbox="1166 772 1484 884">IP address of PAC (proxy-account-container) endpoint.</td> </tr> <tr> <td data-bbox="846 884 1166 968">Admin User field</td> <td data-bbox="1166 884 1484 968">Admin user for swift to authenticate in keystone.</td> </tr> <tr> <td data-bbox="846 968 1166 1115">Admin Tenant field</td> <td data-bbox="1166 968 1484 1115">The service tenant corresponding to the Account-Container used by Swiftstack.</td> </tr> <tr> <td data-bbox="846 1115 1166 1262">Reseller Prefix field</td> <td data-bbox="1166 1115 1484 1262">Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_</td> </tr> <tr> <td data-bbox="846 1262 1166 1304">Admin Password field</td> <td data-bbox="1166 1262 1484 1304">swiftstack_admin_password</td> </tr> <tr> <td data-bbox="846 1304 1166 1348">Protocol</td> <td data-bbox="1166 1304 1484 1348">http or https</td> </tr> </tbody> </table>	Cluster End Point field	IP address of PAC (proxy-account-container) endpoint.	Admin User field	Admin user for swift to authenticate in keystone.	Admin Tenant field	The service tenant corresponding to the Account-Container used by Swiftstack.	Reseller Prefix field	Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_	Admin Password field	swiftstack_admin_password	Protocol	http or https
Cluster End Point field	IP address of PAC (proxy-account-container) endpoint.												
Admin User field	Admin user for swift to authenticate in keystone.												
Admin Tenant field	The service tenant corresponding to the Account-Container used by Swiftstack.												
Reseller Prefix field	Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_												
Admin Password field	swiftstack_admin_password												
Protocol	http or https												

8. If **Syslog Export** or **NFVBENCH** is selected in **Blueprint Initial Setup** Page, the **Services Setup** page will be enabled for the user to view. Following are the options under **Services Setup** Tab:

Name	Description												
Syslog Export	<p>Following are the options for Syslog Settings:</p>  <table border="1" data-bbox="841 695 1529 1066"> <thead> <tr> <th>Remote Host</th> <td>Enter Syslog IP address.</td> </tr> <tr> <th>Protocol</th> <td>Only UDP is supported.</td> </tr> <tr> <th>Facility</th> <td>Defaults to local5.</td> </tr> <tr> <th>Severity</th> <td>Defaults to debug.</td> </tr> <tr> <th>Clients</th> <td>Defaults to ELK.</td> </tr> <tr> <th>Port</th> <td>Defaults to 514 but can be modified by the User.</td> </tr> </thead></table>	Remote Host	Enter Syslog IP address.	Protocol	Only UDP is supported.	Facility	Defaults to local5.	Severity	Defaults to debug.	Clients	Defaults to ELK.	Port	Defaults to 514 but can be modified by the User.
Remote Host	Enter Syslog IP address.												
Protocol	Only UDP is supported.												
Facility	Defaults to local5.												
Severity	Defaults to debug.												
Clients	Defaults to ELK.												
Port	Defaults to 514 but can be modified by the User.												

Name	Description
NFVBENCH	<p>NFVBENCH enable checkbox which by default is false.</p> <p>Create Blueprint configuration</p>  <p>Add ToR information connected to switch:</p> <ul style="list-style-type: none"> • Select a TOR Switch and enter the Switch name. • Enter the port number. For example:eth1/5. VTEP VLANS (mandatory and needed only for VXLAN): Enter 2 different VLANs for VLAN1 and VLAN2 • NIC Ports: INT1 and INT2 optional input. Enter the 2 port numbers of the 4-port 10G Intel NIC at the management node used for NFVBench.
ENABLE_ESC_PRIV	Enable the checkbox to set it as True. By default it is False .

Step 3 To create a C Series Blueprint:

1. On the **Blueprint Initial Setup** page of the Cisco VIM Insight, complete the following fields:

The screenshot shows the 'Create Blueprint configuration' page in the Cisco VIM Unified Management interface. The page is divided into several sections:

- Blueprint Initial Setup:** This section contains the main configuration fields:
 - Blueprint Name:** A text input field with a red asterisk indicating it is required.
 - Tenant Network:** A dropdown menu with 'LinuxBridge/VXLAN' selected.
 - Object Storage Backend:** A dropdown menu with 'Ceph' selected.
 - Platform Type:** A dropdown menu with 'C-Series' selected.
 - POD Type:** A dropdown menu with 'Fulton' selected.
- Optional Features & Services:** A grid of checkboxes for various services:
 - System Export Settings
 - Pod Name
 - Heat
 - Permit Root Login
 - NETAPP_SUPPORT
 - ES_REMOTE_BACKUP
 - Win Admins
 - MFbench
 - Auto Backup
 - Keystone v3
 - NFV Monitoring
 - Enable Ext Pkts
 - SBCV CARD TYPE
 - LDAP
 - TLS
 - Swiftstack
 - Install Mode
 - TCR/Switch Information
 - VMTP
- Import Existing YAML file:** A section with a text input field and 'Browse' and 'Load' buttons.

Name	Description
Blueprint Name field.	Enter the name for the blueprint configuration.
Platform Type drop-down list	Choose one of the following platform types: <ul style="list-style-type: none"> • B-Series (By default) • C-Series (Select C Series)
Tenant Network drop-down list	Choose one of the following tenant network types: <ul style="list-style-type: none"> • Linux Bridge/VXLAN • OVS/VLAN • VTS/VLAN • VPP/VLAN • ACI/VLAN <p>Note when VTS/VLAN or ACI/VLAN is selected then respective tabs are available on Blueprint setup. When Mechanism driver OVS or ACI is selected, VM_HUGEPAGE_PERCENTAGE field is enabled for all standalone compute nodes, when NFV_HOSTS is enabled.</p>

Name	Description
Pod Type drop-down list	Choose one of the following pod type : <ul style="list-style-type: none"> • Fullon(By Default) • Micro • UMHC • NGENAHC <p>Note</p> <ul style="list-style-type: none"> • UMHC pod type is only supported for OVS/VLAN tenant type. • NGENAHC is supported for VPP/VLAN tenant type with no SRIOV • Pod type micro is supported for OVS/VLAN, ACI/VLAN,VPP/VLAN.
Ceph Mode drop-down list	Choose one of the following Ceph types: <ul style="list-style-type: none"> • Dedicated (By Default) • Central. Central is not supported in Production
Optional and Services Features checkbox	Swiftstack, LDAP, Syslog Export Settings, Install Mode, TorSwitch Information, TLS, NFVMON, Pod Name, VMTP, NFVBench, Autbackup, Heat, Keystone v3, Enable Esc Priv. <p>If any one is selected, the corresponding section is visible in various Blueprint sections.</p> <p>By default all features are disabled except Auto Backup.</p>
Import Existing YAML file	If you have an existing C Series YAML file you can use this feature to upload the file. <p>Insight will automatically fill in the fields and any missed mandatory field will be highlighted in the respective section.</p>

2. Click **Physical Setup** to advance to the **Registry Setup** configuration page. Fill in the following details for Registry Setup:

The screenshot shows the 'Create Blueprint configuration' page in the Cisco VIM Unified Management interface. The 'Physical Setup' tab is selected, and the 'Registry Setup' step is highlighted with a blue arrow. The 'Registry User Name', 'Registry Password', and 'Registry Email' fields are visible and empty.

