



Integrate and Orchestrate Cloud Onramp with a Software-Defined Cloud Interconnect Vendor



For supported software information, click [here](#).

To integrate and orchestrate cloud onramp with a software-defined cloud interconnect vendor, you create a network virtualization function, here, Megaport Virtual Edge (MVE), and then you deploy an SD-WAN branch in the cloud of a an interconnect vendor, here, Equinix Network Edge.

Create an MVE Integrated with a Versa Director

This section describes how to create and configure an MVE with Versa Secure SD-WAN.

To configure an MVE with Versa SD-WAN, you do the following:

- Obtain information for the Director node.
- Create a new workflow template on the Director node.
- Add a new device group on the Director node.
- Add a new device on the Director node
- Create the Versa MVE Instance on the Megaport portal.

After you create the MVE with Versa SD-WAN, you can view the MVE public IP address assignment on the Megaport portal and, from the Director node, you can verify that the MVE is registered and is in-sync.

Before you begin, you must have Megaport user accounts with ordering permissions that provide access to the Megaport portal and to the Versa Director node. For information about setting up a Megaport account, see <https://docs.megaport.com/setting-up/registering/>.

Obtain Information for the Director Node

To set up Versa SD-WAN, you need the following information:

- IPv4 address or FQDN of the Director node. An example is cloud211.versa-networks.com.
- Pv4 address or FQDN of the Controller node. To obtain this information from the Director node:
 1. In Director view, select the Configuration tab in the top menu bar.
 2. Select Templates > Device Templates in the horizontal menu bar.

3. Select a template.
4. In the template details page, select the Services tab (the gear icon).
5. Select SD-WAN > System > Controller Configuration in the left menu bar. The Edit Controller Configuration popup window displays a list of the Controller nodes, their IP addresses, and any assigned FQDNs.

| Name | IP Address | FQDN | Transport Domain |
|---|---------------|------|------------------|
| Controller-1-Transport-1... | 54.176.114.26 | | Internet |

- Local authentication string—The default is SDWAN-Branch@Versa.com. If necessary, you can modify the string on the Director node.
- Remote authentication string—The default is Controller-1-staging@Versa.com. If necessary, you can modify the string on the Director node.
- Serial number—This value is created when you add a new device in Versa Director.

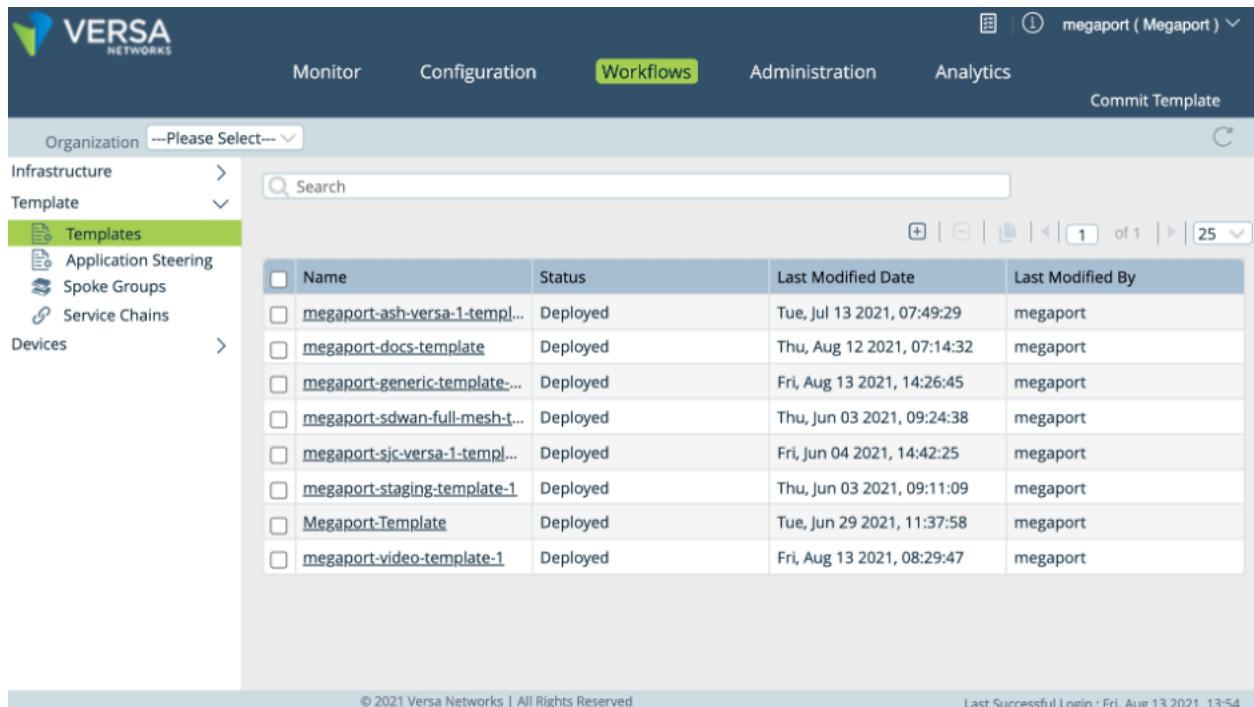
Create a New Workflow Template

On the Director node, you create a new workflow template and devices. It is strongly recommended that you use workflows for creating templates and devices. Workflows automatically build and create some behind-the-scenes configurations and variable values that might otherwise be overlooked.

To create a new workflow template:

1. Log in to the Director node.

2. Select the Workflows tab in the top menu bar.
3. Select Template > Templates in the left menu bar.



The screenshot shows the Versa Networks interface. The top navigation bar includes tabs for Monitor, Configuration, Workflows (which is highlighted in green), Administration, and Analytics. A sub-header "megaport (Megaport)" is visible. On the left, a sidebar lists Infrastructure, Template (selected), and Devices. Under Template, "Templates" is selected, and a sub-menu shows Application Steering, Spoke Groups, and Service Chains. The main content area displays a table titled "Templates" with the following data:

| <input type="checkbox"/> | Name | Status | Last Modified Date | Last Modified By |
|--------------------------|---|----------|----------------------------|------------------|
| <input type="checkbox"/> | megaport-ash-versa-1-temp... | Deployed | Tue, Jul 13 2021, 07:49:29 | megaport |
| <input type="checkbox"/> | megaport-docs-template | Deployed | Thu, Aug 12 2021, 07:14:32 | megaport |
| <input type="checkbox"/> | megaport-generic-template-... | Deployed | Fri, Aug 13 2021, 14:26:45 | megaport |
| <input type="checkbox"/> | megaport-sdwan-full-mesh-t... | Deployed | Thu, Jun 03 2021, 09:24:38 | megaport |
| <input type="checkbox"/> | megaport-sjc-versa-1-templ... | Deployed | Fri, Jun 04 2021, 14:42:25 | megaport |
| <input type="checkbox"/> | megaport-staging-template-1 | Deployed | Thu, Jun 03 2021, 09:11:09 | megaport |
| <input type="checkbox"/> | Megaport-Template | Deployed | Tue, Jun 29 2021, 11:37:58 | megaport |
| <input type="checkbox"/> | megaport-video-template-1 | Deployed | Fri, Aug 13 2021, 08:29:47 | megaport |

At the bottom, a footer bar shows "© 2021 Versa Networks | All Rights Reserved" and "Last Successful Login : Fri, Aug 13 2021, 13:54".

