

CUSTOMER RELEASE NOTES

***X-Pedition Router – Patch Release
 System Firmware Version E8.1.0.6
 June, 2001***

INTRODUCTION:

This document provides specific information for version E8.1.0.6 of the system firmware for the X-Pedition router family of products.

It is recommended that one thoroughly review this release note prior to the installation or upgrade of this product.

NOTICE: A Patch Release contains a small set of specific feature corrections. It has not been subjected to the same standard of regression testing that a Generally Available Release would be. A Patch Release has been tested only to confirm that the specific feature set is functioning as expected. Unless otherwise stated in the Release Notes, a Patch Release has the same restrictions and limitations as the code upon which it was based. Please read *all* of the Release Notes pertaining to the Generally Available release prior to installation of any Patch in your production network. Please report any undocumented issues you find using the normal technical support procedures found in your product documentation.

FIRMWARE SPECIFICATION:

Before installing the E8.1.0.6 firmware, the Boot PROM image on the X-Pedition Router should be upgraded to Boot PROM version E3.0.0.0. Please refer to the SmartSwitch Router Getting Started Guide for instructions on loading the boot PROM software.

FIRMWARE CHANGES AND ENHANCEMENTS:

Issues Resolved in Version E8.1.0.6

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

Address Resolution Protocol (ARP)	I.D.
<p>If a very large amount of ARPs have been learned, the system may have a difficult time gathering enough memory to display the statistics required for the arp show all command. If an adequate amount of memory is not available, the X-Pedition will display memory usage statistics before going into a core dump with the following error messages:</p> <p style="padding-left: 40px;">%SYS-E-MEMUSESTATS, Printing memory stats because no memory available, requested 3217671 –</p> <p style="padding-left: 40px;">%SYS-F-HEAPEMPTY, insufficient heap memory</p> <p>NOTE: With E8.1.0.6, if the system memory is inadequate, the X-Pedition will display the total number of ARPs in the system. In addition, a message will inform the user that not enough free memory exists to display individual ARPs.</p>	01290

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Asynchronous Transfer Mode (ATM)	I.D.
The preference for a directly-connected point-to-point interface is incorrectly set to 110 rather than 0.	01267

Control Module (CM)	I.D.
<p>When using a system with dual Control Modules, a system crash on the Master CM may print only partial core information to the console. In this case, no data will be saved to the core file. This issue does not affect systems with only one Control Module.</p> <p>Note: This issue has been resolved; if a PCMCIA card is installed in the X-Pedition, a core file will always save to it. Although the system firmware can be downloaded from a tftp server rather than a PCMCIA card, a PCMCIA card must always be installed in order for a core file to be saved in the event of a system crash.</p>	01398

Remote Network Monitor Device (RMON)	I.D.
Attempting to configure RMON to use more memory than is available in the system will cause a core dump.	00821

System	I.D.
If a multicast frame encapsulating a unicast IP packet is received, the packet will be discarded. At this point, a new route entry has a reference count of one and will not be removed. This will cause a 256 byte memory leak in the system task, eventually resulting in a core dump.	01244

Telnet	I.D.
The inundation of the X-Pedition with multiple simultaneous Telnet connection requests will create a denial of service attack. Ultimately, all available resources will be consumed while attempting to handle these requests, forcing the system to reboot. Alternatively, the X-Pedition will core dump.	01081 01389

Issues Resolved in Version E8.1.0.5

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

Access Control List (ACL)	I.D.
Attempting to edit an ACL using acl-edit while in configuration mode may produce a core dump when the edited ACL is saved.	01198

Address Resolution Protocol (ARP)	I.D.
The system allows static ARP entries to be over-written by dynamic ARP entries.	00979

