

Dynamic Network Manager User Guide

- Private IP

Version 7.2

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Private IP Dynamic Network Manager Overview

Private IP Dynamic Network Manager (DNM) enables you to make changes to your Private IP Ports, Committed Access Rates (CARs), and customer egress profiles.

Features & benefits

Following are the features and benefits of Private IP Dynamic Network Manager:

- Schedule a Port or CAR change order up to one year in advance
- Make bandwidth changes in minutes through Verizon Enterprise Center
- Subscribe to electronically delivered activity reports
- Download a site detail report in Microsoft® Excel®
- Access a Customer Edge (CE) sample configuration
- Issue a specific set of Ping and Show commands on the Provider Edge (PE) Router
- Make real-time application aware network adjustments

Components

Private IP Dynamic Network Manager consists of three components:

- Looking Glass: Allows Users to view the configuration information of their Multiprotocol Label Switching (MPLS) networks. It is mainly a "view only" interface, but there are Looking Glass orders that allow Users to make certain non-billable Layer 3 configuration changes to their Private IP sites. Looking Glass sample configurations can be downloaded for your CE router. Looking Glass also allows specific PING and Show commands to be issued. Private IP customers can use Looking Glass to see and make settings changes to network service attributes. They can also determine how their sites are configured at the Provider Edge (PE) devices on the network.
- Dynamic Port (DPORT): Allows Users to make PIP transport circuit up/down speed changes.
- Dynamic CAR (DCAR): Allows Users to make up/down speed changes to their Expedited Forwarding Committed Access Rate (EF-CAR) speeds including Quality of Service (QOS) egress profiles.

Note: Since DPORT and DCAR enable price impacting changes, they both require specialized Verizon Enterprise Center (VERIZON ENTERPRISE CENTER) entitlements or permissions. Contact your Account Team for assistance with setting up these permissions.

Business rules for Private IP Virtual Private Networks (VPNs)

The following business rules apply with Private IP (PIP) Dynamic Network Manager:

- Available to existing and new customers, both customer-managed and those using Verizon Managed Services.
- Available for sites located globally. Note: There are countries where Dynamic Port cannot be supported due to contractual obligations with our partners. Your account team can provide details on availability.
- Available on direct connections:

- For Private IP ports with a W prefix: Dynamic Port is available on direct connections using Time Divisional Multiplexing (TDM) in all regions. Direct Ethernet Access is supported in select countries in Europe.
 - For Private IP ports with a B prefix: Dynamic Port is available on both direct connections using TDM access or Ethernet Access in the United States.
 - For Private IP ports with a C prefix: Dynamic Port is available on both direct connections using TDM access or Ethernet Access in all regions.
- For Private IP ports with a W prefix: Dynamic Port requires an initial full port speed of T1, E1, E3, DS3, OC3, STM1, OC12, STM4, and 1 Gigabyte Ethernet (Europe Only).
- For Private IP ports with a B prefix: You can order a lower initial Private IP TDM and Ethernet Port speed and then use Dynamic Port to raise or lower the speed to the level you want in the United States.
- For Private IP ports with a C prefix: You can order a lower initial Private IP TDM and Ethernet Port speed and use Dynamic Port to raise or lower the speed to the level you want in all regions.
- Some restrictions apply:
 - Dynamic Bandwidth (DCAR and DPOR) is not supported on customer sites using the MPLS VPN Inter-provider Connection (MVIC).
 - DPOR is not available with direct connections using NxT1/NxE1 with MLPPP or MLFR.
 - "DCAR only" (i.e., when not sold with DPOR) is available on the following access types: NxT1 with MLPPP, and MLFR for U.S. sold sites only.
 - Because of contractual agreements, there are countries where Dynamic Port cannot be supported. Contact your Verizon Account Team for more details.
- **Below are detailed rules for DPOR changes per day on Private IP ports with a “C” prefix.**
 - Unlimited Speed Change Requests: you can make more than one speed change request during a 24-hour period. Greenwich Mean Time (GMT) is used as the start/stop reference for a DNM 24 hour time period. DPOR/DCAR speed changes can be made up until (but not after) 11:00 p.m. GMT.
 - Ability to Reverse Speed Change Requests: Within 60 minutes of making a speed upgrade (or downgrade) request, you can “correct” the request (as needed) by reversing the speed change request back to the original speed. After 60 minutes the speed change will be completed from a billing perspective. One speed correction is allowed during a 24-hour period.
 - Billing: Verizon will continue to bill in 24 hour minimum daily increments. The highest speed change request made during a 24 hour period will be the speed that is passed to billing for that day.
 - Carry Over Speed: The last speed entered for the day will be the one that gets carried over to the next day and be in effect.

For your information:

The Dynamic Network Manager feature does not support Open Shortest Path First (OSPF) or IP Multicasting access at this time. It is important to modify your router configuration for Dynamic CAR and Dynamic PORT in order to keep your router in sync.

If you select Gold CAR (Expedite Forwarding) for Voice over IP calls, a reduction of the CAR value (e.g., 40.456 reduce to 8K) can directly affect the quality of all Voice over IP calls on this link.

1. Go to <http://sso.verizonenterprise.com>. The sign in page appears.

2. Enter your user name and password and Click Sign In.
3. Verizon Enterprise Center home page appears.

Accessing Dynamic Network Manager

Click Dynamic Network Manager on Verizon Enterprise Center home page to go to DNM Dashboard page under Product Tools.

My workspace

Orders

- Order new service
- View order status
- Disconnect service
- Submit move/add/change
- Browse products catalog
- Create/submit change request
- Manage Requests

Go to orders >

Product tools

- Dynamic network manager

View all >

User admin

- Manage users
- Create user
- Manage structures & groups
- Manage access requests



Alternative Verizon Enterprise Center menu access to DNM

Attention Dynamic Network Manager Users View Details 1/3 →

verizon Manage Account Support

Internet & Wired Communications

My Workspace

- Billing
- View Invoices
- View Inquiry
- Reports
- Make a Payment
- Manage Payment Methods
- Create Inquiry
- Change Billing Address
- Update Paperless Billing

Service

- View Inventory
- Manage Requests
- View Alarms
- My Contract Summary
- Create Service/Change Request
- My Price Book
- Service Management Reporting
- Submit Move/Add/Change Order
- Disconnect Services

Orders

- Create Order
- View Order Status

Repairs & Troubleshooting

- Create Repair Ticket
- View Repair Ticket
- Original Repairs & Troubleshooting

Product Tools

- Inbound Network Manager
- Dynamic Network Manager**
- IP Performance Reporting

View All

Due date: Dec 8, 2019

U0197695 USD 52.00 Due date: Dec 8, 2019	Pay now
IN00240446 INR 145769.00 Due date: Dec 5, 2019	Pay now

Consolidated Bill Summary
Requested date: Oct 15, 2019

View all >

View all >

Orders

Orders by type

Action required
Total actions: 4

A yellow box highlights the 'Dynamic Network Manager' link in the 'Product Tools' section of the menu.

Tip: To avoid having Verizon Enterprise Center/DNM sessions “time out”, you can edit your Verizon Enterprise Center user profile to alter the amount of time before sessions will end. See instructions below for making session duration changes.

The screenshot shows a web browser window for the Verizon Enterprise Center. The main content is titled "Network Manager and Outbound Network Manager Maintenance View Details". On the left, there's a sidebar with the Verizon logo and links for "Manage Account" and "Support". The main area has a section titled "My workspace" with a "Billing" card. On the right, a sidebar titled "Verizon DNM" includes sections for "User Settings" (with "My Profile" highlighted by a green arrow), "Tools" (including "Download Center"), "Support" (with "Contact us" and "Support overview"), "Structures" (with "Reporting Structures"), and "Access Settings" (with "Access Request" and "Pending Request"). At the bottom, there's a taskbar with various icons and a system tray showing "Pulse Secure Connected" and the date/time "7:05 AM 8/6/2020".

Click User Name and then My Profile

The screenshot shows the "Site preferences" page. It has a header "Site preferences" with an edit icon. Below it is a table of settings:

Status Active	Preferred language US English	Proactive chat Disabled
Allow extended session timeout Yes	Time zone GMT	Time format 12 Hrs
Date format mm-dd-yyyy	Items per page 10	Preferred contact method E-mail
Your country dropdown list US	Your state dropdown list -	
Contact and notification preferences /		
Direct data billing services		

When you click the pencil icon on the Site Preferences screen you can edit the preferences.

The screenshot shows the 'Site Preferences' dialog box overlaid on a main application window. The dialog box contains various configuration options:

- Status: Active
- Preferred language: US English
- Proactive chat: Disabled
- Allow extended session timeout: Yes
- Extended Hours: 10
- Time zone: GMT
- Date format: mm-dd-yyyy
- Items per page: 10
- Your country dropdown list: US
- Your state dropdown list: -
- Contact and notification preferences: Direct data billing services
- Preferred language: US English
- Allow extended session timeout: Yes
- Time zone: GMT
- Date format: mm-dd-yyyy
- Items per page: 10
- Countries: All
- State: All

At the bottom are 'Update' and 'Close' buttons, and a 'Chat with us' button.

Click **Extended Hours** to edit/increase Verizon Enterprise Center session timeout duration.

The screenshot shows the 'Site Preferences' dialog box with the 'Extended Hours' dropdown menu open. The menu lists values from 1 to 10, with '5' highlighted in blue. Other options include 1, 2, 3, 4, 6, 7, 8, 9, and 10. The rest of the dialog box and main application interface are visible.

Choose extended session hour's duration and click **Update**.

Dashboard

The DNM Dashboard presents Users with circuits that might require immediate attention. The circuits are arranged by category in horizontal rows. These categories include circuits exhibiting high utilization (thus at risk for packet loss), New Activations, and so on. DNM includes artificial intelligence capability to allow it to learn over time which issues/circuits are of most interest to a User and adjust screen presentation around those preferences.

Key Features

- Bandwidth Utilization Reports
- Utilization Threshold e-mail Alerts
- Order History
- Router Commands (and all other Looking Glass settings information)
- Dynamic Port (DPORT)
- Dynamic CAR (DCAR)
- Bulk Operations for DPORT, DCAR and Circuit Description changes*

Select **Network** to see your Verizon Private IP, Internet Dedicated, Ethernet Switched E-Line or Secure Cloud Interconnect (SCI) Services.

Private IP

- View All
- High Utilized Sites
- Pending Activation

Public IP

- View All
- Pending Activation

SCI

- View All
- Microsoft
- AWS
- Oracle
- Google

Ethernet

- Access
- ELAN
- ELINE

Service Management

- Application Delivery Management²

- Router Commands (and all other Looking Glass settings information)
- Dynamic Port (DPORT)
- Dynamic CAR (DCAR)
- Bulk Operations for DPORT, DCAR and Circuit Description changes*

The Dashboard displays a menu of your Verizon Enterprise Center entitled IP services choices. Choose Network to list the circuits in inventory that you have permission to review.

Private IP circuit List after selection under Network Menu



Private IP				
				Actions
Circuit ID: XXXXXXXX	Port Speed: 1004 Kbps	Encapsulation: FR	Service Type: Not Managed	<input type="button" value="Actions"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
Service ID: PVC 5347682	Realtime CAR: 512 Kbps	Traffic Rule: GI	Description: /	Preferences / <input type="checkbox"/> Utilization Notifications <input type="checkbox"/> Change Notifications
VPN CNE-PIF			Entitlements:	Activation Status: ● Not Available
BASINGSTOKE ROAD RG2				
070-68P				
Equipment IP: 68.138.222.57				
				Feedback
Circuit ID: XXXXXXXX	Port Speed: 128 Kbps	Encapsulation: FR	Service Type: Not Managed	<input type="button" value="Actions"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
Service ID: PVC 5347720	Realtime CAR: 0 Kbps	Traffic Rule: GI	Description: /	Preferences / <input type="checkbox"/> Utilization Notifications <input type="checkbox"/> Change Notifications
VPN CNE-PIF			Entitlements:	Activation Status: ● Not Available
BASINGSTOKE ROAD RG2				
070-68P				
Equipment IP: 68.137.93.5				
Circuit ID: WUA XXXXXXXX	Port Speed: 15 Mbps	Encapsulation: ETHERNET	Service Type: Not Managed	<input type="button" value="Actions"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
Service ID: PVC 1827940	Realtime CAR: 0 Kbps	Traffic Rule: GI	Description: / <small>External Private IP Address: 68.137.93.5</small>	Preferences /
VPN CNE-PIF				
				100%

Alternative circuit list views

Select circuit list views with different levels of detail

Circuit ID XXXXXXXX	Port Speed	Encapsulation	Service Type	Actions
Service ID XXXXXXXX	1536 Kbps	FR	Not Managed	
PVC XXXXXXXX	Realtime CAR	Traffic Rule	Description /	
VPN XXXXXXXXXXXXXXXX	0 Kbps	G1	backupCASA	<input type="radio"/> Utilization Notifications <input type="radio"/> Change Notifications
XXXX XXXXXXXXXX XXXXX		Equipment IP	Entitlements	
RD CA 91350 USA		XXXXXXX		

Circuit ID XXXXXXXX	Port Speed	Encapsulation	Service Type	Actions
Service ID XXXXXXXX	8 Mbps	ETHERNET	Not Managed	
PVC XXXXXXXX	Realtime CAR	Traffic Rule	Description /	
VPN XXXXXX XXXXXXXX	5000 Kbps	R2	Entitlements	<input type="radio"/> Utilization Notifications <input type="radio"/> Change Notifications
XXXXXXX XXXXXXXX		Equipment IP		
XXXXXXX		68.139.174.85		

Search, notification alert, documentation & help, interactive tour

The Dashboard offers Search commands, notification alerts as well as documentation and help options. See the Icon list for each below.

Global Search **Notification Alert** **Documentation & Help**

Take the interactive tour **Show me**

Documentation & help, interactive tour

The documentation help screen provides link to user guides, help desk for each product.

The screenshot shows a "Documentation & Help" interface with a header and a main content area. The header has a close button (X) and a scroll bar on the right. The main content is organized into sections:

- Policy Management**:
 - Help Desk (phone icon)
 - User Guide (document icon)
- Private IP**:
 - Help Desk (phone icon)
 - User Guide (document icon)
- Public IP**:
 - Welcome Kit (document icon)
 - User Guide (document icon)
- Secure Cloud Interconnect**:
 - Help Desk (phone icon)
 - Welcome Kit (document icon)
- VEC Support**:
 - 800-569-8799 (phone icon)
 - Welcome Kit (document icon)
- DNM Activation**:
 - User Guide (document icon)
- E Line**:
 - Help Desk (phone icon)
 - User Guide (document icon)

Search

Search allows Users to look up circuits by circuit ID, service ID, VPN, or location. You can also display search results by Location for multiple service types i.e. Private IP, Public IP, Secure Cloud Interconnect (SCI) and SDWAN Co Management (Versa). You can refine your search further by accessing the “Filter” menu.

The screenshot shows a search interface with a search bar containing "Richardson" and a "Search" button. Below the search bar, it says "Search results for Richardson" and "2 record(s) found". There are two sections: "PIP" and "IDA".

