

Release Notes
switchUp 24+2R
Firmware Revision v3.1.1r00
Release Date: 2005 February 25

V3.1.1r00

Features Added Since V3.1.0r01

IP Address is retained during firmware upgrade.

Features Changed

None

Hardware/Software Dependencies

None

Upgrading the Firmware

No Change. Customers with a MOP (Method of Procedure) to upgrade to v3.0.8r00 should use the same procedure. Other customers should contact CCPU for assistance with the development of such a MOP.

All firmware files are provided and should be uploaded to complete the upgrade procedure.

Fixed Issues

| | |
|--------------|---|
| ccpu00055054 | 24+2 ESW: Setting a loaded port to enable/disable causes that port to stop transmitting traffic |
| ccpu00055104 | 24+2 Menu item should be unprotected. |
| ccpu00055106 | 24+2 Menu item 'Remote HTTP Login' not removed as planned |
| ccpu00055107 | 24+2 ESW: Traps are not being generated - linkdown, linkup, warmstart, coldstart, auth... |
| ccpu00055109 | 24+2 Needs method of retaining IP address across uploads |
| ccpu00055110 | 24+2 ESW: Link light turns off after starting IXIA traffic generator |
| ccpu00055111 | 24+2 ESW: Learning sometimes does not happen when flow control is turned on |
| ccpu00055113 | 24+2 Administratively disabling a GB port permanently disables it. |
| ccpu00055160 | RSTP and Trunking are incompatible |
| ccpu00055168 | SNMP commanded reset never returns success |
| ccpu00055392 | 24+2 ESW: Create history of congestion control value |
| ccpu00055406 | 24+2 ESW: Stretch Menu under Basic Management for easy scripting |
| ccpu00055356 | 24+2 ESW: SNMP Upload prevents user from uploading -boot- file |

Known Issues

ccpu00054553 24+2 Can wedge switch memory such than only a slow power cycle will fix

This only occurs during a switch crash. This is not a cause of a crash but may be the result. Has not been seen in testing v3.1.1r00 (or in testing v3.1.0r01). This does not affect stability of switch.

ccpu00054934 24+2 Operator Interface freezes after several hours of use

This only occurs during stress of the operator interface via the serial port at the same time that multiple RSTP failovers are occurring. Other than the serial port menu being locked the switch continues normal operation (RSTP is correct) and telnet sessions to the switch are unaffected. Without extreme stress from broadcast packets to the CPU the operator interface operates correctly and does not freeze.

ccpu00055050 24+2 ESW: Menu causes DTLB miss after uploading the -cfg- image which resets the switch

Please see the comments under ccpu00055896.

ccpu00055051 24+2 ESW: Walking the MIB returns generic error

Returned OID from GetNext incorrect in Vertex MIB. Will only affect customers walking the MIB. Normal get and set operations are unaffected.

ccpu00055159 RSTP - difference between backup and alternate ports not recognized

Only provided for rapid transition when using multiple connections to a non-point to point network (hub). No CCPU customer currently uses this environment. Does not affect switch stability or failover times for point-to-point (full duplex) connections.

ccpu00055161 24+2 RSTP menu display exhibits irregular timing

RSTP failover performance is stable at 1 to 1.5 seconds for typical network configurations. RSTP menu display sometimes shows incorrect topology change counter. This is a display issue only and in no way affects the operation of RSTP.

ccpu00055192 24+2 ESW: Reset exception occurred while setting a loaded port to disable

This has only been observed once during testing. Because it was initiated by operator action, it does not affect normal switch operation.

ccpu00055817 24+2 ESW: Setting MAC learning to enable/disable through the serial console cause the switch to reset

This has only been observed once during testing. Because it was initiated by operator action, it does not affect normal switch operation.

ccpu00055835 24+2 ESW: Unicast line rate traffic makes CPU slow in responding to pings

Intermittent ping timeouts from a heavily loaded switch are not necessarily indicative of connectivity failure. Other methods must be used to further test line robustness.

