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CUSTOMER RELEASE NOTES

Vertical Horizon – Patch Release
VH-2402S and VH-2402S2
Firmware Version 2.05.25
June 16, 2005

INTRODUCTION:

Enterasys recommends that you thoroughly review this release note prior to installing or upgrading 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.

This release provides support for the Vertical Horizon VH-2402S 24-port 10/100 Ethernet switch and the new VH-2402S2 replacement unit. The VH-2402S/VH-2402S2 (formerly named the ELS100-S24TX2M) is a 24-port dual-speed, standalone, stackable or rack-mountable switch. The switch provides 24 10Base-T/100Base-TX ports, plus two rear-panel slots for optional slide-in 100Base-FX, 1000Base-SX or 1000Base-LX modules. One of the slots can also be used for an optional stacking module that allows you to attach up to seven switches to a 4 Gbps high-speed backplane.

The VH-2402S/VH-2402S2 switches can be used in a standalone configuration, or can be stacked up to seven high to form a single logical switch with up to 168, 10/100 Mbps ports. One optional Management Module, part number VH-SMGMT2, is required for configuring a standalone switch or an entire stack. The optional stacking Interconnect Module and Interconnect Cables are not included with the base unit and need to be ordered separately.

Management of the switch or stack is provided when an optional Management Module is installed. Management access is provided in-band via Telnet or SNMP, or out-of-band; via the serial console port interface either directly or through an attached modem. An embedded Web agent also provides management capability to any computer on the network via common HTTP browsers such as Netscape Navigator or Microsoft's Internet Explorer (both browsers should be Version 4.0 or above).

Local Console Management (LCM) allows you to monitor and configure the VH-2402S/VH-2402S2 from a VT-type terminal. LCM can be used to configure features such as SNMP community names and access rights, Port Enable/Disable, firmware downloads, and Device IP address as well as most other parameters. LCM can also provide statistical and diagnostic information about the entire device or an individual port.

Management of the switch or stack is password protected; the same password is used for LCM and for the Web browser interface. Prior to accessing the Management Module via a network connection you must configure a valid IP address, subnet mask, and in some cases a default gateway, using an out of band connection or the BootP protocol. The management option provides SNMP, RMON (4 groups: 1, 2, 3, 9), and Web management for system control and statistical monitoring.

FIRMWARE SPECIFICATION:

Status	Version No.	Type	Release Date
Current Version	2.05.25	Patch Release	6/16/05
Prior Version	2.05.23	Patch Release	4/29/04
Prior Version	2.05.19	Customer Release	11/21/03
Prior Version	2.05.09	Customer Release	5/14/2003
Prior Version	2.05.02.42	Customer Release	2/7/2003
Prior Version	2.05.02.31	Customer Patch	1/16/2003
Prior Version	2.05.02	Customer Release	9/12/2002
Prior Version	2.05.00.08	Customer Patch	7/24/2002
Prior Version	2.05.00	Customer Release	12/21/2002

HARDWARE COMPATIBILITY:

The ELS100-S24TX2M Broadcom PHY chip has changed from Rev. 5208 to 5208R. If you are currently using hardware Rev. "0F" (or higher), you must use firmware version 2.01.04.01 (or higher) on the ELS100- SMGMT module.

The VH-SMGMT2 module requires firmware release Version 02.05.02, or higher. The version of firmware must be installed on the module if the module is used in a VH-2402S2 or a VH-2402S base unit. If the VH-SMGMT module is used in the VH-2402 base unit it must be running version 02.05.02, or higher.

Note: This firmware requirement does not apply to the VH-STACK or VH-STACK2 card.

BOOTPROM COMPATIBILITY:

ALL

SUPPORTED FUNCTIONALITY:

Features	Support
802.1p - Traffic Management	Yes
802.1Q - VLAN tagging and identification (256 VLANs supported)	Yes
802.1D - Spanning Tree support	Yes
IGMPv1/v2 Snooping	Yes
Address Data Base Maintenance	Yes
Local Management via TELNET (four sessions)	Yes
RMON Groups 1,2,3,9	Yes
Runtime Address Discovery	Yes
Online BOOTP/TFTP	Yes
TFTP download from a host	Yes
Broadcast Suppression	Yes
Trunking	Yes
SNMPv1	Yes
Modem support	Yes
Imbedded HTTP Agent	Yes

Features	Support
Port Mirroring	Yes
Auto-Negotiation	Yes
Stacking	Yes
Redundant power support (option)	Yes
Configuration upload/download support	Yes
Port Security (MAC Locking)	Yes

INSTALLATION AND CONFIGURATION NOTES:

The VH-SMGMT and VH-SMGMT2 are shipped pre-configured with the latest version of firmware. If you would like to upgrade an existing VH-SMGMT or VH-SMGMT2 with this release, please follow the TFTP download instructions that are included with your firmware image upgrade kit. TFTP download instructions are also available on the Enterasys Networks Support web site at: http://www.enterasys.com/support/techtips/tk0020-9.html.