PIP 1 record(s) found

PVC ID XXXXXXXX	Circuit ID XXXXXXXX	VPN Name XXXXX XXXXXXXX - XXXXXXXX	Address 400 INTERNATIONAL PKWY RICHARDSON TX USA 75081-6606	View
Site ID XXXXXXXX	Description Data Update May 3rd second time			
VPN ID XXXXXXXX				

IDA 1 record(s) found

PVC ID XXXXXXXX	Circuit ID XXXXXXXX	VPN Name Internet	Address 400 INTERNATIONAL PKWY RICHARDSON TX USA 75081-6606	View
Site ID XXXXXXXX	Description			
VPN ID XXXXXXXX				

Search filter options

verizon/
Dynamic Network Manager

Home Network API Reports

Private IP

Circuit ID W0V30609	Port Speed	Encapsulation
Service ID	1984 Kbps	FR
PVC 5347682	Realtime CAR	Traffic Rule
VPN CNE-PIF	512 Kbps	G1
BASINGSTOKE ROAD RG2 0TD GBR		Equipment IP 68.138.222.57

Circuit ID W0V30618	Port Speed	Encapsulation
Service ID	128 Kbps	FR
PVC 5347720	Realtime CAR	Traffic Rule
VPN CNE-PIF	0 Kbps	G1
BASINGSTOKE ROAD RG2 0TD GBR		Equipment IP 68.137.93.5

Circuit ID W0V93727	Port Speed	Encapsulation
Service ID	15 Mbps	ETHERNET
PVC 1827940	Realtime CAR	Traffic Rule
VPN CNE-PIF		

Refine Search

Filter

VPN	Country
VPN	Country

Sort

First	Order By
Second	Order By

Description

State

City

Street Address

Zip Code

Encapsulation

Select

100%

Export

Export allows a User to export the current screen data to a CSV file.

verizon/
Dynamic Network Manager

Home Network Policy Management API Reports

Private IP

Inventory

All VPNs

Circuit ID C0108468 Service ID 146124672 PVC 5820282 VPN ACME-Fabrication VRF Name V795957:ACMFabrication VPN Address 150 ALLEN RD ATLANTA, GA 30328-4862 USA	Port Speed 9 Mbps	Encapsulation ETHERNET	Service Type Not Managed	Actions
	Realtime CAR 512 Kbps	Traffic Rule G4	Description Main Office	Preferences Utilization Notifications Change Notifications
		Equipment IP 68.139.174.86	Entitlements	Activation Status Active

Circuit ID C0131900 Service ID 196170131 PVC 5928656 VPN ACME-Fabrication VRF Name Vb10657:ACMFabrication VPN Address	Port Speed 10 Mbps	Encapsulation ETHERNET	Service Type Not Managed	Actions
	Realtime CAR 0 Kbps	Traffic Rule G1	Description Rob's Home Office	Preferences Utilization Notifications Change Notifications
		Equipment IP 152.181.179.42	Entitlements	Activation Status PENDING

View circuit details

You can view the details of the circuit by clicking on the + or open the drop down box and click on **View details**.

The screenshot shows the Juniper Network Manager interface for viewing circuit details. At the top, there's a navigation bar with 'Private IP' selected. Below it, a table lists two circuits. The first circuit has a detailed description: 'VRF Name V795957-ACMEFabrication', 'VPN Address 180 ALLEN RD ATLANTA, GA 30328-4862 USA', and 'Entitlements'. A green arrow points from the 'Actions' dropdown menu to the 'Description' field of the first circuit's row. The second circuit has a similar structure but lacks the descriptive text. The bottom section of the interface shows another table with three columns of circuit information.

Circuit ID	Service ID	Port Speed	Encapsulation	Service Type	Actions
C0108468	146124672	9 Mbps	ETHERNET	Not Managed	View Details
PVC 5820282					Modify Bandwidth
VPN ACME-Fabrication					Network Settings
VRF Name V795957-ACMEFabrication					View Orders
VPN Address					Router Commands
180 ALLEN RD ATLANTA, GA					View Utilization
30328-4862 USA					VRF Details

Circuit ID	Service ID	Port Speed	Encapsulation	Service Type	Actions
C0131900	196707131	10 Mbps	ETHERNET	Not Managed	View Details
PVC 5928656					Modify Bandwidth

Circuit ID	Service ID	Port Speed	Encapsulation	Service Type	Actions
C0108468	146124672	9 Mbps	ETHERNET	Not Managed	View Details
PVC 5820282					Modify Bandwidth
VPN ACME-Fabrication					Network Settings
VRF Name V795957-ACMEFabrication					View Orders
VPN Address					Router Commands
180 ALLEN RD ATLANTA, GA					View Utilization
30328-4862 USA					VRF Details

Note: You can change the description for each circuit. Click on the “pencil” symbol near the description. View the pop up. Enter the description that needs to be changed. Click on “**save**” changes.

Utilization Notifications allows Users to select when (and how often) DNM proactively alerts them about circuits reaching bandwidth utilization thresholds. This helps Users avoid packet loss if/when a circuit “runs too hot”.

Circuit Change Notifications is another subscription option available to all users who are entitled to see/edit particular circuits; all Users who subscribe to this option are notified of changes made by any of the other Users.

The screenshot shows the PIP Looking Glass interface. On the left, there's a sidebar with 'Circuit ID W0V32760', 'Service ID PVC 1795192', 'VPN Lemon/APA', and 'JAPAN N/A JPN'. Below this are tabs for 'Details', 'Equipment', and 'PE Settings'. The 'Equipment' tab is selected, showing fields like 'EF Real Time CAR' (Current - 112 Kbps), 'Utilization Alert Threshold' (0 %), 'Topology' (H), 'CE IP Address' (206.155.31.1), 'Access Type' (T1), and 'Routing Protocol' (BGP). On the right, a modal window titled 'Preferences for W0V32760' is open. It has two sections: 'Utilization Notifications' (switched on, alert at 80% utilization, e-mail to alexander.harvey@one.verizon.com, daily recurrence) and 'Circuit Change Notifications' (switched on, start date/time zone set to Africa/Abidjan, daily recurrence pattern, every weekday checked, no end date). There are 'Subscribe' and 'Cancel' buttons at the bottom. The background shows a summary of circuit statistics: Current - 1.5 Mbps, ETM, G1, Serial3/0/4/12/1, 1.5 Mbps, and Activation Status (Not Available).

Network Settings

This section contains both Customer Edge (CE) settings and Provider Edge (PE) settings information. You can view the General Interface Configuration, Virtual Route (VRF) Information, Quality of Service Information, and IPv4 eBGP Routing Information. You can also produce an example CE design for your router (for a Customer Managed circuit) from the PIP Looking Glass Site Detail screen.

1. Click on the add symbol “+” to view the details of the circuit ID
2. Click on equipment tab to view the customer edge settings details

Virtual Routing and Forwarding (VRF) allows multiple instances of a routing table to exist within the same router at the same time. Because the routing instances are independent, the same or overlapping IP addresses can be used without conflicting with each other. A VRF may be implemented in a network device by having distinct routing tables, also known as forwarding information bases (FIBs), one per VRF.

All VPNs	Bulk Operations	Export	Open
Circuit ID C0108468 Service ID 146124672 PVC 5820282 VPN ACME-Fabrication VRF Name V795957:ACMEEFabricatio n n VPN Address 180 ALLEN RD ATLANTA, GA 30328-4862 USA	Port Speed 8 Mbps Realtime CAR 256 Kbps Equipment IP 68.139.174.86	Encapsulation ETHERNET Traffic Rule R2 Entitlements DC DP LG	Service Type Not Managed Description Description for C0108468 Activation Status Active
Details	Network Settings	Orders	Diagnostics
Utilization	Virtual Services	Cloud Services	Other VRF
General Interface Configuration			
Router Name	ATL29E01	Encapsulation	ETHERNET VLAN : 495 VLAN : 495
Router Type	ASR9K	IPv4 Address / Prefix	68.139.174.85 / 30
Access Type	ETH10Gig	IPv4 MTU	
Interface Name	TenGigE0/7/0/3.427	Shape Adjustment for Ethernet	85%
Routing Protocol	BGP		
Virtual Route Forwarding (VRF)			
VRF Name	V795957:ACMEEFabrication	WAN Analysis Reporting	No
Topology	HUB	MAX Paths	0
Max Routes	1250	Max Paths Routes Load Sharing	No
Quality of Services			
PIP Class of Service	Enhanced Traffic Management	EF Real Time (Gold) CAR	256 Kbps
Port Speed	8 Mbps	Egress Profile	R2-Voice/video centric #1
Policing on Router	YES	MVRF Multicasting Enabled	No
Peak Speed	0 Kbps	Multicasting RP Address	
Queuing Level	Default	Multicasting MDT Address	
FRF 12 Fragmentation	Disabled		
IPv4 eBGP Routing Information			
Multihop IP		Hops Away	
Redistribute Static	Yes	Redistribute Connected	Yes
AS Override	No	Send Community	Yes
		Remote AS	1
IPv6 eBGP Routing Information			
Redistribute Static	Yes	Hops Away	0
AS Override	Yes	Redistribute Connected	No
		Remote AS	0

Customer Edge Settings							
IPv4 Address / Prefix	68.139.174.86 / 30		Layer 2 Encapsulation	ETHERNET VLAN : 3			
Server Level	Not Managed						
Layer 1/2 Information							
CONNECTOR TYPE	RJ45		CE WAN Interface / Handoff Type	100BASE-TX INTERFACE 100M			
VLAN set to	3						
Services(s) Ordered							
Service Order	193608690.0		Work Order	23455498.0			
Managed Service	Not Managed						
Demarcation Information							
1249583C	Site Type CUST	Address 180 ALLEN RD ATLANTA GA 30328-4862 USA	LD1: APT LV1: 1	LD2: BSMT LV2: 2	LD3: BAY LV3: 3		
Sample Router Configuration							
<p>Notice: The router configuration shown below is intended as an example only. You will likely need to add, remove or change certain elements of this configuration to meet your specific requirements. Use at your own risk if you are not sure about the proper use of a command please seek appropriate advice.</p> <pre>!-----Sample interface configuration WITHOUT VLAN tagging enabled----- interface FastEthernet0/0 lor GigabitEthernet0/0 description Verizon MPLS VPN: ACME-Fabrication; Site-Circuit: atlanta-ga_c0108468-146124672-5820282 ip address 68.139.174.86 255.255.255.252 no shutdown speed 100 lor speed 1000 for GigE full-duplex !</pre>							

STD QoS DPORT, and ETM to STD*

The Customer Edge (CE) configuration steps are explicit to Cisco switch stages (for customer managed circuits). For other vendor CE, consult the client manual with respect to changing the interface bandwidth speed. We recommend setting up an egress traffic forming rate on your CE router's WAN interface as per your changes in QOS settings. Follow these guidelines to set up your router for Dynamic Port changes.

ETM QoS DPORT, DCAR, Custom Egress, STD to ETM*

The configuration steps are also explicit to Cisco switch stages (for customer managed circuits). For other merchant CPE, consult the client manual with respect to changing the lining parameters. CBWFQ is typical for Silver CAR and LLQ/Priority Queuing is typical for Gold CAR. We prescribe setting up a settled QOS arrangement on your CE switch's WAN interface as per your changed QOS settings. The external (or parent) strategy should shape all traffic as per your selected DPORT speed. The internal (or kid) strategy ought to contain

data transfer capacity assignments as indicated by your selected DCAR speed and Custom Egress profile. Adhere to these directions to set up your switch for Dynamic CAR changes.

* For more technical details, refer to Customer Edge Configuration Settings section in Appendix

Order history

DNM coordinates all order updates going to downstream IT systems. Every hour it picks up new orders that have been provisioned and processes them. It then picks up any rejected orders waiting for a retry and computes a time when the next retry should occur: once every 24 hours through the sixth retry, then once every 72 hours. After a certain number of retries, DNM stops retrying and sends an email informing a User the update could not be completed. Each order is processed in its own transaction to avoid time-outs when there are a lot of orders in the back log. Retries are processed via the regular work flow. The outcome is reflected in the order history so the original error message, as well as the latest error message can be viewed.

The screenshot shows the DNM Order History interface. At the top, there's a summary card with details like Circuit ID (W0V32760), Service ID (PVC 1795192), and various configuration parameters (Port Speed, Encapsulation, Traffic Rule, Equipment IP). To the right of the card are sections for Actions, Preferences (with options for Utilization Notifications and Change Notifications), and Activation Status (Not Available). Below the card is a table with columns for Details, Equipment, PE Settings, Orders, Diagnostics, Utilization, Hosted Services, Cloud Services, and Other VRF. The Orders column is currently active, showing a list of completed orders with columns for Order Number, CircuitId, Status, Requested Date, Expected Date, BillingId, Order Type, Port Speed, User Id, Status Date, and Change Type. Each row in the table includes a plus sign icon to expand the details for that specific order. A search bar and a feedback link are also visible at the bottom of the table area.

Details	Equipment	PE Settings	Orders	Diagnostics	Utilization	Hosted Services	Cloud Services	Other VRF
Orders ①								
Order Number	CircuitId	Status	Requested Date	Expected Date	BillingId	Order Type	Port Speed	User Id
2944149	W0V32760	COMPLETED	2019/09/23 04:30:05 GMT	2019/09/23 04:30:05 GMT	00209854	DBW	1536 Kbps	mankanta.segu@one.verizon.com
2937065	W0V32760	COMPLETED	2019/09/09 04:30:05 GMT	2019/09/09 04:30:05 GMT	00209854	DBW	1024 Kbps	anil.kumar.pabbisetty@one.verizon.com
2924719	W0V32760	COMPLETED	2019/08/11 03:30:07 GMT	2019/08/11 03:30:07 GMT	00209854	DBW	1536 Kbps	anil.kumar.pabbisetty@one.verizon.com
2917444	W0V32760	COMPLETED	2019/07/29 06:30:05 GMT	2019/07/29 06:30:05 GMT	00209854	DBW	1024 Kbps	anil.kumar.pabbisetty@one.verizon.com
2907036	W0V32760	COMPLETED	2019/07/20 17:30:03 GMT	2019/07/20 17:30:03 GMT	00209854	DBW	1536 Kbps	anil.kumar.pabbisetty@one.verizon.com

DNM order summary

This report allows Users to see multiple circuit change activity versus single circuit events (shown in Order History). You can tailor the report to show a defined range of time and frequency of change orders. Results can be exported to PDF and Excel.

verizon
Dynamic Network Manager

Home Network API Reports

Feedback Hello, Verizon DNM

Private IP	Public IP	SCI	Ethernet	Miscellaneous
DNM Order Summary	View All	SCI Consumption	View All	Port Availability Auto Activation Report

verizon
Dynamic Network Manager

Home Network API Reports

Feedback Hello, Verizon DNM

DNM Order Summary

June 22, 2020 to July 22, 2020

From 6/22/2020 To 7/22/2020

Monthly Orders

DBW

COUNT

MONTH

Show Less

Show Order Pending Order Failed Order Completed

Order ID	3074967	Status	COMPLETED	Port Speed	512 Kbps	Billing ID	00209854	Billing Status
Circuit ID	W0V32760	Order Type	DBW	Change Type		Scheduled Date [GMT]	2020/07/18 18:30:06 GMT	Status Date [GMT]
User ID	verizondnm@gmail.com							2020/07/18 18:30:06 GMT
Order ID	3073934	Status	COMPLETED	Port Speed	768 Kbps	Billing ID	00209854	Billing Status
Circuit ID	W0V32760	Order Type	DBW	Change Type		Scheduled Date [GMT]	2020/07/10 22:30:05 GMT	Status Date [GMT]
User ID	verizondnm@gmail.com							2020/07/10 22:30:05 GMT
Order ID	3073549	Status	COMPLETED	Port Speed	8 Mbps	Billing ID		Billing Status
Circuit ID	C0108468	Order Type	DBW	Change Type		Scheduled Date [GMT]	2020/07/08 21:30:15 GMT	BILLING NOTIFIED
User ID	verizondnm@gmail.com							2020/07/08 21:30:15 GMT
Order ID	3071966	Status	COMPLETED	Port Speed	512 Kbps	Billing ID	00209854	Billing Status
Circuit ID	W0V32760	Order Type	DBW	Change Type		Scheduled Date [GMT]	2020/06/29 18:30:09 GMT	Status Date [GMT]
User ID	verizondnm@gmail.com							2020/06/29 18:30:09 GMT

Diagnostics (Router Commands)

Users can issue router commands to verify specifics in their network.

