

# Cisco ME 3600X Series Ethernet Access Switches: Support in Cisco IOS Software Release 15.1(2)EY

Cisco<sup>®</sup> announces Cisco IOS<sup>®</sup> Software Release 15.1(2)EY for Cisco ME 3600X Series Ethernet Access Switches and the Cisco ME 3800X Series Carrier Ethernet Switch Router. This release advances Cisco's leadership role in the carrier Ethernet access and aggregation market by providing enhanced Layer 2 VPN (L2VPN) and Layer 3 VPN (L3VPN) capabilities. With this new Cisco IOS release, Cisco ME 3600X and ME 3800X users can provide Layer 2 point-to-point services using Virtual Private LAN Services (VPLS). This new release also introduces crucial enhancements in Quality of Service (QoS); Layer 3 routing; Ethernet operations, administration and maintenance (EOAM); and timing. This product bulletin contains content and delivery information for Cisco IOS Software Release 15.1(2)EY.

## New Features

Cisco IOS Release 15.1(2)EY for the Cisco ME 3600X and ME 3800X Series brings support for:

- **VPLS:** VPLS expands the Cisco ME 3600X and ME 3800X Series service portfolio and supports multipoint L2VPN services over the Multiprotocol Label Switching (MPLS) access network. The release brings support for distributed and hierarchical VPLS (H-VPLS), allowing the Cisco ME 3600X and ME 3800X Series to act as VPLS hubs or spokes. To simplify deployment, VPLS autodiscovery allows automatic discovery of VPLS neighbors using the Border Gateway Protocol (BGP).
- **MPLS enhancements:** The Ethernet over MPLS pseudowire implementation is enhanced to support Ethernet virtual circuit (EVC) xconnect and routed pseudowires. EVC xconnect increases the pseudowire scalability on the Cisco ME 3600X and ME 3800X Series and provides implementation consistency with the Cisco 7600 Series. With routed pseudowire, the Cisco ME 3600X and ME 3800X Series integrate routing and Ethernet over MPLS to provide more flexible Layer 2 edge deployments. MPLS is enhanced to support MPLS Interior Gateway Protocol – Layer Distribution Protocol (IGP-LDP) synchronization, which helps with fast convergence.
- **Carrier supporting Carrier (CsC) for MPLS L3VPN:** With CsC, MPLS VPN services defined on the Cisco ME 3600X or ME 3800X Series can span between two remote regions and across a carrier backbone.
- **RFC 3107 carrying label information in BGP-4:** With RFC 3107, BGP can be used to distribute MPLS labels across nonadjacent routers.
- **BGP selective next-hop tracking:** The BGP Selective Address Tracking feature introduces the use of a route map for next-hop route filtering and fast session deactivation.
- **Bidirectional Forwarding Detection (BFD) enhancements:** BFD has been enhanced to support Etherchannel, Switched Virtual Interfaces (SVI), and static routes. These enhancements allow a more flexible deployment for BFD on the Cisco ME 3600X and ME 3800X Series.

- **QoS enhancements:** Cisco IOS Release 15.1(2)EY introduces egress QoS enhancements that include:
  - Egress policing for the Priority Queue (PQ)
  - Egress marking
  - Egress port shaper on EVC interfaces

Congestion management is also enhanced to support Weighted Random Early Detection (WRED). These major enhancements provide the Cisco ME 3600X and ME 3800X Series with advanced QoS capabilities, supporting the definition for enhanced services. The QoS functionality is also extended to support IPv6 differentiated services code point (DSCP) classification, providing full IPv6 QoS support.

