

Cisco Enterprise Content Delivery System Media Delivery Engines (MDEs)

Product Overview

The Cisco® Media Delivery Engines (MDEs) are part of the Cisco Enterprise Content Delivery System (ECDS), a comprehensive media delivery system that helps organizations easily scale video and content delivery over their existing WAN infrastructure. The Cisco MDEs are dedicated appliances that run all ECDS software applications, including the Service Engine, Content Acquirer, Service Router, and Content Delivery System Manager. The Cisco MDEs are available in two models - the Cisco MDE 1125 and the Cisco MDE 3125 - to accommodate the scalability and performance requirements for different-size enterprise sites.

The Cisco MDE 1125 is ideal for small and medium-size site deployments that require less than 1000 simultaneous users and clients for media delivery. The Cisco MDE 1125 provides options from 1 to 2 TB of total storage. The Cisco MDE 1125 comes with a base media license of 100 Mbps throughput and up to 200 simultaneous streams. An additional upgrade license is available to increase the capacity to a total of 500 Mbps throughput and 1000 simultaneous connections.

The Cisco MDE 3125 is ideal for large-site and campus and data center deployments that require scalability for a larger number of users and clients for media delivery. The Cisco MDE 3125 provides 4 TB of total storage. The Cisco MDE 3125 comes with a base media license of 1 Gbps streaming and up to 2000 simultaneous streams. An additional upgrade license is available to increase the capacity to a total of 2 Gbps and 5000 simultaneous connections.

In both cases, the MDE appliances may be stacked together at a single site to further scale deployments and to provide load balancing and redundancy.

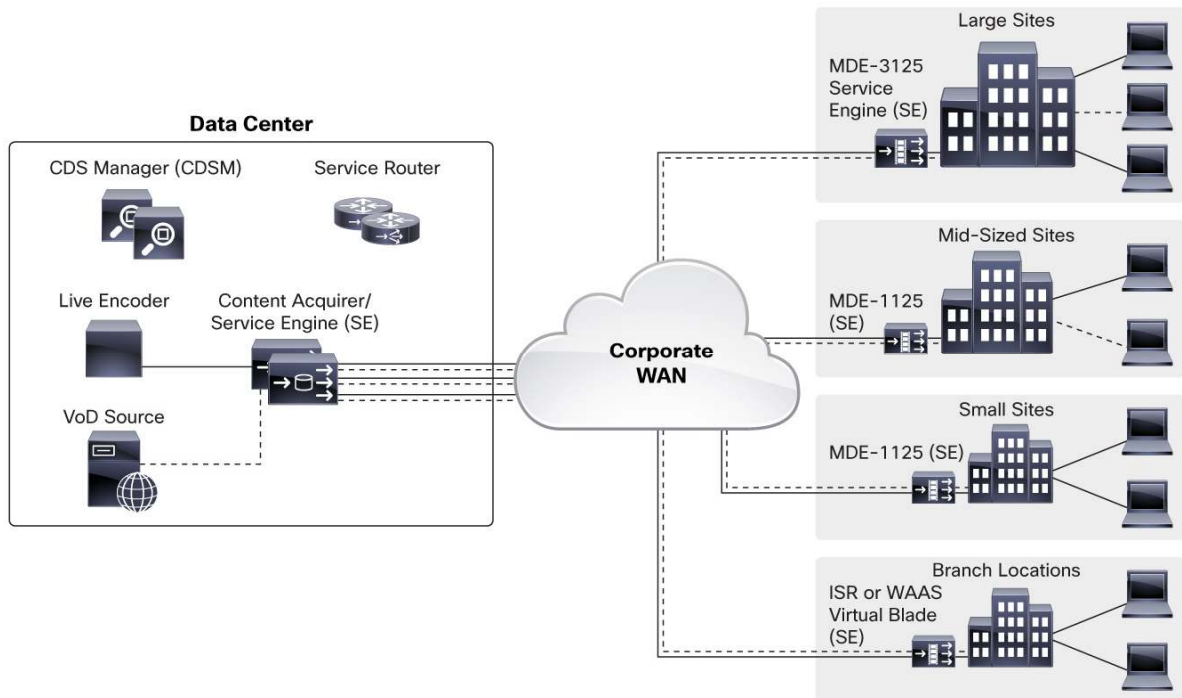
Figure 1 shows the Cisco MDE platform.

Figure 1. Cisco MDE Platform



Figure 2 shows the typical deployment architecture of Cisco ECDS using the MDEs.