4. Click the  Add icon to create a template.

The screenshot shows the 'Create Template' interface for SD-WAN Post Staging. Key fields include:

- Name:** Demo-template
- Type:** SDWAN Post Staging
- Organization:** Megaport
- Device Type:** SDWAN, Full Mesh selected
- Sub Organizations:** No Row Added
- Controllers:** Controller-1
- Subscription:** Solution Addon Tier Premier-Elite... selected, License Period 3 Years
- Redundant Pair:** Enable checked, VRPP, Cloud, CPE
- Preferred Software Version:** LATEST-VERSION

5. Select the Basic tab, and enter information for the following fields. For more information about creating templates, see [Create and Manage Staging and Post-Staging Templates](#).

| Field | Description |
|--------------|--|
| Name | Enter a name for the staging template. |
| Type | Select the template type SD-WAN Post Staging. |
| Organization | Select the provider organization to associate with the template. |
| Device Type | Select SD-WAN, and then select the appropriate role: <ul style="list-style-type: none"> ◦ Full Mesh ◦ Hub ◦ Hub Controller ◦ Spoke |
| Controllers | Select a controller node from your network to associate with the template. |
| Subscription | Select the subscription information for your network: |

[https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/...](https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/)

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| Field | Description |
|----------------------------|---|
| | <ul style="list-style-type: none"> Solution Tier—Network service to be configured. Service Bandwidth—Allocated bandwidth for the service, in Mbps. |
| Preferred Software Version | Select the preferred version of the software that should be deployed on the Director node. During zero-touch provisioning (ZTP), the Director node upgrades a branch to the preferred software version. The preferred version can be backward compatible for up to the two previous VOS versions. |

6. Select the Interfaces tab, and enter information for the following fields. For the fields not listed in the table, you can leave them unchanged.

The screenshot shows the Versa Networks interface for creating a template. The left sidebar shows 'Infrastructure' and 'Template' sections. Under 'Template', 'Templates' is selected. The main area is titled 'Create Template' with tabs for Basic, Interfaces, Tunnels, Routing, Inbound NAT, Services, and Management Servers. The 'Interfaces' tab is active. A sub-section 'Device Port Configuration' shows four ports: Mgmt (yellow), WAN (blue), and two others (grey). Below this is a table for 'WAN Interfaces(1)'. The table has columns: P..., Interface, VLAN ID, Network Name, Priority, IPv4, IPv6, Circuit Provider, Circuit Type, and Circuit Name. One row is shown: P... 0, Interface vni-0/0, VLAN ID 0, Network Name INET-1, Priority 1, IPv4 DHCP, IPv6 None, Circuit Provider blank, Circuit Type blank, and Circuit Name blank. At the bottom are 'Back', 'Cancel', 'Continue', and 'Save' buttons. The footer includes copyright information and a timestamp.

| Field | Description |
|-----------------|--|
| Number of Ports | Choose 4, because MVE requires 4 ports. Note that Port 0 is reserved for management (mgmt) and cannot be changed. |
| Port 1 | Click the icon for port 1, and then select WAN from the dropdown menu. A row is added to the WAN Interfaces list. (The WAN interface is automatically configured by the MVE creation process to connect through the included transit VXC with bandwidth determined by the MVE size.) |
| VLAN ID | The value should be set to 0. |
| Network name | The value should be set to INET-1. |
| IPv4 | The value should be set to DHCP. |
| Circuit | Optionally, enter circuit information. |

7. Click the Continue button until you see the Create button.

The screenshot shows the Versa Networks web interface. The top navigation bar includes 'Monitor', 'Configuration', 'Workflows' (which is highlighted in green), 'Administration', 'Analytics', and 'Commit Template'. On the left, a sidebar shows 'Organization --Please Select--', 'Infrastructure', 'Template' (selected, shown in green), 'Templates' (highlighted in green), 'Application Steering', 'Spoke Groups', 'Service Chains', and 'Devices'. The main content area is titled 'Create Template' and contains tabs for 'Basic', 'Interfaces', 'Tunnels', 'Routing', 'Inbound NAT', 'Services', and 'Management Servers'. Under 'Device Port Configuration', it shows 'Number of Ports' set to 4, with icons for Mgmt (yellow), WAN (blue), and two others (grey). Below this, there's a table for 'WAN Interfaces(1)' with one row for port 0, which has 'vni-0/0' as its interface, '0' as its VLAN ID, 'INET-1' as its network name, and 'DHCP' as its IPv4 setting. At the bottom are 'Back', 'Cancel', 'Continue', and 'Save' buttons.

8. Click Create to create the template.

Add a New Device Group

1. Log in to Versa Director.
2. Select the Configuration tab in the top menu bar.
3. Select Devices > Device Groups in the horizontal menu bar.

The screenshot shows the Versa Director web interface. The top navigation bar includes tabs for Monitor, Configuration (which is selected and highlighted in green), Workflows, Administration, and Analytics. Below the navigation is a breadcrumb trail: Configuration > Megaport > Device Groups. A "Commit Template" button is located in the top right corner. The main content area features a search bar and three dropdown menus: Templates, Devices (which is selected and highlighted in blue), and Objects. A table lists device groups under the heading "Megaport". The table columns are Name, Organizations, Contact Information (Email Address, Phone Number), Appliances, and Members. The data in the table is as follows:

| Name | Organizations | Contact Information | Appliances | Members |
|-------------------|---------------|---------------------|------------|--------------------------------|
| ash-hub | Megaport | | | |
| Megaport-DG | Megaport | | | |
| megaport-docs-dg | Megaport | | | sjc-hub-3 sea-hub-1 |
| Megaport-Hubs | Megaport | | | Megaport-Hub1 |
| megaport-video-dg | Megaport | | | mp1-video-1 |
| mp1-generic-dg | Megaport | | | mp1-generic-1 mp1-generic-2 |

At the bottom of the page, there is a copyright notice: © 2021 Versa Networks | All Rights Reserved and a timestamp: Last Successful Login : Fri, Aug 13 2021, 13:54.

4. Click the Add icon to add a device group. In the Add Device Group popup window, enter information for the following fields.

The screenshot shows the "Add Device Group" dialog box. The left panel contains fields for Name (megaport-docs-dg), Description, Tags, Organization (Megaport), and various configuration options like Staging Template (Select), Post Staging Template (megaport-docs-template), and Contact Information (Email and Phone). The right panel displays a "Post Staging Template Association(2) Devices(0)" table with two entries:

| Tenant | Category | Template |
|----------|-----------|------------------------|
| Megaport | DataStore | Megaport-DataStore |
| Megaport | Main | megaport-docs-template |

At the bottom right of the dialog are "OK" and "Cancel" buttons.

https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/...

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| Field | Description |
|-----------------------|--|
| Name | Enter a name for the device group that is easily identifiable. |
| Description | Enter a text description for the device group. |
| Tags | Enter a text string or phrase to associate with the device group. A tag is an alphanumeric text descriptor with no white spaces or special characters that you can use to search groups. You can specify multiple tags. |
| Organization | Select the organization. |
| Post-Staging Template | Select the template you created in Create a New Workflow Template , above. |

- Click OK.

Add a New Device

- Log in to Versa Director.
- Select the Workflows tab in the top menu bar.
- Select Devices > Devices in the left navigation bar.

| Name | Global Device ID | Status | Last Modified Time | Last Modified By |
|---------------|------------------|----------|-------------------------|------------------|
| Megaport-Hub1 | 117 | Deployed | Fri, Jun 04 2021, 14:42 | megaport |
| Megaport-Hub2 | 126 | Deployed | Tue, Jul 13 2021, 08:01 | megaport |
| mp1-generic-1 | 167 | Deployed | Fri, Aug 13 2021, 14:28 | megaport |
| mp1-generic-2 | 168 | Deployed | Fri, Aug 13 2021, 14:42 | megaport |
| mp1-video-1 | 166 | Deployed | Fri, Aug 13 2021, 08:31 | megaport |
| sea-hub-1 | 159 | Deployed | Thu, Aug 12 2021, 13:36 | megaport |
| sjc-hub-3 | 103 | Deployed | Tue, Jun 29 2021, 14:38 | megaport |

- Click the Add icon. The the Add Device popup window displays.

