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Testing a Compression Card Upgrade Installed at a Customer's Site

- Introducing field installation testing
- Troubleshooting field installed hardware based on test output

Introducing field installation testing

This document describes how to test a BIG-IP system after you install a compression card in the platform. Only a technician authorized by F5 Networks, Inc., should perform the field installation procedure.

Getting started

To run the test, you must be logged into the unit from the console on a management workstation. For detailed information about connecting a management workstation, see *Chapter 2, Connecting a Management Workstation or Network*, in *Installation, Licensing, and Upgrades for BIG-IP Systems*.

After you are logged in, you can run the test utility with the following command:

```
bigstart stop; /bin/tmm -a --speed-test=aha-field
```

Understanding the output of the test utility

After you run the utility, you see several lines of output. Each line of output is a result of a specific test that checks the viability of the hardware. The following section describes how to interpret the output.

Identifying successful test output

If the test was successful, each line of output indicates that the particular test was successfully completed. For a detailed example of the output of a successful test, see Figure 1.1.

```
cn0: Cavium NITROX (8 units); in 64 bit, 99 MHz PCI/X slot.  
cn1: Cavium NITROX (8 units); in 64 bit, 99 MHz PCI/X slot.  
bge0: reset successful  
bge0: chip initialization successful (chipid 0x20030000) 10baseT, 10baseT-FDX, 100baseTX,  
100baseTX-FDX, auto, 1000baseTX, 1000baseTX-FDX, auto  
bge1: reset successful  
bge1: chip initialization successful (chipid 0x20030000) 10baseT, 10baseT-FDX, 100baseTX,  
100baseTX-FDX, auto, 1000baseTX, 1000baseTX-FDX, auto  
aha0: AHA Compression device (rev 2.1) at 1.3  
default TMM Version 9.0.3.96.0.0 (2x1.59GHz AuthenticAMD) 1820MB @ 228MB  
Compression test: starting test.  
Compression test: CRC matched ok.  
Compression test: completed test 2479M bits/sec (65536000 bits in 42106329 cycles)
```

Figure 1.1 Output from a successful hardware test.

There are two specific lines that indicate the test was successful. These lines are in Figure 1.2.

```
aha0: AHA Compression device (rev 2.1) at 1.3
Compression test: CRC matched ok.
```

Figure 1.2 The specific lines indicating a successful test.

Troubleshooting field installed hardware based on test output

If the test does not produce the expected results noted in the *Identifying successful test output*, on page 1-1, it is likely there is a problem. There are two reasons why the hardware test can fail.

- If the card is seated improperly
- If the card is defective

Correcting an improperly seated card

If the card is seated improperly, or there is a hardware failure, the following line is missing from the test output:

```
aha0: AHA Compression device (rev 2.1) at 1.3
```

If the card is seated improperly, check to ensure the card has been properly seated in the slot. Run the hardware test again with the following command:

```
bigstart stop; /bin/tmm -a --speed-test=aha-field
```

If the card is properly seated, and you do not see the correct line in the output, see the following section *Detecting a defective card*.

Detecting a defective card

If you have made sure the card is seated in the slot, and you see the following output in the test, it is likely that the card is not functioning correctly:

```
Compression test: CRC did not match expected
Compression test: unable to extract CRC.
```

If you are not seeing these error messages and the card does not appear to be functioning correctly, use the following command to test the card:

```
/bin/tmm.default -a -speed-test=aha-field-write
```

The output is the same as the standard hardware test, except that instead of the CRC line, the file **compression_test_0.gz** is produced. To complete the test, type the following command:

```
gunzip compression_test_0.gz
```

If the **gunzip** command fails, the card is not functioning properly.