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Cabletron Discovery Protocol (CDP)	I.D.
<p>The CDP neighbor table may, in certain isolated cases, grow to consume all remaining memory on the X-Pedition.</p> <p>NOTE: With this release, the number of CDP neighbor entries is limited to 1000. This restricts the amount of memory that the neighbor table can consume to 384k bytes. If 1000 entries are exceeded, the following error message will appear:</p> <p style="padding-left: 40px;">%CDP-W-NEIGHBOR_EXCEED Neighbor not added table exceeded '1000' entries.</p>	01217
<p>If a Cisco router interface running CDP is shut down, it will send a Cisco Discovery packet with a TTL equal to 0, as well as 25 bytes of padded 0s. This packet causes the X-Pedition's CDP task to stay in an infinite loop, and the console session will freeze.</p>	01257
Cisco Discovery Protocol (CDP)	I.D.
<p>After receiving certain Cisco Discovery Protocol packets (Version 1 or Version 2), the execution of the CLI command cdp show neighbors may cause the X-Pedition to core dump.</p>	01276
<p>Other Cisco protocols (such as DISL) may be mistaken by the X-Pedition for Cisco Discovery Protocol. This creates the possibility of freezing the CDP process, as well as the X-Pedition, due to the reception of incorrect packets.</p>	01279
Command Line Interface (CLI)	I.D.
<p>Utilizing the "size" option on the Diagnostic mode command debug malloc health may result in various problems. The most common of these are pagination errors, as well as failure to limit the number of unresolved ARP addresses.</p>	01274
ER16	I.D.
<p>Removing a SmartTRUNK from a VLAN may cause the ER16 to core dump.</p>	01309 01335
Internet Control Message Protocol (ICMP)	I.D.
<p>Flow-aggregate rate-limiting policies do not rate-limit ICMP packets.</p>	01262
IP	I.D.
<p>The ip show helper-address command incorrectly displays IP helper-addresses for negated interfaces.</p>	00918
<p>Modification or removal of interfaces using ip-helper commands may cause a core dump at a later point in time.</p>	01182
PCMCIA	I.D.
<p>When a PCMCIA card contains more than one System Firmware image, entering the system image list command will produce a 16-byte memory leak.</p>	01275

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QoS	I.D.
Entering the qos show wred port <port_num> command in enable mode with a qos wred input command in the active configuration will cause the X-Pedition to crash.	01291

Rate-Limiting	I.D.
When applying a flow-aggregate rate-limiting policy to an interface with a module containing a SIPP ASIC, Layer-3 flows will time-out and be relearned every 30 seconds. This may cause 100% CPU utilization and freeze any involved ports.	01314

System	I.D.
<p>The X-Pedition freezes during boot-up under following conditions:</p> <ul style="list-style-type: none"> DNS server is configured. SYSLOG server is configured, and the server is specified using a host name (instead of host IP address). Thus, the X-Pedition needs to send a DNS request in order to resolve for the IP address. The interface to send DNS request is on a Gigabit port. The Gigabit port link is up, however the link is not connected to the DNS server. Thus, the router is not able to receive the DNS response. 	01096

VRRP	I.D.
<p>If both VRRP and DVMRP are running on an X-Pedition interface, and the user attempts to shut down DVMRP on the backup VRRP router, the following error messages will display:</p> <p>On the VRRP master router:</p> <pre>%IP-W-DUPLIP, duplicate IP address 172.26.90.1 sent from ethernet address: 00:00:5e:00:01:</pre> <p>On the VRRP backup router:</p> <pre>%IPRED-I-STATE, Mas Dwn, B->M, I/F vrrplnt, vid 1 %IPRED-I-STATE, Rcv HPP, M->B, I/F vrrplnt, vid 1</pre> <p>Restarting DVMRP on the VRRP router will not halt these error messages.</p>	01272

Issues Resolved in Version E8.1.0.4

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

Address Resolution Protocol (ARP)	I.D.
<p>Unresolved ARP addresses may consume all of the X-Pedition's available memory, resulting in a reset without core dump. This is due to an issue introduced in firmware version E8.1.0.3.</p> <p>With the E8.1.0.4 release, the number of unresolved ARP addresses is limited to a maximum of 1000, and a minimum of 500. Whenever the upper limit is exceeded, the address list is cleared down to 75% of the maximum. This limit can be modified from Configuration mode, through the arp set max-unresolved command.</p>	01153