FIRMWARE CHANGES AND ENHANCEMENTS:

Current Patch Release: 2.05.25

The following **known issues** have been fixed in this release of firmware.

Resolved a security vulnerability in prior firmware versions. These firmware revisions contained an internal engineering password used to provide debug access. Knowledge of this password would allow unauthorized access to the switches' internal command line. It is recommended that customers upgrade to this revision
Debug level commands used for gathering information and making register changes are now restricted to the ADMIN login only.

Previous Firmware Release Information

The following known issues and enhancements were outlined in prior releases of firmware. Please refer to the specific release notes of the firmware release for additional information.

Prior Release: 2.05.23

The following **known issues** have been fixed in this release of firmware.

Resolved a condition where an HTTP packet with a source IP address the same as the switch IP address would cause the switch to stop responding.
Resolved a condition where a negative length HTTP packet would cause the switch to stop responding.
Resolved a condition where a high rate of HTTP frames would cause SNMP failure to the switch.
Resolved a condition where a "negotiate authorization frame" would cause the switch to stop responding.

Prior Release: 2.05.19

The following **enhancements** have been added in this release:

Added functionality to set the community name via SNMP using the Enterasys ct-container MIB. **Note**: The RO, RW, and SU communities must be different from each other. ▪ contROCommStr=1.3.6.1.4.1.52.4.1.1.9.5.1 ▪ contRWCommStr=1.3.6.1.4.1.52.4.1.1.9.5.2 ▪ contSUCommStr=1.3.6.1.4.1.52.4.1.1.9.5.3

Added functionality to support the addition of an SNMP Trap Manager's IP address via SNMP by implementing the Enterasys community MIB. **Note**: A maximum of 5 entries can be configured. ▪ communityName=1.3.6.1.4.1.52.1.52.2.1.1 ▪ communityTrap=1.3.6.1.4.1.52.1.52.2.1.2 ▪ communityIpAddr=1.3.6.1.4.1.52.1.52.2.1.3 ▪ communityIndex=1.3.6.1.4.1.52.1.52.2.1.4
Added functionality to support the download of runtime images and upload/download of configurations via SNMP by implementing the ctDownload MIB.
Changed the code to properly support resetting the Spanning Tree configuration BPDU to correctly reset the timer when a topology change occurs.
Changed the description of the "IfDescr" field.
Added the ability to clear the RMON statistics via CLI.
Changed the system descriptor (sysDescr) to reflect the Enterasys standard format.
Added functionality for displaying error message for duplicate community names.

Prior Release: 2.05.09.01

The following **enhancements** were added in the 2.05.09.01 firmware release:

The condition where the timer does not reset after a topology change has been corrected. The system will now reset the 'timesincelasttopologychange' timer after receiving a configuration BPDU with the topology bit flag set to 1.
The RMON counters are now retained after resetting them via the system console. This behavior is now consistent with SNMP and WebView.

Prior Release: 2.05.09

The following **enhancements** were added in the 2.05.09 firmware release:

The Logon screen has been updated to reflect the new corporate address.
The Network Configuration view now contains a parameter, "BOOTP-GET-IP", for the IP State field which can be enabled by the user. This will allow the unit to send BootP requests infinitely until an IP address is received.

The following **known issues** were fixed in the 2.05.09 firmware release:

Resolved an issue to address MAC address learning. It now works as expected when Port Security is enabled AND management is restricted to one VLAN.
Resolved an issue to prevent eavesdropping on stale buffer data. An SNMP trap attack filter was added and padding bytes on all management packets are cleared. Packets shorter than minimum Ethernet frame size are now padded with zeroes. This prevents potential security leakage.
Resolved an issue with the "ifName" OID. The "ifName" OID now displays [f/g]e .x. y where x is the unit number and y is the port number. "f" = fast Ethernet, "g" = gigabit Ethernet.
Resolved an issue to correct the "ifDescr" OID. It now displays the description of the port.

KNOWN RESTRICTIONS AND LIMITATIONS:

