

# Using LANE Manager for Catalyst Switches

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This chapter describes the LAN Emulation (LANE) Manager feature for the Asynchronous Transfer Mode (ATM) module installed in Catalyst 5000 or Catalyst 3000 series switches.

Using CiscoView's LANE Manager feature requires the following progression of tasks:

- 1 Before using CiscoView, work from the command line to determine the default address for LECS, LEC, and LES. Then register the default LECS to the LS1010 ATM Switch.
- 2 Use CiscoView to configure the LANE database, set up a default ELAN, and assign a LES for each ELAN in the database.

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**Note** One LANE database can contain many ELANs, but each database can have only one LES. The LANE database resides on the LECS; the LES tracks MAC addresses per ELAN/VLAN.

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- 3 Return to the command line and bind the LEC to the ELAN.
- 4 When all setup requirements are complete, use CiscoView to review the information.

## LANE Manager

The LANE Manager window allows access to the following LANE management categories:

- LECS Management
- LES/BUS Management
- LEC Management

The LANE Manager window displays changes according to the category selected. Only one category is displayed at a time. You can change the category to access different LANE management features. The default is LEC Management.

To display information for any category, select the category from the pulldown menu next to the CATEGORY label.

To start the LANE Manager application, select **Tools>LANE Manager** from the CiscoView main window.

**TIP:** From Catalyst 5000 devices, start the LANE Manager application by selecting **Card>Configure...>LAN Manager**.

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**Note** Where windows display “optional” fields, you can enter a value or leave the field blank so that the device automatically generates the value. For additional information about the fields, click **Help** to access online help.

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## LECS Management

The LECS Management window provides tools to configure, create, or delete a LECS database and provide action buttons to display virtual channel connections (VCC) and run-time information about a selected LECS.

The LECS Management window contains a list box of LECS entities on the device.

The following action buttons might be available, depending on the device:

- **Configure**—To change the database name of the LECS, enter an exiting database name and click **Modify**. If an invalid value is entered, an error message is displayed.
- **Create**—To create a new LECS, click **Create** and assign values to the fields. Click **Create** to set configuration to the switch.
- **Statistics**—To display the run-time information for a selected LECS, click **Statistics**.
- **VC Connection**—To display the VCC on an LECS, click **VC Connection**.

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**Note** The connections are ordered by virtual path identifier (VPI) and virtual channel identifier (VCI) values. The connection type and the type of the other party are displayed. However, due to space limitations, the ATM addresses for both parties of a selected VCC entry are displayed when you click **Details**. The LECS VCC Details window displays ATM address information only if the connection is a switched virtual connection (SVC).

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All VCC-specific windows are read-only. The information is provided primarily for troubleshooting.

- Database—To configure, create, or delete LECS databases, click **Database** in the LECS Database window. (See “LECS Database” for more information.)

## LECS Database

When you click **Database** in the LECS Management window, the LECS Database window opens. The LECS Database window contains a list box of LECS databases on the device. Within this area, you can configure, create, or delete LECS databases.

The following action buttons might be available, depending on the device:

- Configure—Opens the database configuration window for the selected database. (See “LECS Database Configuration” for more information.)
- Create—Opens the database creation window for the selected database, which displays details for the selected LECS entry. (See the appropriate database creation sections for more information.)

## LECS Database Configuration

When you click **Configure** in the LECS Database window, the LECS Database Configuration window is displayed. The contents of the Database Configuration area depend on the category you select in the window:

- Database Configuration—ELAN Category
- Database Configuration—LES Category

- Database Configuration—LEC MAC Address Category
- Database Configuration—LEC ATM Address Category

### Database Configuration—ELAN Category

If you select the ELAN category, the LECS Database Configuration window displays the configuration for each ELAN defined in a database: ELAN name, corresponding LES ATM address, and access level.

The access level is either open or closed (restricted). Open means that LEC joining requests for the ELAN are accepted; closed means that an LEC must match the MAC or ATM address specified in the database for this ELAN to be allowed in this LEC.

The following action buttons might be available depending on the device:

- **Configure**—Opens the Database ELAN Configuration window for the selected ELAN, which displays details for the selected ELAN entry. (See “Database ELAN Configuration” for more information.)
- **Create**—Opens the Database ELAN Creation window. (See “Database ELAN Creation” for more information.)

### Database Configuration—Default ELAN Category

If you select the Default ELAN category, the LECS Database Configuration window displays the default ELAN in the database, if one has been defined. You can enter the default ELAN name. To modify the existing configuration, edit the fields as appropriate, click **Modify** and exit the window when the configuration is accepted by the device. If the configuration is rejected by the device, an error message is displayed.

### Database ELAN Configuration

When you click **Configure** in the LECS Database Configuration ELAN category window, the Database ELAN Configuration window opens. This window displays the configuration for a selected ELAN defined in a database. You can specify the LES serving this ELAN and the access mode for this ELAN. To modify the ELAN, edit the fields as appropriate, and click **Modify**. If an invalid value exists, an error message is displayed.

### Database ELAN Creation

When you click **Create** in the LECS Database Configuration ELAN category window, the Database ELAN Creation window opens. You can enter the ELAN name, the LES serving the ELAN, and the access mode for the ELAN. To create a new ELAN, edit the fields as appropriate and click **Create**.

### Database Configuration—LES Category

If you select the LES category, the LECS Database Configuration window redraws to display LES entities defined for each ELAN, and the priority level and current state. The priority level is the relative priority of the LES for servicing the ELAN; the lower the number, the more priority is given to the LES.

The following action buttons might be available, depending on your platform and operating system:

- **Configure**—Opens the Database LES Configuration window for the selected ELAN, which displays details for the selected ELAN entry. (See “Database LES Configuration” for more information.)
- **Create**—Opens the Database LES Creation window. (See “Database LES Creation” for more information.)