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ATM	I.D.
The system will attempt to process unsolicited Operations, Administration, and Maintenance (OAM) responses rather than discarding them. This causes the X-Pedition to core dump.	00954
Cisco Discovery Protocol (CDP)	I.D.
The reception of Cisco Discovery Protocol (CDP) packets produces a memory leak of 384 bytes per packet.	01199
Common Command Line Interface (CLI)	I.D.
The X-Pedition Common CLI does not enforce login and enable passwords.	01151
Internet Control Message Protocol (ICMP)	I.D.
The X-Pedition fails to generate ICMP redirect messages as it should. Subsequently, the router functions inefficiently, as packets may take more time moving through the network.	00927
Internet Group Management Protocol (IGMP)	I.D.
Using Layer-2 snooping may result in duplicate IGMP traffic streams.	01064
Network Address Translation (NAT)	I.D.
NAT may attempt to free a network buffer twice, causing a core dump.	01109 01177
System	I.D.
<p>If the X-Pedition is configured to log multiple messages, and the SYSLOG server is unreachable, the error log queue may over flow. This causes the error message "%ERR-E-SYSLOG_Q_SEND_FAIL, SysLog Queue send failed" to print repeatedly in a section of un-interruptible code, which in turn overloads the CPU. Because of this, the back-up Control Module will not receive heartbeats from the active Control Module, and the active Control Module will be shut down.</p> <p>With the E8.1.0.4 firmware release, the above error message will only print every 5 seconds when the error log queue is full, rather than printing continuously.</p>	01196
T-Series Modules	I.D.
<p>Prior to this release, T-Series Modules limited the number of VRRP virtual router IDs to 7. With this release, the full number of allowable virtual router IDs (1-255) may be specified.</p> <p>NOTE: When mixing T-Series and non T-Series ports on a VLAN, the original limitation still exists.</p>	01181

Issues Resolved in Version E8.1.0.3

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

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Address Resolution Protocol (ARP)	I.D.
Unresolved ARP addresses may consume all available netbufs, preventing further traffic forwarding.	01013 01029
After a spanning tree topology change, obsolete entries are not correctly removed from the ARP table.	01086

Layer-2	I.D.
<p>When port mirroring is enabled, some Layer-2 multicast packets are incorrectly forwarded to the first port on the monitor-port's module. This causes switches connected to this port to show unexpected Layer-2 behavior even after port-mirroring is disabled.</p> <p>The X-Pedition will also display the following warning, even after port-mirroring is disabled, in versions prior to E8.1.0.2:</p> <p style="padding-left: 40px;">%L2TM_W_STATION_MOVE MAC addresses are moving between port <port_name> and other port(s). Possible loop.</p>	00982

SmartTRUNK	I.D.
<p>Approximately 10 minutes after a SmartTRUNK with 2 or more Gigabit ports is declared as a trunk-port, the X-Pedition will crash with the following error message:</p> <p style="padding-left: 40px;">%L2TM-W-BAD_PORT request to perform an action on an invalid port (Port <port_id>; <port_name>)</p>	00956

System	I.D.
<p>Mbufs will attempt to copy all data into a single mbuf, thus overrunning the buffer and producing a memory corruption error when the mbuf is freed. This will, in turn, cause the X-Pedition to crash with the following error message:</p> <p style="padding-left: 40px;">%SYS-F-MEMCORRUPT memory block '0x81a7d0b8' has been corrupted</p>	00860
Attempting to copy network packets may produce a core dump.	00997 01006 01039
Due to a lack of available network memory, a core dump may occur in cases of heavy CPU utilization.	01045

VLAN	I.D.
If a trunk port belongs to a VLAN created with both bridged-protocols and a dec, AppleTalk, IPv6, or SNA VLAN, the Port VLAN Ids (PVIDs) may not be set correctly when changing the port to an access port.	01005

Issues Resolved in Version E8.1.0.2

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

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AppleTalk	I.D.
The copy startup to active and copy startup to scratchpad CLI commands do not copy AppleTalk configuration commands when performed. They will, however, include all Non-AppleTalk configuration commands.	00696
If an ACL is attached to an AppleTalk interface, and the ARE module is hot-swapped out and back in, the interface create appletalk command will not execute successfully. Attempting to reenter the command will produce the following error message: %INTERFACE-E-EXISTS, Interface xxx has already been created. Please use another name for the interface.	00808
After negating an ACL applied to an AppleTalk interface, system information displayed on the console will begin to scroll off-screen before the user has the opportunity to read it.	00935
The user cannot negate an AppleTalk ACL after the ARE blade is hot-swapped out and back in again. Upon attempting to do so, the following error message may appear: %CLI-E-FAILED, Execution failed for "no acl 808 deny appletalk zone X" %ERR-E-IVARGCNT, invalid argument count for error 'ACL-E-NATINFO'	00937