Name	Description
Registry User Name text field	User-Name for Registry (Mandatory).
Registry Password text field	Password for Registry (Mandatory).
Registry Email text field	Email ID for Registry (Mandatory).

Once all the mandatory fields are filled the **Validation Check Registry Page** will be changed to a Green Tick.

3. Click **CIMC Common Tab** and complete the following fields:

The screenshot shows the 'Create Blueprint configuration' page in the Cisco VIM Unified Management interface. The 'Physical Setup' tab is selected, and the 'CIMC Common' step is highlighted with a blue arrow. The 'Username' and 'Password' fields are visible and filled with 'admin' and 'password' respectively.

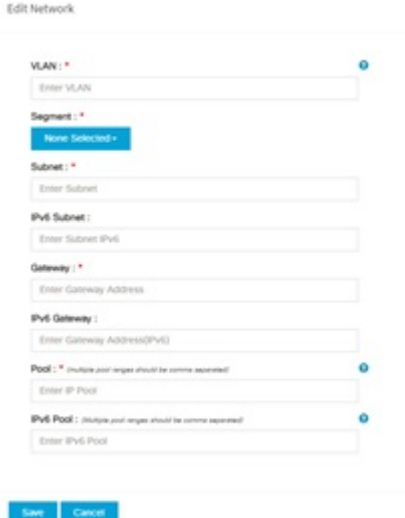
Name	Description
User Name disabled field	By default value is Admin.
Password text field	Enter Password for UCSM Common (Mandatory).

4. Click Networking to advance to the networking section of the Blueprint.

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Cisco VIM Unified Management version: 2.2.2

Name	Description
Domain Name field	Enter the domain name. (Mandatory)
HTTP Proxy Server field	If your configuration uses an HTTP proxy server, enter the IP address of the server.
HTTPS Proxy Server field	If your configuration uses an HTTPS proxy server, enter the IP address of the server.
IP Tables on Management Pods	Specifies the list of IP Address with Mask.
NTP Servers field	Enter a maximum of four and minimum of one IPv4 and/or IPv6 addresses in the table.
Domain Name Servers field	Enter a maximum of three and minimum of one IPv4 and/or IPV6 addresses.

Name	Description
Networks table	

Name	Description
	<p>Network table is pre-populated with Segments. To add Networks you can either clear all the table with Delete all or click edit icon for each segment and fill in the details.</p> <p>You can add, edit, or delete network information in the table.</p>  <ul style="list-style-type: none"> • Click Add (+) to add new entries (networks) to the table. • Specify the following fields in the Edit Entry to Networks dialog:
Name	Description
VLAN field	<p>Enter the VLAN ID.</p> <p>For Segment - Provider, the VLAN ID value is 'none'.</p>
Segment drop-down list	<p>When you add/edit new segment then following segments types are available in the form of dropdown list and you can select only one.</p> <ul style="list-style-type: none"> • API • Management/provision • Tenant • Storage

Name	Description	
		<ul style="list-style-type: none"> • External • Provider • ACIINFRA <p>Note Aciiinfra segment is available only when ACI/VLAN tenant type is selected) Depending upon the segment some of the entries below are not needed. Please refer to the example file in openstack-configs dir for details.</p>
	Subnet field	Enter the IPv4 address for the subnet.
	IPv6 Subnet field	Enter IPv6 Address. This field will be available only for Management provision and API
	Gateway field	Enter the IPv4 address for the Gateway.
	Gateway IPv6 field	Enter the IPv6 address for the gateway. This will support for API and management provision.
	Pool field	Enter the pool information in the required format, for example: 10.1.15-10.1.1.10,102.15-102.1.10 This field is available only for the Mgmt/Provision, Storage, and Tenant segments.
	IPv6 Pool field	Enter the pool information in the required format. For example: 10.1.15-10.1.1.10,102.15-102.1.10

Name	Description
	Click Save.

5. On the **Servers and Roles** page of the Cisco VIM Suite wizard, a pre-populated table filled with Roles : Control, Compute and Block Storage (Only if CEPH Dedicated is selected in Blueprint Initial Setup is available).

The screenshot shows the 'Servers and Roles' configuration page in the Cisco VIM Unified Management wizard. The page is titled 'Create Blueprint configuration' and has tabs for 'Blueprint Initial Setup', 'Physical Setup', and 'OpenStack Setup'. The 'Servers and Roles' tab is active, showing a progress bar with steps: 'Registry Setup', 'CIMC Connect', 'Networking', and 'Servers and Roles'. The configuration fields include:

- Server User Name:** 'root' (with 'Enter Net Support' and 'CIMC VIC With SSOV' options).
- Disable Hyperthreading:** A checkbox.
- COBBLER:**
 - COBBLER Timeout:** '45'.
 - Control Kickstart:** 'ucb-0-910-0-series.ki'.
 - Server Host Password:** 'Enter Server Host Password'.
 - Block Storage Kickstart:** 'ucb-0-910-0-series.ki'.
 - Compute Kickstart:** 'ucb-0-910-0-series.ki'.

Below the fields is a table titled 'Servers and Roles' with the following columns: Server Name, CIMC IP, CIMC User name, CIMC Password, Rack ID, Role, Management IP, Management IPv6, and Action. The table contains four rows:

Server Name	CIMC IP	CIMC User name	CIMC Password	Rack ID	Role	Management IP	Management IPv6	Action
					control			[edit] [delete]
					control			[edit] [delete]
					control			[edit] [delete]
					compute			[edit] [delete]

Note If you choose mechanism driver as OVS or ACI, VM_HUGEPAGE_PERCENTAGE field column is available for compute nodes, where you can fill values from 0 to 100%, when NFV_HOSTS: ALL is chosen.

Name	Description
Server User Name field	Enter the username of the Server.
Disable Hyperthreading	Default value is false. You can set it as true or false.

Name	Description	
Cobbler	Enter the Cobbler details in the following fields:	
	Name	Description
	Cobbler Timeout field	The default value is 45 min. This is an optional parameter. Timeout is displayed in minutes, and its value ranges from 30 to 120.
	Block Storage Kickstart field	Kickstart file for Storage Node.
	Admin Password Hash field	Enter the Admin Password. Password should be Alphanumeric. Password should contain minimum 8 characters and maximum of 32 characters.
	Cobbler Username field	Enter the cobbler username to access the cobbler server.
	Control Kickstart field	Kickstart file for Control Node.
	Compute Kickstart field	Kickstart file for Compute Node.
Cobbler Admin Username field	Enter the admin username of the Cobbler.	

