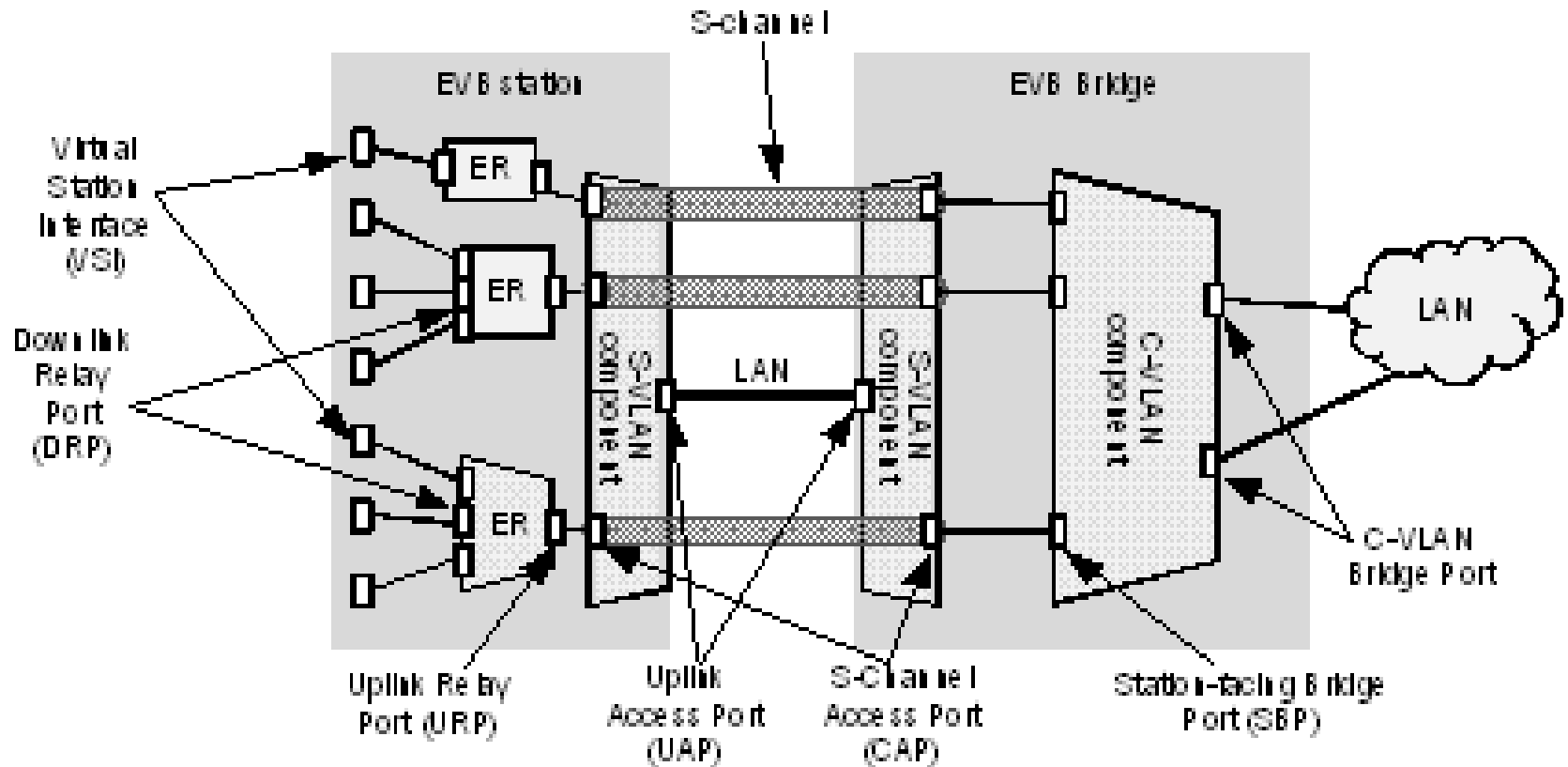


Terminology 802.1Qcn

Paul Bottorff

Yizhou Li

EVB Architecture Model



IETF-IEEE Definitions

- **IETF - Network Virtualization Edge (NVE):** An NVE is the network entity that sits at the edge of an underlay network and implements L2 and/or L3 network virtualization functions. The network-facing side of the NVE uses the underlying L3 network to tunnel tenant frames to and from other NVEs. The tenant-facing side of the NVE sends and receives Ethernet frames to and from individual Tenant Systems. An NVE could be implemented as part of a virtual switch within a hypervisor, a physical switch or router, or a Network Service Appliance, or it could be split across multiple devices.
- **IEEE - Edge Virtual Bridging (EVB):** The set of functions supporting Virtual Station Interfaces (VSIs) in Bridges and attached end stations.