Add Device

Basic **Location Information** **Device Service Template** **Bind Data**

| | | |
|---------------------------|----------------------|-------------------|
| Name* | Global Device ID* | Organization* |
| sjc-hub-3 | 103 | Megaport |
| Deployment Type | Serial Number | Device Groups* |
| CPE-Baremetal Device | Megaport-Hub-3 | megaport-docs-dg |
| +Device Group | | |
| Model Number | | |
| --Select-- | | |
| Admin Contact Information | | |
| Email | Phone Number | Subscription |
| | (USA) (201) 555-5555 | Service Bandwidth |
| | | --Select-- |
| | | License Period |
| | | 1 Years |

Cancel **Save** **Continue**

- Select the Basic tab, and enter information for the following fields.

| Field | Description |
|------------------|---|
| Name | Enter a name for the device that is easily identifiable. |
| Global Device ID | The Director node automatically assigns the next available identifier. |
| Organization | Select the organization. |
| Deployment Type | Select CPE-Baremetal Device. |
| Serial Number | Enter a serial number for the device. Specify a unique and meaningful value for the device and make a note of it, as you need it again when creating the Versa MVE instance in the Megaport Portal. |
| Device Groups | Choose the device group you created in Add a New Device Group , above. The new device is assigned to this device group. |

- Click Continue.
- In the Location Information tab, enter the country where the device is located.
- Click the Continue button until you see the Deploy button.
- Click Deploy to deploy the new device on the Director node.

Create a Versa MVE on the Megaport Portal

Before you create an MVE on the Megaport portal, you need to determine the best location for the MVE. You should

https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/...

Updated: Wed, 23 Oct 2024 07:22:27 GMT

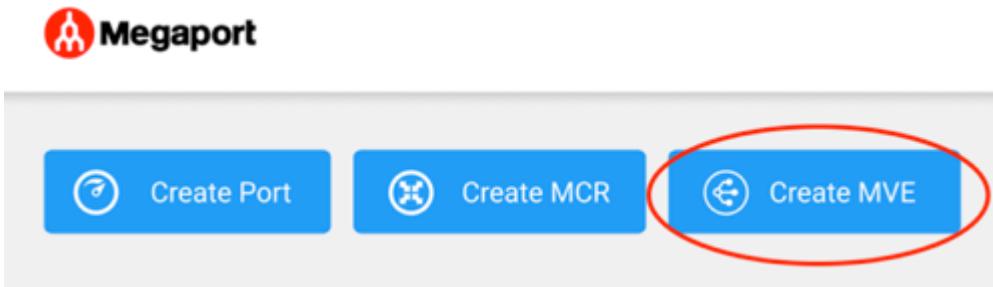
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select a location that supports MVE and that is in the most compatible metropolitan area. You can connect multiple locations to an individual MVE. For location details, see [Planning Your Versa Deployment](#).

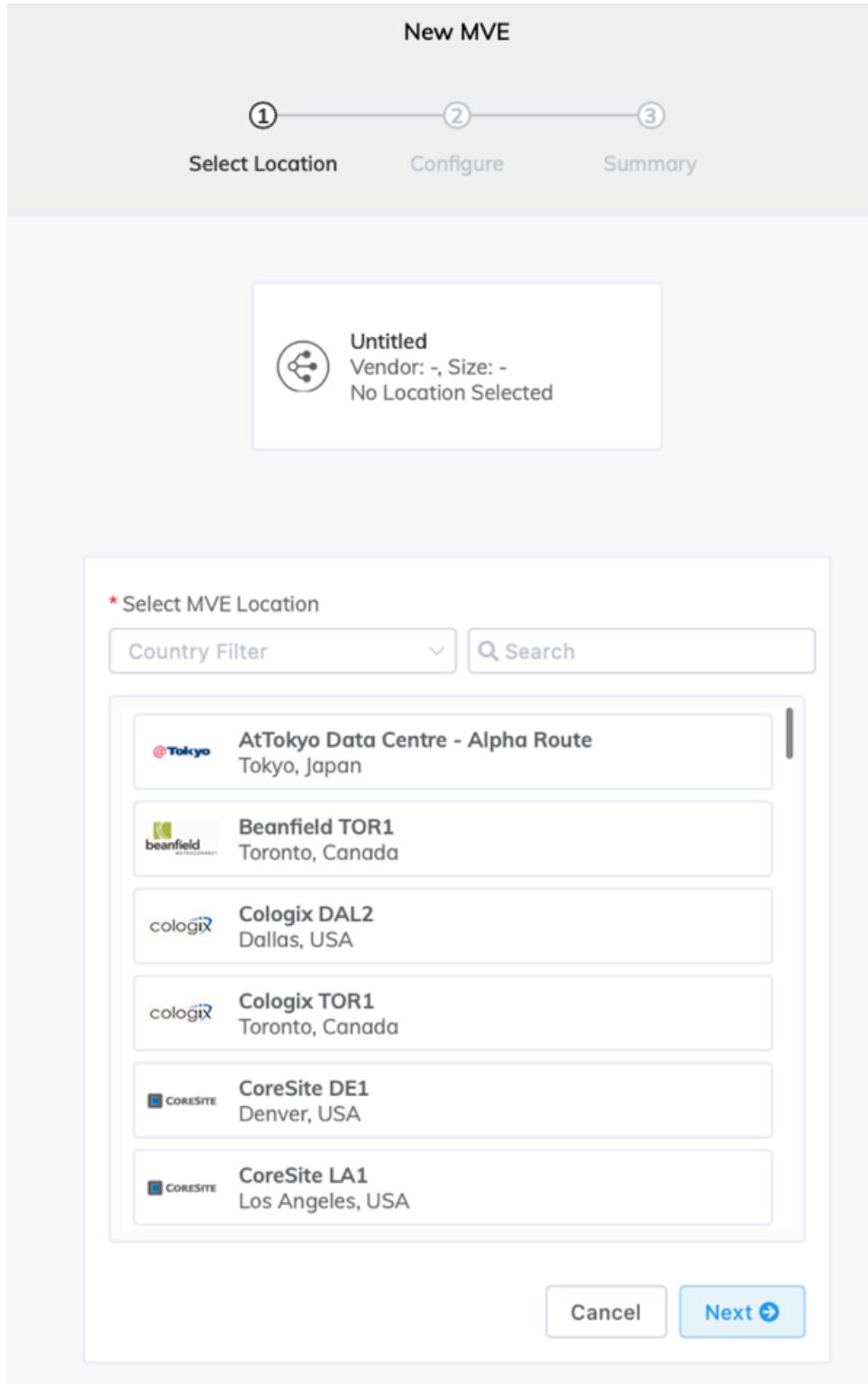
For redundancy or to increase capacity, you can deploy multiple MVEs in the same metropolitan area.

To create an MVE:

1. Go to the Megaport portal, at <https://portal.megaport.com>.
2. Go to the Services page.
3. Click Create MVE.



4. Select the MVE location. Select a location geographically close to your target branch or on-premises locations. The country you choose must be a market in which you have already registered. To register a billing market in the location where you want to deploy the MVE, see [Enabling a Billing Market](#).
5. To search for a local market in the list, enter a country in the Country Filter or enter a metro region detail in the Search filter.



6. Click Next.
7. Select Versa FlexVNF and the software version. The MVE is configured to be compatible with this Versa Networks software version.

[https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/...](https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/)

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8. For the MVE, enter information for the following fields.