Name	Description																			
<p>Add Entry to Servers and Roles</p> <p>Note when Pod type micro is selected then all the three servers will be associated with control, compute and block storage role.</p> <p>For Example:</p> <p>Roles</p> <ul style="list-style-type: none"> • Block Storage <ul style="list-style-type: none"> • -Server 1 • -Server 2 • -Server 3 • Control <ul style="list-style-type: none"> • -Server 1 • -Server 2 • -Server 3 • Compute <ul style="list-style-type: none"> • -Server 1 • -Server 2 • -Server 3 <p>Note When Pod type UMHC is selected then auto ToR configuration is not supported and the ToR info at server and roles level is not allowed to be entered.</p>	<p>Click Edit or + to add a new server and role to the table.</p> <table border="1" data-bbox="850 338 1482 1140"> <tr> <td data-bbox="850 338 1167 394">Server Name</td> <td data-bbox="1172 338 1482 394">Enter a friendly name.</td> </tr> <tr> <td data-bbox="850 394 1167 451">Rack ID field</td> <td data-bbox="1172 394 1482 451">The rack ID for the server.</td> </tr> <tr> <td data-bbox="850 451 1167 508">VIC Slot field</td> <td data-bbox="1172 451 1482 508">Enter a VIC Slot.</td> </tr> <tr> <td data-bbox="850 508 1167 564">CIMC IP field</td> <td data-bbox="1172 508 1482 564">Enter a IP address.</td> </tr> <tr> <td data-bbox="850 564 1167 621">CIMC Username field</td> <td data-bbox="1172 564 1482 621">Enter a Username.</td> </tr> <tr> <td data-bbox="850 621 1167 678">CIMC Password field</td> <td data-bbox="1172 621 1482 678">Enter a Password for CIMC.</td> </tr> <tr> <td data-bbox="850 678 1167 804">Select the Role from the drop down list</td> <td data-bbox="1172 678 1482 804">Choose Control or Compute or Block Storage from the drop-down list.</td> </tr> <tr> <td data-bbox="850 804 1167 953">Management IP</td> <td data-bbox="1172 804 1482 953">It is an optional field but if provided for one Server then it is mandatory to provide it for other Servers as well.</td> </tr> <tr> <td data-bbox="850 953 1167 1140">Management IPv6</td> <td data-bbox="1172 953 1482 1140">Routable and valid IPv6 address. It is an optional field but if provided for one server then it is mandatory for all other servers as well.</td> </tr> </table>		Server Name	Enter a friendly name.	Rack ID field	The rack ID for the server.	VIC Slot field	Enter a VIC Slot.	CIMC IP field	Enter a IP address.	CIMC Username field	Enter a Username.	CIMC Password field	Enter a Password for CIMC.	Select the Role from the drop down list	Choose Control or Compute or Block Storage from the drop-down list.	Management IP	It is an optional field but if provided for one Server then it is mandatory to provide it for other Servers as well.	Management IPv6	Routable and valid IPv6 address. It is an optional field but if provided for one server then it is mandatory for all other servers as well.
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Management IPv6	Routable and valid IPv6 address. It is an optional field but if provided for one server then it is mandatory for all other servers as well.																			
Click Save or Add .	On clicking Save or Add all information related to Servers and Roles gets saved.																			
If Configure ToR checkbox is True with at-least one switch detail, these fields will be displayed for each server and this is similar to DP Tor: Port Channel and Switch Name (Mandatory if Configure ToR is true)	<ul style="list-style-type: none"> • Port Channel field • Switch Name field • Switch Port Info field 	<ul style="list-style-type: none"> • Enter the port channel input. • Enter the switch name. • Enter the switch port information. 																		

Name	Description
DP ToR (Only for Control and Compute) : Mandatory if Intel NIC and Configure TOR is True.	<ul style="list-style-type: none"> • Port Channel field • Switch Name field • Switch Port Info field <ul style="list-style-type: none"> • Enter the port channel input. • Enter the switch name. • Enter the switch port information.
SRIOV TOR INFO (Only for Compute Nodes). It is mandatory in server and roles if Intel NIC and Configure TOR is True. Switch Name (Mandatory if Configure ToR is true) . This field appears only when Intel NIC support is true, as Auto TOR config is not supported in VIC_NIC combo	<ul style="list-style-type: none"> • Switch Name field • Switch Port Info field <ul style="list-style-type: none"> • Enter the switch name. • Enter the switch port information.
Intel SRIOV VFS (valid for Intel NIC testbeds) and can be integer.	For SRIOV support for Intel NIC. By Default, SRIOV support is disabled. To enable, define a value in the range # * 1-32 when INTEL_NIC_SUPPORT is set True (X710 Max VFs = 32) # * 1-63 when CISCO_VIC_INTEL_SRIOV is set True (X520 Max VFs = 63)
INTEL_SRIOV_PHYS_PORTS (valid for Intel NIC test beds) and can be of value 2 or 4 (default is 2)	In some cases the # of Physical SRIOV port needed is 4; to meet that requirement, define the following: # this is optional, if nothing is defined code will assume it to be 2; the only 2 integer values this parameter # takes is 2 or 4 and is true when INTEL_NIC_SUPPORT is True and INTEL_SRIOV_VFS is valid
Click Save or Add .	If all mandatory fields are filled click Save or Add to add information on Servers and Roles.
Disable Hyperthreading	Default value is false. You can set it as true or false.
Click Save	

Note Maximum two ToR info needs to be configured for each connection type on each node (control, compute and block_storage node).

Note If pod type UMHC is selected then CISCO_VIC_INTEL_SRIOV is enabled to be TRUE.

Note For Tenant type **ACI/VLAN**, port channel for each ToR port will not be available in servers and roles, as APIC will automatically assign port-channel numbers. Also, for ACI in full on mode you can select Intel NIC Support in the “Servers and Roles” section.

6. Click **ToR Switch** checkbox in **Blueprint Initial Setup** to enable the **TOR SWITCH** configuration page. It is an **Optional** section in Blueprint Setup but once all the fields are filled in then it will become a part of the Blueprint.