IETF – IEEE Definitions

- **IETF - Tenant System Interface (TSI):** Interface to a Virtual Network as presented to a Tenant System (TS, see [RFC7365]). The TSI logically connects to the NVE via a Virtual Access Point (VAP). To the Tenant System, the TSI is like a Network Interface Card (NIC); the TSI presents itself to a Tenant System as a normal network interface.
- **IEEE - Virtual Station Interface (VSI):** An interface to a virtual station that is attached to a downlink relay port (DRP) of an edge relay (ER).

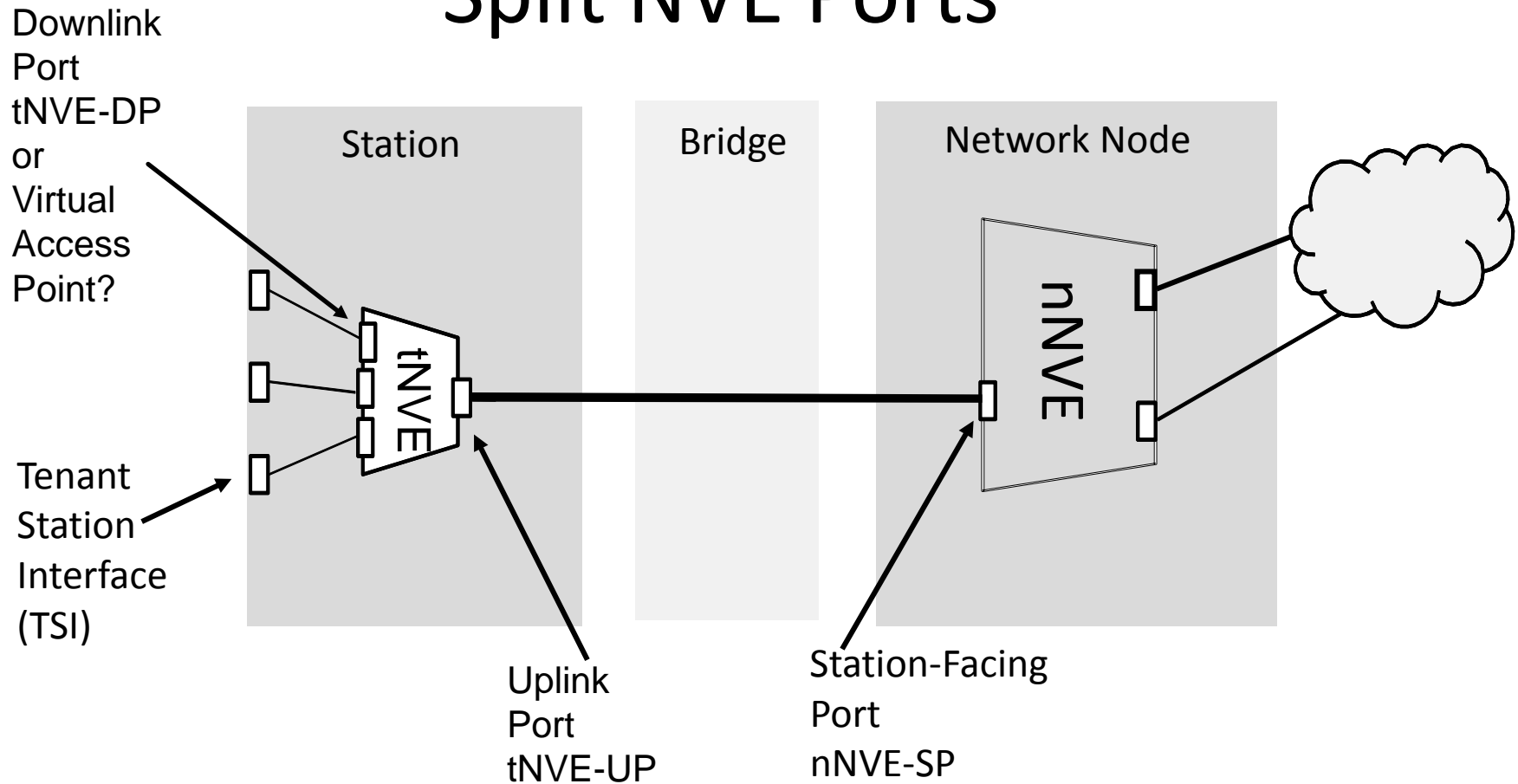
IETF – IEEE Definitions

- **IETF - Split-NVE:** a type of NVE that the functionalities of it are split across an end device supporting virtualization and an external network device.
- **IETF - nNVE:** the portion of Split-NVE functionalities located on the network device which is directly or indirectly connects to the end device holding the corresponding tNVE. nNVE normally performs encapsulation and decapsulation to the overlay network.
- **IETF - tNVE:** the portion of Split-NVE functionalities located on the end device supporting virtualization. It interacts with tenant system by internal interface in end device.
- **IEEE - Edge Virtual Bridging (EVB) Bridge:** A Customer Virtual Local Area Network (C-VLAN) Bridge that supports the Virtual Station Interface (VSI) Discovery and Configuration Protocol (VDP).
- **IEEE - Edge Virtual Bridging (EVB) station:** An end station containing one or more edge relays (ERs).
- **IEEE - Edge Relay (ER):** A Bridge supporting the transfer of frames between one or more downlink relay ports (DRPs) and one uplink relay port (URP).

IETF – IEEE Definitions

- **IETF - Virtual Access Points (VAPs):** A logical connection point on the NVE for connecting a Tenant System to a virtual network. Tenant Systems connect to VNIs at an NVE through VAPs. VAPs can be physical ports or virtual ports identified through logical interface identifiers (e.g., VLAN ID or internal vSwitch Interface ID connected to a VM).
- **IEEE - Downlink Relay Port (DRP):** A port of an edge relay (ER) that is capable of supporting at least one Virtual Station Interface (VSI).

Split NVE Ports



- tNVE-DP, tNVE-UP, nNVE-SP
- Virtual Access Port

Possible New Definitions

- tNVE-DP(or VAP): A port of a tNVE that is capable of supporting at least one Tenant Station Interface (TSI).
- tNVE-UP: A port of a tNVE that supports the Edge Virtual Bridging (EVB) status parameters with an EVBMode parameter value of “NVO3 Mode”.
- nNVE-SP: A nNVE port that supports the Edge Virtual Bridging (EVB) status parameters with an EVBMode parameter value of “NVO3 Mode”.

IETF Definitions

