Technical Support Information List

When a problem arises that you are unable to resolve, the resource of last resort is your router technical support representative. To analyze a problem, your technical support representative will need certain information about the situation and the symptoms you are experiencing. To speed the problem isolation process, present this data when you contact your representative.

Gathering Information about Your Internetwork

Before gathering any specific data, the first thing to do is compile a list of all symptoms that users have reported on the internetwork (such as connections dropping or slow host response).

The next step is to gather specific information. Typical information needed to troubleshoot internetworking problems falls into two general categories: information required for any situation and information specific to the topology/problem.

Information always required by technical support engineers includes the following:

- Configuration listing of all routers involved
- Complete specifications of all routers involved
- Version numbers of software (obtained with **show version** command) and firmware (obtained with the **show controllers** command) on all routers
- Network topology map, including any suspected back doors
- List of hosts and servers (host and server type, number on network, description of host operating systems implemented)
- · List of network layer protocols, versions, vendors

Specific requirements that vary depending on the situation include the following:

- Output from general **show** commands:
 - show interfaces
 - show controllers {serial | token | mci | cbus | fddi}
 - show processes
- Output from protocol-specific **show** commands:
 - show protocol-type route
 - show protocol-type traffic
 - show protocol-type interfaces
 - show protocol-type arp
 - show appletalk globals (AppleTalk only)
 - show ipx servers (Novell only)
- Output from relevant **debug** privileged EXEC commands.
- Output from protocol-specific **ping** (Echo Request/Echo Reply) and **trace** diagnostic tests as appropriate.
- Network analyzer traces.
- Core dumps (use the **exception dump** router configuration command). You also can use the **write core** router configuration command if the system is operational.

Getting the Data from Your Router

You must tailor the way you obtain information from the router to the systems you are using to get that information. A few hints are outlined as follows (organized by an information-gathering tool).

For PC and Macintosh

Connect a PC or Macintosh to the console port of the router and log all output to a disk file. The exact procedure varies depending on the communication package used with the PC.

For Terminal Connected to Console Port or Remote Terminal

The only way to get information with this configuration is to attach a printer to the AUX port on the terminal (if one exists) and force all screen output to go to the printer. Using a terminal is undesirable because there is no way to capture the data to a file.

For UNIX Workstation

At your UNIX prompt, enter the command **script** *filename*, then Telnet to the router. The UNIX **script** command causes all screen output to be captured to the specified filename. To stop capturing output and close the file, enter the end-of-file character for your UNIX system.

Note To get your system to automatically log specific error messages or operational information to a UNIX syslog server, use the **logging** *internet-address* router configuration command. For more information about using the **logging** command and setting up a syslog server, refer to your *Router Products Configuration Guide* and *Router Products Command Reference* publications.

Presenting Data to Your Technical Support Representative

Your technical support representative will accept information in any format that you can provide. Common forms include data sent via file transfer, electronic mail, magnetic media, and hard copy.

The order of preference is as follows:

- 1 The preferred method of information delivery is via the File Transfer Protocol (FTP) service over the Internet. If your environment supports FTP, you can place your file in the "incoming" directory on the host named *ftp.cisco.com*.
- 2 The next best method is to send data by electronic mail. Before trying this method, be sure to contact your router technical support representative, especially when transferring binary core dump files.
- **3** Transfer via a PC-based communications protocol, such as *Kermit*. Again, be sure to contact your technical support representative before attempting any transfer.
- 4 Transfer by disk or tape.
- **5** The least favorable method is hard copy transfer by physical mail or fax.