Name	Description																										
Configure ToR optional checkbox. Note If UMHC is selected as podtype, configure TOR is not allowed.	Enabling this checkbox, changes the configure ToR section from false to true. Note Configure tor is true then ToR switch info maps in servers																										
ToR Switch Information mandatory table if you want to enter ToR information.	Click (+) to add information for ToR Switch. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>ToR switch name.</td> </tr> <tr> <td>Username</td> <td>ToR switch username.</td> </tr> <tr> <td>Password</td> <td>ToR switch password.</td> </tr> <tr> <td>SSH IP</td> <td>ToR switch SSH IP.</td> </tr> <tr> <td>SSN Num</td> <td>ToR switch ssn num.</td> </tr> <tr> <td>VPC Peer Keepalive</td> <td>Peer Management IP. You cannot define if there is no peer.</td> </tr> <tr> <td>VPC Domain</td> <td>Cannot define if there is no peer.</td> </tr> <tr> <td>VPC Peer Port Info</td> <td>Interface for vpc peer ports.</td> </tr> <tr> <td>VPC Peer VLAN Info</td> <td>VLAN ids for vpc peer ports (optional).</td> </tr> <tr> <td>BR Management Port Info</td> <td>Management interface of build node.</td> </tr> <tr> <td>BR Management PO Info</td> <td>Port channel number for management interface of build node.</td> </tr> <tr> <td>BR Management VLAN info</td> <td>VLAN id for management interface of build node (access).</td> </tr> </tbody> </table>	Name	Description	Name	ToR switch name.	Username	ToR switch username.	Password	ToR switch password.	SSH IP	ToR switch SSH IP.	SSN Num	ToR switch ssn num.	VPC Peer Keepalive	Peer Management IP. You cannot define if there is no peer.	VPC Domain	Cannot define if there is no peer.	VPC Peer Port Info	Interface for vpc peer ports.	VPC Peer VLAN Info	VLAN ids for vpc peer ports (optional).	BR Management Port Info	Management interface of build node.	BR Management PO Info	Port channel number for management interface of build node.	BR Management VLAN info	VLAN id for management interface of build node (access).
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BR Management VLAN info	VLAN id for management interface of build node (access).																										
Click Save .																											

Note When tenant type ACI/VLAN is selected, the TOR switch information table differs and is mandatory.

Name	Description
Configure ToR optional checkbox. Note If UMHC is selected as podtype, configure TOR is not allowed.	Enabling this checkbox, changes the configure ToR section from false to true. Note Configure tor is true then ToR switch info maps in servers

Name	Description																												
ToR Switch Information mandatory table if you want to enter ToR information.	Click (+) to add information for ToR Switch.																												
	<table border="1"> <thead> <tr> <th data-bbox="833 344 1179 394">Name</th> <th data-bbox="1179 344 1520 394">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="833 394 1179 453">Name</td> <td data-bbox="1179 394 1520 453">ToR switch name.</td> </tr> <tr> <td data-bbox="833 453 1179 512">Username</td> <td data-bbox="1179 453 1520 512">ToR switch username.</td> </tr> <tr> <td data-bbox="833 512 1179 571">Password</td> <td data-bbox="1179 512 1520 571">ToR switch password.</td> </tr> <tr> <td data-bbox="833 571 1179 630">SSH IP</td> <td data-bbox="1179 571 1520 630">ToR switch SSH IP.</td> </tr> <tr> <td data-bbox="833 630 1179 688">SSN Num</td> <td data-bbox="1179 630 1520 688">ToR switch ssn num.</td> </tr> <tr> <td data-bbox="833 688 1179 772">VPC Peer Keepalive</td> <td data-bbox="1179 688 1520 772">Peer Management IP. You cannot define if there is no peer.</td> </tr> <tr> <td data-bbox="833 772 1179 856">VPC Domain</td> <td data-bbox="1179 772 1520 856">Cannot define if there is no peer.</td> </tr> <tr> <td data-bbox="833 856 1179 915">VPC Peer Port Info</td> <td data-bbox="1179 856 1520 915">Interface for vpc peer ports.</td> </tr> <tr> <td data-bbox="833 915 1179 999">VPC Peer VLAN Info</td> <td data-bbox="1179 915 1520 999">VLAN ids for vpc peer ports (optional).</td> </tr> <tr> <td data-bbox="833 999 1179 1083">BR Management Port Info</td> <td data-bbox="1179 999 1520 1083">Management interface of build node.</td> </tr> <tr> <td data-bbox="833 1083 1179 1209">BR Management PO Info</td> <td data-bbox="1179 1083 1520 1209">Port channel number for management interface of build node.</td> </tr> <tr> <td data-bbox="833 1209 1179 1318">BR Management VLAN info</td> <td data-bbox="1179 1209 1520 1318">VLAN id for management interface of build node (access).</td> </tr> <tr> <td colspan="2" data-bbox="305 1318 1528 1373">Click Save.</td> </tr> </tbody> </table>	Name	Description	Name	ToR switch name.	Username	ToR switch username.	Password	ToR switch password.	SSH IP	ToR switch SSH IP.	SSN Num	ToR switch ssn num.	VPC Peer Keepalive	Peer Management IP. You cannot define if there is no peer.	VPC Domain	Cannot define if there is no peer.	VPC Peer Port Info	Interface for vpc peer ports.	VPC Peer VLAN Info	VLAN ids for vpc peer ports (optional).	BR Management Port Info	Management interface of build node.	BR Management PO Info	Port channel number for management interface of build node.	BR Management VLAN info	VLAN id for management interface of build node (access).	Click Save .	
	Name	Description																											
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Click Save .																													

Note When the Tenant type ACI/VLAN is selected, the ToR switch information table differs and is mandatory.

Name	Description	
Configure ToR	Is not checked, as by default ACI will configure the ToRs	
	Host Name	ToR switch name.
	VPC Peer keep alive	Enter Peer must be exist pair.
	VPC Domain	Enter an integer.
	BR management port info	Enter BR management port info eg. Eth1/19 ,atleast one pair to be exist.
Enter Node ID	Entered integer must be unique.	

Note If TOR_TYPE is selected as NCS-5500, the TOR switch information table differs and is mandatory.

Name	Description
Configure ToR optional checkbox Note If NSC-5500 is selected as TOR_TYPE, configure TOR is set as mandatory.	Enabling this checkbox, changes the configure ToR section from false to true. Note Configure TOR is true then ToR switchinfo maps in servers.

Name	Description																										
If you want to enter Fretta details fill in the NCS-5500 Information table.	Click (+) to add information for Fretta Switch.																										
	<table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td>Enter the NCS-5500 hostname.</td> </tr> <tr> <td>User Name</td> <td>Enter the NCS-5500 username.</td> </tr> <tr> <td>Password</td> <td>Enter the NCS-5500 password.</td> </tr> <tr> <td>SSH IP</td> <td>Enter the NCS-5500 ssh IP Address.</td> </tr> <tr> <td>VPC Peer Link</td> <td>Peer management IP.</td> </tr> <tr> <td>BR Management PO Info</td> <td>Port channel number for management interface of build node.</td> </tr> <tr> <td>BR Management VLAN info</td> <td>VLAN id for management interface of build node (access).</td> </tr> <tr> <td>VPC Peer Port Info</td> <td>Interface for vpc peer ports.</td> </tr> <tr> <td>VPC Peer Port Address</td> <td>Address for ISIS exchange.</td> </tr> <tr> <td>ISIS Loopback Interface address</td> <td>ISIS loopack IP Address.</td> </tr> <tr> <td>ISIS net entity title</td> <td>Enter a String.</td> </tr> <tr> <td>ISIS prefix SID</td> <td>Integer between 16000 to 1048575.</td> </tr> </tbody> </table>	Name	Description	Name	Enter the NCS-5500 hostname.	User Name	Enter the NCS-5500 username.	Password	Enter the NCS-5500 password.	SSH IP	Enter the NCS-5500 ssh IP Address.	VPC Peer Link	Peer management IP.	BR Management PO Info	Port channel number for management interface of build node.	BR Management VLAN info	VLAN id for management interface of build node (access).	VPC Peer Port Info	Interface for vpc peer ports.	VPC Peer Port Address	Address for ISIS exchange.	ISIS Loopback Interface address	ISIS loopack IP Address.	ISIS net entity title	Enter a String.	ISIS prefix SID	Integer between 16000 to 1048575.
	Name	Description																									
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ISIS Loopback Interface address	ISIS loopack IP Address.																										
ISIS net entity title	Enter a String.																										
ISIS prefix SID	Integer between 16000 to 1048575.																										