New MVE

① Select Location ② Configure ③ Summary

Example MVE
Vendor: Versa, Size: MVE 4/8/1000 Cologix DAL2, Dallas

Monthly Rate: \$2,508.00 USD (Price Excludes Tax)

| MVE Configuration | | Versa FlexVNF Service Details |
|--|--|---|
| * Select Vendor | | Version 21.1.3 |
| Aruba EC-V Version 8.3.3.86005 Aruba Orchestrator 9 or later required, must immediately upgrade boot image to version 9.X | | * MVE Name <input type="text" value="Example MVE"/> |
| Cisco C8000 Version 17.08.01a Minimum version of vManage is 20.8 | | * Size <input type="text" value="MVE 4/8/1000"/> |
| Cisco C8000 Version 17.06.01a Minimum version of vManage is 20.6 | | * Minimum Term <input type="text" value="12 Months"/> |
| Cisco C8000 Version 17.05.01a Minimum version of vManage is 20.5 | | Service Level Reference <input type="text"/> |
| Cisco C8000 Version 17.07.01a Minimum version of vManage is 20.7 | | * Director Address <input type="text" value="director1.versa.com"/> |
| Fortinet FortiGate-VM Version 6.4.4 | | * Controller Address <input type="text" value="controller1.versa.com"/> |
| VMware VMware SD-WAN Version 3.4.1 | | * Local Auth <input type="text" value="SDWAN-Branch@Versa.com"/> |
| Versa Versa FlexVNF Version 21.1.3 | | * Remote Auth <input type="text" value="Controller-1-staging@Versa.com"/> |
| | | * Serial Number <input type="text"/> |

Cancel **Back** **Next** 

| Field | Description |
|-------------------------|--|
| MVE Name | Enter a name for the MVE that is easily identifiable, especially if you plan on provisioning more than one. This name appears in the Megaport portal. |
| Size | Select a size. The list displays all sizes that match the CPU capacity at the selected location. The sizes support varying numbers of concurrent connections, and individual partner product metrics vary slightly. For more information about sizing, see Planning Your Versa Deployment . |
| Minimum Term | Select No Minimum Term to pay as you go, or select a term of 12, 24, or 36 months. Longer terms result in a lower monthly rate. The default is 12 months. For more information about contract terms, see MVE Pricing and Contract Terms . |
| Service Level Reference | Enter a unique identifying number for the MVE, which is used for billing purposes, for example, the cost center number or a unique customer ID. The service level reference number appears for each service under the Product section of the invoice. For an existing service, you can also edit this field. |
| Director Address | Enter the FQDN or IPv4 address of the Director node. |
| Controller Address | Enter the FQDN or IPv4 address of the Controller node. |
| Local Authentication | Enter the local authentication string that is configured on the Director node. |
| Remote Authentication | Enter the remote authentication string that is configured on the Director node. |
| Serial Number | Enter the serial number that you used when creating the device on the Director node. |

9. Click Next to view the Summary screen. The monthly rate is based on location and size.
10. Confirm the configuration and pricing, and then click Add MVE.

New MVE

Select Location
 Configure
3
Summary

Example MVE
 Vendor: Versa, Size 4/8/1000
 Cologix DAL2, Dallas

Summary

Location: Cologix DAL2, Dallas

Vendor: Versa FlexVNF 21.1.3

MVE Name: Example MVE

Size: 4/8/1000

Minimum Term: 12 Months

Director Address: director1.versa.com

Controller Address: controller1.versa.com

Local Auth: SDWAN-Branch@Versa.com

Remote Auth: Controller-1-staging@Versa.com

Serial Number: Megaport-Hub1

Monthly Rate: \$2,508.00 USD
Price Excludes Tax

Cancel
Back
Add MVE

11. Click Order.
12. Review the order services agreement.
13. Click Save to save the configured MVE before placing the order.
14. Click Add Promo Code to enter a promotional code, and click Add Code.
15. Click Order Now.

Ordering MVE provisions the instance and assigns IP addresses from the Megaport SDN. The MVE provisioning takes a

[https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration...](https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration)

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few minutes to complete. The provisioning process creates a Versa FlexVNF.

View the MVE Public IP Address Assignment on the Megaport Portal

After you create the MVE, you can view it on the Megaport portal and the Director node.

To view the MVE on the Megaport portal, go to the Services page.



As part of MVE provisioning, Megaport creates a transit virtual cross-connect (VXC) to provide internet connectivity and to allow MVE to register and communicate with the Versa SD-WAN overlay network. Versa Networks creates and maintains the overlay network to provide secure tunnels from the branch locations. The transit VXC is a fixed size, based on the size of the MVE. You cannot modify or delete the transit VXC. In the Megaport portal, the transit VXC icon differs from a standard VXC icon, as shown in the screenshot above.

To view the public IP addresses assigned to the MVE:

1. Click the Gear icon next to the transit VXC to Megaport Internet.
2. Locate the public IPv4 or IPv6 address from the public IP addresses that are assigned to the MVE. Make a note of these addresses for use later.
3. Under Services, verify that the new MVE device is present in the Megaport portal.
4. On the Director node, verify that the new MVE configuration is synced and that the service is up and reachable.
 - a. Select the Monitor tab in the top menu bar.
 - b. Select Devices in the horizontal menu bar.
 - c. Review the Config Synchronized, Reachability and Service columns.

A screenshot of the Director node's Monitor tab. The top navigation bar includes tabs for Monitor, Configuration, Workflows, Administration, and Analytics. The Monitor tab is selected. Below the tabs, there is a summary section showing "Total Appliances: 3" and "Selected Appliances: 0". A search bar and a tags filter are also present. The main area is a table listing three devices:

| Name | Mgmt. Address | Tags | Type | Service Start Time | Software Version | Organizations | Snaps... | Status | Config Synchroniz... | Reachability | Service | Locked |
|------------------|---------------|------|--------|-----------------------|------------------|---------------|----------|---------|----------------------|--------------|---------|--------|
| Megaport-Hub1 | 10.255.0.38 | | Hub | Tue, Jun 29 2021, ... | 21.1.3-GA | Megaport | | Unknown | | Unknown | | |
| megaport-video-1 | 10.255.0.202 | | Branch | Tue, Aug 17 2021, ... | 21.1.3-GA | Megaport | | | | Up | | |
| sea-hub-1 | 10.255.0.200 | | Branch | Tue, Aug 10 2021, ... | 21.1.3-GA | Megaport | | | | Up | | |

Note: It can take up to 10 minutes for the MVE to register with the Director node.

Deploy an SD-WAN Branch on Equinix Network Edge

This section describes how to deploy Versa VOS on Equinix Network Edge (NE). It describes how to directly connect the network-to-network interface (NNI) connection on the network edge device to cloud and service providers globally. Network Edge provides virtual network services that run on a modular infrastructure platform and that are optimized for instant deployment and interconnection of network services. The Equinix Cloud Exchange (ECX) fabric portal allows you to establish on-demand network connections between data centers, internet service providers, cloud providers, and UCaaS providers, between any two ECX fabric locations within a metropolitan area or globally, using software-defined interconnections.

Note that the screenshots in this section may vary slightly from what you see, but the basic configuration parameters remains the same.

