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Software Release Notes

Flex21™

FlexManager Software v2.1.8r00 Release

Release Date: 2006 Oct 31

These release notes describe features that have been added and changed, known issues, and instructions for downloading and upgrading your FlexManager software to v2.1.8r00.

This is a GA release. Known issues are listed in these release notes. We appreciate any feedback you have on this release. Please use our standard support channel at http://support.ccpu.com for any issues, questions, or feedback so that we can track your request properly.

Please note that this release is not backwards compatible with v1.0.3r00 or previous releases. If you are upgrading from such a release, please contact CCPU support in this case. If you are upgrading from release v2.0.0r00 or later version, please follow the upgrade procedure shown in these release notes in section 6.

Features Added in v2.1.8r00

- **None.**

Features Changed in v2.1.8r00

- **None.**

Hardware/Software Dependencies

- FlexManager software v2.1.8r00 includes a code upgrade for the FlexMicro firmware. The current release version of FlexMicro firmware is v2.1.4r00. If your FlexMicros are running a prior version, please upgrade them to v2.1.4r00, as described in section “Upgrading FlexMicros”.
- FlexManager software v2.1.8r00 does not include a code upgrade for the FlexMicro bootloader. The current release version of FlexMicro bootloader is v2.1.3r00. If your FlexMicros are running a prior version, please upgrade them to v2.1.3r00, as described in section “Upgrading FlexMicros”.
- Some software features may not work on early beta hardware FlexManager cards. In particular, the ability for one FlexManager to reset the other is not functional. This affects the ability of the `sitecfg` command to modify IP addresses on the standby FlexManager from the active. If you are a participant in CCPU beta programs for Flex21 system, please contact CCPU technical support.

Fixed Issues

- **Serial port(DB9 console) lost character in FlexManager:** Some characters are lost in FlexManager when a blade dump out plenty of characters using serial channel through FlexPower(FlexMicro). Characters are lost on the I2C bus between the FlexManager and the FlexPower. **This issue has been fixed** (Zilla 10758). If error happens on I2C bus, FlexMicro will resend the message after a delay.

- **FlexManager lost sync under heavy traffic:** FlexManager may lose sync while heavy broadcast traffic on the LAN. **This issue has been fixed** (Zilla 10860). The broadcast flow control mechanism has been improved to avoid lost sync.
- **Unknown CPCI blade faults:** For some cPCI blade faults, there is no description or date/time stamp for them. All these faults are latched faults. The description information of the latched faults has been wrongly removed. **This issue has been fixed** (Zilla 10859). All these faults information has been restored.
- **FlexManager replication state "None" with only second network link up**: If fabric switch A has a problem(Not working, ex. admin down in switch), the replication state in none; namely, the replicationState goes to 'none'. The communication via second switch is OK. If the switch A is OK again the replicationState will be recovered and corrected. It was caused by the replication connection factory only attempted to replicate over the first link on switch A. **This issue has been fixed** (Zilla 10710). Now the replication connection factory attempts to replicate over both the first link and the second link.
- **Voltage faults in FlexPower:** When login in FlexManger, there were latched voltage faults in FlexPower, which almost happen in every chassis. The sampling timing of voltages is too early before the voltage output is stable. **This issue has been fixed** (Zilla 10137). A small delay was introduced during the powerup sequence to allow buses to settle before the powerup
- **Not all slots were turned on with the "on" command**: Can not turn on all slots by "on" command. The bulk 'on' or 'off' command to turn slots 2~20 on/off used to skip slots N+1~20 if it failed at slot N. **This issue has been fixed** (Zilla 10139). Now, it continues executing for slots N+1~20 even if it fails at slot N.

Known Issues

- When both flexManagers are under abnormal extremely heavy Unicast flow, after a synchronization action like "failover" or "sitecfg" change, two FlexManager may lose sync. (zilla 10946)
- Upon powering up the PDP, the LED hardware should be re-initialized. Also, if the data cable is unplugged from the PDP and then reinserted, the LED hardware should be re-initialized. However, in order for the FlexManager software to reinitialize the PDP LEDs, the cable must remain unplugged for at least 10 seconds. This allows the software to detect the absence of the PDP, it must reinitialize the LEDs .
- On repeated FRU insertions or while in split-brain mode, a FlexManager may lose the control to certain FRUs. This may also cause incorrect system operation. This issue is resulted from I2C bus errors under these scenarios. To resolve this problem, it is recommended that you reinsert the affected FRUs and the FlexManagers. (zilla 3813, 3851, 3781)
- As for this release, it is recommended that you do not use the USB port on a FlexManager. (zilla 2679)
- It is recommended that you do not change the FlexManager serial console baud rate (/system/fru/flexmgr/flexmgr[12]/serial/s0/config) for other FlexManager. If you change the serial console configuration of the standby FlexManager from the active FlexManager, it may not take effect. The default baud rate is 38400, 8N1, on *both* FlexManagers. Note that blade serial baud settings (/system/frus/flexcpci/flexcpci[1-21]/consoleConfig) function correctly. (zilla 3661)
- If CLI `connect` sessions are open during a managed failover, serial console access to those slots may be erratic from the new standby FlexManager. The workaround is to close all connected sessions before performing managed failover. This does not affect unmanaged failovers. (zilla 3777)
- You should not reconfigure FlexManager IP addresses via a CLI session running by telnet or ssh. If you need to reconfigure FlexManager IP addresses (by the 'sitecfg' CLI command, or by setting the IP address attributes directly and then setting the 'configure' attributes), it is recommended that you do so via a CLI session running over a serial console connection.
- Installing multi-megabyte script packages may lead to system instability during the FlexManager registry repair process (when the registry database on the standby FlexManager is resynchronized with the registry database on the active FlexManager). This is because script files are currently replicated in a way that may exhaust available memory, resulting in rolling watchdog resets.