When TOR-TYPE selected as NCS-5500 and 2 NCS-5500 are configured it is mandatory to configure MULTI_SEGMENT_ROUTING_INFO

Name	Description
BGP AS Number field	Integer between 1 to 65535.
ISIS Area Tag field	A valid string.
Loopback Interface name field	Loopback Interface name.
API bundle ID field	Integer between 1 to 65535.

Name	Description
API bridge domain field	String (Optional, only needed when br_api of mgmt node is also going through NCS-5500; this item and api_bundle_id are mutually exclusive).
EXT bridge domain field	A valid string (user pre-provisions physical, bundle interface, sub-interface and external BD for external uplink and provides external BD info setup_data).

- Click **OpenStack Setup** Tab to advance to the **OpenStack Setup** Configuration page.
- On the **OpenStack Setup** Configuration page of the Cisco VIM Insight wizard, complete the following fields:

Name	Description	
HA Proxy	Fill in the following details:	
	External VIP Address field	Enter IP address of External VIP.
	External VIP Address IPv6 field	Enter IPv6 address of External VIP.
	Virtual Router ID field	Enter the Router ID for HA.
	Internal VIP Address IPv6 field	Enter IPv6 address of Internal IP.
	Internal VIP Address field	Enter IP address of Internal VIP.
Keystone	Mandatory fields are pre-populated.	
	Admin User Name	admin.
	Admin Tenant Name	admin.

Name	Description	
LDAP	LDAP enable checkbox which by default is false , if LDAP is enabled on keystone.	
	Domain Name field	Enter name for Domain name.
	Object Class for Users field	Enter a string as input.
	Object Class for Groups field	Enter a string.
	Domain Name Tree for Users field	Enter a string.
	Domain Name Tree for Groups field	Enter a string.
	Suffix for Domain Name field	Enter a string.
	URL field	Enter a URL with ending port number.
	Domain Name of Bind User field	Enter a string.
	Password field	Enter Password as string format.
	User Filter field	Enter filter name as string.
	User ID Attribute field	Enter a string.
	User Name Attribute field	Enter a string.
	User Mail Attribute field	Enter a string.
Group Name Attribute field	Enter a string.	

Name	Description		
Neutron	Neutron fields would change on the basis of Tenant Network Type Selection from Blueprint Initial Setup . Following are the options available for Neutron for OVS/VLAN:		
	<table border="1"> <tr> <td data-bbox="805 411 1146 527">Tenant Network Type field</td> <td data-bbox="1149 411 1481 527">Auto Filled based on the Tenant Network Type selected in the Blueprint Initial Setup page.</td> </tr> </table>	Tenant Network Type field	Auto Filled based on the Tenant Network Type selected in the Blueprint Initial Setup page.
	Tenant Network Type field	Auto Filled based on the Tenant Network Type selected in the Blueprint Initial Setup page.	
	<table border="1"> <tr> <td data-bbox="805 537 1146 646">Mechanism Drivers field</td> <td data-bbox="1149 537 1481 646">Auto Filled based on the Tenant Network Type selected in Blueprint Initial Setup page.</td> </tr> </table>	Mechanism Drivers field	Auto Filled based on the Tenant Network Type selected in Blueprint Initial Setup page.
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	<table border="1"> <tr> <td data-bbox="805 657 1146 1020">NFV Hosts field</td> <td data-bbox="1149 657 1481 1020">Auto filled with the Compute you added in Server and Roles. If you select All in this section NFV_HOSTS: ALL will be added to the Blueprint or you can select one particular compute. For Eg: NFV_HOSTS: compute-server-1, compute-server-2.</td> </tr> </table>	NFV Hosts field	Auto filled with the Compute you added in Server and Roles. If you select All in this section NFV_HOSTS: ALL will be added to the Blueprint or you can select one particular compute. For Eg: NFV_HOSTS: compute-server-1, compute-server-2.
	NFV Hosts field	Auto filled with the Compute you added in Server and Roles. If you select All in this section NFV_HOSTS: ALL will be added to the Blueprint or you can select one particular compute. For Eg: NFV_HOSTS: compute-server-1, compute-server-2.	
	<table border="1"> <tr> <td data-bbox="805 1031 1146 1110">Tenant VLAN Ranges field</td> <td data-bbox="1149 1031 1481 1110">List of ranges separated by comma form start:end.</td> </tr> </table>	Tenant VLAN Ranges field	List of ranges separated by comma form start:end.
Tenant VLAN Ranges field	List of ranges separated by comma form start:end.		
<table border="1"> <tr> <td data-bbox="805 1121 1146 1201">Provider VLAN Ranges field</td> <td data-bbox="1149 1121 1481 1201">List of ranges separated by comma form start:end.</td> </tr> </table>	Provider VLAN Ranges field	List of ranges separated by comma form start:end.	
Provider VLAN Ranges field	List of ranges separated by comma form start:end.		
<table border="1"> <tr> <td data-bbox="805 1211 1146 1320">VM High Page Size (available for NFV_HOSTS option) field</td> <td data-bbox="1149 1211 1481 1320">2M or 1G</td> </tr> </table>	VM High Page Size (available for NFV_HOSTS option) field	2M or 1G	
VM High Page Size (available for NFV_HOSTS option) field	2M or 1G		
<table border="1"> <tr> <td data-bbox="805 1331 1146 1379">Enable Jumbo Frames field</td> <td data-bbox="1149 1331 1481 1379">Enable the checkbox</td> </tr> </table>	Enable Jumbo Frames field	Enable the checkbox	
Enable Jumbo Frames field	Enable the checkbox		
<p>For Tenant Network Type Linux Bridge everything remains the same but Tenant VLAN Ranges will be removed.</p>			
CEPH	<p>Ceph has two pre-populated fields:</p> <ul style="list-style-type: none"> • CEPH Mode : By default Dedicated. • NOVA Boot: From drop down selection you can choose Ceph or local. 		
GLANCE	By default Populated for CEPH Dedicated with Store Backend value as CEPH .		
CINDER	By default Populated for CEPH Dedicated with Volume Driver value as CEPH .		