Deploy Network Edge

To deploy a Versa VNF in the Equinix infrastructure:

1. Log in to the Equinix ECX fabric portal.
2. Select Network Edge > Create a Virtual Device in the top menu bar.

The screenshot shows the Equinix Cloud Exchange Fabric portal interface. At the top, there is a navigation bar with the Equinix logo, the text 'EQUINIX CLOUD EXCHANGE FABRIC', and an 'Explore' button. Below the navigation bar, there is a secondary menu with options: 'Connections', 'Network Edge' (which is highlighted with a blue underline), 'Ports', 'Inventory', 'My Company', 'Administration', and 'Support'. A dropdown menu is open under 'Network Edge', showing 'Create a Virtual Device' and 'View Virtual Devices'. Below this, there is a section titled 'Create an Edge' with two options: 'With a Secondary High Availability Device (Recommended)' and 'A Single Edge Device without High Availability'. Both sections include a brief description and a 'Create' button.

3. Select either High Availability Edge Device or Single Edge Device for branch deployment.
4. In the Add New Edge Device screen, in Vendor Package, select Versa FlexVNF.

Add New Edge Device

Vendor Package Location Device Details Additional Services Review and Submit

Select Vendor Packages for your Devices

| | | | |
|--|--|---|--|
|  Cisco CSR 1000V See Description |  Juniper Networks vSRX See Description |  Palo Alto Networks VM Series See Description |  Cisco CSR See Description |
|  CloudGenix Virtual ION See Description |  Fortinet FortiGate VM Series See Description |  VERSA Networks Versa FlexVNF See Description |  Fortinet FortiGate See Description |

5. In Location, select the metro region in which to deploy the VNF.

Create a VERSA Networks Cloud Gateway SD-WAN

Vendor Package Location Device Details Additional Services Review and Submit

Select Edge Device Location

Choose the Metro where this new Edge Device will be deployed.

Select Metro

| | | | | |
|----------------|-----------|-----------|--------|--------|
| Silicon Valley | Ashburn | Chicago | Dallas | London |
| Frankfurt | Amsterdam | Singapore | Sydney | |

6. In Device Details, provide bootstrapping information by entering information in the following fields.

Create a VERSA Networks Cloud Gateway SD-WAN

The screenshot shows the 'Device Details' step of the VERSA Networks Cloud Gateway SD-WAN creation process. The interface is divided into several sections:

- Licensing:** Options for 'Bring Your Own License (BYOL)' or 'SDWAN-Branch@VERSA.com'. Fields for Local ID (SDWAN-Branch@VERSA.com) and Remote ID (Controller-1-staging@VERSA.com) are present.
- Software Package:** Selection of software package. Options include FlexVNF-2 (selected), FlexVNF-4, and FlexVNF-6.
- Term Length:** Selection of term length. Options include 1 month, 3 months, 6 months, and 12 months. A note states: "Choose your term length. Longer terms include additional savings. Charges are billed monthly."
- Optional Details:**
 - Purchase Order Number:** Input field with placeholder "e.g. PO194829". Note: "Purchase Order information will be included in your order confirmation email."
 - Order Reference/Identifier:** Input field with placeholder "Reference". Note: "Enter a short name/number to identify this order on the invoice."
- Pricing Overview:** Summary of costs:

| | |
|-------------------------|----------------|
| Network Edge Instance | 460.00 USD /mo |
| Edge Device License | 0.00 USD /mo |
| Monthly Recurring Total | 460.00 USD |
| Term Total | 460.00 USD |

 Billing start date: Apr 26 2020 22:36 GMT. Note: "Additional taxes and/or fees may apply, depending on the Metro."

Print Order Summary button is located at the bottom right of the Pricing Overview section.

| Field | Description |
|---------------------------------------|---|
| Licensing (Group of Fields) | Enter information about the Versa Networks headend components. |
| ◦ Local ID | Enter the local authentication information. |
| ◦ Remote ID | Enter the remote authentication information. |
| ◦ Serial Number | Enter the serial number of the device. |
| SD-WAN Controller | Enter the public IP address of the Controller node's WAN interface. |
| Edge Device Details (Group of Fields) | |
| ◦ Device Name | Enter the name of the device as it is configured on the Director node. |
| Software Package | Select the software package. The number represents the number of cores to use for the software. Using more cores increases the performance. |

7. In Additional Services, enter information for the following fields.

The screenshot shows the 'Create a VERSA Networks Cloud Gateway SD-WAN' wizard at the 'Additional Services' step. The progress bar has five steps: Vendor Package (green), Location (green), Device Details (green), Additional Services (blue), and Review and Submit (grey). The 'Additional Services' section contains the following fields:

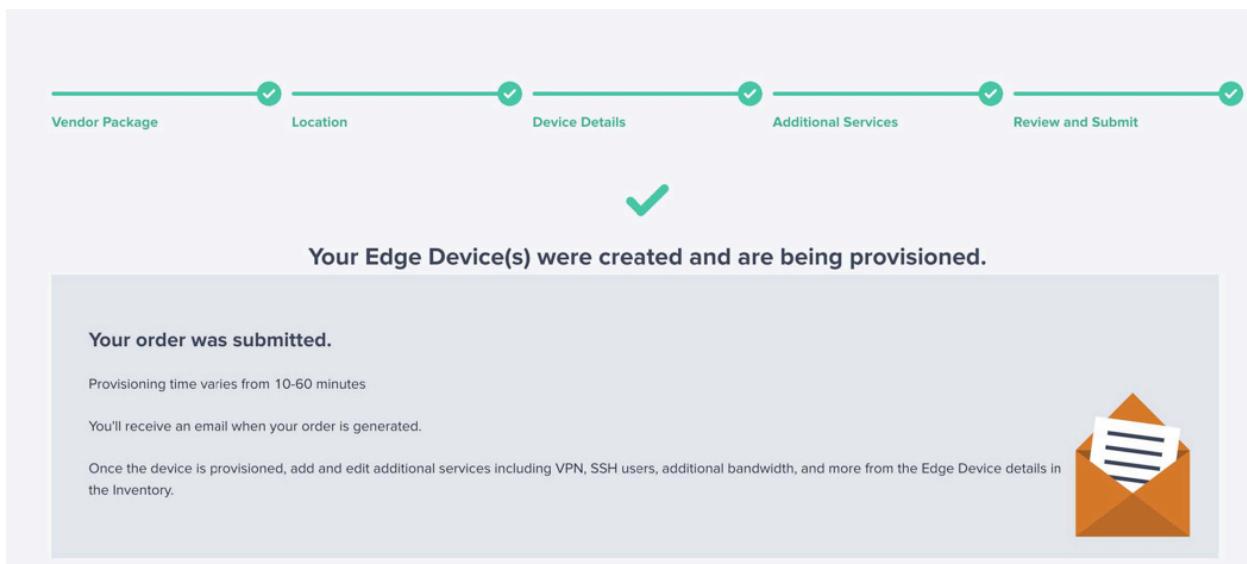
- Add Access IP Addresses:** A dropdown menu with 'Primary Device' selected. Under 'Access IP Addresses', two entries are listed: '44.224.54.57/32' and '44.225.10.85/32'. Below these is a button 'Add Another Access IP Address'.
- Term Length:** A dropdown menu set to '1 month'. A note says: 'Choose your term length. Longer terms include additional savings. Charges are billed monthly.'
- Pricing Overview:** A table showing costs:

| | |
|-------------------------|----------------|
| Network Edge Instance | 460.00 USD /mo |
| Edge Device License | 0.00 USD /mo |
| Monthly Recurring Total | 460.00 USD |
| Term Total | 460.00 USD |

 A note: 'Billing will start Apr 26 2020 22:36 GMT'. A link 'Print Order Summary' is available.
- Additional Internet Bandwidth:** A note: 'All devices include 15 Mbps of internet bandwidth as part of the Edge Instance package. For a fee, you can add up to an additional 2001 Mbps of internet bandwidth.' A field 'Bandwidth in Mbps' with placeholder 'Enter a value between 25 and 2001'.

| Field | Description |
|-------------------------------|--|
| Add Access IP Addresses | Add the WAN IP addresses of the Controller nodes. As access list (ACL) is then created on upstream router to allow control plane communication. |
| Additional Internet Bandwidth | By default, Equinix Network Edge provides one ISP connection that has 15 Mbps of bandwidth. For an extra cost, you can add up to 2 Gbps of additional bandwidth. |

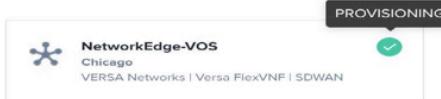
8. In Review and Submit, click Confirm. The following screen displays. It can take 10 to 30 minutes to provide the edge device, depending on the metro region. When the provisioning completes, you receive an email.