1. Click **Router Commands** under *Site Details*. The *Router Commands* section appears above “Site Details.”
2. Select a command from the *Select Router Command* drop-down list.
3. Click **Submit**. The system displays the response from the router.

The screenshot shows the DNM (Dynamic Network Manager) interface for a specific circuit. At the top, there's a summary table with details like Circuit ID (W0V32760), Service ID (1795192), PVC (1795192), VPN (LemonAPA), and various connection parameters. Below this, a navigation bar includes tabs for Details, Equipment, PE Settings, Orders, Diagnostics (which is highlighted in red), Utilization, Hosted Services, Cloud Services, and Other VRF. On the right side of the interface, there are sections for Actions, Preferences (with options for Utilization Notifications and Change Notifications), and Activation Status (showing Not Available). The main content area is titled "Router Commands" and contains a dropdown menu labeled "Select Router Command". This dropdown lists several network commands, such as "show ip route vrf [V80575:LemonAPA]", "show ip route vrf [V80575:LemonAPA] [ip-prefix]", and "ping vrf [V80575:LemonAPA] ip [target_ip_address] repeat 5". A vertical scrollbar is visible on the right side of the command list. The bottom right corner of the interface shows a zoom level of 100%.

Ethernet Access pre activation test (US only)

Users can issue an Ethernet Access test prior to activating the circuit.

If all the below conditions are satisfied DNM allows the Ethernet Access Test and will display the Ethernet Access Test Results tab.

Conditions:

- Encapsulation must be Ethernet
- Region must be US domestic Circuit
- Port Speed must be less than or equal to 1GB
- Circuit Activation Status cannot be active

Submission of the Test Steps:

1. Click **Router Commands** under Site Details. The Router Commands section appears above Site Details.
2. Select the **Ethernet Test** from the Router Command drop-down list.

3. Initiate the Test.

Ethernet test tab

Circuit ID C0138656
Service ID 136065507
PVC 5971707
VPN E2E-MAR17-USA-NVDQ143
VRF Name Vb68944-E2EMAR17USANVDQ1
43-etc
VPN Address
750 WASHINGTON BLVD
STAMFORD, CT USA

Port Speed 10 Mbps
Realtime CAR 0 Kbps
Encapsulation ETHERNET
Traffic Rule G1
Equipment IP 68.130.242.78

Service Type Not Managed
Description description1-test-25thNov test
Entitlements
Activation Status PENDING

Router Commands Preferences
Utilization Notifications
Virtual Services Change Notifications

Cloud Services Other VRF

Details Network Settings Orders Diagnostics Utilization Virtual Services Cloud Services Other VRF

Router Commands Ethernet Test
Ethernet Test Start Test
Ethernet Test Result

Click **Start Test**.

Circuit ID C0138656
Service ID 136065507
PVC 5971707
VPN E2E-MAR17-USA-NVDQ143
VRF Name Vb68944-E2EMAR17USANVDQ1
43-etc
VPN Address
750 WASHINGTON BLVD
STAMFORD, CT USA

Port Speed 10 Mbps
Realtime CAR 0 Kbps
Encapsulation ETHERNET
Traffic Rule G1
Equipment IP 68.130.242.78

Service Type Not Managed
Description description1-test-25thNov test
Entitlements
Activation Status PENDING

Router Commands Preferences
Utilization Notifications
Virtual Services Change Notifications

Cloud Services Other VRF

Details Network Settings Orders Diagnostics Utilization Virtual Services Cloud Services Other VRF

Router Commands Ethernet Test
Ethernet Test Start Test
Ethernet Test Result

Click **Continue**, After Confirmation.

Green Bar will appear which states the Ethernet Access Test was successfully submitted.

The screenshot shows the Dynamic Network Manager interface for a Private IP configuration. A yellow arrow points to the top status bar which displays the message "Successfully Initiated Ethernet test for circuitid C0138656". The main pane shows various network parameters like Circuit ID, Service ID, Port Speed, Encapsulation, and Activation Status. The "Diagnostics" tab is selected. Under the "Ethernet Test" section, there is a "Start Test" button.

After Ethernet test is completed

1. Ethernet test results option will appear.
2. Click **Ethernet Test Result**.

The screenshot shows the same interface after the Ethernet test has completed. A green arrow points to the "Ethernet Test Result" link under the "Router Commands" section. A tooltip box labeled "E" appears over the "Start Test" button, stating "Action not allowed as circuit is under Ethernet Test." The "Diagnostics" tab is still selected.

Response from Test

Ethernet Access Test Results

Details Network Settings Orders **Diagnostics** Utilization Virtual Services Cloud Services Other VRF

Router Commands **Ethernet Test Result**

Ethernet Test Result

Event	Sum Cd	History Key	Date
Activation	TOK	053551764	21-JUN-21 07:22:05.681000

=====
Y1564 Service Configuration Results : OK
=====

FAIL/PASS	pass	pass	pass	pass
Duration (secs)	62	62	62	62
Frame Size	128	512	1518	EHDX
Test Phase	cir	cir	cir	cir

[Download PDF](#)

Event	Sum Cd	History Key	Date
Maintenance	TOK	053551898	21-JUL-21 07:22:05.681000

+

Bandwidth utilization

Users can view a chart displaying circuit utilization over a time period of 1 day through 30 days. The example below shows received and transmitted results for the Verizon Provider Edge (PE) port. Ingress/Received is what Verizon receives from a customer, and Egress/Transmitted is what Verizon sends to a customer. If you were to view the Customer Equipment (CE) port then you would see the opposite measurements. Verizon PE port measurements and CE port Measurements should closely match.



1. Click on the **Utilization** tab to view the utilization details.
2. By default the daily summary utilization details will be shown.
3. To view 15 min interval usage, select and drag to specific duration so that 15 mins interval usage duration can be viewed.
4. Use the toggle buttons next to Egress and Ingress speed to view specific usage details (i.e. Only Egress or Ingress traffic).

View pending tickets, orders and associated Virtual Route Forwarding (VRF)

Click on the “+” add symbol to view the details of the circuit ID. You can view the pending tickets and orders in the right end corner of the details tab.

1. Click on **pending tickets** to see the status of the ticket on the separate page.
2. Click on **pending orders** to see the status of the ticket on the separate page.

Configure eBGP routing parameters

Click on the “+” add symbol to view the details of the circuit ID.

1. Click on  near the routing protocol in details tab. The Configure eBGP Routing Parameters section appears below the Circuit ID details.
2. Enter the incentive for each eBGP Routing variable. If you are utilizing eBGP or changing to eBGP, you can change the accompanying parameters:
 - a. AS Number - BGP autonomous system number for the current network.
 - b. AS Override - Replaces your AS Number with our AS number if the source and destination AS numbers are the same.
 - c. Send Community - Allows you to send standard communities to us that we will send across the Cloud.
 - d. Advertisement Interval - Changes default BGP advertisement timers from 30 seconds to 0 seconds.
 - e. Distribute List - Site will see a default route only.
 - f. Remove Private AS.

Note: AS override, send community, Advertisement Interval, Distribute List, Remove Private AS are toggles.

3. Click on schedule toggle to select date and time zone.
4. Select the values from the drop down menus for date time zone.
5. Click on Submit so that the changes will be effected -or- Click on Cancel so that the changes will not take effect.

Configure Static Routes

Static routing is a form of routing that occurs when a router uses a manually-configured routing entry, rather than information from a dynamic routing protocol to forward traffic.

1. Click on the Static tab under circuit ID. The Configure Static Routes section appears above Site Details.
2. Select CE IP Address for the following bounce. The IP address is populated in the Next Hop field.

OR-

Select Sub Interface for the next hop. The sub-interface is populated in the Next Hop field.

3. Select CE IP Address for the Sending IP. The IP address is populated in the Forwarding IP field.

OR-

Select Destination IP Address and enter the IP address in the Forwarding IP field.

4. Click Add. Include or expel what should be in the switch or should be expelled from the switch.
5. If relevant, enter a Process Date/Time to plan this activity.
6. Select a period zone starting from the drop list.
7. Click Schedule Order if you are planning for a future date.
8. Snap Process Order to present your request. The Process Order Confirmation spring up shows your request number.
9. Click Submit.

OR-

Click Cancel.

Port speed changes

Dynamic Port (DPORT) is a feature of DNM. It allows Users to submit a change order online to raise/lower Private IP transport speeds. After a Private IP port is ordered and provisioned, you can use Dynamic Port to adjust the port to a desired speed size. After VERIZON ENTERPRISE CENTER entitlements for Dynamic Port (and Dynamic CAR) are confirmed, you must initially wait 24 hours before the first change order can be issued. This is due to the IT processing time for the submitted entitlements/permissions.

Note: 1 Private IP Port (or EF CAR) change is permitted per day for circuits with prefixes "W" and "B". For circuits with a "C" prefix, the following multi-change-per-day rules apply:

- Unlimited Port Speed Change and Dynamic CAR Requests: Users may make more than one port speed change and/or EF CAR change request during a 24 hour period. Greenwich Mean Time (GMT) is used as the start/stop reference for a DNM 24 hour time period. These speed changes can be made prior to 11:00 PM GMT.
- Ability to Reverse Speed Change Requests: Within 60 minutes of making a speed upgrade (or downgrade) request, a User can "correct" the request (as needed) by reversing the speed change request back to the original speed. After 60 minutes the speed change will be established as the new highest speed for the day. That speed is what will be sent to Billing for that day. One speed correction is allowed during a 24 hour period. Alternatively a User can submit a new change order (within 60 minutes) to reverse the mistake.
- Billing: Verizon will continue to bill in 24 hour minimum daily increments. The highest speed change request made during a 24 hour period will be the speed sent to Billing for that day.
- Carry-Over Speed: The last speed change request entered for the day is the one that is carried over to the next day. This speed will be billed daily going forward unless another speed change is requested.

If you are using Enhanced Traffic Management (ETM) Class of Service and a circuit's EF CAR value is set to 90% of your current port speed, then a Dynamic CAR change order should be issued first to lower the EF CAR value before attempting to lower the circuit port speed via Dynamic PORT.

Class of Service: Committed Access Rate speeds and Egress Policies

Dynamic CAR (DCAR) allows Users to submit a change order online to raise/lower Private IP port speeds. However, Users have two options for defining how to set up CAR speeds for use with Private IP circuits:

- Standard (STD) – Standard option supports Best Effort (BE) CAR speeds only. It does not support Expedited Forwarding (EF Real-Time aka Gold) CAR speeds. Moving from ETM to Standard may influence the voice traffic present on this connection. Dynamic CAR is not applicable to standard CAR speeds.
- Enhanced Traffic Management (ETM) - You can expand port speed EF Real-Time (Gold) CAR up to 90% of the port speed. Moving from Standard to ETM enables you to use DCAR online to change the Gold CAR rate. You can upgrade or downgrade the Gold CAR (EF Real Time) value within the limitation of Gold CAR. Minimum Gold CAR

value is OK, and the maximum Gold CAR value can be set up to 90% of the port speed. Increasing Gold CAR has a CPE performance impact. If you have questions, contact your account team before submitting this change. The Gold CAR is policed on Ingress into the Private IP network. Any traffic marked with EF Real Time that exceeds the subscribed Gold CAR value is discarded. If you select Gold CAR (Expedited Forwarding) and are using this for Voice over IP calls, a reduction of the CAR value (e.g. 40.456 reduce to 8K) can directly affect the quality of Voice over IP calls on this link. Ensure that you make a corresponding reduction on the device that determines the call admission control policy for this link as well as making a reduction on the CE router's QoS queuing policies.

- The maximum configurable CAR value is governed by the port speed as well as the Egress profile of the Private IP port in service.
- Users may change their "G" or "R" Egress profiles via DCAR. When the Gold CAR value is equal to or greater than 50% of the port speed DCAR will only display "R" level policies.
- Ingress refers to traffic which enters the Private IP Provider Edge (PE) device from the User's CE router.
 - Private IP Standard: All traffic coming into the PE device on ingress is marked AF3 (DSCP=24).
 - Private IP Enhanced Traffic Management (ETM): Customers subscribe to the EF Class of Service and can use 100% of the port for the five additional data classes: AF4, AF3, AF2, AF1, and BE. The EF Class of Service can range from OK up to 90% of the port.
- Egress refers to the traffic which is exiting on the Private IP PE device and being delivered to the User's CE router with a percentage of bandwidth dedicated to each class of service. Egress policies are based on Low Latency Queuing (LLQ) and Class-Based Weighted Fair Queueing (CBWFQ). LLQ is used exclusively for the EF Class of Service and uses strict priority queuing to allow delay-sensitive data (such as Voice over IP) to be sent first, giving delay-sensitive data preferential treatment over other traffic.
- Class-Based Weighted Fair Queueing (CBWFQ) is used for the five data classes of service: AF4, AF3, AF2, AF1, and BE. It allows Verizon to specify a percentage allocation of bandwidth to be allocated for each class of traffic.
- The default egress policy for all Private IP customers is: EF: 50%, AF4: 40%, AF3: 39%, AF2: 16%, AF1: 1%, BE: 4%. This means on egress, up to 50% of the port will be dedicated to the EF class of service. Anything which exceeds 50% on egress is discarded. While a User can still use the port for other traffic classes on egress, the EF traffic is given the highest priority. If you are receiving nothing but AF3 traffic on egress, 100% of the port is used for AF3. If you are receiving both EF and AF3, up to 50% of the port bandwidth is dedicated to the EF traffic.

- Customers with IP Telephony (also referred to as Voice over IP, or VoIP) requirements also have the option to set the EF Class of service up to 90% of the port speed. EF: 90%, AF4: 40%, AF3: 39%, AF2: 16%, AF1: 1%, BE: 4%.

Note: More information about EF CAR & Egress settings is available in Appendix section.

How to modify port bandwidth and EF CAR

Click **Modify Bandwidth** in the Actions Menu (or in the Expanded Details view, bottom left of screen).

The screenshot shows a network management interface with two circuit details listed. Each detail includes fields like Circuit ID, Service ID, PVC, VRF Name, and VPN Address. To the right of each detail is an 'Actions' dropdown menu. The 'Actions' menu contains options such as View Details, Modify Bandwidth, Network Settings, View Orders, Router Commands, View Utilization, and VRF Details. A green arrow points from the 'Actions' menu of the top detail to the 'Modify Bandwidth' option. Below the 'Actions' menu, there are sections for Preferences (Utilization Notifications, Change Notifications) and Activation Status (Activation Status: PENDING).

