ENTRA® vCMTS

Reliable. Flexible.
Simplified.

Overview

Vecima's Entra® vCMTS is a cloud-native, open, and highly scalable solution that enables cable operators to seamlessly transition from legacy DOCSIS® to DOCSIS 3.1+ and DOCSIS 4.0 and deliver high-speed data and voice services to residential and business customers alike.

As part of the Entra Cloud platform, Entra vCMTS delivers exceptional performance, featuring industry-leading reliability, as well as improved power and cooling efficiency, space density, and cost savings. Deployed on COTS hardware, vCMTS features a secure, containerized architecture that is automation-ready and free from the constraints of chassis-based systems and legacy virtualization, while relieving the operator of the burden of container-orchestration.

Reliable

- Specialized high-availability schemes optimize resource usage and service continuity
- Container isolation eliminates unwanted interactions between unrelated features
- Automated validation with the Entra Access Test Platform and Access Simulators

Flexible

- Linear horizontal scaling enables the addition of optimal capacity when needed
- Mixed hardware clusters protect initial investment while enabling expansion over time
- Open and Interoperable

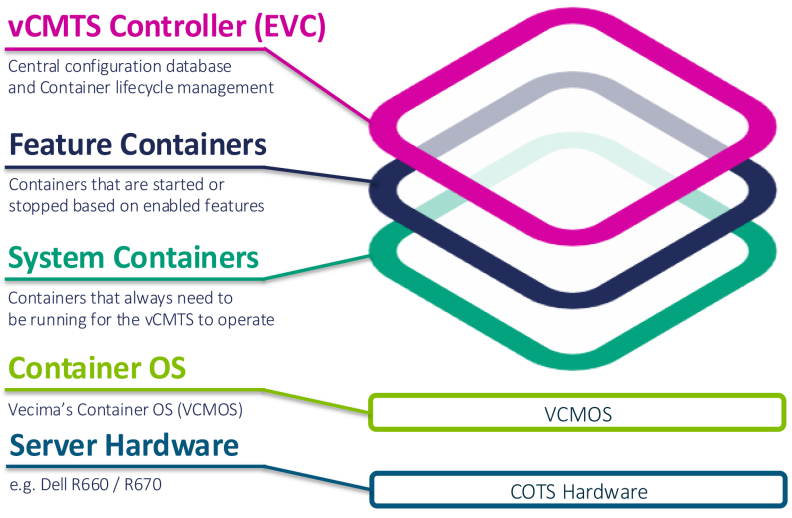
Simplified

- User interfaces and APIs interact automatically with container orchestration
- Full API control of all aspects of the vCMTS. Reduce OPEX through automated workflows (configuration, monitoring, validation)

Architecture

The Entra vCMTS runs on COTS hardware and utilizes Vecima's custom and maximally-secure Linux-based Container OS, VCMOS. Infrastructure or system containers are launched automatically on servers as they are joined to the vCMTS cluster.

Acting as a DAA Principal Core and Auxiliary DOCSIS Core for Remote PHY Nodes (RPNs), the Entra vCMTS delivers all the functions of a traditional CMTS with greater flexibility and scalability. New VMCs (and other feature containers) are launched throughout the cluster as new configuration is added to the EVC. New servers may be added incrementally to a cluster as more VMC capacity is needed.



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The Entra vCMTS Advantage

Cloud-native Architecture
Latest container-based virtualization technology, maintaining familiar workflows

Flexible Deployments
Scale precisely and on demand, including mixed hardware within the cluster

Specialized High-availability
Advanced high-availability techniques maintain service delivery at lower cost

Container Isolation and Resiliency
Independent container (feature) life-cycle management with isolation, reducing component interactions

Vecima's Agile Engagement Model
Industry-leading collaborative development pipeline

API First
Full API access for centralization and automation of provisioning, monitoring, and validation

Built for DOCSIS 4.0

When configured for DOCSIS 3.1 operation, a single VMC delivers nearly 10 Gbps of downstream throughput. With DOCSIS 4.0 configuration, this capability increases to nearly 15 Gbps.

The Entra vCMTS is designed and architected with DOCSIS 4.0 in mind, providing a clear, software-upgradeable path to DOCSIS 4.0 deployment and service delivery.

DOCSIS® INTEROP TRAILBLAZER CableLabs 2025

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