Figure 2. Cisco Enterprise Content Delivery System's Media Delivery Engines Deployment Architecture



Features and Benefits

Table 1 lists the applications, use cases, and benefits of the Cisco Enterprise Content Delivery System. Table 2 lists the features and benefits of the Cisco Media Delivery Engines.

Table 1. Cisco Enterprise Content Delivery System Applications and Benefits

| ECDS Applications and Use Cases | ECDS Benefits |
|--|---|
| <ul style="list-style-type: none"> Internal corporate communications Live town hall and all-hands meetings Business video E-learning: employee training and education Digital signage and kiosks IT software distribution and image management | <ul style="list-style-type: none"> Support of live video and video on demand (VoD) Cost-effective and optimized video delivery Reduced streaming bandwidth requirements Enterprise WAN scalability Flexible deployments to any endpoint or client Predictable, high-quality video performance |

Table 2. Cisco MDE Features and Benefits

| Feature | Benefit |
|--|--|
| Live stream splitting | Allows a single media stream entering the Cisco ECDS network to be efficiently split to serve multiple users, allowing the administrator to offer live streaming in a manner that scales |
| Content prepositioning | Uses off-hours bandwidth and delivers consistent experience for video and other applications |
| Content ingest | Ingests content for live video, video on demand, and other web components for efficient media delivery and offloading of the origin server |
| Dynamic caching | Reduces the WAN usage for long-tail video and other content over HTTP |
| Dedicated Cisco Integrated Management Controller (IMC) port for device management | Manages the hardware and device environment specifics through a dedicated Cisco IMC port |

| Feature | Benefit |
|---|--|
| Built-in storage for hosting recovery software | Uses 4 GB of internal memory to support recovery of the system and configuration from a remote, centralized management station |
| Small footprint | Provides a 1 rack unit (1RU) footprint that is ideal for remote location deployments |
| Gigabit Ethernet support | Supports management and data traffic efficiently through Gigabit Ethernet ports |

Product Specifications

Table 3 lists the Cisco Media Delivery Engines specifications per product model.

Table 3. Cisco MDE 1125 and Cisco MDE 3125 Product Specifications

| Specification | MDE 1125 | MDE 3125 |
|--|------------------|----------------|
| Base license: Throughput Simultaneous streams (concurrent connections) | 100 Mbps 200 | 1 Gbps 2000 |
| Upgradable to maximum: Throughput Simultaneous streams (concurrent connections) | 500 Mbps 1000 | 2 Gbps 5000 |
| Number of CPUs | 1 | 2 |
| Total storage | 1 to 2 TB | 4 TB |
| Number of hard drives | 2, 3, or 4 | 8 |
| Memory | 8 GB (DDR3) | 16 GB (DDR3) |
| Gigabit Ethernet data network interfaces | 2 | 6 |
| Cisco IMC Ethernet ports | 1 | 1 |

Table 4 lists the Cisco Media Delivery Engines physical product specifications.

Table 4. Cisco MDE Physical Product Specifications

| Feature | Specification |
|----------------------------------|--|
| Dimensions (H x W x D) | 1RU: 1.7 x 16.9 x 28.5 in. (4.32 x 43 x 72.4 cm); fits standard Telco racks with additional kit |
| Weight (set) | ~ 27 to 36 lb (12.3 to 16.3 kg), dependent on model and configuration of hard disk drives and power supplies |
| CPU | Intel® Xeon® Quad-Core 2.4 GHz E5-2609, 80W |
| Hard drives | 2.5-in., 500-GB SATA 7.2K RPM, front-accessible |
| RAID | LSI MegaRAID 9266-8i |
| Other interfaces | One serial console; Cisco Integrated Management Console |
| Power | 650W power supply unit (PSU) |
| Backup power supply | Yes (optional) |
| Power rating | 100 to 240 VAC, 7.6A to 3.65A, 50 to 60 Hz |
| Internal USB drive | 4 GB |
| Temperature: operating | 32 to 104°F (0 to 40°C) (operating, sea level, no fan fail, no CPU throttling, turbo mode) |
| Temperature: nonoperating | -40 to 158°F (-40 to 70°C) |
| Altitude: operating | 0 to 10,000 ft (0 to 3000m; maximum ambient temperature decreases by 1°C per 300m) |
| Altitude: nonoperating | 40,000 ft (12,000m) |
| Humidity: operating | 10 to 90% noncondensing |
| Humidity: nonoperating | 5 to 93% noncondensing |
| Altitude: operating | 0 to 10,000 ft (0 to 3000m; maximum ambient temperature decreases by 1°C per 300m) |
| Altitude: nonoperating | 0 to 40,000 ft (12,000m) |

Regulatory Standards

Table 5 lists regulatory and standards compliance specifications for the Cisco MDEs.