Circuit Detail 1				Circuit Detail 2			
Circuit ID: C0108468	Port Speed: 9 Mbps	Encapsulation: ETHERNET	Service Type: Not Managed				
Service ID: 146124672	Realtime CAR: 912 Kbps	Traffic Rule: G4	Description: Main Office				
PVC: 5820282		Equipment IP: 68.09.74.86	Entitlements: 1G, 1P, 1S				
VRF Name: V795957:ACMEEFabrication							
VPN Address: 160 ALLEN RD ATLANTA, GA 30328-4662 USA							
Circuit ID: C0031600	Port Speed: 10 Mbps	Encapsulation: ETHERNET	Service Type: Not Managed				
Service ID: 1967077131	Realtime CAR: 0 Kbps	Traffic Rule: G1	Description: Rob's Home Office				
PVC: 5820856		Equipment IP: 152.181.179.42	Entitlements: 1G, 1P, 1S				
VRF Name: V810857:ACMEEFabrication							
VPN Address: 160 ALLEN RD ATLANTA, GA 30328-4662 USA							

+

Actions ▾
 View Details
Modify Bandwidth
 Network Settings
 View Orders
 Router Commands
 View Utilization
 VRF Details

Preferences ⓘ
 Utilization Notifications
 Change Notifications

Activation Status
● PENDING

Dynamic Port Speed Menu example:

Modify Bandwidth

The port Speed on the Speed Gauge is not the exact port speed of the user. Please check the dropdown to see the available port speeds.

Port Speed

EF Realtime CAR

Scheduling

Schedule change to happen later

Submit Order **Cancel**

*Required Fields

Feedback

Scheduler: User may optionally schedule Port/CAR changes out to a year in advance.

Port Speed

EF Realtime CAR

Scheduling

Schedule change to happen later

Submit Order **Cancel**

Circuit ID W0V32760
Service ID
PVC 1795192
VPN LemonAPA
JAPAN TOKYO, N/A JPN

ETM

Egress Profile*

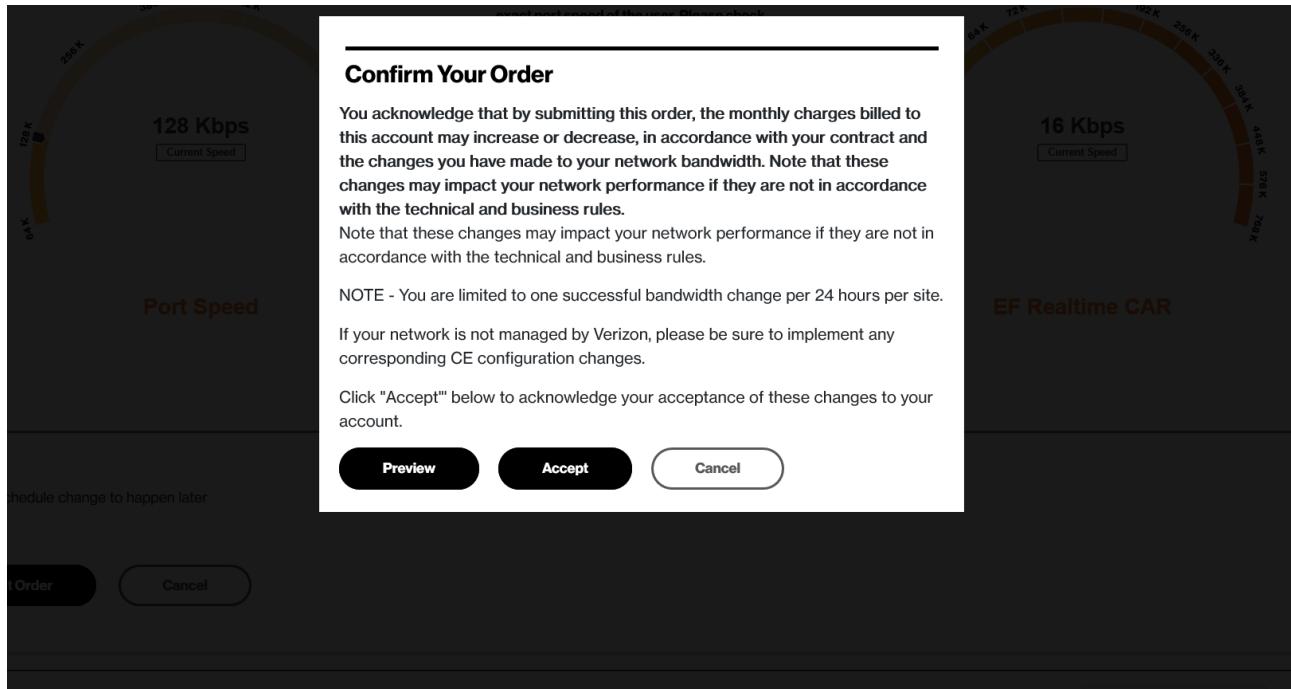
Nov 2019

27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7

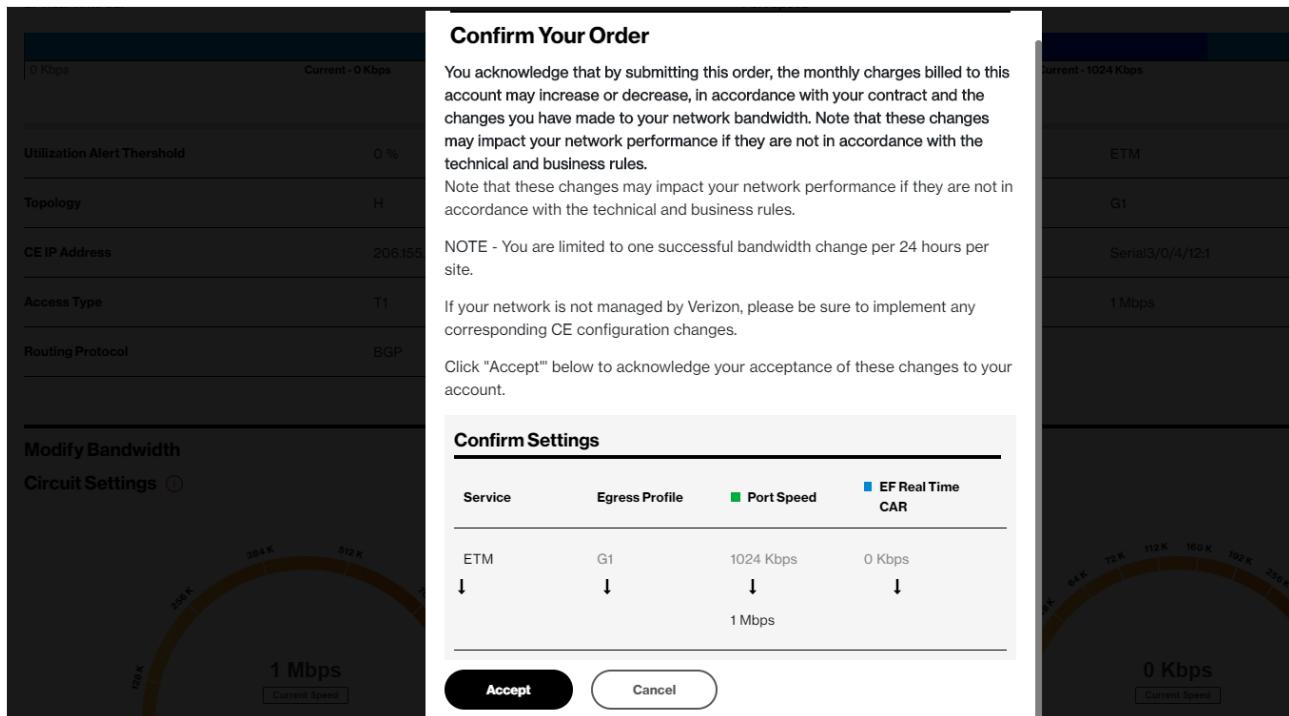
Encapsulation FR
Traffic Rule G1
Equipment IP 206.155.31.17

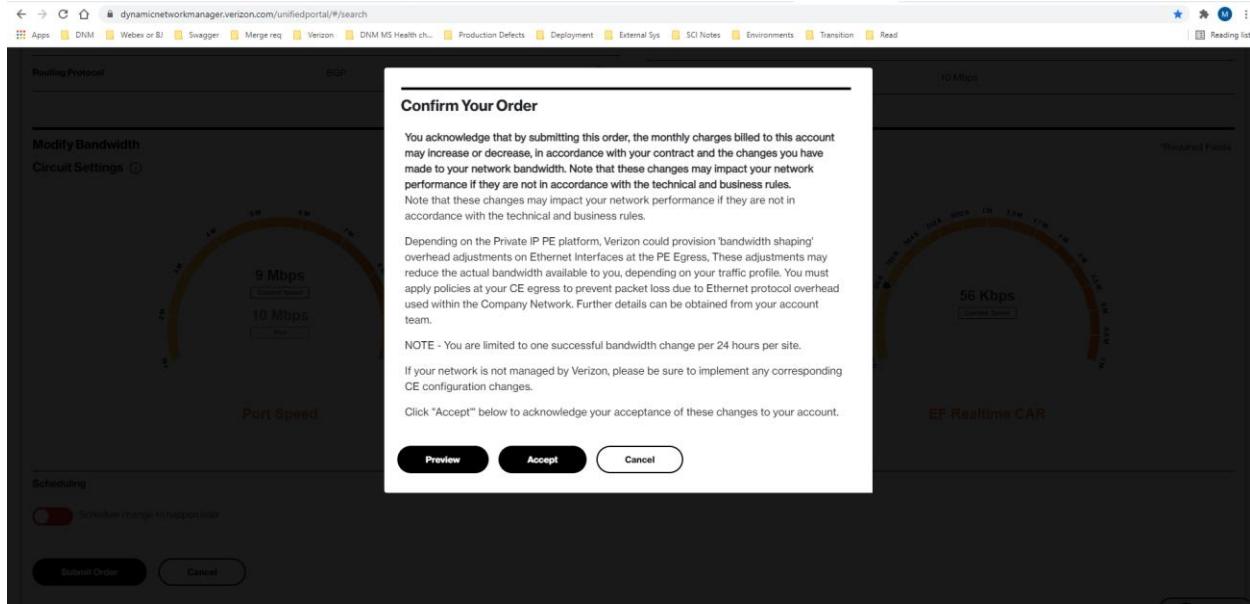
Service Type Not Managed
Description Testing the bulk update test process
Entitlements DC DP LG
Actions **Preferences** Utilization Notifications Change Notifications
Activation Status Active

Order Confirmation Pop-Up



Select **Preview** button to see Before/After Speed Changes before Accepting.





Change order acceptance (full text):

Please ensure that the Port speeds you request are set above the existing CAR for each site. If not, your orders will not be processed.

If your network is not managed by Verizon, please be sure to implement any corresponding CE configuration changes.

Depending on the Private IP PE platform, Verizon could provision 'bandwidth shaping' overhead adjustments on Ethernet Interfaces at the PE Egress. These adjustments may reduce the actual bandwidth available to you, depending on your traffic profile. You must apply policies at your CE egress to prevent packet loss due to Ethernet protocol overhead used within the Company Network. Further details can be obtained from your account team.

You acknowledge that by submitting this order, the monthly charges billed to this account may increase or decrease, in accordance with your contract and the changes you have made to your network bandwidth. Note that these changes may impact your network performance if they are not in accordance with the technical and business rules.

The changes to your network will normally be completed within approximately 15 minutes for customer-managed and DNM Full Automation Managed circuits. If you request simultaneous multiple changes, the changes may take longer. For requests submitted on circuits terminating on Verizon Managed Services Customer Edge (CE) routers without support for Dynamic Network Manager (DNM) Full Automation, your requested changes may take up to 72 hours before the CE routers are manually updated by Verizon. Contact your account team for information about how to upgrade your CE device configuration to allow Full Automation. If your site is not managed by Verizon Business, please be sure to implement any corresponding CE configuration changes.

Depending on the Private IP PE platform, Verizon could provision 'bandwidth shaping' overhead adjustments on Ethernet Interfaces at the PE Egress. These adjustments may reduce the actual bandwidth available to you, depending on your traffic profile. You must apply policies at your CE egress to prevent packet loss due to Ethernet protocol overhead used within the Company Network. Further details can be obtained from your account team.

NOTE - You are limited to one successful bandwidth change per 24 hours per site (except for "C" prefixed circuits).

Please print a copy of this request for your records.

Click "Accept" below to acknowledge your acceptance of these changes to your account.

Note for Private IP Ethernet Ports with a prefix of B or C.

Ethernet Access goes from the customer premise to the nearest Layer 2 device. A Network to Network Interface (NNI) connects the Layer 2 device to the nearest Private IP Provider Edge over a shared interface. The bandwidth on the NNI is not reserved. In the event the NNI or Provider Edge device has reached capacity it will not be possible to increase your Ethernet Port speed. You will however be able to lower the speed. The dropdown menu on Dynamic Port will reflect the port speeds available based on the amount of bandwidth on the NNI. If the NNI or Provider Edge has been capped you will need to engage your Verizon account team (or the Verizon Enterprise Help Desk) to enable submission of an order to increase bandwidth. As part of the ordering process your Ethernet Port will be migrated to an NNI with sufficient bandwidth to support the higher port speed. There will be no change in the Circuit ID; it will remain the same.

Network to Network Interface (NNI) Toggling for DPORT Change

NNI Toggling allows customers the ability to change the bandwidth on a circuit and if the NNI does not contain enough bandwidth for the change, it will automatically move to an alternate NNI, if one is available. This allows the customer to submit the Dynamic Port (DPort) transaction instead of requiring a standard order via Account Team. If there is no alternate NNI, then the change will have to be made with a standard change order via your account / support team.

NOTE: This is only available to US Domestic Commercial customers at this time.

When NNI Toggling is enabled (see the screenshot below), the new message will display next to bandwidths and will highlight the specific bandwidths that exceed the current NNI bandwidth. The "red" bar (next to the speed) represents the current NNI speed, while the "black" bar represents the speeds that exceed the NNI bandwidth.

In the screenshot below, you can see that the Current Bandwidth is at 8Mbps. If a Port change was made to 9Mbps, it would trigger the NNI move, if there is an alternative available with 9Mbps of capacity.

Modify Bandwidth

Circuit Settings ⓘ *Required Fields

Please check the dropdown to see the available port speeds.

Port Speed

8 Mbps
Current Speed
10 Mbps Max

EF Realtime CAR

56 Kbps Current Speed

Scheduling

Schedule change to happen later

Port speed greater than nni capacity

Port Speed*

8 Mbps
3 Mbps
4 Mbps
5 Mbps
6 Mbps
7 Mbps
8 Mbps
9 Mbps
10 Mbps

EF Realtime CAR*

56 Kbps
304 K
512 K
900 K
1 M
1.2 M
1.7 M
2 M
3 M
5.3 M
8 M

Submit Order **Cancel**

When a User selects a speed that is greater than NNI Capacity + Current Port Speed then a (see screenshot below) message will appear next to the bandwidth selected. This notifies the user that the selected bandwidth change will place a “hot cut” order which will bring down the network for an approximate 15 minutes. During this down time, the system is automatically moving the circuit from one NNI to another NNI that has enough bandwidth for the DPort change.

If there is no alternative NNI with enough bandwidth then the transaction will fail, (back out the bandwidth change) and the user will need to contact their Account Team / Support Team to submit a standard order.