You can check information about the FlexVNF device on the Equinix cloud exchange fabric.

To check the device status, select Network Edge > View Virtual Device. The edge device can be in one of three stages: Initializing, Provisioning, and Provisioned.

The screenshot shows the Equinix Cloud Exchange Fabric dashboard. At the top, there is a navigation bar with the Equinix logo, "EQUINIX CLOUD EXCHANGE FABRIC", and an "Explore" button. Below the navigation bar, there are links for "Connections", "Network Edge", "Ports", "Inventory", "My Company", "Administration", and "Support". The main content area is titled "Your Virtual Device". It displays a card for a device named "NetworkEdge-VOS" located in "Chicago". The card includes the text "VERSA Networks | Versa FlexVNF | SDWAN". A small orange circle with three dots is next to the device name, and a black box labeled "INITIALIZING" is positioned above it. Below the card, the URL "Inventory > Virtual Device Details" is shown, along with tabs for "Details", "Connections", "Interfaces", and "Additional Services".

**Your Virtual Device**[Inventory](#) > [Virtual Device Details](#)[Details](#) [Connections](#) [Interfaces](#) [Additional Services](#)**Your Virtual Device**[Learn More](#)[Connect to a Network Service](#)[Inventory](#) > [Virtual Device Details](#)[Details](#) [Connections](#) [Interfaces](#) [Additional Services](#)

After the edge device status changes to Provisioned, the IP address information displays. The FlexVNF public IP is available as a WAN IP address. The FlexVNF management IP address is only for Equinix internal use and cannot be accessed from an external site.

Details Connections Interfaces Additional Services

[Refresh Device Status](#)

Account Details

| | |
|-----------------|----------------------|
| Account Details | RITSnet, Inc. 155888 |
|-----------------|----------------------|

Device Details

| | |
|-----------------------|--|
| Virtual Device Name | NetworkEdge-VOS |
| Device Status | PROVISIONED |
| Virtual Device UUID | 2699ba7f-a154-4387-9be5-bb690f3a7823 |
| Software Package | FlexVNF-2 |
| Vendor | VERSA Networks |
| Device Type | SDWAN |
| Model | Versa FlexVNF |
| Location | Chicago |
| IP Address | 64.191.215.145 |
| Host Name Prefix | host |
| FQDN | host-145-215-191-64-CH.nfvhost.equinix.com |
| Term Length in months | 1 |

Ping Device

Performs a ping operation on the virtual device to see if it's reachable.

No Status Ping Device

License Information

| | |
|---------------------|--------------------------------|
| License Type | Bring Your Own License |
| License Status | APPLIED |
| License Expiry Date | - |
| Local ID | SDWAN-Branch@VERSA.com |
| Remote ID | Controller-1-staging@VERSA.com |
| Serial Number | NetworkEdge-VOS |
| Controller 1 | 44.224.54.57 |
| Controller 2 | 44.225.10.85 |

Activity Log

| | |
|---------|--------------------------------------|
| Updated | Mar 27 2020 22:48 GMT by rahulvaidya |
| Created | Mar 27 2020 22:38 GMT by rahulvaidya |

IP Addresses

| | |
|-------------------------------|-------------------|
| VNF Management IP | 10.203.124.90/22 |
| VNF Management Gateway IP | 10.203.124.1 |
| VNF Public IP | 64.191.215.145/31 |
| VNF Public Gateway IP | 64.191.215.144 |
| DNS Name Primary IP Address | 156.154.70.1 |
| DNS Name Secondary IP address | 156.154.71.1 |

The Director node reports a failed task, because the edge devices automatically bootstrap using a staging script. This is expected behavior.

| | | | | | | | |
|--|----------------------------------|------|--------|----------------------|------------------------|------------------------|---|
| <input type="checkbox"/> | <input type="button" value="▼"/> | 3312 | System | Create-Baremetal ... | Fri, Mar 27 2020, 1... | Fri, Mar 27 2020, 1... | Inventory Not Found... ! |
| <p>Description : Inventory Not Found Branch: { NetworkEdge-VOS }; Branch Appliance creation Failed</p> <p>Initiated by : System</p> <p>Running Messages :</p> <ul style="list-style-type: none"> added Serial Number [NetworkEdge-VOS] Device to Unknown Devices and wan ips are: [] Branch Appliance creation Failed {name: null, IP Address : 10.0.1.213 } Appliance with serial number : NetworkEdge-VOS not found in inventory sent email to rob@versa-networks.com Successfully Send Email to Administrator <p>Errors :</p> <ul style="list-style-type: none"> Cannot deserialize value of type `java.util.Date` from String "2020-03-27 15:48:10.478323-07:00": expected format "yyyy-MM-dd HH:mm:ssXXX" at [Source: (org.apache.http.conn.EofSensorInputStream); line: 7, column: 19] (through reference chain: com.versa.vnms.service.sms.provider.plivo.PlivoSMSGetDetailsResponse["message_time"]) Appliance with serial number : NetworkEdge-VOS not found in inventory | | | | | | | |

https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/

Updated: Wed, 23 Oct 2024 07:22:27 GMT

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| Serial Number | Hardware Serial Num... | Transport Address | Management Address | Branch ID | Time Created | Action | Delete |
|-----------------|------------------------|-------------------|--------------------|-----------|-------------------------|-------------------------------------|------------------------|
| NetworkEdge-VOS | NetworkEdge-VOS | | 10.0.1.213 | 65 | Fri, Mar 27 2020, 22:48 | Associate to Branch | Delete |

Create a Template and a Device on the Director Node

After you have provisioned the edge device, you create a template and the device on the Director node. You cannot create the device on the Director node in advance, because you do not have the WAN IP address.

To create a template and device on the Director node:

1. Log in to the Director node.
2. To create a template, select the Workflows tab in the top menu bar, select Template > Templates in the left menu bar, and then click the Add icon.

3. Select the Basic tab, and configure the appropriate information.
4. Select the Interfaces tab. You can configure up to 9 interfaces on the branch device. Note the following:
 - vni-0/0 is reserved for the default ISP connection. Information about the WAN static IP address is available on the ECX portal. Currently, DHCP is not supported for Network Edge.
 - vni-0/1 is reserved for an additional ISP connection, at an extra cost, or to bring up your own MPLS connection.
 - vni-0/8 is reserved for the network-to-network interface (NNI). This is a cross-connect with other services, such as UCaaS providers, cloud providers, and ISPs.
 - In the Link Monitor field, do not check Nexthop. The Network Edge upstream routers do not allow ICMP packets.