- **Network Virtualization Edge (NVE):** An NVE is the network entity that sits at the edge of an underlay network and implements L2 and/or L3 network virtualization functions. The network-facing side of the NVE uses the underlying L3 network to tunnel tenant frames to and from other NVEs. The tenant-facing side of the NVE sends and receives Ethernet frames to and from individual Tenant Systems. An NVE could be implemented as part of a virtual switch within a hypervisor, a physical switch or router, or a Network Service Appliance, or it could be split across multiple devices.
- **Split-NVE:** a type of NVE that the functionalities of it are split across an end device supporting virtualization and an external network device.
- **nNVE:** the portion of Split-NVE functionalities located on the network device which is directly or indirectly connects to the end device holding the corresponding tNVE. nNVE normally performs encapsulation and decapsulation to the overlay network.
- **tNVE:** the portion of Split-NVE functionalities located on the end device supporting virtualization. It interacts with tenant system by internal interface in end device.
- **Tenant System Interface (TSI):** Interface to a Virtual Network as presented to a Tenant System (TS, see [RFC7365]). The TSI logically connects to the NVE via a Virtual Access Point (VAP). To the Tenant System, the TSI is like a Network Interface Card (NIC); the TSI presents itself to a Tenant System as a normal network interface.
- **Virtual Access Points (VAPs):** A logical connection point on the NVE for connecting a Tenant System to a virtual network. Tenant Systems connect to VNIs at an NVE through VAPs. VAPs can be physical ports or virtual ports identified through logical interface identifiers (e.g., VLAN ID or internal vSwitch Interface ID connected to a VM).

IEEE Definitions

- **Edge Virtual Bridging (EVB):** The set of functions supporting Virtual Station Interfaces (VSIs) in Bridges and attached end stations.
- **Edge Relay (ER):** A Bridge supporting the transfer of frames between one or more downlink relay ports (DRPs) and one uplink relay port (URP).
- **Virtual Station Interface (VSI):** An interface to a virtual station that is attached to a downlink relay port (DRP) of an edge relay (ER).
- **Downlink Relay Port (DRP):** A port of an edge relay (ER) that is capable of supporting at least one Virtual Station Interface (VSI).
- **Uplink Relay Port (URP):** A port of an edge relay (ER) that supports the Edge Virtual Bridging (EVB) status parameters with an EVBMode parameter value of “EVB station.”
- **Station-facing Bridge Port (SBP):** A Bridge Port that supports the Edge Virtual Bridging (EVB) status parameters with an EVBMode parameter value of “EVB Bridge”.