Converged Cable Access Platform
Virtual CCAP Core (vCore)

COMMSCOPE®

FEATURES

- Virtual CCAP Core for Remote PHY Devices (RPDs)
- Hardened, widely-deployed software base with 20 years of innovation and testing
- Feature-rich CommScope software
- High availability
- Scalability, operational efficiencies, and high performance
- Single common management solution for all architectures
- Management and DOCSIS® Core software shared with E6000® CER and RD2322 RMD
- OUDP for high-split leakage detection
- DOCSIS 3.1*Enhanced* downstream bonding
- DOCSIS 4.0 modem support
- 7.0 Gbps downstream and 1.6 Gbps upstream per RPD
- Software resiliency
- Support for any combination of 1x1, 1x2, 2x2, and 2x4 RPDs
- HLX™ Domain Manager for license management and creating configuration templates
- PacketCable 1.5 and PCMM support
- Downstream and upstream channel bonding
- Layer 2 operation
- Multi-VLAN
- Data-plane Ethernet loss recovery
- BSoD Q-tag L2VPN and dual-Q-tag support
- PNM support
- Viavi Reverse Sweep and Spectrum Monitoring support
- Telnet support
- PTP support

The CommScope® Virtual CCAP Core (vCore) is a cloud-native, software-only implementation of a DOCSIS® MAC Core that runs on general-purpose x86-based commercial-off-the-shelf (COTS) hardware. It complements the E6000® CER, CommScope Remote MACPHY Devices (RMDs), and CommScope Remote PHY Devices (RPDs) to provide a range of network architecture options for MSOs using field-hardened software from CommScope.

vCore includes the functions of a Principal Core, a DOCSIS Aux Core, and supporting components for RPDs in a Distributed Access Architecture (DAA) network. The vCore software leverages the industry's most widely used, robust, field-proven, and feature-rich CMTS MAC and application software. The vCore supports both CommScope and third-party RPDs.

The vCore software architecture is optimized and recommended for use with the Red Hat platform including OpenShift and Red Hat CoreOS. These tools provide for easy installation and software upgrades, while delivering industry-leading network security capabilities.

A vCore deployment exists on a cluster of COTS host servers that provide hardware High Availability (HA) supported by the vCore software. The worker machines, or nodes, in the cluster run containerized applications.

CommScope HLX™ Domain Manager manages licensing and provides configuration, monitoring, and logging options. vCore also supports configuration, monitoring, and logging through interfaces to legacy back-office systems.
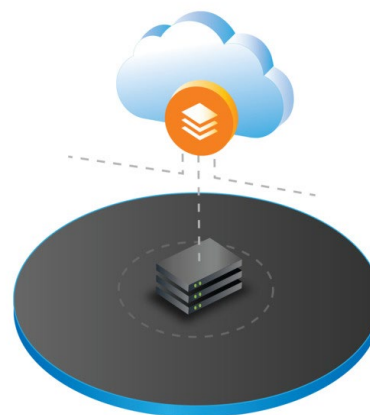
HARDWARE REQUIREMENTS

Component	Minimum Specification
Host Servers	3
Processor	Dual-socket 2 x Xeon 6448H (Sapphire Rapids/Intel Gen 4)
RAM per host	512 GB
HDD or SDD capacity (per host)	2.4 TB
Ethernet Ports per host	2 x nVidia ConnectX 6 NIC (total 4 100 Gbps ports)
Management/Overlay Ports	4 x 1 Gbps NIC per host

ORDERING INFORMATION

Model Name	Description
vCore	vCore software bundle
vCore-MAC-DS-31-1.2G	License to enable DOCSIS 3.0/3.1 MAC processing for the full DS-SG
vCore-MAC-US-31-204	License to enable DOCSIS 3.0/3.1 MAC processing for the full US-SG
System-DOCSIS-31E	License for DOCSIS 3.1*Enhanced* downstream bonding

RELATED PRODUCTS

RD1 Series RPD	HLX Domain Manager
RD1 Series Remote PHY Shelf	RD1 Series HD Remote PHY Shelf
RD3 Series RD2322 RPD	RD4 Series RD1424-M4 RPD
E6000 CER CCAP Core	RD3 Series RMD

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