SD-WAN Edge

The **SD-WAN Edge** is where the SD-WAN tunnel is initiated or terminated and provides the SD-WAN service demarcation similar to how an Ethernet NID provides the service demarcation for a Carrier Ethernet service.

The SD-WAN Edge creates and terminates secured (encrypted) tunnels over different types of wired or wireless underlay networks, such as T1s/E1s, broadband Internet (DSL, Cable, and PON), WiFi and LTE wireless access networks, and IP (Internet) and MPLS core networks. The SD-WAN Edge also performs application-based QoS and security policy enforcement, application forwarding over one or more WAN connections, and QoS performance measurements over each WAN to determine WAN path selection. The SD-WAN Edge may also perform WAN optimization functions such as packet buffering/reordering, data deduplication, data compression, and forward error correction.

Since SD-WAN Edges often connect to public Internet WANs, they would include, at a minimum, some NAT and firewall capabilities.

The SD-WAN Edge functionality may be provided by a physical CPE device resident on the customer premises and managed by the CSP or MSP. SD-WAN Edge functionality may also be implemented as a software-based virtual network function (VNF) which may run on a virtual CPE (vCPE) at the customer premises or any other type of generalized compute platform, e.g., server in a data center, which may also be managed by the CSP or MSP or by a cloud service provider. Note that vCPE, uCPE and ‘white box’ server are often used interchangeably in the industry. MEF typically uses the vCPE term.

The MSP or CSP operates and maintains the SD-WAN Edge as part of an SD-WAN managed service. In the MEF LSO RA, an SD-WAN Edge communicates with the SD-WAN Controller via the LSO Adagio interface.

**Example(s)**

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