Device Port Configuration

| Number of Ports | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | LTE | WiFi |
|-----------------|------|-----|-----|---|---|---|---|---|---|---|-----|-------|
| 10 | Mgmt | WAN | WAN | | | | | | | | 4G | Wi-Fi |

WAN Interfaces

| Port # | Interface | VLAN ID | Network Name | Priority | IPv4 | | IPv6 | | Allow SSH To CPE | Link Monitor | | | Sub Interfaces |
|--------|-----------|---------|--------------|----------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| | | | | | Static | DHCP | Static | DHCP | | Nexthop | Remote IP | | |
| 0 | vni-0/0 | | WAN1 | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1 | vni-0/1 | | MPLS | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

LAN Interfaces

| Port # | Interface | VLAN ID | Network Name | Organization | Zones | Routing Instance | IPv4 | | IPv6 | | Sub Interfaces | | |
|--------|-----------|---------|--------------|----------------|------------|-----------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| | | | | | | | Static | DHCP | Static | DHCP | | | |
| 7 | vni-0/7 | | LAN-1 | Equinix-Cust-A | --Select-- | Equinix-Cust-A-LAN-VR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8 | vni-0/8 | | LAN-RC | Equinix-Cust-A | --Select-- | Equinix-Cust-A-LAN-VR | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Buttons: Back, Cancel, Continue, Recreate

5. On the Director node, create a branch device. Select Devices > Device Groups in the horizontal menu bar, and then Click the Add icon.
6. Select the Basic tab, and configure the appropriate information. Ensure that the serial number matches the serial number that you provided when creating the Network Edge on the ECX fabric portal.

Add Device

Basic

Name: NetworkEdge-VOS
Global Device ID: 102
Organization: Equinix

Deployment Type: CPE-Baremetal Device
Serial Number: NetworkEdge-VOS

Admin Contact Information

Email:
Phone Number: (201) 555-0123

Subscription

Service Bandwidth:
Aggregate Bandwidth:

Buttons: Cancel, Save, Continue

7. Select the Location Information tab, and enter the appropriate information.

Address 1

City CHICAGO

State CHICAGO

Country USA

Zip

Latitude 41.878114

Longitude -87.629798

Get Coordinates

Back Cancel Save Continue

- Select the Bind Data table, and enter the WAN static IP address information that you used when creating the device.

| Variable | Value |
|---|-------------------|
| Internet_IPv4_staticaddress | 64.191.215.145/31 |
| LAN1_IPv4_staticaddress | 192.168.10.1/24 |
| LAN2_IPv4_staticaddress | 192.168.20.1/24 |
| Internet-Transport-VR_IPv4_vrHopAddress | 64.191.215.144 |

OK Cancel

- Click OK.
- Click Deploy

After you deploy the device, a task is generated for create an appliance, which you can see on the Tasks screen. Note that bootstrapping takes about 5 to 6 minutes to complete.

Tasks

Failed 491 | Pending 0 | In Progress 1 | Success 2775 | Total 3267

| | ID | User | Activity | Time | | Description | Progress |
|--|------|---------|----------------------|------------------------|----------|-----------------------|------------------------------------|
| | | | | Start Time | End Time | | |
| | 3314 | adminAT | Create-Baremetal ... | Fri, Mar 27 2020, 1... | | createAppliance: a... | <div style="width: 80%;">80%</div> |

Description :
createAppliance: appliance Name:{NetworkEdge-VOS}

Initiated by : adminAT

Running Messages :

- Connecting to appliance...
- Setting up appliance...
- Applying initial configuration
- NetworkEdge-VOS is rebooting after applying template:{ NE-Template }

When the bootstrapping completes, are branch devices are listed under Administration > Appliances.

| Name | Mgmt. Address | Type | Time Created | Service Start Tl... | Software Version | Site ID | Organizations | Snap... | Status | Config Synchroniz... | Reachability | Service | Locked |
|-----------------|---------------|------------|--------------------|---------------------|------------------|---------|-------------------------|---------|--------|----------------------|--------------|---------|--------|
| Controller-1 | 10.234.0.150 | Controller | Tue, Nov 05 20... | Tue, Mar 17 20... | 16.1-R2-S10.1 | 1 | ACAPacificMalaysiaP... | | | | | Up | |
| Controller-2 | 10.234.0.189 | Controller | Tue, Nov 05 20... | Mon, Mar 09 2... | 16.1-R2-S10.1 | 2 | ACAPacificMalaysiaP... | | | | | Up | |
| Equinix-Multi | 10.2.64.105 | Branch | Sat, Mar 07 20... | Fri, Mar 06 202... | 16.1-R2-S10.1 | 105 | Equinix-Cust-A,Equin... | | | | | Up | |
| NetworkEdge-VOS | 10.2.64.102 | Branch | Fri, Mar 27 202... | Fri, Mar 27 202... | 16.1-R2-S8 | 102 | Equinix | | | | | Up | |

The following are issues and limitations with Network Edge:

- You cannot access the Network Edge using SSH or a console. The only way to access the Network Edge is using shell from the Director node after the device completes its bootstrapping.
- By default, Equinix Network Edge provides a single ISP connection with 15 Mbps of bandwidth. For an extra cost, you add up to 2 Gbps of additional bandwidth.
- The Network Edge is running VOS Release 16.1R2_S8 VOS version. You can upgrade it later.
- The Network Edge has 9 interfaces on edge device
 - vni-0/0 is reserved for the default ISP connection. Information about the WAN static IP address is available on the ECX portal. Currently, DHCP is not supported for Network Edge.
 - vni-0/1 is reserved for an additional ISP connection, at an extra cost, or to bring up your own MPLS connection.
 - vni-0/8 is reserved for the network-to-network interface (NNI). This is a cross-connect with other services, such as UCaaS providers, cloud providers, and ISPs.

Create an NNI Connection

The Equinix ECX portal allows you to establish connections between data centers, and on-demand connections for service providers, cloud providers, and UCaaS providers between any two ECX fabric locations within a metro or globally using software-defined interconnection.

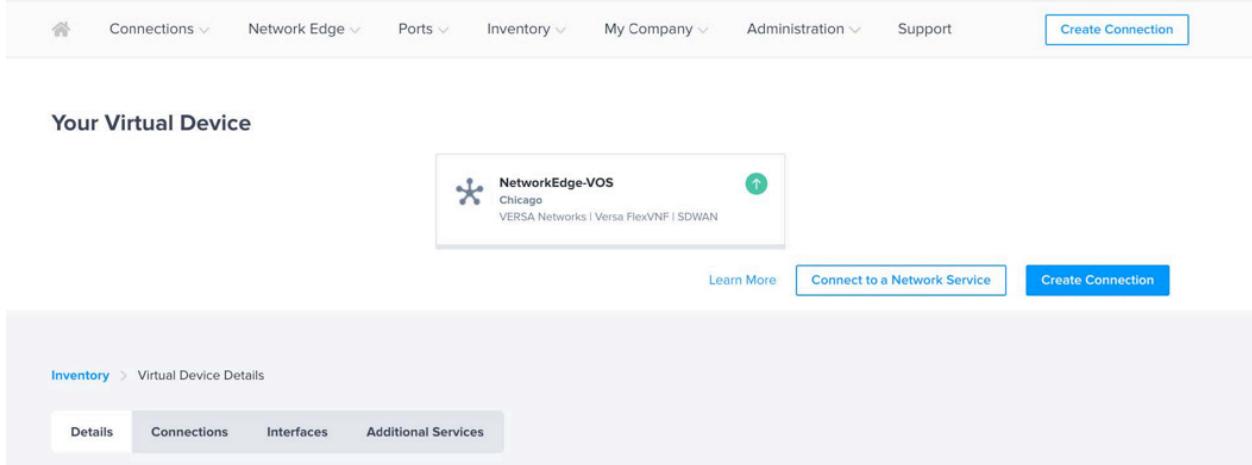
https://docs.versa-networks.com/Getting_Started/Deployment_and_Initial_Configuration/Branch_Deployment/Initial_Configuration/