Advanced Routing Engine (ARE)	I.D.
If an ARE module is configured, the copy startup to active and copy startup to scratchpad commands produce unusual errors. After entering either of these commands, the user will be unable to hot-swap-out the ARE module. In addition, performing the copy startup to scratchpad command erases all AppleTalk configuration commands unless the user has entered a save active command before entering "are-config" mode.	00810

ATM	I.D.
When the user enters the port set at.## transmit-clock-source loop command for an APHY-67 module (T3/DS3 ATM Interface), the clocking remains in the "local" (default) mode, rather than being placed into "loop" mode.	00842

Cabletron Discovery Protocol (CDP)	I.D.
In CDP versions prior to version 6, certain CDP packets will cause the X-Pedition to core dump when CDP is enabled or auto-enabled (default).	00941

Command Line Interface (CLI)	I.D.
When a valid unicast address is added to an interface (as in the example below), the CLI responds with the following error message: %CLI-E-BADUNIADDR, Unicast address required: XX.XX.XX.X/XX Example: interface create ip test address-netmask 212.131.29.127/25 port gi.2.3 In addition, the system will not allow the new IP address to be added to the interface, despite the fact that it is valid.	00952

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Dynamic Host Configuration Protocol (DHCP)	I.D.
The user may encounter a packet error which prevents the system from receiving a DHCP address.	00861
DVMRP	I.D.
DVMRP may not restart correctly when the user executes the copy startup to active command.	00936
ER16	I.D.
When using 4-port GBIC Modules on an ER16, the user may encounter spurious interrupts from the module when a faulty cable exists and/or the GBIC is in use.	00864
Given the following arrangement on an ER16: <ul style="list-style-type: none"> • 4 SmartTRUNKs configured st.1 through st. 4 • 8-port Gigabit module in Slot 1 • 4-port Gigabit module in Slot 3 When the user attempts to create a fifth SmartTRUNK through the use of the vlan make trunk-port command the ER16 will begin a continuous core dump.	00925
GSX-31 Gigabit Modules	I.D.
The user cannot disable auto-negotiation of flow control on a GSX-31 module through the CLI; the command will be rejected. Example: <pre>(config)# port set gi.7.1 auto-negotiation-flowctl off (config)# save ac %CLI-E-FAILED, Execution failed for "port set gi.7.1 auto-negotiation-flowctl off"</pre>	00823
Layer-2	I.D.
On the X-Pedition, a maximum number of 505 static-entry filters can be included in a configuration. If a 506 th filter is added, the line will be removed from the configuration file, however the router will also create an invalid Layer-2 table entry. This makes it impossible to use any ports attached to the now-removed "506 th filter" with any other filter.	00731 00792
Per VLAN Spanning Tree (PVST)	I.D.
When PVST is configured through the startup configuration file, multicast routing will fail.	00858
SNMP	I.D.
Using SNMP applications to access serviceStatusGroup variables may cause the X-Pedition to core dump.	00880
System	I.D.
Upon display of the following error message:	00800

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System	I.D.
%SYS-E-BADCHKSUM, Bad CRC in CPU received packet The X-Pedition will stop forwarding traffic.	00855 00910
Attempting to choose a new boot source using the system image choose command may result in a loss of memory.	00822
Backplane speed statistics are not visible in Enable mode. With this correction, the user can now view backplane speed statistics through the Enable mode command, system show hardware verbose .	00882

NOTE: Version E8.1.0.1 was released internally. It will not be represented here.