ccpu00055837 24+2 ESW: Port trunking menu allows more ports to be selected even though ports 1 to 12 are highlighted

The switch does not enforce trunking configuration via the operator interface. Follow the description specified in the user manual.

ccpu00055852 24+2 ESW: Multiple trunk confuses switch

External network failures can apparently cause trunking to also fail. If the trunking is employed and one of the trunked lines fails, the switch should be examined to make sure it is operating properly. If necessary, reboot the switch. Note, the switch continues to operate properly if the failed link is NOT restored to service. The problem occurs when the failed link is restored. This is under investigation.

ccpu00055888 24+2 ESW: Toggling MAC LEARNING LIMIT causes switch to prevent unicast traffic from being switched.

The failure has only been observed rarely and only occurs when adjusting the MAC learning limit on a heavily loaded switch. It is recommended that changes be made during a maintenance window and not in a network that is in use carrying critical traffic.

ccpu00055896 24+2 Sometimes automatically reboots at end of SW upgrade

The switch must be rebooted at the end of the upgrade process in order for the new firmware to become operational. Sometimes a switch will automatically reboot after the firmware has been installed. Since this is a required step anyway, no harm is done. There have been no problems of any sort correlated to switches exhibiting this behavior.

ccpu00055901 24+2 ESW: CoS/QoS is not configurable through the menu

Switch operation is not correctly described in the user manual. The manual will be corrected. CoS/QoS are based on the VLANTAG.

ccpu00055992 24+2 ESW: Protocol migration of ports can not be changed

Switch behavior cannot be modified. The manual and corresponding displays will be corrected.

V3.1.0r01

Features Added Since 3.0.8r00

User control of swap and ok to pull LED now possible both from menu and SNMP.

Features Changed

Boot image upgrade switch no longer asks for confirmation. This is to allow for future upgrade via SNMP. Customers with scripts expecting the "CoContinue" prompt will need to be modified.

Hardware/Software Dependencies

None

Upgrading the Firmware

No Change. Customers with a MOP (Method of Procedure) to upgrade to v3.0.8r00 should use the same procedure. Other customers should contact CCPU for assistance with the development of such a MOP.

All firmware files are provided and should be uploaded to complete the upgrade procedure.

Fixed Issues

ccpu00049640 24+2 RST Alpha image freezes GUI when changing RST
ccpu00050745 24+2 ESW: Query the RSR register to verify switch reboot cause
ccpu00053785 24+2 ESW: Switch would lock up and not pass any traffic
ccpu00053787 24+2 ESW: Switch Reset while running Spatial Script
ccpu00053788 24+2 ESW: RSTP causes memory leak
ccpu00053801 24+2 ESW: menu lock up with switch lock up with ACT and LINK problem
ccpu00053829 24+2 ESW: Extreme test causes a switch to be unresponsive to pings and telnet

ccpu00053911 Switches formed ethernet loop when test was stopped
ccpu00053912 RSTP rebalance stops responding to menu driven priority changes
ccpu00053930 RSTP Time Since last reconfig does not update when root node changes
ccpu00054260 24+2 ESW: Upgrading from v3.1.0a07 to v3.1.0a08 causes the switch to lock up - forms a loop
ccpu00054268 24+2 ESW: The menu hang and the ping stopped while testing v3.1.0a08 image
ccpu00054330 24+2 ESW: Stability testing on v3.1.0a09
ccpu00054331 24+2 ESW: After uploading the -boot- file and resetting the switch, the banner version number does not match the file version
ccpu00054804 24+2 forms permanant loops during RSTP failover
ccpu00054807 Boot upgrade precludes upgrade via SNMP
ccpu00054856 24+2 ESW: RSTP does not revert to high priority path after problem clears
ccpu00054861 24+2 ESW - 5 switches in a ring become locked in an event storm
ccpu00054862 24+2 ESM: RSTP Time Since last reconfig does not update when root node change
ccpu00054863 24+2 ESM: Recoverable Packet Storm & RSTP
ccpu00055103 24+2 Link Light stuck on (3.10r00)

