GLOSSARY

A

AAA — AAA refers to Authentication, Authorization, and Accounting, which is a security architecture for distributed systems that determines the access given to users for specific services and the amount of resources they have used.

aggregation — A user-defined collection of network elements. For example, an aggregation can contain devices, links, VPNs, and other aggregations.

alarm — Sequence of event notifications that share the same source, cause, or fault. For example, if a single port goes up and then down, these two events in a related sequence may result in a single alarm. An alarm is stateful and is opened when a fault is first detected. Event notifications may be added to the alarm, and it is archived when it is fixed.

association — A relationship between the following types of network elements: a logical (protocol-oriented) network element and a physical network element; a logical network element and another logical network element; or an existing association and anything else. An example for a VPN would be an association between the physical IP interface and Virtual Routing and Forwarding (VRF) table, which is the associated routing table. An association is not considered a topological link.

B

BFD — Bidirectional Forwarding Detection (BFD) is used to detect communication failures between two elements, or endpoints, that are connected by a link, such as a virtual circuit, tunnel, or LSP.

BNG — Broadband Network Gateway (BNG) provides capabilities that help to improve the service provider's ability to manage the subscriber's services, and simplify overall network operations.

business element — Construction or organization of certain network elements and their properties into a logical entity, to provide the ability to track them in a way that makes sense from a business perspective. A virtual private network (VPN) is a business element, which represents a set of interconnected sites that form a single network over a public network. Prime Network organizes the business elements in a way that creates a containment hierarchy that reflects the VPN structure.

business tag — A string that is meaningful to the business, and that can be used to label a component of a network element for use in Prime Network screens and reports. There are three types of business tags: subscriber, provider, and label. Business tags are stored in the Prime Network gateway database.

C

carrier grade NAT A large-scale Network Address Translation (NAT) that provides translation of millions of private IPv4 addresses to public IPv4 addresses.

CCM Change and Configuration Management provides tools that allow you to manage the software and device configuration changes that are made to devices in your network.

D

data center A centralized repository, either physical or virtual for the storage, management, dissemination of data and information organized around a particular manner. In other words, it is a facility used to house computer systems and associated components, such as telecommunications and storage systems.

DHCP Dynamic Host Configuration Protocol is used to automate host configuration by assigning IP addresses, delegating prefixes (in IPv6), and providing extensive configuration information to network computers.

dynamic links The physical and logical links that exist between elements in the network. These links are discovered by Prime Network using various protocols (such as STP, CDP, and LLDP).

dynamic templates Used to group configuration items, which are later applied to a group of subscribers. This template is globally configured through the command line interface (CLI).

E

ePDG Secures the data transmission with a UE connected to the EPC over an untrusted non-3GPP access. For this purpose, the ePDG acts as a termination node of IPsec tunnels established with the UE.

event In the context of network management, a discrete activity that occurred at a specific point in time.

E-LMI Ethernet Local Management Interface (E-LMI) is a protocol that operates between the customer edge (CE) network element and the provider edge (PE) network element. Ethernet LMI is a protocol between the CE network element and the provider edge (PE) network element.

F

FabricPath An innovation in Cisco NX-OS software that brings the stability and scalability of routing to Layer 2. It provides a foundation to build a scalable fabric—a network that itself looks like a single virtual switch from the perspective of its users.

Foreign Agent A router on a mobile node's visited network that provides routing services to the mobile node. The FA acts as a mediator between the mobile node and it's home agent (HA).

G

GRE Generic routing encapsulation (GRE) is a tunneling protocol, originated by Cisco Systems and standardized in RFC 2784. GRE encapsulates a variety of network layer packets inside IP tunneling packets, creating a virtual point-to-point link to devices at remote points over an IP network.

H

Home Agent A router on a mobile node's home network which tunnels datagrams for delivery to the mobile node when it is away from home. It maintains current location (IP address) information for the mobile node. It is used with one or more foreign agents.

HSGW HRPD Serving Gateway, a component in the evolved High Rate Packet Data (eHRPD) mobile network. It terminates the eHRPD access network interface from the Evolved Access Network (eAN) or Evolved Packet Core Function (ePCF) and routes UE-originated or terminated packet data traffic.

HSRP Hot Standby Router Protocol (HSRP) is a protocol that provides backup to a router in case of failure. Using HSRP, several routers are connected to the same Ethernet network segment and work together to present the appearance of a single virtual router.

H-VPLS Partitions the network into several edge domains that are interconnected using an MPLS core. The edge devices learn only of their local N-PE devices and therefore do not need large routing table support.

I

IP Multicast A bandwidth-conserving technology that reduces traffic by simultaneously delivering a single stream of information to thousands of corporate recipients and homes.