Name	Description	
<p>VMTP optional section, this will be visible only if VMTP is selected from Blueprint Initial Setup. For VTS tenant type Provider network is only supported.</p>	<p>Check one of the check boxes to specify a VMTP network:</p> <ul style="list-style-type: none"> • Provider Network • External Network <p>For the Provider Network complete the following:</p>	
	<p>Network Name field</p>	<p>Enter the name for the external network.</p>
	<p>Subnet field</p>	<p>Enter the Subnet for Provider Network.</p>
	<p>Network IP Start field</p>	<p>Enter the starting floating IPv4 address.</p>
	<p>Network IP End field</p>	<p>Enter the ending floating IPv4 address.</p>
	<p>Network Gateway field</p>	<p>Enter the IPv4 address for the Gateway.</p>
	<p>DNS Server field</p>	<p>Enter the DNS server IPv4 address.</p>
	<p>Segmentation ID field</p>	<p>Enter the segmentation ID.</p>
	<p>For External Network fill in the following details:</p>	
	<p>Network Name field</p>	<p>Enter the name for the external network.</p>
	<p>IP Start field</p>	<p>Enter the starting floating IPv4 address.</p>
	<p>IP End field</p>	<p>Enter the ending floating IPv4 address.</p>
	<p>Gateway field</p>	<p>Enter the IPv4 address for the Gateway.</p>
	<p>DNS Server field</p>	<p>Enter the DNS server IPv4 address.</p>
<p>Subnet field</p>	<p>Enter the Subnet for External Network.</p>	

Name	Description												
<p>TLS optional section, this will be visible only if TLS is selected from Blueprint Initial Setup Page.</p>	<p>TLS has two options:</p> <ul style="list-style-type: none"> • External LB VIP FQDN - Text Field. • External LB VIP TLS - True/False. By default this option is false. 												
<p>SwiftStack optional section will be visible only if SwiftStack is selected from Blueprint Initial Setup Page. SwiftStack is only supported with KeyStonev2. If you select Keystonev3, swiftstack will not be available to configure.</p>	<p>Following are the options that needs to be filled for SwiftStack:</p> <table border="1" data-bbox="805 546 1487 1138"> <tbody> <tr> <td data-bbox="805 546 1143 663">Cluster End Point</td> <td data-bbox="1149 546 1487 663">IP address of PAC (proxy-account-container) endpoint.</td> </tr> <tr> <td data-bbox="805 672 1143 751">Admin User</td> <td data-bbox="1149 672 1487 751">Admin user for swift to authenticate in keystone.</td> </tr> <tr> <td data-bbox="805 760 1143 907">Admin Tenant</td> <td data-bbox="1149 760 1487 907">The service tenant corresponding to the Account-Container used by Swiftstack.</td> </tr> <tr> <td data-bbox="805 915 1143 1033">Reseller Prefix</td> <td data-bbox="1149 915 1487 1033">Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_</td> </tr> <tr> <td data-bbox="805 1041 1143 1083">Admin Password</td> <td data-bbox="1149 1041 1487 1083">swiftstack_admin_password</td> </tr> <tr> <td data-bbox="805 1092 1143 1138">Protocol</td> <td data-bbox="1149 1092 1487 1138">http or https</td> </tr> </tbody> </table>	Cluster End Point	IP address of PAC (proxy-account-container) endpoint.	Admin User	Admin user for swift to authenticate in keystone.	Admin Tenant	The service tenant corresponding to the Account-Container used by Swiftstack.	Reseller Prefix	Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_	Admin Password	swiftstack_admin_password	Protocol	http or https
Cluster End Point	IP address of PAC (proxy-account-container) endpoint.												
Admin User	Admin user for swift to authenticate in keystone.												
Admin Tenant	The service tenant corresponding to the Account-Container used by Swiftstack.												
Reseller Prefix	Reseller_prefix as configured for Keysone Auth,AuthToken support in Swiftstack E.g KEY_												
Admin Password	swiftstack_admin_password												
Protocol	http or https												

Note When the Tenant type ACI/VLAN is selected then ACIINFO tab is available in blueprint setup.

Note When ACI/VLAN is selected then ToR switch from initial setup is mandatory.

Name	Description
APIC Hosts field	Enter host input. Example: <ip1 host1>:[port] . max of 3, min of 1, not 2;
apic_username field	Enter a string format.
apic_password field	Enter Password.
apic_system_id field	Enter input as string. Max length 8.
apic_resource_prefix field	Enter string max length 6.
apic_tep_address_pool field	Allowed only 10.0.0.0/16
multiclass_address_pool field	Allowed only 225.0.0.0/15
apic_pod_id field	Enter integer(1- 65535)
apic_installer_tenant field	Enter String, max length 32
apic_installer_vrf field	Enter String, max length 32
api_l3out_network field	Enter String, max length 32

Note

Name	Description
VTS Day0 (checkbox)	True or false default is false.
VTS User name	Enter as string does not contain special characters.
VTS Password	Enter password
VTS NCS IP	Enter IP Address format.
VTC SSH Username	Enter a string
VTC SHH Password	Enter password

When Tenant Type is VTS/VLAN then VTS tab is available in blueprint setup.

Note If vts day0 is enabled then SSH username and SSH password is mandatory.

If SSH_username is input present then SSH password is mandatory vice-versa

- If **Syslog Export** or **NFVBENCH** is selected in **Blueprint Initial Setup** Page, then **Services Setup** page will be enabled for user to view. Following are the options under **Services Setup** Tab:

Name	Description	
Syslog Export	Following are the options for Syslog Settings:	
	Remote Host	Enter Syslog IP Address.
	Protocol	Supports only UDP.
	Facility	Defaults to local5.
	Severity	Defaults to debug.
	Clients	Defaults to ELK.
	Port	Defaults to 514 but can be modified by the User.
NFVBENCH	<p>NFVBENCH enable checkbox by default is false.</p> <p>Add ToR information connect to Switch:</p> <ul style="list-style-type: none"> • Select a TOR Switch and enter the Switch name. • Enter the port number. For Example: eth1/5 . VTEP VLANS (mandatory and needed only for VTS/VXLAN,); Enter 2 different VLANs for VLAN1 and VLAN2. • NIC Ports: INT1 and INT2 optional input. Enter the 2 port numbers of the 4-port 10G Intel NIC at the management node used for NFVBench. 	
ENABLE_ESC_PRIV	Enable the checkbox to set it as True. By default it is False .	

Step 4 Click **Offlinevalidation**, to initiate an offline validation of the Blueprint.

Step 5 Blueprint can also be created using an **Upload functionality**:

- In Blueprint Initial Setup.
- Click **Browse** in the blueprint initial setup.
- Select the YAML file you want to upload.
- Click **Select** button.
- Clicking on load button in the Insight UI Application. All the fields present in the YAML file would be uploaded to the respective fields in UI.
- Enter the name of the Blueprint (Make sure you enter unique name while saving Blueprints. There would be no two Blueprints with same name.)
- Click **Offline Validation**.
- If all the mandatory fields in the UI are populated, then Offline Validation of the Blueprint will start else a pop up would be visible which will inform which section of Blueprint Creation has a missing information error.
- On Validation Success of Blueprint **Save Blueprint** button will be enabled with **Cancel** button
- A pop up will be generated asking to initiate the deployment with **Blueprint Name** and the stages you need to run.

