

# System Requirements to Implement MLS

Document ID: 10577

## Contents

### Introduction

#### Prerequisites

Requirements

Components Used

Conventions

#### Catalyst 6500/6000 Series Switch

#### Catalyst 5500/5000 Series Switch

#### Guidelines for External Routers Used with the Catalyst 5500/5000

#### Related Information

## Introduction

Each section of this document contains the system requirements to implement Multilayer Switching (MLS) on the platforms described.

## Prerequisites

## Requirements

There are no specific requirements for this document.

## Components Used

This document is not restricted to specific software and hardware versions.

## Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

## Catalyst 6500/6000 Series Switch

- Cisco Catalyst 6000 series switches with Supervisor Engine I support MLS with a Multilayer Switch Feature Card (MSFC1 or MSFC2) and a Policy Feature Card (PFC). The MSFC2 with PFC2 perform Layer 3 (L3) switching using CEF. The Supervisor Engine 720, PFC3, and MSFC3 perform L3 switching with CEF for the PFC3. Refer to the document Configuring CEF for PFC2 and PFC3 for more information.
- Catalyst 6000 series switches support MLS for IP, IP multicast, and Internetwork Packet Exchange (IPX) protocols. By default, IP and IPX MLS are enabled, and IP multicast MLS is disabled.
- Catalyst 6000 series switches do not support an external MLS route processor (MLS–RP). The internal multilayer switching must be done by MSFC1, MSFC 2, or MSFC3 with a PFC.
- Catalyst 6000 series Supervisor Engine Catalyst OS (CatOS) software version 5.1 CSX or later supports IP and IP multicast, and CatOS software release 5.2(1) CSX or later supports IPX MLS.
- The Multilayer Switch Module (MSM) is the equivalent of the Catalyst 8510 campus switch router (CSR) with four internal gigabit ports connecting it to the Catalyst 6000 backplane. Since it is based on the Catalyst 8510 CSR, it is already using the hardware CEF by default (for IP, IP multicast, and

IPX, if configured). There is no need to configure MLS for the MSM to do L3 hardware switching.

**Note:** The MSM is an end of sale (EOS) product. (Refer to the End of Sale Announcement for Multilayer Switch Module (MSM) for Catalyst 6000 Family Switches.) The MSM is effectively replaced by the MSFC.

## Catalyst 5500/5000 Series Switch

- Catalyst 5000 series switches support MLS in Supervisor Engine III with Netflow Feature Card (NFFC) or NFFC II.
- Catalyst 5000 also supports MLS using Route Switch Module (RSM), Route Switch Feature Card (RSFC), or external Cisco 7500, 7200, 4500, 4700, and 3600 series routers. The MSM or MSFC on a Catalyst 6000 switch can also be used as an external RP for Catalyst 5000.
- Supervisor Engine CatOS software release 4.1(1) or later supports MLS for IP, software release 5.1 or later supports MLS for IP multicasts, and software release 5.2(1) or later supports IPX for Catalyst 5000.
- Cisco IOS® Software Release 11.3(2)WA4(4) or later supports MLS on RSM or Cisco 7500, 7200, 4700, and 4500 series routers, Cisco IOS Software Release 12.0(2) or later on Cisco 3600 series routers, and Cisco IOS Software Release 12.0(3c)W5(8a) or later on the RSFC.

## Guidelines for External Routers Used with the Catalyst 5500/5000

When using an external router with the Catalyst 5500/5000, follow these guidelines:

- One directly attached external router per Catalyst 5000 series switch is recommended to ensure that the MLS–Switching Engine (MLS–SE) caches the appropriate flow of information from both sides of the routed flow.
- You can use Cisco high–end routers (Cisco 7500, 7200, 4500, 4700 and, 3600 series) for MLS when they are externally attached to the Catalyst 5000 series switch. You can make the attachment with multiple Ethernets (one per subnet) by using FastEthernet with the Inter–Switch Link Protocol (ISL) or with Fast EtherChannel (FEC).
- You can connect end hosts through any media (Ethernet, FastEthernet, ATM, and FDDI). However, the connection between the external router and the Catalyst 5000 series switch must be through standard 10/100 Ethernet interfaces, ISL, or FEC.

## Related Information

- [LAN Product Support Pages](#)
- [LAN Switching Support Page](#)
- [Technical Support – Cisco Systems](#)

---

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2014 – 2015 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

---

Updated: Aug 30, 2005

Document ID: 10577

---