When a VLAN is set to “Not in Service” and there is an Egress Port assigned to the VLAN traffic with that VLAN tag, traffic is forwarded instead of being dropped. **Work-around**: Within the “Bridge Settings” View, change the “VLAN Learning” parameter to IVL mode. **Note**: This issue will occur with an agent Module in the same switch within the stack. A “Learning” Broadcast packet will cause this event to happen.
Due to a Chip Limitation, the VH-2402S does not support "Admit Only VLAN-tagged frames."
The Root Port Cost on a Trunk will change back to the Default Port Cost (i.e., 15) after a respan or a reboot of the VH-2402S/VH-2402S2.
Under high broadcast loads, the VH-2402S/VH-2402S2 implements internal mechanisms to limit broadcast and multicast traffic to the Management Agent. This filtering of traffic to the CPU may cause the CPU not to see the IGMP streams for a group for which no “join” messages have been received. The outcome of this event is flooding of the multicast stream until either a “Join” (or “Leave”) message is received or until the broadcast and multicast traffic is reduced to a small enough level that the Management Agent can process all of them.
The VH-2402S2 Filtering Database supports up to 8,000 entries compared to the VH-2402S Filtering Database which supports up to 12,000 entries due to internal chipset memory limitations. While the actual internal memory is slightly smaller in the new chip because of the sparse hashing mechanism used, it is often possible to have many more than 8000 table entries.
If a Static Router port is configured on a multi-port trunk (link aggregation group), it may not be saved following a reboot of the VH-2402S/VH-2402S2. **Note**: Static Router ports on other ports are not lost after a reboot. This issue will be fixed in a future release.
When VLANs are added in the Port Assignment VLAN Config View, they will not be saved following a reboot until the CPU Agent has had time to place them in NV-RAM. After configuring the Ports with VLANs, wait 5 minutes before rebooting the switch.
EMAN 3.0 Java Chassis Manager works properly, but at times it may not properly “draw” the VH-2402S2 Stack. **Work-around:** • Add the following line to the <install>/Resources/ChMgr.ini file under [ChMgrLayouts]: etsysOidDevVHx2402S2=7 • Add the enterasys-oids-mib to the EMAN 3.0 MIB database.
While a TFTP configuration upload is being done, an image download of new firmware cannot be done at the same time. The new firmware can be downloaded as soon as the TFTP configuration upload has finished.
When modifying Speed/Duplex and Flow Control parameters on more than 8 Ports within the Port Configuration View, only the Speed/Duplex values will be saved after clicking on <OK> or <APPLY>.

Other Known Issues and Restrictions can be found in the VH-2402S v02.05.00 Release Notes. Any problems other than those listed above should be reported to our Technical Support Staff.

ENTERASYS PRIVATE ENTERPRISE MIB SUPPORT:

Title	Version
ELS100.MIB	01.00.00

Enterasys Private Enterprise MIBs are available in ASN.1 format from the Enterasys web site at: http://www.Enterasys.com/support/mibs/. Indexed MIB documentation is also available.

COMPLIANCE SUPPORT:

Compliance Level	Compliant
Year 2000	Yes

Known Anomalies: None.

IEEE STANDARDS SUPPORT:

Standard	Title
IEEE 802.1D	Transparent Bridging Specifications (ISO/IEC 10038)
IEEE 802.1p	Traffic Class Expediting and Dynamic Multicast Filtering
IEEE 802.1Q	Virtual Bridged Local Area Networks
IEEE 802.2	Local Area Networks, Logical Link Control (LLC)
IEEE 802.3	CSMA/CD 9 (ISO/IEC 8802-3)
IEEE 802.3I	10Base-T (ISO/IEC 8802-3, clause 14)
IEEE 802.3u	100Base-TX (ISO/IEC 8802-3, clause 25)
IEEE 802.3u	100Base-FX (ISO/IEC 8802-3, clause 26)
IEEE 802.3x	Flow Control
IEEE 802.3z	1000Base-SX, 1000Base-LX

IETF STANDARDS MIB SUPPORT:

RFC No.	Title	Groups Supported
1157	Simple Network Management Protocol(SNMP)	
1213	MIB-II	System, Interfaces, IP, ICMP, UDP, Transmission (dot3), and SNMP
1493	Bridge MIB	Spanning Tree and various managed objects for bridges
1573	Interfaces Evolution MIB	MIB-II Interfaces Group extensions
1643	Ethernet-like	Various Ethernet specific aspects
1757	RMON MIB	Statistics, History, Alarm, and Event
2674	Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions	Groups in the P-BRIDGE MIB -- ---------- dot1dExtBase OBJECT IDENTIFIER ::= { pBridgeMIBObjects 1 } dot1dPriority OBJECT IDENTIFIER ::= { pBridgeMIBObjects 2 } Groups in the Q-BRIDGE MIB -- ---------- dot1qBase OBJECT IDENTIFIER ::= { qBridgeMIBObjects 1 } dot1qTp OBJECT IDENTIFIER ::= { qBridgeMIBObjects 2 } dot1qStatic OBJECT IDENTIFIER ::= { qBridgeMIBObjects 3 } dot1qVlan OBJECT IDENTIFIER ::= { qBridgeMIBObjects 4 }

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SNMP TRAP SUPPORT:

RFC No.	Title
RFC 1215	coldStart_trap warmStart_trap linkUp_trap authenticationFailure_trap egpNeighborLoss_trap
RFC 1493	ENTERPRISE dot1dBridge NewRoot 1 topologyChange 2
RFC 1573	SnmpTraps linkDown 3 LinkUp 4
RFC 1757	IETF RMON, ENTERPRISE rmon -- 1.3.6.1.2.1.16 risingAlarm 1 fallingAlarm 2

GLOBAL SUPPORT:

By Phone: (603) 332-9400
1-800-872-8440 (toll-free in U.S. and Canada)
For the Enterasys Networks Support toll-free number in your country:
http://www.enterasys.com/support/gtac-all.html

By Email: Support@enterasys.com

By Web: http://www.enterasys.com/support

By Fax: (603) 337-3075

By Mail: Enterasys Networks, Inc.
35 Industrial Way
P.O. Box 5005
Rochester, NH 03866

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