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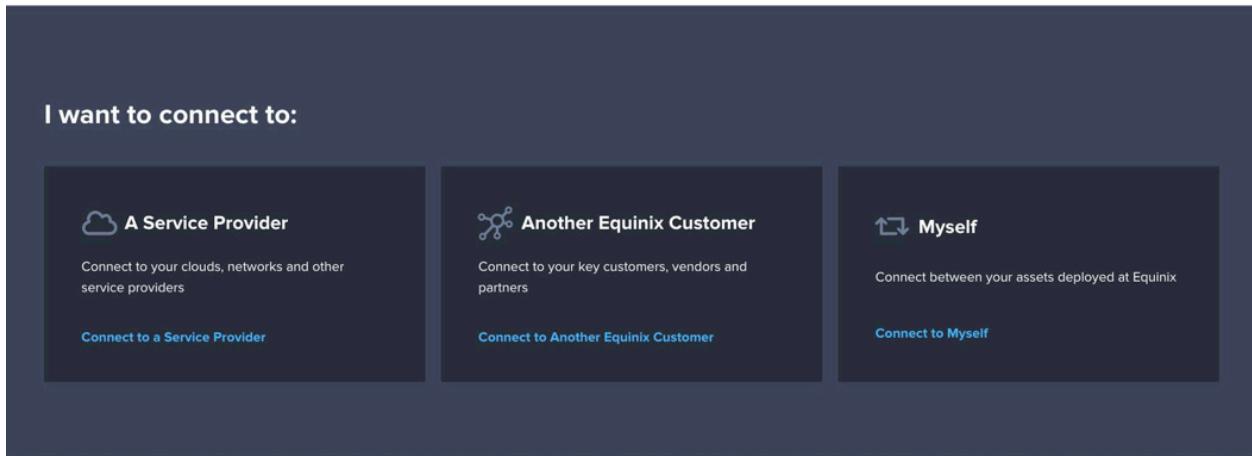
To create the network-to-network interface connection:

1. Log in to ECX fabric portal.
2. Select the Network Edge > Create a Virtual Device, and then click Create Connection to initiate the process.



The screenshot shows the ECX fabric portal interface. At the top, there's a navigation bar with links for Connections, Network Edge, Ports, Inventory, My Company, Administration, and Support, along with a prominent 'Create Connection' button. Below this, a section titled 'Your Virtual Device' displays a device card for 'NetworkEdge-VOS Chicago' located in 'Chicago'. The card includes the text 'VERSA Networks | Versa FlexVNF | SDWAN'. Below the card are three buttons: 'Learn More', 'Connect to a Network Service', and 'Create Connection'. Underneath this, the 'Virtual Device Details' page is shown, with the 'Connections' tab selected. The page also includes tabs for 'Details', 'Interfaces', and 'Additional Services'. A breadcrumb navigation path 'Inventory > Virtual Device Details' is visible at the top of this page.

3. Select the type of connection.



The screenshot shows the 'I want to connect to:' section of the portal. It features three main options: 'A Service Provider' (with a cloud icon), 'Another Equinix Customer' (with a network node icon), and 'Myself' (with a double arrow icon). Each option has a corresponding 'Connect to [Service]' button below it. The background is dark, and the text is white or light blue.

4. Select the service provider. The following screenshot shows the creation of a network-to-network interface connection with RingCentral.

Select a Service Provider

Showing Results 1 Out of 1

RING CENTRAL INC.

4 Locations | 1 Services

Select

5. Select the edge device and service providers location from the available metro regions. Note that this screen differs from service provider to service provider.

Select Locations

Preview

NetworkEdge-VOS Chicago — Speed Latency (RTT) < 1 ms — RING CENTRAL INC. Chicago

Origin
Locations with ports or Virtual Devices

AMER [3]

Select Location

- Miami
- Silicon Valley
- Chicago**

No ports found

Virtual Devices in Chicago:

- NetworkEdge-VOS Chicago
- Equinix-Multi Chicago

Destination
RING CENTRAL INC. locations you can connect with

AMER [4]

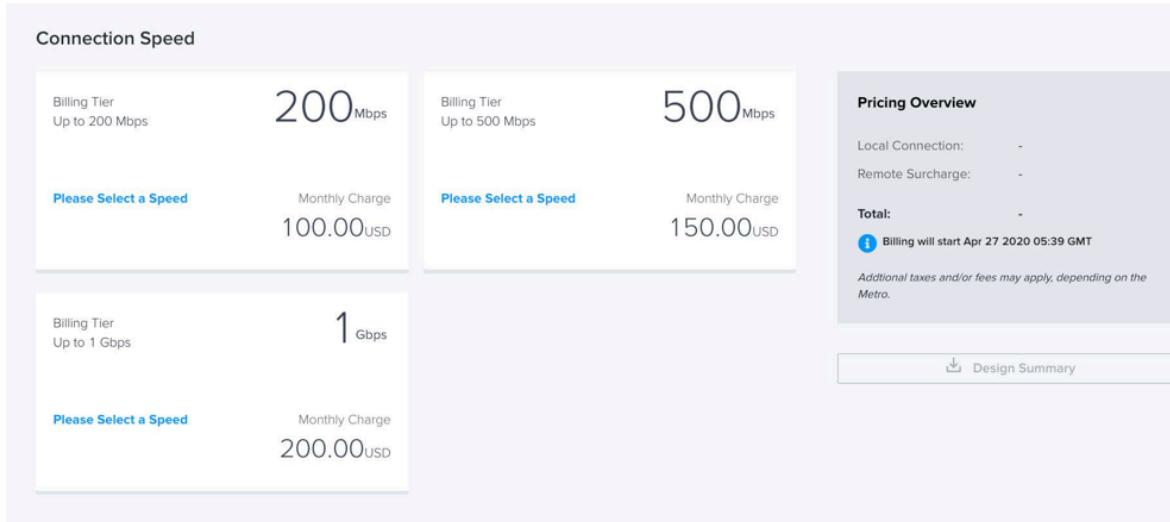
Suggested:

- Chicago** Latency (RTT) < 1 ms

Remote:

- Silicon Valley Latency (RTT) 46 ms
- Dallas Latency (RTT) 20 ms
- Ashburn Latency (RTT) 19 ms

6. Select the bandwidth requirements. Note that this screen differs from service provider to service provider.



To verify the status of the network-to-network interface connection, select the Connections tab.

Your Virtual Device

Equinix-Multi
Chicago
VERSA Networks | Versa FlexVNF | SDWAN

Learn More [Connect to a Network Service](#) [Create Connection](#)

[Inventory](#) > Virtual Device Details

Details [Connections](#) [Interfaces](#) [Additional Services](#)

Virtual Connections

Viewing 1 of 1

RC_CloudConnect_MultiTen

Chicago Origin ————— RINGCENTRAL (C Chicago) Destination

To verify which VOS interface the network-to-network interface connection is associated with, select the Interfaces tab. By default, vni-0/8 is reserved for the network-to-network interface.

| Details | Connections | Interfaces | Additional Services |
|-------------------|-------------|------------|--|
| Interfaces | | | |
| | | | |
| Name | MAC Address | IP Address | Assigned Type |
| Eth0 | - | - | Equinix Managed |
| vni-0/0 | - | - | Equinix Managed |
| vni-0/1 | - | - | Connection to Network Service Provider |
| vni-0/2 | - | - | - |
| vni-0/3 | - | - | - |
| vni-0/4 | - | - | - |
| vni-0/5 | - | - | - |
| vni-0/6 | - | - | - |
| vni-0/7 | - | - | - |
| vni-0/8 | - | - | RC_CloudConnect_MultiTen(RINGCENTRAL) |

Supported Software Information

Releases 21.2.2 and later support all content described in this article.

Additional Information

[Create and Management Staging and Post-Staging Templates](#)