



VERIZON ADAPTIVE NETWORK FABRIC+

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1. GENERAL

- 1.1 **Service Definition.** Verizon Adaptive Network Fabric+ is a software-defined connectivity solution that simplifies the ordering, provisioning, and management of connections suited to high-performance, latency-sensitive, and bandwidth-intensive applications of all types, including Artificial Intelligence (AI) and machine learning workloads (the Service). The Service defines the operational and service-level requirements to deliver and support unified networking across cloud services, data centers, and enterprise locations via an API-driven Service Portal. The Service is defined by a modular framework of Service Components, detailed in Section 1.2, which allows for the creation of point-to-point and point-to-multipoint connectivity between public clouds, data centers, and Customer Sites.
- 1.2 **Service Components.** The Service consists of the following modular building blocks (collectively, Service Components), which the Customer will select and configure via the Service Portal (see 1.3.2).
 - 1.2.1 **Port.** The Port is a programmable virtualized network termination point located in a Service-enabled data center that acts as the physical entry point for Ethernet, TCP/IP traffic and the central access point for all other Service Components.
 - 1.2.1.1 **Capacity.** Ports are available in fixed capacities of 1 Gbps, 10 Gbps, and 100 Gbps.
 - 1.2.1.2 **Oversubscription.** Ports can be oversubscribed up to 400% through the establishment of multiple EVC connections, provided aggregate traffic does not exceed the physical hardware capacity and can be subjected to traffic prioritization.
 - 1.2.1.3 **High Availability.** Ports are optionally orderable in diverse pairs configured in physically distinct diversity zones (separate power/cooling) within or across data center locations to ensure failover protection.
 - 1.2.2 **Adaptive Connections.** Adaptive Connections are programmable virtualized networks—enabling the rapid creation of connectivity between Ports, Cloud Service Providers (CSPs), Verizon layer 3 services or SaaS providers.
 - 1.2.2.1 **Ethernet Connection.** A Layer 2 point-to-point component using Ethernet Virtual Connections (EVCs). Verizon provides optional Class of Service (CoS) choices, including Real Time CoS.

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- 1.2.2.2 **Internet Connection.** A scalable, on-demand virtual connection utilizing Verizon's Internet Dedicated Service (IDS) for connectivity to the public Internet. Internet Connections include assignment of non-portable IPv4 and/or IPv6 addresses.
- 1.2.2.3 **L3VPN Connection.** Provides secure, private connectivity over the Verizon network.
- 1.2.2.4 **Cloud Connection.** Provides direct, private, and secure connections between a Port and CSPs or SaaS providers, such as AWS Direct Connect, Azure Express Route, Google Cloud Interconnect, and Salesforce Express Connect.
- 1.2.3 **Cross Connect.** A physical or virtual point-to-point connection between Customer Equipment and the Port.
- 1.2.3.1 **Requirement.** All Ports require a Cross Connect to the Customer Equipment in order to utilize the Service. This Cross Connect can be provided by either Verizon or the Customer. Customers may alternatively order through a data center operator, which requires separate management outside of the Service account.

1.2.3.2 **Customer-Provided Cross Connects; Disconnection.** Upon termination of a Port, Customer is responsible for promptly disconnecting any Customer-provided Cross Connect associated with that Port. If Customer fails to disconnect the Customer-provided Cross Connect within a reasonable time after termination of the Port, Verizon may disconnect, or cause the disconnection of, the Customer-provided Cross Connect from Verizon's assets on Customer's behalf. Verizon may alternatively require Customer to disconnect the Customer-provided Cross Connect before Verizon completes termination or decommissioning of the applicable Port.

- 1.2.3.3 **Authorization.** Establishing a Cross Connect requires a Letter of Authorization (LOA) to be presented to the data center provider. The Verizon provided LOA is automatically generated by the Service process and made available once a Customer provisions a new Port.
- 1.2.3.4 **Management.** Verizon will manage the order and deployment process for Cross Connects ordered via the Service Portal.

1.3 **Platform and Portal**

- 1.3.1 **Optimized Service.** Verizon provides the Service as an Optimized Service via the Verizon Optimized Service platform.
- 1.3.2 **Service Portal.** The API-based portal acts as the primary interface for managing Service Components. It provides customers with the ability to find locations using interactive maps, configure devices with context-sensitive help, and purchase components via a Shopping Cart.

1.4 **Country Specific Limitations**

- 1.4.1 **United States - Health Care Information and Compliance.** Customer agrees not to cause, or otherwise request that Verizon create, receive, maintain or transmit protected health information (as defined under United States law at 45 C.F.R. § 160.103) for or on behalf of Customer in connection with any service related to NaaS or in any manner that would make Verizon a business associate (as defined under United States law at 45 C.F.R. § 160.103) to Customer. Customer shall assume and be solely responsible for any reporting requirements under law or contract arising from Customer's breach of this clause.
- 1.4.2 Intrastate or Interstate Service Access, Ethernet Connection in the U.S. Mainland are considered interstate for regulatory jurisdiction purposes if more than 10% of the total traffic over an instance of

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such Service (e.g., a circuit) is Internet traffic, or otherwise begins and ends in different states. If more than 90% of the total traffic over a Service instance will begin and end in the same state, and is not Internet traffic, then Customer may order it as intrastate for regulatory jurisdiction purposes. When ordering a Service as intrastate, Customer will be required to certify that (1) the traffic over the Service instance purchased will be intrastate, as defined above; (2) if this certification is incorrect, Customer will be responsible for any unbilled surcharges and applicable fees; and (3) if this certification is no longer true, Customer has a duty to notify Verizon within thirty (30) days.