In the example below, the user selected a bandwidth of 9 Mbps, which exceeds the NNI capacity. You can see the message that is displayed to notify the user of NNI toggle change, if they continue to submit the order, the NNI change will trigger a move from one NNI to another that has enough bandwidth. At this point they can continue with the change or change the port speed to a lower value.

Modify Bandwidth

Circuit Settings ⓘ *Required Fields

Please check the dropdown to see the available port speeds.

Port Speed

9 Mbps
Current Speed
10 Mbps Max

EF Realtime CAR

56 Kbps Current Speed

Scheduling

Schedule change to happen later

Port Speed*

9 Mbps
56 Kbps
ETM
G4

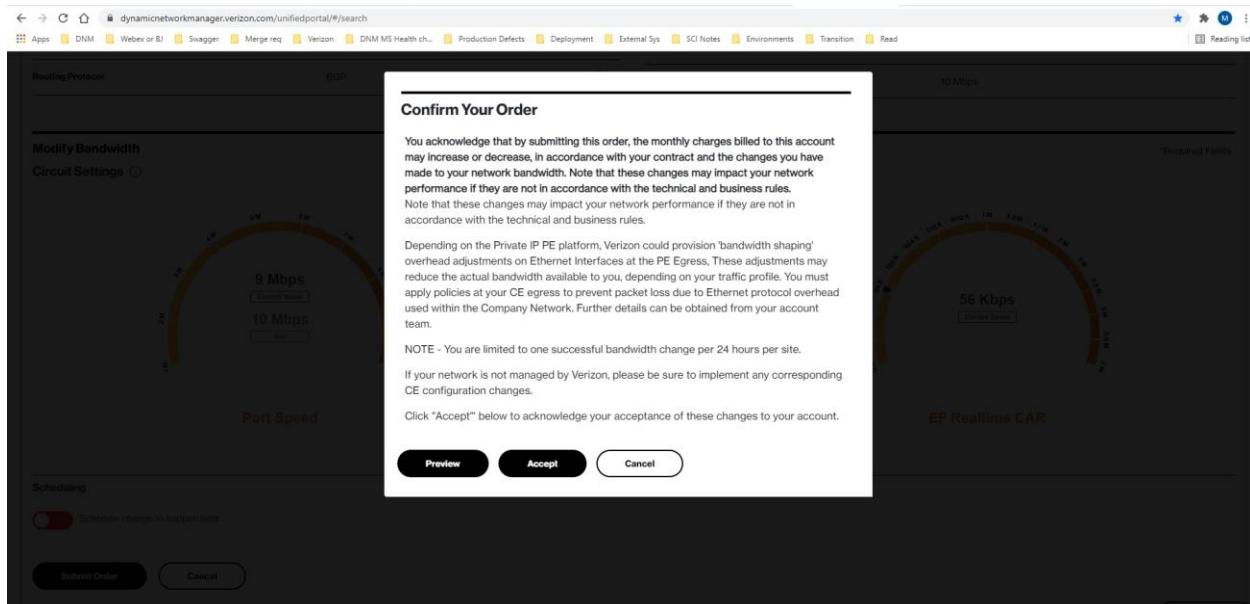
EF Realtime CAR*

56 Kbps
304 K
512 K
900 K
1 M
1.2 M
1.7 M
2 M
3 M
5.3 M
8 M

Submit Order **Cancel**

Warning: You are trying to add thermal bandwidth to your Private IP. Port a provisioning change is required. This change will require brief service down time lasting up to 15 minutes. Upon completion you will be able to make your desired DPORT / DCAR speed change.

Confirmation window of the transaction will be provided. You will need to accept the terms to submit the order. Ensure you come back and verify that the order successfully completed.



If the Bandwidth order fails

User will need to go in and review the order status for the specific change. That change order will display on the order status field:

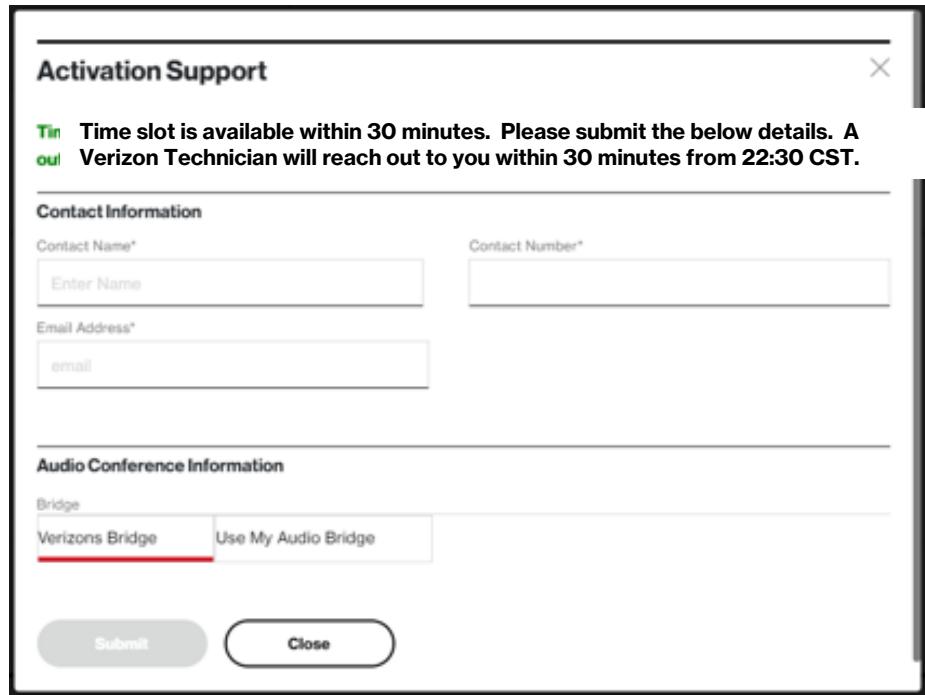
“Layer 2 provisioning failed.”

Click on that “**Activation Support**” button. This will trigger the Support team to begin work to resolve the issue as quickly as possible. They will at a minimum roll the bandwidth change back to bring the network back up.

Details	Network Settings	Orders	Diagnostics	Utilization	Virtual Services	Cloud Services	Other VRF
Orders ⓘ							
Order Number	CircuitId	Status	Created Date	Scheduled Date	BillingId	Order Type	Port
3238437	C0108468	L2FAILED	2021/07/06 16:14:22 GMT		DBW	9 M	
Retry Order Activation Support							

Complete the Contact Information and “**Submit**” the request.

The Support Team for US Commercial customers, are available 7 days a week 24 hours a day to support the requests.



The dialog box is titled "Activation Support". It contains a message: "Time slot is available within 30 minutes. Please submit the below details. A Verizon Technician will reach out to you within 30 minutes from 22:30 CST." Below this, there are two sections: "Contact Information" and "Audio Conference Information". In the "Contact Information" section, there are fields for "Contact Name*" (with placeholder "Enter Name") and "Contact Number*". In the "Audio Conference Information" section, there is a "Bridge" field containing "Verizons Bridge" (which is underlined) and a "Use My Audio Bridge" button. At the bottom are "Submit" and "Close" buttons.

Bulk operations

This Dynamic Network Manager (DNM) feature allows Users to submit multiple circuit changes at one time. There are three categories of DNM bulk changes: 1) Circuit descriptions, 2) Bandwidth (Dynamic PORT), CAR (Dynamic CAR), Profile (Egress) and 3) Bulk subscription (Utilization threshold alerts and circuit change activity). Bulk change requests can be manually entered directly into the tool or via a DNM spreadsheet template (where applicable).

Please note that only Private IP single VRF (virtual route forwarding) and PORT Multi-VRF circuits are supported for Bulk speed changes currently. PVC Multi-VRF circuit support is targeted for 4Q20.

Tip: If you elect to use the DNM spreadsheet template to enter your circuits, you can first use DNM's Export function to download the VPN/circuit list you wish to modify and then copy/paste the appropriate values into the Bulk spreadsheet template fields.

← Bulk Operations[Create New Job](#)[Jobs in Progress](#)[Completed Jobs](#)**Settings**

Select an Operation*

Select	▼
Circuit Description	
Bandwidth, CAR, Profile - Change with pre-set speeds	
Bandwidth, CAR, Profile - Upload excel with custom speeds	
Bulk Subscription	

Circuit Description

This option allows changes to Circuit Descriptions (only). You can manually enter circuit information or enter it into a DNM spreadsheet template.

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Home Network API Reports

goodmans8323 X
Hello, Alexander Harvey

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Settings *Required Field

Select an Operation* Circuit Description

Circuits

Upload a list of Circuit IDs

Drop file here, or click to select from your computer.

- OR -

Enter a list of Circuit IDs,pvcId:description per line. Eg:C12345,P12345:description

Download Template

Feedback

Upload

CircuitDescriptionTemplate 1595246260341 - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW

Cut Copy Paste Format Painter

Font Alignment Number

Normal Conditional Format as Neutral

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	circuitId	pvcId	description										
2	1	1	description1										
3	2	2	description2										
4	3	3	description3										
5	4	4	description4										
6	5	5	description5										
7	6	6	description6										
8	7	7	description7										
9	8	8	description8										
10	9	9	description9										
11	10	10	description10										
12	11	11	description11										
13	12	12	description12										
14	13	13	description13										
15	14	14	description14										
16	15	15	description15										
17	16	16	description16										
18													
19													

Note: Circuit information submitted via spreadsheet for any DNM bulk change request must be entered in a DNM spreadsheet template format. If data does not match the Template format provided, the sheet will not be uploaded.

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Search

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Settings

Select an Operation*
Circuit Description

Circuits

Upload a list of Circuit IDs
OR
Enter a list of Circuit IDs,pvcID,description per line. Eg:C12345,P12345,description
Drop file here, or click to select from your computer.
Upload

Download Template



Live Chat

After the Excel file (or your manually entered list) has been entered, Click **Upload**.

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Search

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Settings

Select an Operation*
Circuit Description

Circuits

Selected circuits are listed below. You may modify your circuit list before validating. Note that duplicate circuit IDs have been removed.

Circuit ID	PVC ID	Description

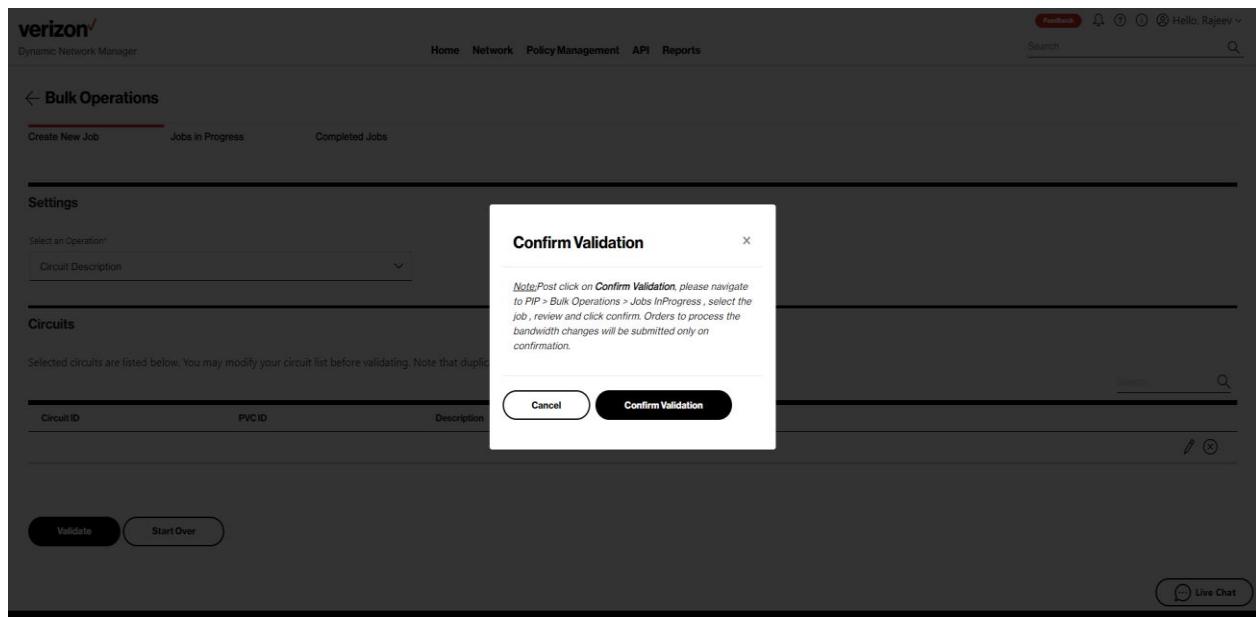
Validate Start Over

Live Chat

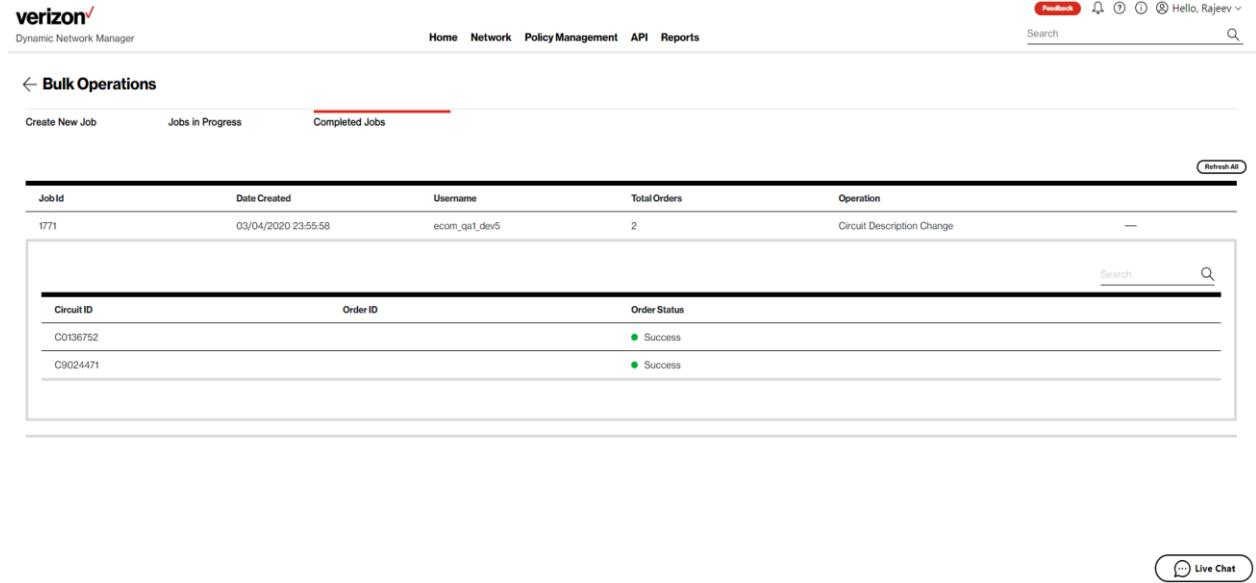


Click **Validate**

Validate



Click Confirm Validation.



Completed Tab displays the jobs that have been processed.

