Chapter 3. Diagnostics

This section provides basic troubleshooting information to help you resolve some common problems that might occur with your BladeCenter unit.

If you cannot locate and correct the problem using the information in this section, see Appendix A, "Getting help and technical assistance," on page 83 for more information.

Diagnostic tools overview

The following tools are available to help you identify and solve hardware-related problems:

- **Troubleshooting charts**

  These charts list problem symptoms and steps to correct the problems. See the Chapter 6, "Symptom-to-FRU index," on page 57 for more information.

- **Diagnostic programs and error messages**

  The built-in self-test (BIST) program checks the BladeCenter unit during startup and generates error messages if problems are found.

  The system diagnostic program, Real Time Diagnostics Version 1.3, tests the major components of your BladeCenter unit. The Real Time Diagnostics software is available from the IBM Support Web site at http://www.ibm.com/systems/support. It is run from the IBM Director Management Console window (under the **BladeCenter** task in the Task panel).

  To obtain the Real Time Diagnostics program, go to the following Web site: http://www.ibm.com/systems/support.

  1. Select **Servers** from the list at the left of the window.
  2. Select **Downloadable files** from the list at the left of the window.
  3. In the **Downloadable files by category** list, select **Diagnostic**.
  4. Click the entry for Real Time Diagnostics and follow the instructions on that page.

- **Light Path Diagnostics feature**

  Use the Light Path Diagnostics feature to identify system errors quickly. On the BladeCenter unit, the Light Path Diagnostics feature consists of the LEDs on the front and rear of the BladeCenter unit and on the front of the modules and blade servers.

Identifying problems using the Light Path Diagnostics feature

If the system-error LED on the system LED panel on the front or rear of the BladeCenter unit is lit, one or more error LEDs on the BladeCenter components also might be on. These LEDs help identify the cause of the problem.

This section provides the information to identify problems that might arise during installation using the Light Path Diagnostics feature.

To locate the actual component that caused the error, you must locate the lit error LED on that component.

For example:

A system error has occurred, and you have noted that the BladeCenter system-error LED is lit on the system LED panel. You then locate the module or blade server that also has an error LED lit (see "BladeCenter unit power, controls, and indicators" on page 11 for the location of error LEDs; see the documentation that comes with your blade server for the location of error LEDs on the blade). If the component is a module, replace the module. If the component is a blade server with its system-error LED lit, follow the instructions in the documentation that comes with the blade server to isolate and correct the problem.