



CHAPTER 8

Diagnostics

From the Home window of Cisco IP Solution Center (ISC), which you receive upon logging in, click the **Diagnostics** tab and you receive a window as shown in Figure 8-1, “**Diagnostics Selection**.”

Figure 8-1 Diagnostics Selection

The screenshot shows the Cisco IP Solution Center (ISC) interface. The top navigation bar includes links for Home, Shortcuts, Account, Index, Help, About, and Logout. The user is logged in as 'admin'. The 'Diagnostics' tab is selected. A sidebar on the left is titled 'MPLS Diagnostics Expert' and contains a 'Selection' section with five items: 'CE to CE', 'PE to attached CE', 'CE to PE across Core', 'PE to PE (in VRF)', and 'PE to PE (Core)'. The main content area is titled 'MPLS Diagnostics Expert Feature Selection' and describes automated troubleshooting and diagnostics for MPLS VPNs. It lists five connectivity verification features, each with an icon and a brief description:

- CE to CE - MPLS VPN Connectivity Verification: Checks the MPLS VPN connectivity between two CEs.
- PE to attached CE - MPLS VPN Connectivity Verification: Checks the MPLS VPN connectivity between a PE and the locally attached CE.
- CE to PE across Core - MPLS VPN Connectivity Verification: Checks the MPLS VPN connectivity between a CE and a remote PE across the MPLS core.
- PE to PE (in VRF) - Edge VPN Connectivity Verification: Checks the MPLS VPN connectivity between two PEs.
- PE to PE (Core) - MPLS Core Connectivity Verification: Checks the MPLS Core connectivity between two PEs.

The Cisco MPLS Diagnostics Expert (MDE) application is an automated, workflow-based network management application that troubleshoots and diagnoses problems in Multiprotocol Label Switching (MPLS) VPNs. MDE offers users the capability to reduce the amount of time required to diagnose MPLS-related network outages—in many cases from hours to minutes. It performs diagnostics based on analysis of network failure scenarios, across MPLS access, edge, and core networks. It is equally applicable to both service provider and enterprise “self-deployed” MPLS VPN networks. Network operations center (NOC) support technicians as well as second-line and third-line support can benefit from this product. MDE optionally integrates with the provisioning features of the ISC MPLS VPN component. To diagnose MPLS VPN core problems, Cisco IOS or IOS XR software releases supporting MPLS operations and maintenance (OAM) features including label-switched path (LSP) ping and LSP traceroute are required.

This application is explained in detail in the [Cisco MPLS Diagnostics Expert 2.1.3 User Guide on ISC 5.1](#).

The [Cisco MPLS Diagnostics Expert 2.1.3 Failure Scenarios Guide on ISC 5.1](#) provides details of all feature scenarios and observations reported by the MDE application for ISC. It also lists all IOS and IOS XR commands executed by the troubleshooting workflows.