- **Synchronous Ethernet (SyncE) Ethernet Synchronization Messaging Channel (ESMC):** SyncE provides effective timing to the remote network devices through a packet network. ESMC allows excellent clock source traceability, to correctly define the timing source and to help prevent a timing loop. Cisco IOS Release 15.1(2)EY introduces support for ESMC and Synchronization Status Messages (SSM), and provides more efficient and reliable deployment in mobile backhaul with the Cisco ME 3600X and ME 3800X Series.
- **EOAM (IEEE 802.1ag) enhancements:** Ethernet Connectivity Fault Management (CFM) is a subset of EOAM that provides numerous mechanisms and procedures that allow discovery and verification of the path through 802.1 bridges and LANs. Cisco IOS Release 15.1(2)EY introduces support for CFM on EVC interfaces, extending 802.1ag support on the more flexible and scalable EVC interfaces.
- **EVC enhancement:** The EVC infrastructure is enhanced to support multicast Internet Group Management Protocol (IGMP) snooping and Integrated Routing and Bridging (IRB) for unicast traffic. These enhancements bring higher integration with IP unicast and multicast routing.

## Ordering Information

Table 1 provides the list of part numbers for the Cisco ME 3600X Series Metro Ethernet switches.

**Table 1.** Ordering Information for Cisco ME 3600X Series

| Cisco ME 3600X Series Access Switches                                 | Part Number       |
|---|-------------------|
| Cisco ME 3600X-24TS Ethernet Access Switch                            | ME-3600X-24TS-M   |
| Cisco ME 3600X-24FS Ethernet Access Switch                            | ME-3600X-24FS-M   |
| Cisco ME 3600X Series Metro IP Access Software Paper License          | ME3600X-I         |
| Cisco ME 3600X Series Advanced Metro IP Access Software Paper License | ME3600X-A         |
| Product activation key for ME 3600X Series (paper delivery)           | ME3600X-LIC=      |
| Product activation key for ME 3600X Series (e-delivery)               | L-ME3600X-LIC=    |
| Cisco ME 3600X Series IOS Universal without Crypto TAR                | S360XVT-15102EY   |
| Cisco ME 3600X Series IOS Universal TAR                               | S360XVK9T-15102EY |

Table 2 provides the list of part numbers for the Cisco ME 3800X Series.

**Table 2.** Ordering Information for Cisco ME 3800X Series

| Cisco ME 3800X Series Switch Router   | Part Number       |
|---|-------------------|
| Cisco ME 3800X-24FS Ethernet Access Switch                                  | ME-3800X-24FS     |
| Cisco ME 3800X Metro Ethernet Services License                              | ME3800X-E         |
| Cisco ME 3800X Series Metro IP Services Software Paper License              | ME3800X-I         |
| Cisco ME 3800X Series Metro Aggregation Services Software Paper License     | ME3800X-A         |
| Cisco ME 3800X Series Metro IP2 Aggregation Services Software Paper License | ME3800X-I-A       |
| Product activation keys for ME 3800X Series (paper delivery)                | ME3800X-LIC=      |
| Product activation keys for ME 3800X Series (e-delivery)                    | L-ME3800X-LIC=    |
| Cisco ME 3800X Series IOS Universal without Crypto TAR                      | S380XVT-15102EY   |
| Cisco ME 3800X Series IOS Universal TAR                                     | S380XVK9T-15102EY |

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Software Center.

## Cisco Services

Cisco IOS Software Release 15.1(2)EY follows the standard Cisco support policy. For more information, visit [www.cisco.com/en/US/products/products\\_end-of-life\\_policy.html](http://www.cisco.com/en/US/products/products_end-of-life_policy.html).

## For More Information

Software is available for download from the following site: [www.cisco.com/cisco/web/download/index.html](http://www.cisco.com/cisco/web/download/index.html).

Additional product information is available at the following sites:

- Cisco ME 3600X Series Ethernet Access Switches: [www.cisco.com/en/US/products/ps10956/index.html](http://www.cisco.com/en/US/products/ps10956/index.html)
- Cisco ME 3800X Series Carrier Ethernet Switch Router: [www.cisco.com/en/US/products/ps10965/index.html](http://www.cisco.com/en/US/products/ps10965/index.html)



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