2. SUPPLEMENTAL TERMS

2.1 Technical Limits and Performance

- 2.1.1 **Throughput.** For L3VPN and Internet Connections, Customer will factor protocol overhead into its ordering decisions to ensure intended throughput.
- 2.1.2 **EVC Constraint.** A single EVC is limited by the lowest port speed of the connected Ports.
- 2.1.3 **IP Allocation.** Customer will utilize at least 80% of any IPv4 addresses obtained from any source prior to requesting new IP addresses from Verizon.
- 2.1.4 **Shaping.** Verizon reserves the right to apply bandwidth shaping overhead adjustments. Customer may need to apply policies at its site to prevent packet loss due to Ethernet protocol overhead.

2.1.5 **Third Party Cloud Service Providers.** Cloud Connections rely on interconnection services provided by Third Party Cloud Service Providers (CSPs). Verizon does not control, and makes no warranties, guarantees, or representations regarding, the performance, availability, or continued offering of any CSP interconnection service. Verizon shall not be liable for any failure, degradation, modification, or discontinuation of a CSP's interconnection service, and any such event shall not constitute a breach of Verizon's obligations or give rise to a Service Level Agreement credit. Customer is solely responsible for maintaining its own agreements with the applicable CSP(s) and for ensuring that its CSP service meets Customer's requirements.

2.2 Operations and Maintenance

- 2.2.1 **Scheduled Maintenance.** Verizon will perform scheduled maintenance during Maintenance Windows. Verizon will use commercially reasonable efforts to provide at least seven days' notice of any scheduled maintenance expected to impact Service.
- 2.2.2 **Emergency Maintenance.** Verizon reserves the right to perform emergency maintenance at any time without prior notice if Verizon determines such maintenance is necessary to maintain the integrity of the Verizon Network.

2.3 Customer Responsibilities

- 2.3.1 **Demarcation.** Verizon responsibility ends at the Port. In the case where Verizon provides the Cross Connect, the customer is responsible for any equipment beyond the cable connected to the customer equipment. Any cabling, Customer provided Cross Connects, or equipment beyond the Port (Customer Equipment) is the sole responsibility of Customer.
- 2.3.2 **Security.** Customer is responsible for the security of its local network and for any traffic originating from its equipment or encryption. Verizon encapsulates but does not encrypt the customer's traffic.
- 2.3.3 **Termination within Portal.** In addition to the termination rights set forth in the Master Services Agreement, Customer may terminate any individual Service Component directly via the Service

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Portal. Termination of a Service Component via the Service Portal is effective on the date shown in the Portal or the confirmation email, whichever is later.

2.3.4 **Service Disclaimers.** Verizon makes no warranties, guarantees, or representations, express or implied, that: (i) the Service will be uninterrupted, error-free, or free from unauthorized access; (ii) the Service will protect the Customer's network, data, or systems from intrusions, viruses, or other harmful programming routines; or (iii) the performance of the Service will prevent unauthorized access to Customer's systems or render Customer's systems invulnerable to security breaches. Customer is responsible for maintaining an overall security program for its network and data, including but not limited to: (a) implementing encryption for Customer traffic traversing the Service; (b) exercising due diligence in protecting systems and information used to access the Service Portal and Service Components; and (c) promptly notifying Verizon in writing of any security compromise with respect to Customer's Service Portal credentials or Service Components. Verizon is not responsible for Customer Data or files lost, corrupted, or intercepted while using the Service.

3. **FINANCIAL TERMS.** Customer will pay the MRCs and NRCs for Verizon Adaptive Network Fabric+ as specified in the Service Order Form at time of quote and in the applicable Agreement. The Charges shown herein are in United States dollars with the understanding that Customer will be billed in the invoice currency for the associated Service.

3.1 **Administrative Charges.** The following administrative Charges are applicable to Verizon Adaptive Network Fabric+ and the elements comprising Verizon Adaptive Network Fabric+. Administrative Charges will be charged, and Customer will pay, for each service element comprising the Verizon Adaptive Network Fabric+ as applicable.

Charge Type	Instance	Non-Recurring Charge (NRC)
Administrative Change	Per Change	\$60.00
Cancellation of Order	Per Port / Connection	\$800.00

3.2 Additional administrative Charges (shown as Ancillary Charges) are found in the Master Terms and at the following URL: www.verizon.com/business/service_guide/reg/applicable_charges_toc.htm

4. **SERVICE LEVEL AGREEMENT (SLA)**
The Service Level Agreement for Adaptive Network Fabric may be found at the following URL: www.verizon.com/business/service_guide/reg/cp-adaptive-network-fiber-sla

5. **DEFINITIONS.** The following definitions apply to Adaptive Network Fiber, in addition to the definitions identified in the Agreement, and the administrative charge definitions at the following URL: www.verizon.com/business/service_guide/reg/definitions_toc_2017DEC01.htm

Term	Definition
Ethernet Virtual Connection (EVC)	A logical connection that enables the distribution and management of data traffic over a physical Port.
Maintenance Window	The period during which Verizon performs planned network maintenance.
Rate Limit	The maximum speed or bandwidth assigned to a specific connection, which acts as a committed speed for billing purposes.

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