Bandwidth, CAR, profile – change with preset speeds

The screenshot shows the 'Bulk Operations' section of the Verizon Dynamic Network Manager. At the top, there are navigation links for Home, Network, Policy Management, API, and Reports, along with a search bar and user information. Below the header, there are tabs for 'Create New Job', 'Jobs in Progress', and 'Completed Jobs'. The main area is titled 'Settings' and contains three dropdown menus: 'Select an Operation' (set to 'Bandwidth, CAR, Profile - Change with pre-set speeds'), 'Bandwidth' (set to 'Select'), 'EF Realtime CAR' (set to 'Select'), and 'Egress Profile' (set to 'Select'). A note above the dropdowns states: "'Bulk functionality supports single VRF change only'". A message at the bottom right says: 'Please Select Either Bandwidth or EF Realtime Car and Egress Profile'.

Enter Bandwidth, CAR and Profile selections in drop down menus.

This screenshot shows the same 'Bulk Operations' section as the previous one, but with specific values selected in the dropdown menus. The 'Select an Operation' dropdown is still set to 'Bandwidth, CAR, Profile - Change with pre-set speeds'. The 'Bandwidth' dropdown is now set to '2000 Kbps', the 'EF Realtime CAR' dropdown is set to '32 Kbps', and the 'Egress Profile' dropdown is set to 'G1'. The note above the dropdowns remains: "'Bulk functionality supports single VRF change only'". The message at the bottom right also remains: 'Please Select Either Bandwidth or EF Realtime Car and Egress Profile'.

Click Circuits bar to search & select circuits for Bulk changes.

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Bulk Operations					
<input checked="" type="checkbox"/> UnSelect All <input type="text"/> Search					
Circuit ID C0136752 Location TX,USA	PVC ID 5957706	VPN Name E2E-MAR17-USA-NVDQ143	Bandwidth	EF RealTime CAR	Egress Profile
Circuit ID C0136385 Location TX,USA	PVC ID 5955170	VPN Name E2E-MAR17-USA-NVDQ143	Bandwidth	EF RealTime CAR	Egress Profile
Circuit ID ENRALDAL0001 Location UV,USA	PVC ID VCP_121951049_2	VPN Name E2E-MAR17-USA-NVDQ143	Bandwidth	EF RealTime CAR	Egress Profile
Circuit ID 9228504 Location DO,USA	PVC ID 9228504	VPN Name RadLabG2Orch	Bandwidth	EF RealTime CAR	Egress Profile
<input type="button" value="Upload"/> Live Chat					

Click **Upload** to submit circuits for Bulk Changes.

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Bulk Operations					
<input type="text"/> Search					
Settings					
Select an Operation*	Bandwidth	EF Realtime CAR	Egress Profile	Please Select Either Bandwidth or EF Realtime Car and Egress Profile	
Bandwidth, CAR, Profile - Change with pre-set speeds	2000 Kbps	16 Kbps	G1		
Circuits					
Selected circuits are listed below. You may modify your circuit list before validating. Note that duplicate circuit IDs have been removed.					
Circuit ID	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	New EF Realtime CAR
C0136385	5955170	2000 Kbps	2000 Kbps	16 Kbps	G1
ENRALDAL0001	VCP_121951049_2	2000 Kbps	2000 Kbps	16 Kbps	G1
C3017152	5974019	2000 Kbps	2000 Kbps	16 Kbps	G1
C9607286	5956692	2000 Kbps	2000 Kbps	16 Kbps	G1
C9208052	5967334	2000 Kbps	2000 Kbps	16 Kbps	G1
Show:	5	Go to:	1 / 5	<input type="button" value="Validate"/> <input type="button" value="Start Over"/> Live Chat	

Click **Validate**.

Click Confirm Validation.

Important Note: DNM will send you an email confirmation when all submitted circuits are processed after the Confirm Validation step. If however, you go to the Jobs in Progress tab to review status before receiving the DNM email, then hit Refresh to see the most current list of validated circuits (or hit Refresh All for in-progress status of all active requests). DNM processes circuit validations in batches so you may need to hit Refresh/Refresh All several times. Click Revalidate after making corrections (or deletions).

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Home Network Policy Management API Reports

Search

← Bulk Operations

Create New Job Jobs in Progress Completed Jobs

Refresh All

JobId	Date Created	Username	Total Orders	Orders Completed	Operation
2470	07/21/2020 07:48:51	ecom_qat_dev5	9	4	Bulk Modify Bandwidth Validation

Please click on refresh button to get the updated status.

Failed (1) Success (4)

Refresh

Bulk Modify Bandwidth Validation succeeded for the following circuits

Circuit Id	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	New EF Realtime CAR	Current Egress Profile	New Egress Profile
C5952791	5954290		6 Mbps		8 Kbps	G1	
C1068540	5980967		10 Mbps		16 Kbps	R1	
C0136752	5957706		200 Mbps		1300 Kbps	G1	
C9024471	4052249		1536 Kbps		384 Kbps	G1	

Place Order

Live Chat

Click **Place Order** once Revalidation is complete.

This is the final step to entering the bulk change request.

Bulk Operations					
Create New Job		Jobs in Progress		Completed Jobs	
Please click on refresh button to get the updated status.					
Job Id	Date Created	Username	Total Orders	Orders Completed	Operation
2470	07/21/2020 07:48:51	ecom_qat_dev5	9	4	Bulk Modify Bandwidth Validation
Failed (0)	Success (4)				<button>Refresh</button>
Bulk Modify Bandwidth Validation succeeded for the following circuits					
CircuitId	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	Current Egress Profile
C5952791	5954290	6 Mbps	8 Kbps	G1	
C1068540	5980967	10 Mbps	16 Kbps	R1	
C0136752	5957706	200 Mbps	1300 Kbps	G1	
C9024471	4052249	1536 kbps	384 Kbps	G1	
Place Order					
Live Chat					

Success tab show circuits that have been successfully submitted.

Bandwidth, CAR, profile – upload excel with custom speeds

DNM allows you to drag & drop an Excel spreadsheet into DNM with your defined circuit changes. This spreadsheet must be in the same format as the accessible DNM Excel template.

The screenshot shows the DNM Bulk Operations interface. In the 'Settings' section, a dropdown menu is set to 'Bandwidth, CAR, Profile - Upload excel with custom speeds'. In the 'Circuits' section, there is a file upload area with a placeholder 'Drop file here, or click to select from your computer.' and a 'Upload' button. A green arrow points from this 'Upload' button to the corresponding button in the Excel spreadsheet screenshot below.

Click **Upload** after dropping Excel file into DNM.

The screenshot shows an Excel spreadsheet with the following data:

DO NOT CHANGE THE HEADER INFORMATION - SPECIFY ONLY INVENTORY						
Circuit ID	PVC ID	Bandwidth	Bandwidth Unit	EF Realtime CAR	EF Realtime CAR Unit	Egress Profile
<<Enter Circuit ID>>	<<Enter PVC ID>>	10	Select	10	Select	Select
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

DNM speed change template

The screenshot shows the Verizon DNM Bulk Operations interface. At the top, there's a navigation bar with links for Home, Network, Policy Management, API, and Reports. A search bar and a user greeting 'Hello, Rajeev' are also present.

The main section is titled 'Bulk Operations' with a back arrow icon. Below it, there are three tabs: 'Create New Job', 'Jobs in Progress', and 'Completed Jobs'. The 'Jobs in Progress' tab is selected.

Settings section: A note states "Bulk functionality supports single VRF change only". A dropdown menu is open, showing the option "Bandwidth, CAR, Profile - Upload excel with custom speeds".

Circuits section: A note says "Selected circuits are listed below. You may modify your circuit list before validating. Note that duplicate circuit IDs have been removed." A search bar and a 'Live Chat' button are on the right.

Circuit ID	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	New EF Realtime CAR	Current Egress Profile	New Egress Profile	Status
C0136752	5957706	200 Mbps	1300 Kbps	G1		Valid		
9228504	9228504	10 Gbps	0 Kbps	G1		Valid		
C1068540	5980967	10 Mbps	16 Kbps	R1		Valid		
C9024471	4052249	1536 Kbps	384 Kbps	G1		Valid		
C5952791	5954290	6 Mbps	8 Kbps	G1		Valid		

Page navigation: Go to: 1 / 2. Buttons at the bottom: 'Validate' (dark background), 'Start Over' (light background).

When finished editing, click **Validate**.

This screenshot shows the same DNM Bulk Operations interface as the previous one, but with a modal dialog box in the center.

The modal is titled "Confirm Validation" and contains the following text: "Note: Post click on Confirm Validation, please navigate to PIP > Bulk Operations > Jobs InProgress , select the job , review and click confirm. Orders to process the bandwidth changes will be submitted only on confirmation." It has two buttons: "Cancel" and "Confirm Validation".

The main table of circuits remains the same as in the first screenshot.

Page navigation: Go to: 1 / 2. Buttons at the bottom: 'Validate' (dark background), 'Start Over' (light background).

Click **Confirm Validate**.

[← Bulk Operations](#)[Create New Job](#) [Jobs in Progress](#) [Completed Jobs](#)[Refresh All](#)

Job Id	Date Created	Username	Total Orders	Orders Completed	Operation
2470	07/21/2020 07:48:51	ecom_qa1_dev5	9	1	Bulk Modify Bandwidth Validation
Please click on refresh button to get the updated status.					
Failed (1) Success (1)					Refresh
Bulk Modify Bandwidth Validation failed for the following circuits					
Circuit ID	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	New EF Realtime CAR
9228504	9228504	10 Gbps		0 Kbps	G1
					Site data not found
					Edit Delete
Revalidate					
2463	07/20/2020 15:40:35	ecom_qa1_dev5	2	0	Bulk Modify Bandwidth Validation
2462	07/20/2020 15:32:12	ecom_qa1_dev5	3	1	Bulk Modify Bandwidth Validation
2461	07/20/2020 08:21:48	ecom_qa1_dev5	1	0	Bulk Modify Bandwidth Validation
2460	07/20/2020 08:02:21	ecom_qa1_dev5	3	2	Bulk Modify Bandwidth Validation

Important Note: DNM will send you an email confirmation when all submitted circuits are processed after the Confirm Validation step. If however, you go to the Jobs in Progress tab to review status before receiving the DNM email, then hit Refresh to see the most current list of validated circuits (or hit Refresh All for in-progress status of all active requests). DNM processes circuit validations in batches so you may need to hit Refresh/Refresh All several times. Click Revalidate after making corrections (or deletions).

[← Bulk Operations](#)[Create New Job](#) [Jobs in Progress](#) [Completed Jobs](#)[Refresh All](#)

Job Id	Date Created	Username	Total Orders	Orders Completed	Operation
2470	07/21/2020 07:48:51	ecom_qa1_dev5	9	3	Bulk Modify Bandwidth Validation
Please click on refresh button to get the updated status.					
Failed (1) Success (3)					Refresh
Bulk Modify Bandwidth Validation succeeded for the following circuits					
Circuit Id	PVC ID	Current Port Speed	New Port Speed	Current EF Realtime CAR	New EF Realtime CAR
C0136752	5957706		200 Mbps	1300 Kbps	G1
C1068540	5980967		10 Mbps	16 Kbps	R1
C9024471	4052249		1536 Kbps	384 Kbps	G1
					Edit Delete
					Place Order
					Live Chat

Click **Place Order** once Revalidation is complete.

This is the final step to entering the Bulk change request.

Bulk subscriptions

Bulk subscription changes work very similarly to single changes that are made in the “Preferences” section displayed for individual circuits. Alternatively here you can apply changes to multiple circuits/VPNs.

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Feedback Feedback icon Help icon Logout icon Hello, Rajeev Logout icon

Home Network Policy Management API Reports

Search Search icon

← Bulk Subscription

Utilization Notifications Circuit Change Notifications

Select VPN to Subscribe

Current Subscriptions

Circuit ID	VPN	Service ID	Recurrence	High Alert	Status
<input type="checkbox"/> C0136752	ves-vns-orch-infra	123555363	DAILY	30%	Subscribed
<input type="checkbox"/> C0136752	E2E-MAR17-USA-NVDQ143	123555363	DAILY	30%	Subscribed

Search Search icon

Unsubscribe

Subscribed Subscribed icon Not Subscribed Not Subscribed icon

Live Chat Live Chat icon

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Home

← Bulk Subscription

Utilization Notifications Circuit Change Notifications

Select VPN to Subscribe

Select

- E2E-MAR17-USA-NVDQ143
- EohsfMNC
- RadLabG2Orch
- TwsdhnK
- VPN-JUL16-SIT-01
- VPN-Jun16M-163
- VPN

[← Bulk Subscription](#)

Utilization Notifications Circuit Change Notifications

Select VPN to Subscribe: TwsdhnK

Circuit List								
<input type="checkbox"/> Circuit ID	PVC	Service ID	Port Speed	High Alert	Street Address	City, State	Country	Status
<input type="checkbox"/> C5008383	16341251	82423582	1536 Kbps		8239 WQQAWHMLVLFJY SP	VSTAKXRHXIYL, VV	USA	●
<input type="checkbox"/> C5553193	80111434	85206452	1536 Kbps		1848 VQUDJYTC DF FA	FSPZIUR, OZ	USA	●
<input type="checkbox"/> C0136385	5955170	117718343	1000 Kbps		400 INTERNATIONAL PKWY?	RICHARDSON, TX	USA	●
<input type="checkbox"/> C0136517	5955965	117015098	10 Kbps		1600 W 7TH ST	FORT WORTH, TX	USA	●
<input type="checkbox"/> C0136752	5957706	123555363	200 Mbps	30%	1600 W 7TH ST	FORT WORTH, TX	USA	●
<input type="checkbox"/> C1067115	5967622	133448095	4 Mbps		400 INTERNATIONAL PKWY	RICHARDSON, TX	USA	●
<input type="checkbox"/> ENRALDAL0001	VCP_121951049_2	121951049	1 Gbps		5959 N BTDXD CVY	TFGTITY◆VMHBH, UV	USA	●
<input type="checkbox"/> W4N58795	5960011	991336827	34.386 Mbps		123 MISSION ST	SAN FRANCISCO, CA	USA	●

Alert when or above: of utilization

● Subscribed ● Not Subscribed

Live Chat Live Chat

Select one or all listed circuits to submit for Alerts/Notifications subscription.