Known Issues

ccpu00054553 24+2 Can wedge switch memory such than only a slow power cycle will fix
This only occurs during a switch crash. This is not a cause of a crash but may be the result. Has not been seen in testing v3.1.0r01. This does not affect stability of switch.

ccpu00054934 24+2 Operator Interface freezes after several hours of use
This only occurs during stress of the operator interface via the serial port at the same time that multiple RSTP failovers are occurring. Other than the serial port menu being locked the switch continues normal operation (RSTP is correct) and telnet sessions to the switch are unaffected. Without extreme stress from broadcast packets to the CPU the operator interface operates correctly and does not freeze.

ccpu00055050 24+2 ESW: Menu causes DTLB miss after uploading the -cfg- image which resets the switch
This occurs extremely infrequently during the upgrade procedure only. It has never been seen on a switch that was not being upgraded. Seen twice only during testing upgrade/downgrade procedures. If the upgrade is continued from the point of the failure the upgrade will still complete successfully. This was last seen in an upgrade from v3.0.8r00 to v3.1.0r01 and as such would be an artifact of v3.0.8r00.

ccpu00055051 24+2 ESW: Walking the MIB returns generic error
Returned OID from GetNext incorrect in Vertex MIB. Will only affect customers walking the MIB. Normal get and set operations are unaffected.

ccpu00055054 24+2 ESW: Setting a loaded port to enable/disable causes that port to stop transmitting traffic
If a port is under heavy load, administratively disabling and re-enabling a port can cause that port to stop transmitting. Do not use the administrative port state on the basic menu to control the port. This was only seen at 148,800 frames/sec with flow control enabled on a 10/100 port. (see ccpu0005111)

ccpu00055106 24+2 Menu item 'Remote HTTP Login' not removed as planned
Menu item displays but is otherwise inoperative.

ccpu00055107 24+2 ESW: Traps are not being generated - linkdown, linkup, warmstart, coldstart, auth...
This will only affect customers using SNMP trap functionality.

ccpu00055111 24+2 ESW: Learning sometimes does not happen when flow control is turned on
This has only been observed on a maximally loaded port. On a port with expected heavy load avoid the use of flow control.

ccpu00055113 24+2 Administratively disabling a GB port permanently disables it.
Do not use the administrative port state on the basic menu to control the port.

ccpu00055159 RSTP - difference between backup and alternate ports not recognized
Only provided for rapid transition when using multiple connections to a non-point to point network (hub). No CCPU customer currently uses this environment. Does not affect switch stability or failover times for point-to-point (full duplex) connections.

ccpu00055160 RSTP and Trunking are incompatible
Enabling both RSTP and trunking will cause Ethernet loops to form. This was an adverse side effect of the recent RSTP improvements and will be fixed shortly in a patch release.

ccpu00055161 24+2 RSTP menu display exhibits irregular timing
RSTP failover performance is stable at 1 to 1.5 seconds. RSTP menu display sometimes shows incorrect topology change counter. This is a display issue only and in no way affects the operation of RSTP.

ccpu00055168 SNMP commanded reset never returns success
Reset occurs before acknowledgement PDU can be transmitted. This only affects the case where SNMP is in use and a reset is asserted using SNMP.

V3.0.8r00

Features Added Since 3.0.1r00

None

Features Changed

None

Hardware/Software Dependencies

None

Upgrading the Firmware

No Change

Fixed Issues

ccpu00051028 - Some PHY devices have incorrect link status. Link presence not detected.
Tracked down to incorrectly initialized PHY reset line. Fixed GPIO pin selection on MPC850 control processor.