On Validation Failure of Blueprint **Cancel** button will be enabled.

Once the **Offlinevalidation** is successful, **Save** option will be enabled which will redirect you to the Blueprint Management Page.

The wizard advances to the Blueprint Management page. On the Blueprint Management page you can select the recently added valid Blueprint and click **Install** button which is disabled by default.

A pop up will be generated asking to initiate the deployment with **Blueprint Name** and the stages you need to run.

By default all stages are selected but you can also do an incremented install.

In case of Incremented Install you should select stages in the order. For Example: If you select **Validation Stage** then the 2nd stage Management Node Orchestration will be enabled. You cannot skip stages and run a deployment.

Once you click **Proceed** the Cloud Deployment would be initiated and the progress can be viewed from "Dashboard".

Note Once the Blueprint is in **Active State**, the **Post-Install** features listed in Navigation Bar will changed to **Active** stage.

Post Installation Features for Active Blueprint

This option is only available to a pod, which is successfully deployed. There are multiple sublinks available to manage the day-n operation of the pod. However, often Insight cross-launches the relevant services, through delegating the actual rendering to the individual services.

Monitoring the Pod

Cisco VIM uses ELK (elasticsearch, logstash and Kibana) to monitor the OpenStack services, by cross-launching the Kibana dashboard.

To cross launch Kibana, complete the following instructions:

-
- Step 1** Login as **POD User**.
 - Step 2** Naviagte to **POD**.
 - Step 3** Navigate to **Post-install**
 - Step 4** Click **Monitoring**
The **Authentication Required** browser pop up is displayed.
 - Step 5** Enter the **username** as admin.
 - Step 6** Enter the ELK_PASSWORD password obtained from /root/installer-`<tagid>`/openstack-configs/secrets.yaml in the management node.
Kibana is launched in an I-Frame

Note Click **Click here to view Kibana logs in new tab** link to view Kibana Logs in a new tab.

Cross Launching Horizon

Horizon is the canonical implementation of Openstack's Dashboard, which provides a web based user interface to OpenStack services including Nova, Swift and, Keystone.

-
- Step 1** In the Navigation pane, click **Post-Install > Horizon**.
- Step 2** Click **Click here to view Horizon logs in new tab**.
You will be redirected to Horizon landing page in a new tab.
-

NFVI Monitoring

NFVI monitoring is a Cross launch browser same as Horizon. NFVI monitoring link is available in the post install only if the setupdata has NFVI Monitoring configuration during the cloud deployment which basically pings the monitoring and checks status of **Collector VM1 Info** and **Collector VM2 Info**.

-
- Step 1** Login as **POD User**.
- Step 2** Naviagte to **POD**.
- Step 3** Navigate to **Post-install**
- Step 4** Click **Reconfigure**.
- Step 5** Click **NFVI Monitoring**
- Step 6** Click the link **Click here to view NFVI monitoring**.
You will be redirected to NFVI monitoring page
-

Run VMTP

VIM 2.0, provides an integrated data and control plan test tool (called VMTP).VMTP helps you to test the cloud at any given time.

Run VMTP is divided in two sections:

- **Results for Auto Run:** Auto run shows the results of VMTP which was run during the cloud deployment (Blueprint Installation).
- **Results for Manual Run:** To run VMTP on demand click **Run VMTP**.



Note If VMTP stage was skipped or not-run during Blueprint Installation, this section of POST Install gets disabled for the user.

Run CloudPulse

In VIM 2.2, we provide an integrated tool, called Cloud Pulse, that periodically checks the cloud services endpoint. The results of these tests are reflected under the Cloud Pulse link. You can also run these API endpoint tests on demand, and fetch the result of these tests by refreshing the table.

Endpoints Tests:

1. cinder_endpoint
2. glance_endpoint
3. keystone_endpoint
4. nova_endpoint
5. neutron_endpoint
6. all_endpoint_tests

Operator Tests:

1. rabbitmq_check
2. galera_check
3. ceph_check
4. node_check
5. docker_check
6. all_operator_tests

Run NFV Bench

One can **Run NFV Bench** for **BandC** series Pod, through Cisco VIM Insight. On a pod running with CVIM 2.2 and higher releases, click on the NFVBench link on the NAV-Menu.

You can run either fixed rate test or NDR/PDR test. As the settings and results for the test types differ, the options to run these tests are presented in two tabs, with its own settings and results .

NDR/PDR Test

-
- Step 1** Login as **POD User**.
- Step 2** Naviagte to **POD**.
- Step 3** Navigate to **Post-install**
- Step 4** Click **Run NFV Bench**.
- Step 5** Log-in to **CISCO VIM Insight**.
- Step 6** Click on NDR/PDR test and complete the following fields

Name	Description
Iteration Duration	Select duration from 10 to 60 sec. Default is 20 sec

Name	Description
Frame Size	Select the correct frame size to run
Run NDR/PDR test	Click on Run NDR/PDR test. Once NDR/PDR test is finished it will display each type of test with its own settings and results.

Fixed Rate Test

- Step 1** Log-in to **CISCO VIM Insight**.
- Step 2** In the **Navigation** pane, click **Post-Install >Run NFV Bench**.
- Step 3** Click Fixed rate test and complete the following fields.

Name	Description
Rate	Rate: Select right configuration pps or bps from drop down-list and enter values : For pps: minimum: 2500pps; maximum: 14500000pps (=14.5Mpps); default: 1000000pps (=1Mpps) For bps: minimum: 1400000bps; maximum: 10000000000bps (=10Gbps); default: 1000000000 (=1Gbps)
Iteration Duration	Select duration from 10-60Sec. Default is 20sec.
Frame Size	Select the right frame size(64,IMIX,1518) to run.
Run Fixed rate test	Click on Run Fixed rate test. Once Fixed rate test is finished it will display each type of test with its own settings and results.

POD Management

One of the key aspects of Cisco VIM is that it provides the ability for the admin to perform pod life-cycle management from a hardware and software perspective. Nodes of a given pod corrupts at times and VIM provides the ability to add, remove or replace nodes, based on the respective roles with some restrictions. Details of pod management will be listed in the admin guide, however as a summary the following operations are allowed on a running pod:

- Step 1** **Add or Remove Storage Nodes:** You can add one node at a time, given that we run Ceph as a distributed storage offering.
- Step 2** **Add or Remove Computes Nodes:** N-computes nodes can be replaced simultaneously; however at any given point, at least one compute node should be active.

Step 3 **Replace Control Nodes:** We do not support double fault scenarios, replacement of one controller at a time is supported.

System Update

As part of the lifecycle management of the cloud, VIM has the ability to bring in patches (bug fixes related to code, security, etc.), thereby providing the additional value of seamless cloud management from software perspective. Software update of the cloud is achieved by uploading a valid tar file following initiation of a System Update from the Insight as follows:

Step 1 Login as **POD User**.

Step 2 Navigate to **POD**.

Step 3 Navigate to **Post-install**

Step 4 Click **System Update**.

