F5® Platforms: Platform Diagnostics

MAN-0475-02

Table of Contents

Platform Diagnostics overview

Platform Diagnostics is a hardware diagnostic utility that you can run from the host of an F5® platform, without requiring a reboot into the End-User Diagnostic (EUD). The Platform Diagnostics utility tests hardware components, such as the hardware accelerator, hard drives, and PCI devices. You should run the EUD only when you are advised to do so by your F5 Support representative.

When you run Platform Diagnostics, it produces two log files that contain verbose debug information:

- `/var/log/platform_check`
- `/var/log/platform_diag`

You can find test results in QKView and BIG-IP® iHealth®.

Supported platforms

These platforms support this version of the Platform Diagnostics utility.

Platform name	Platform ID
BIG-IP® i800 Series	C117
BIG-IP i2000 Series	C117
BIG-IP i4000 Series	C115
BIG-IP i5000 Series	C119
BIG-IP i7000 Series	C118
BIG-IP i10000 Series	C116
BIG-IP i11000 Series	C123
BIG-IP i15000 Series	D116
Herculon™ i2800	C120
Herculon i5800	C121
Herculon i10800	C122

Platform Diagnostics platform_check tests

You can run `platform_check` commands on an active system using one of these methods:

- By typing `platform_check <test-name>`.
- By typing `tmsh run util platform_check <test-name>`

Run all platform_check tests

You use the `platform_check` test without any options to run all tests.

1. Log in to the command line of the system using an account with root access.
2. Run all Platform Diagnostics `platform_check` tests.

   ```
   platform_check
   ```

If the output is `Overall Platform Health: PASS`, the platform passed all tests. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check sensors

You can use the `platform_check sensors` test to check the system, power supply units, and fan tray sensor values while the system is in production.

Note: *Supported only on i5000/i7000/i10000/i11000 Series platforms.*

1. Log in to the command line of the system using an account with root access.
2. Check the sensor values to see if any are outside of specified limits.

   ```
   platform_check sensors
   ```

If the output is `PASS`, the sensor values are within acceptable limits. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check devices on the PCI bus

You can use the `platform_check pci` test to check that expected devices on the PCI bus are present, and whether the width or speed is not what is expected, while the system is in production.

1. Log in to the command line of the system using an account with root access.
2. Check the integrity of the PCI devices installed in the system.

   ```
   platform_check pci
   ```

If the output is `PASS`, the PCI devices passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check Always-On Management (AOM)

You can use the `platform_check aom` test to check for Always-On Management (AOM) errors while the system is in production.

Note: *Supported only on i5000/i7000/i10000/i11000 Series platforms.*

1. Log in to the command line of the system using an account with root access.
2. Run the check to see if there are any AOM errors.

   ```
   platform_check aom
   ```

If the output is `PASS`, the AOM passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check the System Event Log

You use the `platform_check sel` test to check the System Event Log (SEL) for entries with a problematic security level while the system is in production.

Note: *Supported only on i5000/i7000/i10000/i11000 Series platforms.*

1. Log in to the command line of the system using an account with root access.
2. Run the check to see if there are any entries in the SEL with a problematic security level.

   ```
   platform_check sel
   ```

If the output is `PASS`, the SEL passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests. You can review the SEL logs in `/var/log`.

Check the storage drive

You can use the `platform_check drive` test to verify the SMART status of all SMART-capable storage drives installed in the system while the system is in production.

1. Log in to the command line of the system using an account with root access.
2. Examine the integrity of the storage drive installed in the system.

   ```
   platform_check drive
   ```

If the output is `PASS`, the storage drive passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check memory

You can use the `platform_check memory` test to check the memory while the system is in production.

Note: *Supported only on i5000/i7000/i10000/i11000 Series platforms.*

1. Log in to the command line of the system using an account with root access.
2. Verify the memory installed in the system..

   ```
   platform_check memory
   ```

If the output is `PASS`, the memory passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Platform Diagnostics platform_diag tests

You can run `platform_diag` commands on your system using one of these methods:

- Run all tests by typing `platform_diag`
- Run a specific test by typing `platform_diag <test-name>`

Warning: *You should not run these tests on an active system, since these tests stop system daemons from using `bigstart stop`. This stops traffic to the system and might disable some network interfaces.*

Run all platform_diag tests

You can use the `platform_diag` test without any options to run all tests.

1. Log in to the command line of the system using an account with root access.
2. Run all Platform Diagnostics `platform_diag` tests.

   ```
   platform_diag
   ```

If the output is `Overall Platform Health: PASS`, the platform passed all tests. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check SSL and compression

You use the `platform_diag hwaccel` test to check the hardware SSL and compression accelerators installed in the system.

Warning: *This test stops system daemons using `bigstart stop`, stops traffic to the system, and might disable some network interfaces.*

1. Log in to the command line of the system using an account with root access.
2. Check the integrity of the SSL and compression accelerator hardware installed in the system.

   ```
   platform_diag hwaccel
   ```

   Note: *This command could take a while to complete. You can run `bigstart status` to see the status of each of the default services. For more information on the `bigstart` command, see the `bigstart` manpage.*

If the output is `PASS`, the SSL and compression hardware passed the test. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

Check the packetpath

You can use the `platform_diag packetpath` test to check the internal paths to test the Ethernet interfaces in the system, including between the front panel switch, HSBs, processors, and more.

Warning: *This test stops system daemons using `bigstart stop`, stops traffic to the system, and might disable some network interfaces.*

1. Log in to the command line of the system using an account with root access.
2. Check the integrity of the internal paths.

   ```
   platform_diag packetpath
   ```

   Note: *This command could take a while to complete. You can run `bigstart status` to see the status of each of the default services. For more information on the `bigstart` command, see the `bigstart` manpage.*

If the output is `PASS`, the internal packet path works as expected. If the output is `FAIL`, you should consider taking the system out of production to run the End-User Diagnostic (EUD) tests.

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Index