4 Power up and Testing

Introduction

Your iWarp system includes system confidence tests that provide diagnostic information about the iWarp hardware and software. This chapter only provides an overview of the diagnostic tests; it does not provide in-depth information about the tests, nor does it tell how to interpret test results. This chapter provides the following information:

- how to apply power to the iWarp system
- what to expect when the tests are running
- what to do if something goes wrong

NOTES

The iWarp diagnostics will not operate unless the iWarp system software has been installed and the new kernel has been booted.

The iWarp system software makes available an on-line "readme" file that contains additional information about the system diagnostics. The file is located in

`/iwarp/diag/3.2/readme`
or
`/iwarp/diag/2.8/readme`

Applying Power

To apply power to the iWarp system, do the following:

1. Plug the iWarp system AC power cord into an outlet.
2. Move the circuit breaker (located at the bottom back of each cabinet) up to the ON position. Do this for each cabinet to supply AC power to the system.
3. Verify that the fans and power indicators come on. If they do not come on check the following:
   - — Make sure the AC power cord is plugged into the power receptacle.
   - — Check the cabinet circuit breaker and the breaker box.
   - — Make sure the fan and power supply plugs are firmly in place on the power strip.
   - — If you confirm that the system is receiving power, but no power indicators are lit, call iWarp Customer Support at the number given in step 5 of this procedure.

4. The self tests for the iWarp system execute automatically. The red and green indicator lights should come on for each cell in the array. The red lights should go off after a few seconds, and the green lights should remain on with the yellow lights blinking.
5. If a red indicator light remains on, turn the power off for that cabinet, wait a few seconds, and turn the power back on. If this does not correct the problem, call iWarp Customer Support at

   1–800–654–4977.

Running The Diagnostics

To run the iWarp diagnostics, do the following:

1. Login to the system as root.
2. Type

   `cd /iwarp/diag/3.2` (or `/iwarp/diag/2.8`) <CR>
   `siblock` <*SIBnumber*> <CR>.
   `iwconf` <*SIBnumber*> <CR>.

   NOTE

   The iWarp system interfaces to the Sun system through a Sun Interface board (SIB). Always use `siblock` before starting the diagnostics (or running other software for that matter).

   The SIB number (*SIBnumber*) in the above commands identifies the SIB on which you are running iwconf. If you omit the SIB number, the system assumes a default SIB number of "0."

3. After you enter the `iwconf` command, the system responds with:

   ```
   IWCONF VERSION x.x
   ```

4. The system then displays the current SIB number and the `iwconf` test prompt:

```
0-->
```

NOTE

If the iWarp system software has not been installed, the following error message will be displayed:

```
Unable to open device.
```

If you get this message, the system software must be installed.

5. To start the diagnostic tests, type

```
test <CR>
```

The resulting display should look similar to Figure 4-1 (Figure 4-1 does not show all the tests that will report).

```
0--> test

00H  Test 00  PBA Test.................................Passed
01H  Test 01  GSAR Test............................... Passed
02H  Test 02  Dual Port RAM Test.......................Passed
03H  Test 03  Host Communication Test..................Passed
04H  Test 04  Fast RAM Test............................Passed
05H  Test 05  EPROM Test...............................Passed
06H  Test 06  LM-mapped iSIB Register Test.............Passed
07H  Test 07  SIB Reset Test...........................Passed
19H  Test 25  Configuration Test.......................Passed
1aH  Test 26  SRU Test.................................Passed
1bH  Test 27  System Pathway Test......................Passed

0--> test
```

Figure 4-1: Typical iWarp Diagnostic Test Results (Passed Tests)

6. The `iwconf` tests fall into two general categories:
   — Tests 0 through 23 report on SIB functionality.
   — Tests 25 through 27 report on iWarp system functionality.

   If you want a list of all available `iwconf` tests, type

   `des` <CR>.

7. If you want to run a specific test, type

   `test` <*test number*> `<CR>`.

8. To quit `iwconf`, type

   ```
   sibunlock  <SIBnumber>  <CR>
   exit <CR>.
   ```

NOTE

The default number base for `iwconf` is hexadecimal. To change to decimal base, type

`base=10t <CR>`

or

`base=dec <CR>`

If Something Goes Wrong

If you run the diagnostics and failures occur, the resulting display will look similar to Figure 4-2 (not all tests are shown in Figure 4-2).

```
0--> test


19H  Test 25  Configuration TestRESETSIG bit in GCR was not set
in allowed time after iSIB reset.................Failed  <===

1aH  Test 26  SRU Test
Time out waiting for interface kernel to set IFTH flag
  after a packet was sent to it..................Failed  <===

1bH  Test 27  System Pathway Test
Time out waiting for interface kernel to set IFTH flag
  after a packet was sent to it..................Failed  <===


                    ===> ERRORS OCCURRED <===
```

Figure 4-2: Typical iWarp Diagnostic Test Results (Failed Tests)

If the diagnostics report a failure, do the following before calling for assistance:

1. Go back over the installation procedure; be sure you completed all the steps.
2. Be sure all boards are properly seated in the system backplane.
3. Be sure the pathway cables are properly connected.
4. Check to see that all cables are firmly seated in their connectors.
5. Make sure the iWarp software has been properly installed.

If the diagnostics continue to report failures, you will need to contact iWarp Customer Service at

1–800–654–4977.