Issues Resolved in Version E8.0.1.8

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

Access Control List (ACL)	I.D.
When entering an ACL command including the keyword "log" (example: acl xyz deny ip any any log), and applying that ACL (in this case, "xyz") to an interface, the keyword "log" may be confused with "accounting". This will cause an acl <name> deny ip any any log rule to be placed at the top of the ACL list. Thus, even though the user enters a "deny" ACL, accounting will be activated rather than logging.	00774

Command Line Interface (CLI)	I.D.
When a valid unicast address is added to an interface (as in the example below), the CLI responds with the following error message: <pre>%CLI-E-BADUNIADDR, Unicast address required: XX.XX.XX.X/XX</pre> Example: interface create ip red address-netmask 20.20.20.20/21 port gi.2.3 interface add ip red address-netmask 20.20.87.0/21 In addition, the system will not allow the new IP address to be added to the interface, despite the fact that it is valid.	00558

Internet Control Maintenance Protocol (ICMP)	I.D.
When the X-Pedition receives a Jumbo Frame larger than the specified Maximum Transmission Unit (MTU), and the "do not fragment" bit is set, the system will not return a message indicating the packet will not be forwarded (for example: "Destination Unreachable: Fragmentation Required").	00720

MTRACE	I.D.
Using the mtrace command may cause the system to freeze; the Telnet session (or serial console) may freeze up, and the Telnet task, CONS2T, may register about 99% CPU usage.	00752

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Network Address Translation (NAT)	I.D.
When a Domain Name System (DNS) is configured on an inside NAT interface, the system will generate an incorrect User Datagram Protocol (UDP) checksum upon NAT translation of a query-response packet entering on the outside NAT interface. Subsequently, the DNS on the inside interface will not receive these packets from DNS servers configured on the outside NAT interface.	00795

OSPF	I.D.
Corruption of a route table entry when using OSPF multipath may cause a core dump. The defect is created by an invalid array of interface pointers inside the routing table data structure.	00809

System	I.D.
When Bootstrap Protocol (BOOTP) request packets flow through an X-Pedition, the system overwrites the Time To Live (TTL) value on these packets to 64, rather than decrementing it.	00711

Issues Resolved in Version E8.0.1.7

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

VRRP	I.D.
<p>Given the following arrangement:</p> <p style="padding-left: 20px;">PC - VRRP Slave - VRRP Master</p> <p>In certain configurations, when an ARP reply must go through the VRRP Slave to get to the VRRP Master, the Slave will update its own ARP cache; however it will not forward the reply on to the VRRP Master. In the diagram above, the VRRP Master will ARP for the PC and the PC will respond. The ARP reply, however, will go no further than the VRRP Slave. Because the VRRP Master never received the ARP reply, the connection between it and the PC will be lost.</p>	00791

Issues Resolved in Version E8.0.1.6

Because all of the issues in the following tables have been resolved, a statement with each issue declaring its resolution has not been included.

Class of Service (CoS)	I.D.
The Class of Service field in a Q-tagged packet is now preserved across a routed (Layer 3) interface. This requires a AA-series card (ASIC IPP 3.0 or higher), or a T-series card (SIPP 2.1 (3.0) or higher).	00783 00798

DVMRP	I.D.
DVMRP will sometimes modify Layer-3 entries without ensuring that it is safe to do so. This corrupts the Layer-3 tables, which will in turn create a core dump.	00793

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IP	I.D.
If IP reverse-flow is enabled, and broadcast packets are being received, the X-Pedition will core dump and reboot while building routing tables.	00715
NTP	I.D.
If an X-Pedition is configured with the wrong IP address for the NTP server, saving the active configuration and then repeatedly entering show configuration command may cause the X-Pedition to core dump.	00755
OSPF	I.D.
When the X-Pedition receives an OSPF Link State Advertisement larger than 1500 bytes (default MTU size), the LSA will undergo IP fragmentation and reassemble. When the system attempts to store this reassembled packet in the OSPF database, it will make a copy of the packet and attempt to insert this copy into a 1500 byte memory block. This exceeds its allocated memory, which in turn corrupts both the database and linked lists. This causes the X-Pedition to core dump and reboot.	00790

KNOWN RESTRICTIONS AND LIMITATIONS:

Command Line Interface (CLI)	I.D.
If one user is logged into an X-Pedition through the console port, and another via Telnet session, commented-out lines created in the first user's active configuration file while the second user executes a show command may not appear to the second user.	00399

Other restrictions and known issues can be found in the version E8.1.0.0 Release Notes.

GLOBAL SUPPORT:

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For information regarding the latest firmware available, recent release note revisions, or if you require additional assistance please visit the Enterasys Networks Support web site.