**digital**™

DIGITAL VNswitch 900 Series
Version 3.1
Release Notes
December 1998

As warranted, Cabletron changes the firmware of this device to make functional enhancements or to correct reported problems. These release notes identify enhancements and changes to the firmware that impact end-user operations. They also contain firmware and software requirements, and list updates in this release as well as known conditions and restrictions that apply to the operation of the modules.

The following example describes the firmware version number:

Version 1.1

Functional enhancement or problem corrected
Major functional enhancement
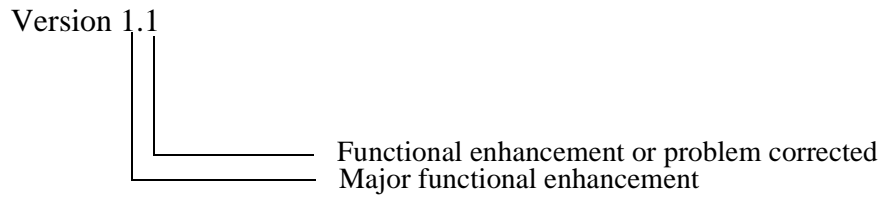
Note: The VNswitch product documentation is currently at Version 3.0. However, Version 3.0 product documentation, including these release notes, reflects the major functional release, Version 3.1.

Contents

Hardware and Firmware Support

VNswitch firmware Version 3.1, supports the following products:

- DVNEA (VNswitch 900EA)

- DVNEE (VNswitch 900EE)

- DVNEF* (VNswitch 900EF)

- DVNEX (VNswitch 900EX)

- DVNFA (VNswitch 900FA)

- DVNLL (VNswitch 900LL)

- DVNXA (VNswitch 900XA)

- DVNXX (VNswitch 900XX)

- DVNFF (VNswitch 900FF)

- DVNFX (VNswitch 900FX)

- DVNGV (VNswitch 900GV)

    * DVNEF-MM includes 12 10BaseT ports and 1 pair fixed ANSI MIC multimode fiber connectors
      DVNEF-MX includes 12 10BaseT ports and 1 MMI FDDI port

DIGITAL MultiSwitch 900 Support

For VNswitch operation in the DIGITAL MultiSwitch 900, we recommend:

- For the VNswitch 900GV, VNswitch 900EE, VNswitch 900EF, VNswitch 900EA, VNswitch 900EX, VNswitch 900XX, VNswitch 900LL, VNswitch 900FA, and the VNswitch 900XA modules, you must use DIGITAL MultiSwitch 900 firmware V5.2 or higher.

- For the VNswitch 900FF and VNswitch 900FX modules, you must use DIGITAL MultiSwitch 900 firmware V5.4 or higher.

clearVISN Support

To manage the VNswitch modules using the clearVISN application, we recommend:

- For the VNswitch 900EE, VNswitch 900EF, VNswitch 900EA, VNswitch 900EX and the VNswitch 900XX modules, you must use clearVISN V2.0 or higher.

- For the VNswitch 900LL, VNswitch 900FA, and the VNswitch 900XA modules, you must use clearVISN V2.1 or higher.

- For the VNswitch 900FF and VNswitch 900FX modules, you must use clearVISN V2.2 or higher.

- For the VNswitch 900GV, you must use clearVISN V3.0 or higher.

New for This Release

This section describes release specifics for the new VNswitch 900GV product.

Release Version 3.1 of the VNswitch firmware is the first release to support the new hardware DVNGV (VNswitch 900GV). The 900GV supports one Gigabit uplink and one Multiswitch 900 VNbus connection. The 900GV supports Gigabit Ethernet Single-Mode Fiber (SMF) and Gigabit Ethernet Multi-Mode Fiber (MMF) via an industry standard Gigabit Interface Converter (GBIC).

Configuration Management for the Gigabit Ethernet uplink is similar to other Ethernet interfaces on the VNswitch. All the CLI commands that are documented in the Switch Management Guide that apply to Fast Ethernet interfaces, also apply to the Gigabit Uplink. Web management is also consistent between regular 10MB/100Mb Ethernet interfaces and the Gigabit Ethernet interface. RMON counters and MIB-support for RMON is also consistent. There are however some important differences for Gigabit:

- Gigabit Interface Converter (GBIC): The 900 GV uses a GBIC removable connector. The proper GBIC must be inserted for the Gigabit interface to work properly. Please see the "Installation and Configuration" manual Part Number: EK-DVNGV-IN.A01 for a detailed description for proper installation and the different GBICs supported.

- Support for 802.3 Pause Control Frames. The 900GV supports the standard based 802.3 Pause control frames and the default configuration is to both transmit Pause-frames and honor the reception of Pause-frames. While these default values can be changed, it is recommended that the default values NOT be changed or serious performance degradation may occur. In Addition, the performance of the 900GV might be significantly degraded if the remote node on the Gigabit Ethernet fiber does not fully support the reception of 802.3 pause frames.

- Full-duplex/speed: The 900GV does not allow the default value of full-duplex to be changed to half-duplex. Also, the speed may not be changed from the default 1000Mbit speed.

- RMON: The RMON-MIB, CLI, and the RMON Web-management for the 900GV is consistent with other VNswitch RMON interfaces. However, it should be noted that the mib/CLI/WEB are all based on counters that 'wrap' at 2**32. At 1000Mbit/sec speeds, these counters (particularly for octet counters) can wrap quickly. The '1800 sec' utilization values that are displayed with the following command will most likely be invalid:

  Monitor> interface statistics 1

  The time utilization is calculated from the RMON history table. The interval time can be modified using the WEB-interface to something more reasonable, or this entry can just be deleted altogether.