### Database LES Configuration

When you click **Configure** in the LECS Database Configuration LES category window, the Database LES Configuration window opens. You can specify the priority level for the LES of the selected ELAN. To modify the existing configuration, edit the fields as appropriate and click **Modify**.

### Database LES Creation

When you click **Create** in the LECS Database Configuration LES category window, the Database LES Creation window opens. You can enter the name of the ELAN, the address, and priority level of a LES. To create a new LES, click **Create** and define the fields as desired. Click **Create** and exit the window when the creation is accepted by the device. If the creation is rejected by the device, an error message is displayed.

### Database Configuration—LEC MAC Address Category

If you select the LEC MAC Address category, the LECS Database Configuration window redraws to show LEC MAC addresses. You can specify the mapping from the primary MAC address of an LEC to the ELAN to which the LEC is assigned.

The following action buttons might be available, depending on the device:

- **Configure**—Opens the Database LEC MAC Address Configuration window for the selected LEC MAC Address. (See “Database LEC MAC Address Configuration” for more information.)
- **Create**—Opens the Database LEC MAC Address Creation window. (See “Database LEC MAC Address Creation” for more information.)

### Database LEC MAC Address Configuration

When you click **Configure** in the LECS Database Configuration—LEC MAC Address category window, the Database LEC MAC Address Configuration window opens. This window allows you to specify the mapping from the primary MAC address of a LEC to the ELAN which the LEC is assigned. To modify the existing configuration, edit the fields as appropriate and click **Modify**.

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**Note** If an LEC MAC address is assigned to a different ELAN, the LEC membership changes. See “Database Configuration—ELAN Category” for information about reassigning a LEC MAC address.

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### Database LEC MAC Address Creation

When you click **Create** in the LECS Database Configuration—LEC MAC Address category window, the Database LEC MAC Address Creation window opens. You can designate the LEC MAC address for an ELAN. To create a new LEC MAC address, click **Create** and define the fields as desired. Click **Create** and exit the window when the creation is accepted by the device. If the creation is rejected by the device, an error message is displayed.

### Database Configuration—LEC ATM Address Category

If you select the LEC ATM Address category, the LECS Database Configuration window shows the LEC ATM Addresses. You can specify the mapping from the primary ATM address of an LEC to the ELAN which the LEC is assigned.

The following action buttons might be available, depending on your platform and operating system:

- **Configure**—Opens the Database LEC ATM Address Configuration window for the selected LEC ATM Address entry. (See “Database LEC ATM Address Configuration” for more information.)
- **Create**—Opens the Database LEC MAC Address Creation window. (See “Database LEC ATM Address Creation” for more information.)

### Database LEC ATM Address Configuration

When you click **Configuration** in the LECS Database Configuration—LEC ATM Address category window, the Database LEC ATM Address Configuration window opens. You can specify the ELAN name to which the LEC is assigned. To modify the existing configuration, edit the fields as appropriate, click **Modify**, and exit the window when the configuration is accepted by the device. If the configuration is rejected by the device, an error message is displayed.

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**Note** If an LEC ATM address is assigned to a different ELAN, the LEC membership changes. Refer to the section “Database Configuration ELAN Category” for information on how to reassign an LEC ATM address.

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### Database LEC ATM Address Creation

When you click **Create** in the LECS Database Configuration—LEC ATM Address category window, the Database LEC ATM Address Creation window opens. You can specify the LEC ATM address for a specific ELAN. To create a new LEC ATM address, click **Create** and define the fields as desired. Click **Create** again and exit the window when the creation is accepted by the device. If the creation is rejected by the device, an error message is displayed.

## LES/BUS Management

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**Note** This LES/BUS implementation is a Cisco implementation.

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The LES/BUS Management window provides tools to configure, create, or delete an LES or BUS and display the following information:

- LEC connections
- Run-time information about a selected LES or BUS
- Registered MAC addresses

The LES/BUS Management window contains a list box for all the LES/BUS entities on the device.

The following action buttons might be available depending on your platform and operating system:

- **Configure**—To display details for the selected LES entry, select LES/BUS entry and click **Configure**. Modify the fields as appropriate, click **Modify** and exit the window when the change is accepted by the device. If the change is rejected, an error message is displayed.
- **Create**—To create a new LES/BUS, click **Create** and define the fields as desired. Click **Create** again and exit the window when the creation is accepted by the device. If the creation is rejected by the device, an error message is displayed.
- **Statistics**—To display the run-time information, select an LES/BUS entry and click **Statistics**.
- **LEC Connection**—To display a list of LEC entities connected with a selected LES, select the LES entry and click **LEC Connection**. The available information consists of LEC ATM address, LEC ID, and VPI/VCI of the bidirectional control direct connection.

### LES/BUS Configuration

When you select an entry from the LES/BUS Management list box and click **Configure**, the LES/BUS Configuration window opens. This window contains the detailed configuration of the selected LES/BUS and allows you to modify the existing configuration. To modify the existing configuration, edit the fields as appropriate, click **Modify**, and exit the window when the configuration is accepted by the device. If the configuration is rejected by the device, an error message is displayed.

### LEC Management

The LEC Management window contains the following action buttons:

- **Details**—To display details, select an ELAN entry and click **Details**.
- **Statistics**—To display statistics, select an LEC entry and click **Statistics**.
- **VCC Information**—To display VCC information, select an LEC entry and click **VCC Information**.
- **Address Mapping**—To display information regarding MAC to ATM address mapping, select an LEC entry and click **Address Mapping**.

The LEC Management window contains a list box for all the LECs on the device.

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**Note** All LEC Management Information Base (MIB) variables are read-only in Cisco devices. As a result, you can display, but not change, LEC Management windows.

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