- While upgrading to v2.1.3r00 or later from a release prior to v2.0.0r00 (i.e. v1.1.0r00, v1.0.3r00, or earlier versions), both FlexManagers must be first upgraded to v2.0.0r00 (as per instructions in the corresponding release notes), then upgraded to v2.1.3r00 or later (as per instructions provided below).
- In the IPMI library, the URL passed to ipfpSessnInit() doesn't contain the user:password portion as the reglib API does. Thus, IPFP security is not consistent with the reglib API level of security since the functions don't require a user/password. (See Zilla 3779.)
- The 'faults' command can be very CPU-intensive when run from the FlexManager CLI. Multiple invocations of this command in separate FlexManager CLI sessions have been found to prevent the watchdog timer from being serviced regularly, resulting in the FlexManager resetting. It is recommended that there be no more than three invocations of 'faults' on a given FlexManager at any time.
- Always use an absolute pathname on the server for both sitesave and siteload rather than relying on a relative pathname, since relative pathnames are not handled correctly in all cases.

Upgrading FlexManager Software from v2.0.0 and later to v2.1.8r00

v2.1.8r00 contains support for the optional PDP package. Therefore, the upgrade procedure contains extra steps (11 through 13). **These extra steps are needed only when using the PDP package**.

1. Put the all-v2.1.8r00.fm file on an HTTP or anonymous FTP server on the same network as the Flex21 system.

2. Connect to both the FlexManagers using serial consoles.

3. Ensure the FlexManagers are replicating and the registry is blessed.

4. On the standby FlexManager:

    a. Type "upgrade", select option 2 "Install firmware from URL", and specify the URL for the new firmware location as per the help instructions.

    b. When the new firmware has been downloaded and installed, you are prompted to reboot. Enter "y" to reboot the FlexManager.

5. Once the standby FlexManager comes up repeat step 4 to install FlexManager software version 2.1.8r00 and its bootloader on the alternate bank of flash RAM. This is necessary to ensure that the new bootloader is ultimately installed on bank zero, which is the bank from which the booloader is executed
6. Login to the other FlexManager (it should still be active) with the user name "admin"

    a. Wait for approximately two minutes until the hainfo command shows the FlexManagers replicating and the registry is blessed

    b. On the active FlexManager, type "failover"

7. Ensure the other FlexManager becomes active
8. On the Previously Active (Now Standby) FlexManager, repeat steps 4 and 5 to install FlexManager software version 2.1.8r00
9. Once the FlexManager comes up after the second reboot, if you wish to enable POST (power-on-self-test):

    a. Login with the user name "admin".
    b. At the FlexManager CLI prompt, type 'set /system/svc/flexuser/flexUser/post/postOnReboot on'
    c. Alternatively, to enable POST only once (only after the next reboot but not on subsequent reboots), type 'set /system/svc/flexuser/flexuser/post/postOnReboot once'.

d. To enable the DRAM pattern test (when postOnReboot is set to ‘on’ or ‘once’), type ‘set /system/svc/flexuser/flexuser/dramTestEnable 1’.

10. Wait until ‘hainfo’ on the FlexManager shows myRole = standby, replicationState = replicating.
11. Make sure that the FlexManagers are in active/standby replicating mode, by typing 'hainfo' on both.
12. On the active FlexManager CLI prompt, type 'set /system/svc/flexuser/flexUser/packages custom-pdp' to include support for the PDP package. On the standby, type 'get /system/svc/flexuser/flexUser/packages' and make sure it is set to 'custom-pdp'.
13. Reboot both FlexManagers. After they come up and are in active/standby replicating mode, verify that PDP attributes appear under /system/frus/custom/flexpdp/flexPdp directory.

Upgrading FlexMicros

Usually, when you follow the upgrade procedure for FlexManager software, the FlexMicros are (by design) not automatically upgraded. They continue running at the current revisions until instructed to upgrade. The latest revision of the FlexMicro firmware is v2.1.4r00 while the latest revision of the bootloader is v2.1.3r00. You can check the current revision of their firmware and bootloader using the `getrevs` command. You can use the `setrevs` command to upgrade the FlexMicro firmware and/or bootloader for all FlexMicros (ex., ‘setrevs boot v2.1.3r00 firm v2.1.4r00’).