Dynamic Network Manager

Home Network Policy Management API Reports

Select VPN to Subscribe: TwsdhnK

Circuit List								
<input checked="" type="checkbox"/> Circuit ID	PVC	Service ID	Port Speed	High Alert	Street Address	City, State	Country	Status
<input checked="" type="checkbox"/> C5008383	16341251	82423582	1536 Kbps		8239 WQQAWHMLVLFJY SP	VSTAKXRHXIYL, VV	USA	●
<input checked="" type="checkbox"/> C5553193	80111434	85206452	1536 Kbps		1848 VQUDJYTC DF FA	FSPZIUR, OZ	USA	●

Start Date / Time Zone: Pick Date

Recurrence Pattern: Daily Weekly Monthly

Weekly Options:

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

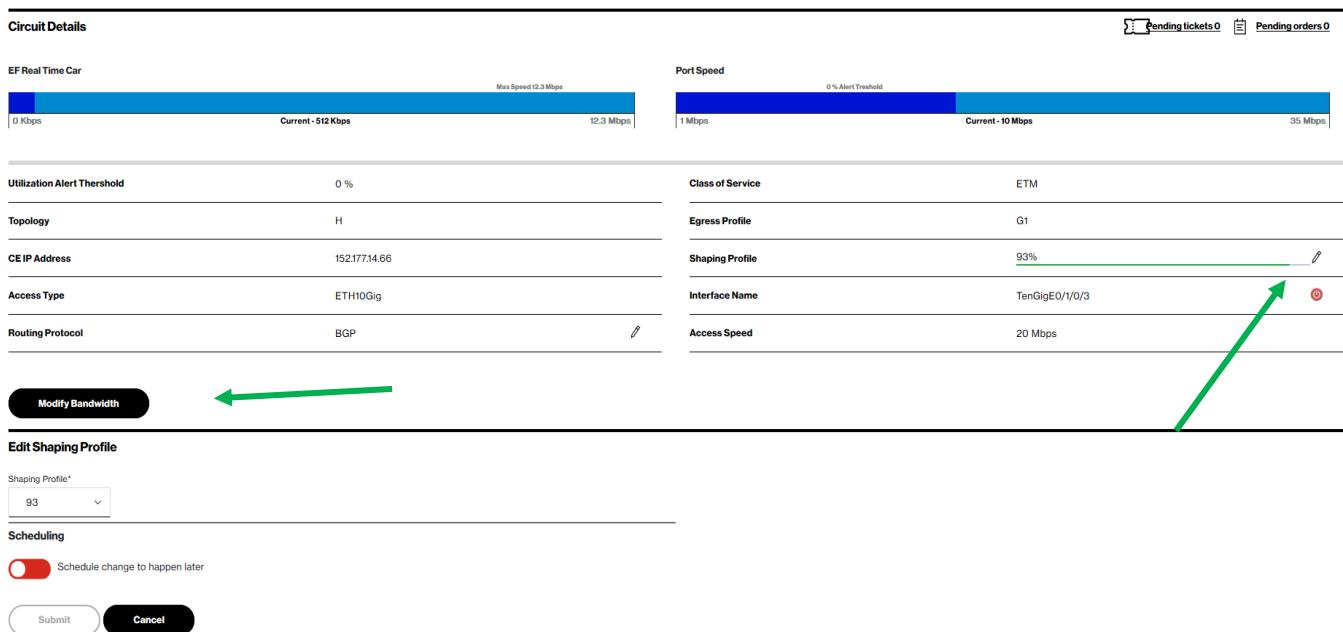
End Date:

Live Chat

Schedule the desired frequency of Emailed Alerts.

Modify Shaping adjustment

The Ethernet cards handle shaping and policing based on L2 overhead. In the case of Ethernet encapsulation when shaping, the router does not include Inter-Frame Gap (IFG), Preamble, and Start Frame Delimiter (SFD). When dealing with small frames, this overhead could be considerable. The marketed Ethernet speeds and the transmission equipment assumes L1 payload. To adjust for this discrepancy, the shaping rate on the PEs can be adjusted to compensate for the Ethernet overhead depending on the type of service that the customer is buying (voice, voice/data combined, and data).



Click on shaping profile in the details tab. The Modify Shaping Adjustment for Ethernet Overhead section appears above the Site Details.

Select 76, 85, or 94 from the Shape PE departure data transmission to drop-down rundown.

Enter a Process Date/Time to plan this activity, if relevant.

Select a period zone starting from the drop list.

Click Schedule Order on the off chance that you are booking this for a future date.

Click Process Order to present your request. The Process Order Confirmation spring up shows up.

Click Accept to recognize that the solicitation may affect your system and that you oversee rolling out any related improvements required on your client edge (CE) switch. You will get an email when the solicitation is finished. There is no restriction to the quantity of non-billable design changes that can be mentioned, yet

please permit 24 hours for changes submitted Monday through Friday to be finished. On the off chance that a solicitation is made on an end of the week or US occasion, it will be handled on the following industry day.

Click Print to print a duplicate of your solicitation.

Modify Admin Status

Click  next to Interface Name in the *Site Details*. The *Modify Admin Status* section appears above the *Site Details*.

Enter a *Process Date/Time* to schedule this job, if applicable.

Select a time zone from the drop-down list.

Click **Schedule Order** if you are scheduling this for a future date.

Select no-shutdown or shutdown from the *New Admin Status* drop-down list.

Click **Process Order** to submit your order. The *Process Order Confirmation* pop-up appears.

Click **Accept**.

Utilization Alert Threshold	0 %
Topology	H
CEIP Address	68.138.222.58
Access Type	E1
Routing Protocol	BGP

Class of Service	ETM
Egress Profile	G1
Interface Name	Serial0/9/2/0/1/1/1/2:1
Access Speed	0 Kbps

[Modify Bandwidth](#)

Edit Admin Status

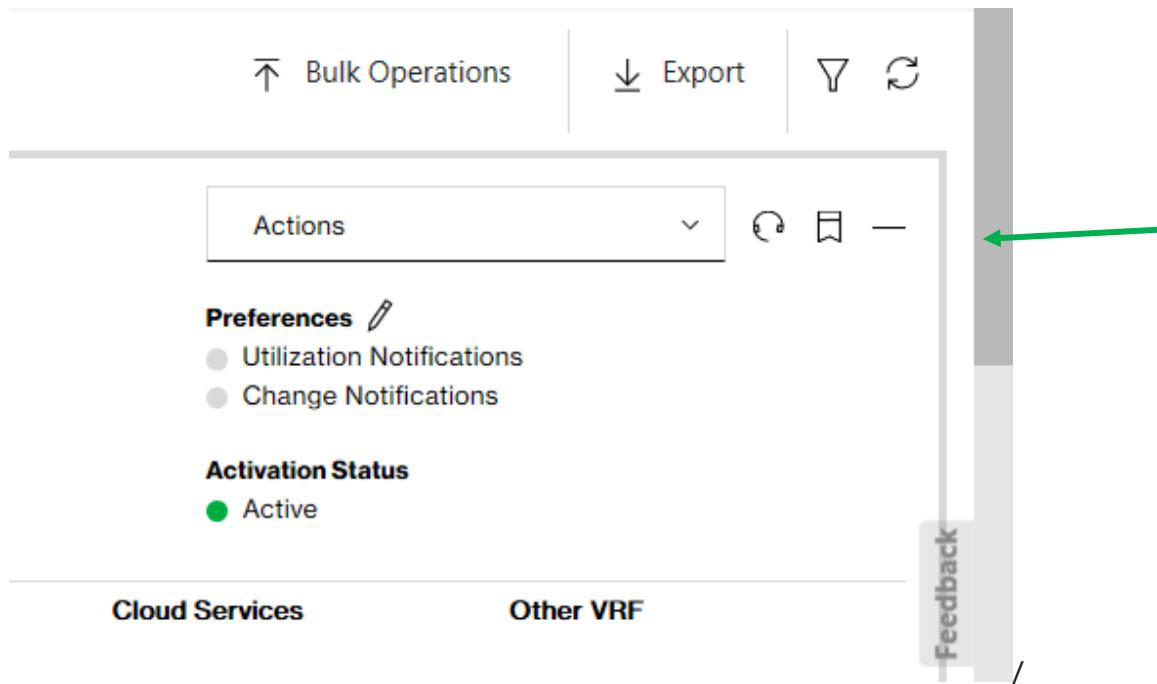
Admin Status*

Scheduling Schedule change to happen later



Open Quick (Trouble) Ticket

Click the Headphone icon under Site Details. The *Create Quick Ticket* pop-up appears.

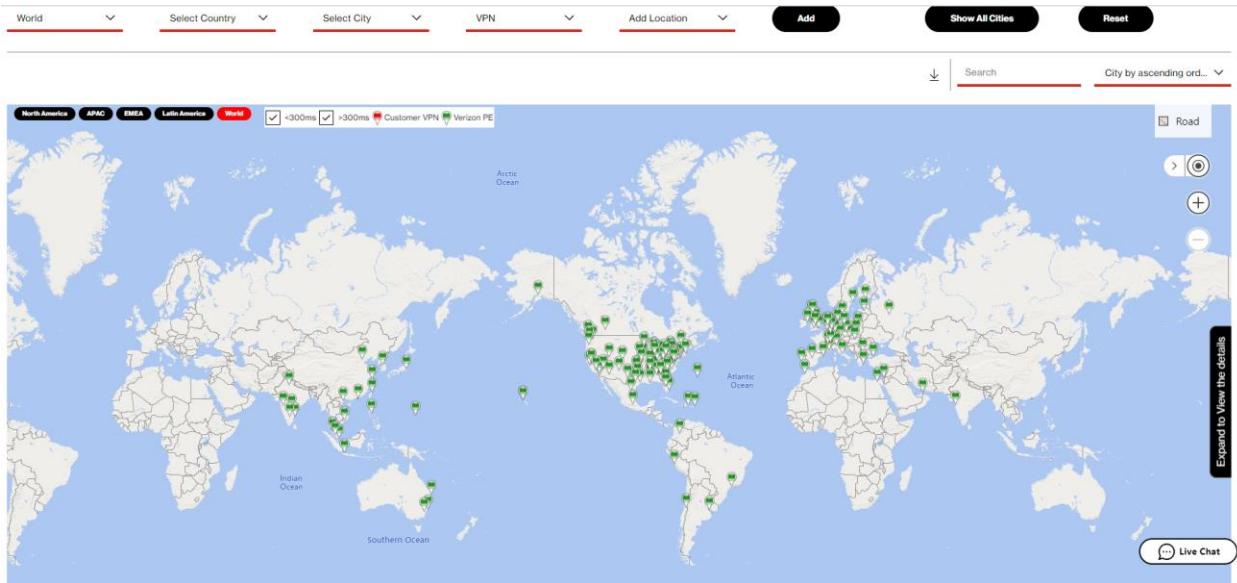


When you open a ticket, the circuit ID for which you are viewing in the *Site Details* automatically populates. Enter a different circuit ID, if applicable.

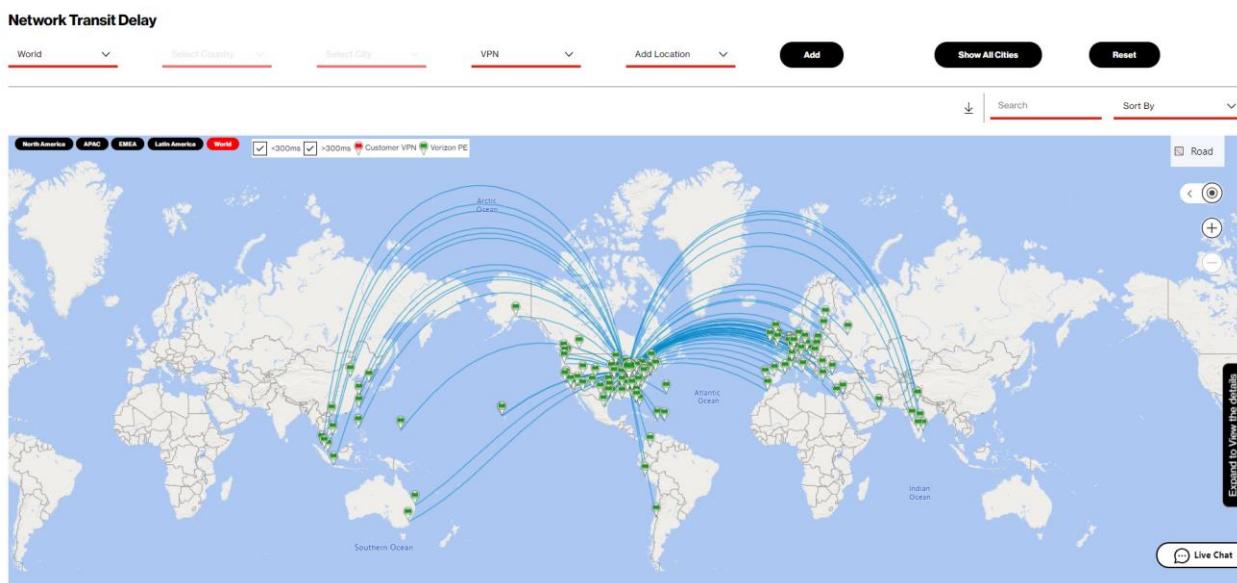
Click **Next** to verify service and enter the ticket information.

Network Transit Delay

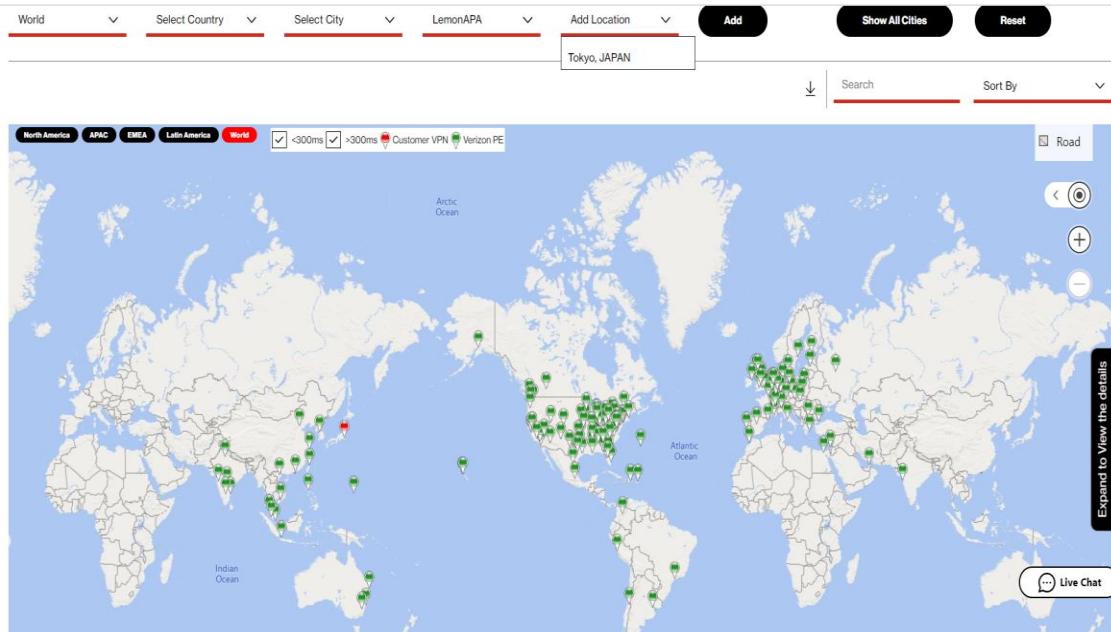
This section displays Verizon metrics for Network Transit Delay (Latency) between Private IP PE (provider edge) devices. This is not a report but rather a listing of those metrics. You can see what Verizon's Service Level Agreements (SLA) Latency metrics are between the selected sites.