V3.0.1r00

Features Added Since 2.0.1r00

- Rapid Spanning Tree functionality compatible with IEEE 802.3w is now available through the Advanced Management -> Rapid Spanning Tree menu.
 - The switch will default to Rapid Spanning Tree Protocol, provided other switches on that network are also using Rapid Spanning Tree.
 - Proper operation and minimum convergence time for RSTP are dependent on having correct settings for Edge ports, Point to Point ports, Path Costs, and Port Priorities under the appropriate submenus.
 - To force a switch to use only the original Spanning Tree Protocol, change the STP Version to “STP Compatible” under the Spanning Tree Protocol Configuration submenu.
 - For more information on Rapid Spanning Tree operation, configuration, and limitations, please see the IEEE 802.3w and IEEE 802.1d standards documents.
 - Notes:
 1. Pulling the RSTP root switch to simulate switch failure will result in packet delays of up to 20 seconds. The MAC address of the root switch can be found in the Spanning Tree Protocol Configurations submenu under “Designated Root.”
 2. On switch insertion and RSTP reconvergence, random packet delays on the order of 5-10 seconds are observed approximately 10% of the time.
 3. On switch uplink cable pulls affecting the RSTP root node and neighboring switches, random packet delays on the order of 5-10 seconds are observed approximately 10% of the time.
 4. To minimize reconvergence time you may also wish to force the speed and duplex of each port that is used to connect switches rather than waiting for autonegotiation to complete.

Features Changed

- None.

Hardware/Software Dependencies

- If using (Rapid) Spanning Tree Protocol on the 24+2 switch in a system with SPARCblade processors running upLink, please be sure the SPARCblade is running CCPUIIe v1.2.6r01 or later driver package and CCPULink v1.2.5r00 or later.

Upgrading the Firmware

When uploading the image v3-0-0a00 for the first time, please follow one of the two procedures below.

- **To upload the firmware to the switch using NetCCN**

Note: It is recommended that you use TeraTerm Pro during firmware upload.

1. Assign an IP address to the NetCCN. You need to access the NetCCN via telnet.
2. Using TeraTerm Pro, telnet to the NetCCN. From the NetCCN, connect to the switch by using the ‘connect’ command.
3. Log in and reboot the switch.
4. Stop the booting process by pressing the ESC key.
5. On the boot CLI prompt, type “upload” to start the upload process.
6. Once the upload process has started, send the file using the Kermit protocol.
7. Start uploading the boot file. The boot file must be the first image to be uploaded. Once the boot file has been uploaded, the boot image will reset the switch. Then, you can upload the rest of the files, i.e. dbg, sw, cfg, and swcfg. It is not mandatory to reboot the switch after each file upload.
8. After uploading all the files, type “boot” to boot the switch. This starts the booting process and loads the newly uploaded image.
9. The switch will now have the factory default settings. All previous user settings are now gone.

10. Once you see the login prompt, you have successfully installed the entire package. Log in using “admin” as username and “123456” as password.

- **To upload the firmware to the switch using a laptop/desktop**

1. Set the switch serial baud rate to 115200. This will allow you to upload the files faster. You will need to connect to the front serial console of the 24+2 Switch. Use a straight through serial cable.
2. Save the settings and reboot the switch.
3. Stop the booting process by pressing the ESC key.
4. On the boot CLI prompt, type “upload” to start the upload process.
5. Once the upload process has started, send the file using the Kermit protocol.
6. Start uploading the boot file. The boot file must be the first image to be uploaded. Once the boot file has been uploaded, the boot image will reset the switch. Then, you can upload the rest of the files, i.e. dbg, sw, cfg, and swcfg. It is not mandatory to reboot the switch after each file upload.
7. After uploading all the files, type “boot” to boot the switch. This starts the booting process and loads the newly uploaded image.
8. Connect at the serial console at 9600 since the swcfg file resets the switch’s settings to factory default.
9. Once you see the login prompt, you have successfully installed the entire package. Log in using “admin” as username and “123456” as password.

Fixed Issues

- ccpu00049640 – When the 24+2 ESW is running RSTP, changing RSTP values causes the GUI to freeze.

Known Issues

- Excessive traffic, such as in the case of a network loop, excessive broadcast traffic, etc., can cause interference with input to the serial console.