Table 5. Cisco MDE Regulatory and Standards Compliance: Safety and EMC

| Specification | Description |
|-----------------------|---|
| Safety | <ul style="list-style-type: none">• UL 60950-1 No. 21CFR1040 Second Edition• CAN/CSA-C22.2 No. 60950-1 Second Edition• EN 60950-1 Second Edition• IEC 60950-1 Second Edition• AS/NZS 60950-1• GB4943 2001 |
| EMC: Emissions | <ul style="list-style-type: none">• 47CFR Part 15 (CFR 47) Class A• AS/NZS CISPR22 Class A• CISPR2 2 Class A• EN55022 Class A• ICES003 Class A• VCCI Class A• EN61000-3-2• EN61000-3-3• KN22 Class A• CNS13438 Class A |
| EMC: Immunity | <ul style="list-style-type: none">• EN55024• CISPR24• EN300386• KN24 |

Ordering Information

Table 6 lists ordering information.

Table 6. Cisco MDE Ordering Information

| Product Name | Part Number |
|--|--|
| MDE 1125 | |
| Media Delivery Engine 1125, HW (1RU, 8 GB) | MDE-1125-K9 |
| MDE 1100 Series Base Media Delivery Software | Contact your local Cisco account representative for latest software version part number. |
| ECDS Base MDE 1125 Media Streaming License: up to 100 Mbps/200 streams | MDE-1125-ML100200 |
| MDE 1125 Media License Upgrade: up to additional 400 Mbps/800 streams | MDE-1125-ML-400800 |
| MDE 1100 Series Content Acquirer Software License | MDE-1100-CALIC |
| MDE 3125 | |
| Media Delivery Engine 3125, HW (1RU, 16 GB) | MDE-3125-K9 |
| MDE 1100 Series Base Media Delivery Software | Contact your local Cisco account representative for latest software version part number. |
| ECDS Base MDE 1125 Media Streaming License: up to 1 Gbps/2000 streams | MDE-3125-ML1G2000 |
| MDE 3125 Media License Upgrade: up to additional 1 Gbps/2000 streams | MDE-3125-ML1G3000 |
| MDE 3100 Series Content Acquirer Software License | MDE-3100-CALIC |
| Available for Both MDE Platforms | |
| MDE HDD 2.5 (500-GB SATA) | MDE-HD2GC3-500GB |
| CDS Management Software License for ECDS | MDE-MGMTSW-LIC |

| Product Name | Part Number |
|---|--------------------|
| Spares and Supplemental Orders | |
| Media Delivery Engine 1125, hardware spare | MDE-1125-K9= |
| Media Delivery Engine 3125, hardware spare | MDE-3125-K9= |
| MDE HDD 2.5 (500-GB SATA) spare | MDE-HD2GC3-500GB= |
| MDE 1125 Media License Upgrade: up to additional 400 Mbps/800 streams | MDE-1125-ML400800= |
| MDE 3125 Media License Upgrade: up to additional 1 Gbps/2000 streams | MDE-3125-ML1G3000= |
| MDE 1100 Series Content Acquirer Software License | MDE-1100-CALIC= |
| MDE 3100 Series Content Acquirer Software License | MDE-3100-CALIC= |
| MDE 650W Power Supply C-Series, hardware spare | MDE-650WPS-C= |

Service and Support

Cisco and our partners provide a broad portfolio of smart, personalized services and support that can help you realize the full value of your video investment, and increase business agility and network availability. This portfolio of services promotes business transformation through a network-based collaboration platform that allows business to collaborate anywhere, anytime.

Cisco SMARTnet[®] Service, an award-winning technical support service, is available for Cisco MDE appliances and the ECDS solution. Cisco SMARTnet Service offers direct, anytime access to Cisco engineers and an extensive range of technical resources. Cisco SMARTnet delivers rapid issue resolution, flexible device-by-device coverage, and premium service options to help maximize operational efficiency.

For more information about these services, visit <http://www.cisco.com/en/US/products/hw/video/services.html>.

For More Information

For more information about the Cisco Enterprise Content Delivery System and the Cisco Media Delivery Engines, visit or contact your local Cisco account representative.



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