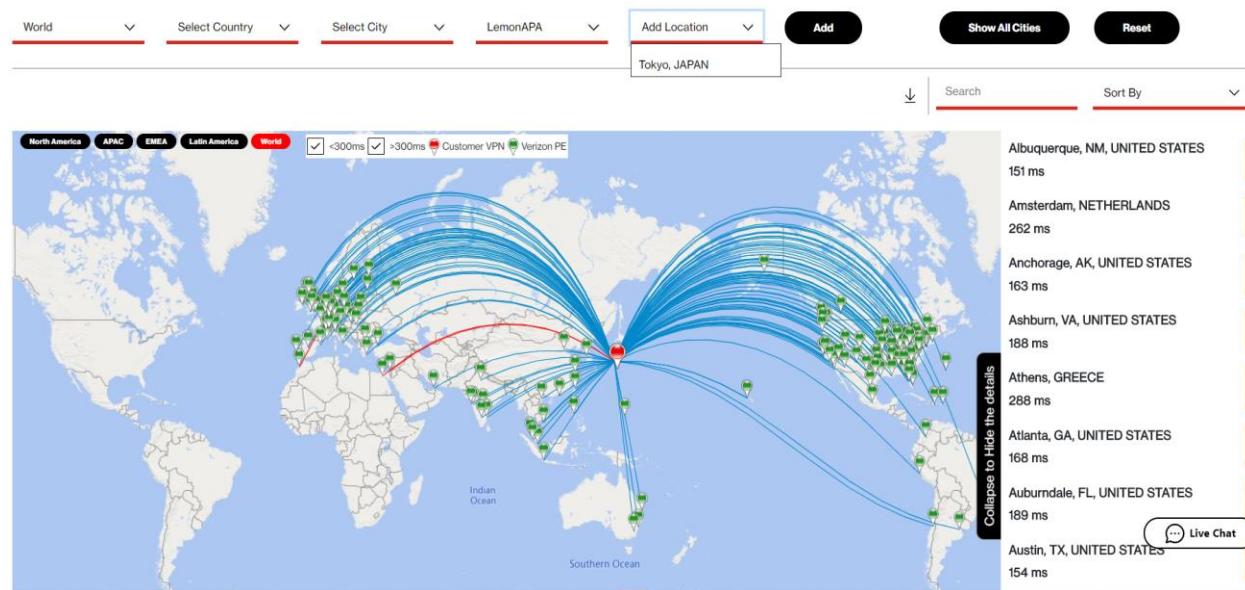
Select the region you want, if applicable. Then use the filters to view the region, country, or city that you want to view on the map. By clicking on any Verizon PE location/city we can display the latency measurements between that location and all other Verizon PE locations.



You can also view Network Transit Delay for User VPN sites by adding a VPN site(s) and clicking to see the relative transit delay metrics. In the below graph we added a user VPN site (Tokyo, Japan). By clicking now on Tokyo we can show its relative Network Transit Delay measurements between that location and all other Provider Edge router locations.



Network Transit Delay



APPENDIX

Quality of Service (QoS) egress traffic profiles

PIP ETM general configuration, PIP STD, PIP data centric and PIP data/voice combined

The egress QoS policies referenced in the table below are for customers using 50% or less of the EF/Voice over IP CoS and are allocating more bandwidth for other applications, such as data and video.

Profile #	Profile Identifier	EF Egress	AF4	AF3	AF2	AF1	BE	Comments
1	_G1	50%	40%	39%	16%	1%	4%	Default profile – balanced allocation
2	_G2	50%	48%	20%	16%	12%	4%	Video-centric #1
3	_G3	50%	68%	12%	10%	8%	2%	Video-centric #2
4	_G4	50%	15%	20%	20%	1%	4%	Data-centric with emphasis on bulk-transfer applications
5	_G5	50%	15%	60%	60%	1%	4%	Data-centric with emphasis on transactional applications
6	_G6	50%	15%	40%	40%	1%	4%	Data-centric with balanced bulk-transfer and transactional applications
7	_G7	50%	15%	10%	10%	5%	30%	Data-centric with large percentage of unmarked (BE-marked) applications and bulk-transfer applications

Profile #	Profile Identifier	Egress	AF4	AF3	AF2	AF1	BE	Comments
8	_G8	50%	30%	10%	10%	5%	25%	Balanced QoS w/ ample video for a 384K video on a T1
9	_G9	50%	20%	30%	30%	10%	5%	Data-centric w/ balanced applications (matches HSBC policy)
10	_G10	50%	15%	20%	20%	5%	40%	Data-centric with large percentage of unmarked (BE-marked) applications and transactional applications
11	_G11	50%	30%	20%	20%	10%	20%	Data centric with balanced allocation
12	_G12	50%	60%	5%	10%	5%	20%	Video centric/minimum control traffic
13	_G13	50%	10%	40%	30%	5%	15%	Data balanced apps #2
14	_G14	50%	20%	25%	25%	10%	20%	Data balanced AF3/AF2 centric
15	_G15	50%	20%	10%	20%	40%	10%	Data centric with emphasis on Scavenger/Standard data apps

PIP ETM voice centric configuration

The egress QoS policies referenced in the table below are for customers using 90% of the EF/Voice over IP (VoIP) CoS for VoIP and are allocating more bandwidth for other applications, such as data and video.

Profile #	Profile Identifier	EF Egress	AF4	AF3	AF2	AF1	BE	Comments
1	_RT	90%	40%	39%	16%	1%	4%	Voice default-centric
2	_R2	90%	48%	20%	16%	12%	4%	Voice-centric and video-centric #1
3	_R3	90%	68%	12%	10%	8%	2%	Voice-centric and video-centric #2
4	_R4	90%	15%	60%	20%	1%	4%	Voice-centric and data-centric with emphasis on bulk-transfer applications
5	_R5	90%	15%	20%	60%	1%	4%	Voice-centric and data-centric with emphasis on transactional applications
6	_R6	90%	15%	40%	40%	1%	4%	Voice-centric and data- centric with balanced bulk-transfer and transactional applications
7	_R7	90%	15%	30%	10%	5%	30%	Voice-centric and data- centric with large percentage of unmarked (BE- marked) applications and bulk-transfer applications
8	_R8	90%	30%	20%	10%	5%	25%	Balanced QoS w/ ample video for a 384K video on a T1
Profile #	Profile	EF	AF4	AF3	AF2	AF1	BE	Comments

	Identifier	Egress							
9	_R9	90%	20%	35%	30%	10%	5%	Voice-centric w/ balanced applications (matches HSBC policy)	
10	_R10	90%	15%	10%	20%	5%	40%	Voice-centric w/ large percentage of unmarked (BE-marked) applications and transactional applications	
11	_R11	90%	30%	20%	20%	10%	20%	Voice centric with balanced allocation	
12	_R12	90%	60%	5%	10%	5%	20%	Video centric/minimum control traffic	
13	_R13	90%	10%	40%	30%	5%	15%	Voice/Data Balanced apps #2	
14	_R14	90%	20%	25%	25%	10%	20%	Data Balanced AF3/AF2 Centric	
15	_R15	90%	20%	10%	20%	40%	10%	Data-centric with emphasis on Scavenger/Standard Data Apps	

Customer Edge (CE) configuration settings

STD QoS DPORT, and ETM to STD (customer managed)

The following configuration steps are specific to Cisco router platforms. For other vendor CPE, consult the user manual with regards to changing the interface bandwidth speed.

We recommend setting up an egress traffic shaping rate on your CE router's WAN interface according to your changed QOS settings. Follow these instructions to prepare your router for Dynamic Port changes.

!

```
policy-map parent
  class class-default
    shape average <DPORt-in-bps>
!
```

The policy map needs to be applied to the WAN interface in the outgoing direction.

!

```
interface <WAN Interface>
  service-policy output parent
!
```

For smaller and mid-size Cisco routers, the shape command uses a Tc default value of 25 milliseconds if no Bc, and Be values are specified with the shape command. For Ethernet WAN circuits, we recommend lowering the shape Tc value to 4 milliseconds and setting the Be to 0 to avoid buffering issues in the transmission path.

If your router does not shape to layer 1 speeds (most Cisco routers will not), be aware that the layer 2 encapsulation overhead is added AFTER the router shaped the traffic to the configured rate.

We recommend lowering the shape rates accordingly, especially for Ethernet WAN circuits. For Ethernet WAN circuits, our generic recommendation is to adjust the shaping speed to:

76% of your DPORt speed in case of pure VoIP traffic (avg. packet size of 78 bytes)

85% of your DPORt speed in case of mixed data and VoIP traffic (avg. packet size of 140 bytes)

94% of your DPORt speed in case of pure data traffic (avg. packet size of 404 bytes)

The recommended configuration is:

!

```
policy-map parent
  class class-default
    shape average <adjusted DPORt-in-bps> <adjusted DPORt-in-bps x 0.004> 0
!
```

Example:

For a Fast Ethernet WAN circuit with a selected DPORt speed of 60 Mbit/s on a Cisco 7200, and a mixed VoIP and data traffic pattern, the recommended values and configuration are:

<adjusted DPORt-in-bps> : $60,000,000 \times 85\% = 51,000,000$

<adjusted DPORt-in-bps x 0.004> : $51,000,000 \times 0.004 = 204,000$

!

```
policy-map parent
```

```

class class-default
    shape average 51000000 204000 0
!
interface FastEthernet0/0
    service-policy output parent
!

```

ETM QoS DPoRT, DCAR, custom Egress, and STD to ETM

The following configuration steps are specific to Cisco router platforms. For other vendor CPE, consult the user manual with regards to changing the queuing parameters. CBWFQ is typical for Silver CAR and LLQ/Priority Queuing is typical for Gold CAR.

We recommend setting up a nested QOS policy on your CE router's WAN interface according to your changed QOS settings. The outer (or parent) policy should shape all traffic according to your selected DPoRT speed. The inner (or child) policy should contain bandwidth allocations according to your selected DCAR speed and Custom Egress profile. Follow these instructions to prepare your router for Dynamic CAR changes.

```

!
policy-map child
    class realtime
        priority <DCAR-in-kbps>
        police <DCAR-in-bps> conform-action transmit exceed-action drop
    !
    class priority
        bandwidth remaining percent <% for AF4 according to selected custom Egress profile #>
        random-detect dscp-based
    class missioncritical
        bandwidth remaining percent <% for AF3 according to selected custom Egress profile #>
        random-detect dscp-based
    class transactional
        bandwidth remaining percent <% for AF2 according to selected custom Egress profile #>
        random-detect dscp-based
    class general
        bandwidth remaining percent <% for AF1 according to selected custom Egress profile #>

```

```

random-detect dscp-based
class class-default
bandwidth remaining percent <% for BE according to selected custom Egress profile #>
random-detect dscp-based
!
!
policy-map parent
class class-default
shape average <DPORt-in-bps>
service-policy child
!
```

The parent policy map needs to be applied to the WAN interface in the outgoing direction.

```
!
interface <WAN Interface>
service-policy output parent
!
```

For smaller and mid-size Cisco routers, the shape command uses a Tc default value of 25 milliseconds if no Bc, and Be values are specified with the shape command. For Ethernet WAN circuits, we recommend lowering the shape Tc value to 4 milliseconds and setting the Be to 0 to avoid buffering issues in the transmission path.

If your router does not shape to layer 1 speeds (most Cisco routers will not), be aware that the layer 2 encapsulation overhead is added AFTER the router shaped the traffic to the configured rate.

We recommend lowering the shape rates accordingly, especially for Ethernet WAN circuits. For Ethernet WAN circuits, our generic recommendation is to adjust the shaping speed to:

76% of your DPORt speed in case of pure VoIP traffic (avg. packet size of 78 bytes)

85% of your DPORt speed in case of mixed data and VoIP traffic (avg. packet size of 140 bytes)

94% of your DPORt speed in case of pure data traffic (avg. packet size of 404 bytes)

The recommended configuration for the parent policy is:

```
!
policy-map parent
class class-default
shape average <adjusted DPORt-in-bps> <adjusted DPORt-in-bps x 0.004> 0
service-policy child
```

!

EXAMPLE:

For a Fast Ethernet WAN circuit with a selected DPORT speed of 60 Mbit/s, DCAR speed of 10 Mbit/s, a G1 Custom Egress profile on a Cisco 7200, and a mixed VoIP and data traffic pattern, the recommended configuration is:

```
<DCAR-in-kbps> : 10,000
<DCAR-in-bps> : 10,000,000
<% for AF4 > : 40
<% for AF3 > : 39
<% for AF2 > : 16
<% for AF1 > : 1
<% for BE > : 4
<adjusted DPORT-in-bps> : 60,000,000 x 85% = 51,000,000
<adjusted DPORT-in-bps x 0.004> : 51,000,000 x 0.004 = 204,000
!
policy-map child
    class realtime
        priority 10000
        police 10000000 conform-action transmit exceed-action drop
    !
    class priority
        bandwidth remaining percent 40
        random-detect dscp-based
    class missioncritical
        bandwidth remaining percent 39
        random-detect dscp-based
    class transactional
        bandwidth remaining percent 16
        random-detect dscp-based
    class general
        bandwidth remaining percent 1
        random-detect dscp-based
```

```

class class-default
    bandwidth remaining percent 4
    random-detect dscp-based
!
policy-map parent
    class class-default
        shape average 51000000 204000 0
        service-policy child
!
interface FastEthernet0/0
    service-policy output parent
!
```

Glossary

Looking Glass is a no cost network statistics reporting functionality that is available to all Private IP customers globally. It provides the ability for view only 'Looking Glass' into your Private IP Network parameter settings. The following Network Attributes are available for viewing:

- VPN Level Information
- VPN Defaults
- Site Information
- PE Interface Info
- CE Interface info
- Class of Service Info
- VRF Parameters
- BGP Routing Info
- RIP Routing Info
- PIP Static Routes
- Site of Origin information

Configuration Parameter	Description
Multicasting RP Address	Multicasting Rendezvous Point Address
Multicasting MDT	Multicast distribution tree IP address
Apply Static RP ACL	Removes access list 20, only used by ICB for multiple static rendezvous points
Multicasting VPN	Turn up new sites with multicasting
Multicasting Number of Routes	Multicasting number of routes
Multicasting Routes Threshold	Multicasting routes threshold at which to generate warning message
Change Admin Status	Do a shutdown or no shutdown to set the admin status on the interface
MTU	Mean transmission unit
IP Verify Unicast	An anti-spoofing command, also needed on host sites with hub and spoke topologies
VPN Topology	Type of VPN topology
Redistribute	Redistribute routes learned from
Maximum Routes	Maximum routes for the VFR
Concord Enabled	Concord reporting enabled
Maximum Paths	Number of expected sites that will be sending out the same routes to load share amongst
EIBGP Load Sharing	Allows for external and internal BGP load sharing

BGP Import Optimization	Make the PE import the paths learned via all the route reflectors
Default Info Originate	A method of sending out a default route across our network
OSPF Default Info Originate	Redistributes the default route from BGP to OSPF
Routing Protocol	Routing protocol between the CE and PE
BGP Remote AS	BGP autonomous system number for the customer network
OSPF Cost	OSPF costing for the interface
Timers Keepalive	Changes the default BGP keepalive from 60 seconds
Timers Hold time	Changes the default BGP hold time from 180 seconds
BGP Send Community	Allows customers to send standard communities to us and we will send across the cloud
Allow AS In	Allows our own AS number to be seen by our PE routers x number of times
Default AS Override	Replaces the customer's AS number with our AS number if source and destination AS numbers are the same
Replace AS	Replace our private AS number 65000 with our registered AS number 1684 or a private one in range 64512-65535

Customer support & training

Customer support

Contact customer support for product and general platform questions or errors.

Contact your account team with any account specific questions on equipment or service, pricing information, or adding additional users to Verizon Enterprise Center.

Click on your name in the top right corner of the screen. Click Contact Us & Send Feedback.

- U.S. Call 1.800.569-8799 (M-F 9 AM – 6 PM ET).
- Live Chat: Icon located in VERIZON ENTERPRISE CENTER, Networx and Calnet Portals.
- EMEA Customers: 00 800 4321 5432.
- APAC Customers: apac.Verizon Enterprise Center.support@intl.verizon.com.

Training

Go to <https://customertraining.verizon.com> to enroll in training or to download user and other reference guides. Log in with an existing login or create a new one.