IP Pool An IP pool is a sequential range of IP addresses within a certain network. IP addresses can be assigned dynamically from a single pool or from a group of pools for services running on a network element.

IPSec The Internet Protocol Security suite that interacts with one another to provide secure private communications across IP networks.

IS-IS Intermediate System-to-Intermediate System (IS-IS) protocol is a routing protocol developed by the ISO. It is a link-state protocol where IS routers exchange routing information based on a single metric to determine network topology.

L

LAC Layer 2 Tunnel Access Concentrator, which allows users and telecommuters to connect to their corporate intranets or extranets using L2TP. In other words, it forwards packets to and from the LNS and a remote system.

link A physical or logical connection between two devices in the network, a device and an aggregation, or two aggregations.

LMA Local Mobility Anchor is the home agent for a mobile node in a Proxy Mobile IPv6 (PMIPv6) domain. It is the topological anchor point for mobile node home network prefixes and manages the binding state of an mobile node.

logical link An association between two network elements (based on a chain of physical links between the elements); for example, a tunnel.

M

managed element A network element that is managed by Prime Network; for example, a device, cloud, or Internet Control Message Protocol (ICMP) VNE.

MLPPP Multilink PPP is a protocol that connects multiple links between two systems as needed to provide bandwidth when needed. MLPPP packets are fragmented, and the fragments are sent at the same time over multiple point-to-point links to the same remote address.

N

network clock service The means by which a clock signal is generated or derived and distributed through a network and its individual nodes for the purpose of ensuring synchronized network operation.

network element Any physical component or device in the network that can be managed through an IP address.

P

PDSN Packet Data Serving Node is a component of the Code Division Multiple Access (CDMA) 2000 mobile network. It acts as a connection point between the Radio Access Network (RAN) and IP Network.

physical link A link between physical network objects; for example, a connection between two physical ports.

provider The party providing a service.

pseudowire An emulation of a point-to-point connection over a packet-switching network (PSN), which operates over a uniform packet-based access/aggregation networ

pseudowire headend A technology that allows termination of access or aggregation pseduowires into an L2 or L3 domain. It replaces a 2-node solution with a 1-node solution.

Q

QoS Quality of services is the technique of prioritizing traffic flows and specifying preferences for forwarding packets with higher priority.

S

SBC Session Border Controllers control and manage real-time multimedia traffic flows between IP network borders, handling signaling, and media.

static links Links that are created at the VNE level but are not updated. These links do not perform any configuration or provisioning on a device or in the network.

subscriber The party receiving a service.

subscriber access points The access interfaces that are named based on the parent interface.

T

ticket Object that represents an attention-worthy root alarm whose type is marked in the registry as "ticketable." A ticket has the same type as the root alarm it represents, and it has a status, which represents the entire correlation tree. A ticket can be acknowledged by the user. Both Prime Network Vision and Cisco Prime Network Events display tickets and allow you to navigate down to view the consequent alarm hierarchy. From an operator's point of view, a fault is always represented by a complete ticket. Operations such as Acknowledge or Remove are applied to the whole ticket.

U

unassociated bridges Switching Entities that do not belong to a flow domain, such as a network VLAN, a VPLS instance, or a network pseudowire.

V

virtual cloud or unmanaged network Network, or part of a network, that is not managed by Prime Network. An unmanaged network is often represented in network diagrams by a cloud symbol or image.

virtualization A concept of creating a virtual version of any resource, such as hardware platform, operating system, storage device, or network resources

VLAN Virtual local-area network (LAN). Group of devices on one or more LANs that are configured (using management software) so that they can communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.

VPC Virtual Port Channel (vPC) allows links that are physically connected to two different Cisco Nexus 7000 or Cisco Nexus 5000 series network elements to appear as a single port channel by a third device.

VPLS Virtual Private LAN Service is a Layer 2 VPN technology that provides Ethernet-based multipoint-to-multipoint communication over MPLS networks. VPLS allows geographically dispersed sites to share an Ethernet broadcast domain by connecting sites through pseudowires.

VPN Virtual Private Network. Enables IP traffic to travel securely over a public TCP/IP network by encrypting all traffic from one network to another. A VPN uses *tunneling* to encrypt all information at the IP level.

VRRP Virtual Router Redundancy Protocol is a non-proprietary redundancy protocol that is designed to increase the availability of the static default gateway servicing hosts on the same subnet. This increased reliability is achieved by advertising a virtual router (a representation of master and backup routers acting as a group) as a default gateway to the hosts instead of one physical router.

Y

Y.1731 Y.1731 is an ITU-T recommendation that provides mechanisms for service-level Operation, Administration, and Maintenance (OAM) functionality in Ethernet networks.