Step 5 Click **Openstack Password**

Step 6 Click **Browse** button.

Step 7 Select the valid tar file.

Step 8 Click **Open > Upload and Update** .

Message stating System Update has been initiated will be displayed. Logs front-ended by hyperlink would be visible in the section below before Update Logs to help see the progress of the update. During the software update, all other pod management activities will be disabled. Post-update, normal cloud management will commence.

Reconfiguring CIMC Password through Insight

Update the `cimc_password` in the CIMC-COMMON section, and/or the individual `cimc_password` for each server and then run the update password option.

To update a password, you need to follow the password rules:

- Must contain at least one lower case letter.
- Must contain at least one upper case letter.
- Must contain at least one digit between 0 to 9.
- One of these special characters `!$#@%^-_=*&`
- Your password has to be 8 to 14 characters long.

Before you begin

You must have a C-series pod up and running with Cisco VIM to reconfigure CIMC password.



Note Reconfigure CIMC password section would be disabled if the pod is in failed state as indicated by `ciscovim install-status`.

-
- Step 1** Login as **POD User**.
- Step 2** Naviagte to **POD**.
- Step 3** Navigate to **Post-install**
- Step 4** Click **Reconfigure**.
- Step 5** Click **Openstack Password**

Name	Description
CIMC_COMMON old Password	CIMC_COMMON old password field cannot be edited.
CIMC-COMMON new Password	Enter new CIMC-COMMON password. Password should be alphanumeric according to the password rule.
Click Update Password	Old CIMC-COMMON password will be updated with new CIMC-COMMON password.

Reconfiguring OpenStack Password

Cisco VIM has been designed with security to accommodate users password policy.

There are two options to regenerate the Password:

- 1. Regenerate all passwords:** Check the **Regenerate all passwords** checkbox and click **Set Password**. This automatically regenerates all passwords in alphanumeric format.
- 2. Regenerate single or more password:** If you want to set a specific password for any service like Horizon's ADMIN_USER_PASSWORD you can add it by doing an inline edit. Double click field under Password and then enter the password which enables **Set Password**.



Note During the reconfiguration of password, all other pod management activities are disabled. Postupdate, normal cloud management commences.

Reconfiguring OpenStack Services, TLS certs and ELK configurations

Cisco VIM supports the reconfiguration of OpenStack log level services, TLS certificates, and ELK configuration. Listed below are the steps to reconfigure the OpenStack and other services:

- Step 1** Login as **POD User**.
- Step 2** Naviagte to **POD**.
- Step 3** Navigate to **Post-install**
- Step 4** Click **Reconfigure OpenStack Config**.
- Step 5** Click on the specific item to be changed and updated; For TLS certificate it is the path to certificate location.

Step 6 Enter **Set Config** and the process will commence.

During the reconfiguration process, all other pod management activities will be disabled. Post-update, normal cloud management will commence.

Reconfiguring Optional Services

Cisco VIM offers optional services such as heat, migration to Keystone v3, NFVBench, NFVIMON and so on, that can be enabled as post-pod deployment. Optional services can be un-configured as post-deployment in Cisco VIM feature set. These services can be enabled in one-shot or selectively. Listed below are the steps to enable optional services:

Step 1 Login as **POD User**.

Step 2 Naviagte to **POD**.

Step 3 Navigate to **Post-install**

Step 4 Click **Reconfigure Optional Services**.

Step 5 Choose the right service and update the fields with the right values.

Step 6 Enter **Reconfigure** to commence the process.

During the reconfiguration process, all other pod management activities will be disabled. Post-update, normal cloud management will commence. Once reconfigure is initiated than optional feature would be updated in active blueprint. If reconfigure of Optional Services fail in the time of reconfigure process then it is advised to contact CiscoTAC to resolve the situation through CLI.

Note All reconfigure operation feature contains repeated deployment true or false.

- Repeated re-deployment true - Feature can be re-deployed again.
- Repeated re-deployment false- Deployment of feature allowed only once.

Deployment Status :

Optional Features	Repeated re-deployment Options
APICINFO	True
EXTERNAL_LB_VIP_FQDN	False
EXTERNAL_LB_VIP_TLS	False
INSTALL_MODE	True
LDAP	True
NETWORKING	True
NFVBENCH	False
NFVIMON	False

Optional Features	Repeated re-deployment Options
PODNAME	False
PROVIDER_VLAN_RANGES	True
SWIFTSTACK	True
SYSLOG_EXPORT_SETTINGS	False
TENANT_VLAN_RANGES	True
TORSWITCHINFO	False
VIM_ADMINIS	True
VMTP	False
VTS_PARAMETERS	False
AUTOBACKUP	True
Heat	False
Keystone v3	False
HTTP Proxy Server	True
HTTPS Proxy Server	True

Pod User Administration

Cisco VIM Insight offers Users (Pod Admin(s) or Pod Users) to manage Users and roles associated with them.

Managing Users

To add new User

- Step 1** Click **Login as POD User**.
- Step 2** Navigate to **POD User Administration**.
- Step 3** Click **Manage Users**.
- Step 4** Click **Add Users** to add a new user.
- Step 5** Complete the following fields in the **Add Users** page of the Cisco VIM Insight:

Field Name	Field Description
Email ID	Enter the Email ID of the User.

Field Name	Field Description
User Name	Enter the User Name if the User is new. If the User is already registered to the Insight the User-Name gets auto-populated.
Role	Select the Role from the drop-down list.

Step 6 Click **Save**.

Managing Roles

To create a new Role:

Step 1 Click **Log in as POD User**.

Step 2 Navigate to **Pod User Administration** and click **Manage Roles**. By default you will see a full-pod-access role in the table.

Step 3 Click **Add Role** to create a new role.

Step 4 Complete the following fields on the **Add Roles** page in Cisco VIM Insight:

Field Name	Field Description
Role	Enter the name of the role.
Description	Enter the description of the role.
Permission	Check the Permission checkbox to select the permission.

Step 5 Click **Save**. Once, the Blueprint is in an Active state all the permissions are same for C-series and B-series Pods other than Reconfigure CIMC Password which is missing for B-series Pod.

Note Permissions are divided in the granular level where viewing *Dashboard* is the default role that is added while creating a role.

Managing Root CA Certificate

You can update the CA Certificate during the registration of the POD. Once, logged in as POD User and if you have the permission to update the certificate you can view under POD User Administration>> Manage Root CA Certificate.

To update the Certificate:

Step 1 Click **Login as POD User**

Step 2 Navigate to **POD User Administration>>Manage Root CA certificate**.

Step 3 Click **Browse** and select the certificate that you want to upload.

Step 4 Click **Upload**.

- If the certificate is Invalid, and does not matches with the certificate on the management node located at (var/www/mercury/mercury-ca.crt) then Insight will revert the certificate which was working previously.
- If the Certificate is valid, Insight will run a management node health check and then update the certificate with the latest one.

Note The CA Certificate which is uploaded should be same as the one which is in the management node.