- The Gigabit Ethernet port can NOT be redirected to any backplane channels.

Features in This Release

VNswitch V3.1 firmware supports web-based management of VNswitch modules. The following features are included in this release. Refer to *DIGITAL VNswitch 900 Series Switch Management* for further information.

- **Web-Based Management**
  The VNswitch module, with V3.0 firmware, includes a built-in web server and management application that allows you to configure and monitor the module over the Internet. For web access you must first assign an IP address to the module using the CLI. You can use either of the following web browsers: Netscape V4.0 or Internet Explorer V4.0. Following are the web management features supported in this release:

  — **System**
  General
  Reset
  Error Log (Crash Log and Diagnostic Log)
  Memory
  IP Host
  Upgrade Device
  Save/Restore Configuration
  SNMP (Communities, RMON- Statistics Configuration, RMON - History Configuration)

  — **Interfaces**
  Configuration
  Packet Counters
  Error Counters

  — **Bridging**
  General
  By Port
  Spanning Tree by VSD
  Address Filters
  Protocol Filters
  Forward Bridging Database
  VSD Configuration General

  — **IP Routing**
  General
  Enable/Disable Routing
  Addresses
  IP Counters
  Static Routers
  Access Control
  Filtered Routes
  Enhanced Proxy ARP

  — **Telnet to Module**

- **BGP4**
  This feature is an implementation of the latest version of the Border Gateway Protocol (BGP), BPG4, which is defined in RFC 1654. BGP is an exterior gateway routing protocol that allows the exchange of network reachability information among autonomous systems (AS). Routing information within each AS is shared using interior gateway protocols, such as RIP, OSPF, or Integrated IS-IS. For more information, refer to *DIGITAL VNswitch 900 Series Router Management*.

- **T3/E3 and T1/E1 ATM ModPHYs**
  This release supports T3/E3 and T1/E1 ModPHYs for VNswitch ATM modules.

- **New Command Line Interface (CLI) Functionality**

  — **New ATM physical (ATM Phy Config>) commands for T3/E3 and T1/E1 ModPHY support**
    These commands include ENABLE/DISABLE commands, LIST commands, and SET commands.

  — **New counters for the ATM Phy>LIST STATUS command:**

    - Net up count

    - Net down count

    - Data direct and Bridge Tunnel VC count

    - Number of times the PHY went into loopback because the PHY was down

  — **Additional ATM enhancements**
    These enhancements include new LIST SUMMARY commands for ATM> and ATM Config> and improvements for the Config>CLEAR ATM command.

  — **Command Line Editing and Command Line Completion**
    This release allows you to edit commands on the command line, recall previously entered commands, and complete partially entered commands automatically.

- **Duplicate MAC**
  This release of the firmware supports existence of duplicate MAC addresses on separate VSDs.

- **RMON History and Statistics**
  RMON History and Statistics are supported for Ethernet ports, 10BaseT and 10BaseFL, on VNswitch 900E* and VNswitch 900LL modules. (E* includes the VNswitch 900EA, 900EE, 900EF, and the 900EX modules.)

- **Byte Counters (except the VNswitch 900GV)**
  This release of the firmware adds support for byte counters ifInOctets and ifOutOctets (MIB-2).

- **Year 2000 Compliance**
  This release of the firmware is Year 2000 compliant.

Known Considerations and Restrictions

Read this section for special considerations and restrictions regarding the operation of your VNswitch 900 modules.

ATM

This section lists ATM known restrictions and conditions specific to this release.

Setting Line Attenuation and Transmission Power For DS3 Interfaces

The *set line-building-out* command, which sets the line attenuation, and the s*et transmission-power* command are specific to the modPMD implementations. They are required for the E3/T3 physical media specifications.

It is strongly recommended that you use the factory default for the transmission power. If the transmission power is not properly set, the physical media will not conform to the T3 or E3 specifications. The factory default for T3 lines is low, and for E3 lines, the default is high.

ATMswitch 900F Interoperability Problems

To configure the VNswitch 900 ATM modules in a DIGITAL MultiSwitch 900 chassis for LAN interconnect operations with the DIGITAL ATMswitch 900F, follow these special instructions:

- Use ATMswitch 900, Version 1.2, firmware.

- Configure the ATMswitch 900 to operate with UNI V3.1 signaling, using the command:

      UNI -v31 -p<port #> -s<slot #>

If you have two ATMswitch 900F modules in your MultiSwitch 900 chassis and you want to use two ports from each to connect to four VNswitch 900 ATM modules on the backplane, you must use two different sets of ports from each ATMswitch 900F module. For example, if you want to use ports 1 and 3 in the first ATMswitch 900F module, then you must use ports 2 and 4 in the second ATMswitch 900F module.

If you choose the same port numbers in both ATMswitch 900F modules, only the first instance of that port number is available for a connection. Once you have an ATMswitch 900F port 1 connected to another module (VNswitch 900EA), that signal set is in use. The second instance of an ATMswitch 900F port 1 connection to another VNswitch 900 ATM module cannot be completed because that signal set is already in use on the backplane.

Nonsupport of Nonzero VP Values in ATM

Nonzero Virtual Path (VP) values are not supported for ATM in this release.

No FLOWmaster Support for ATM

VNswitch 3.0 firmware does not support FLOWmaster for ATM networks.

Configuring Link Parameters

ATM link failures may be caused by an out-of-revision VNswitch ATM adapter card when connected to a backplane, or by an out-of-revision ModPHY card when connected to the front panel. For backplane connections, be sure that the VNswitch ATM adapter card is at revision 1 or higher, and for front panel connections, be sure that the ModPHY card is at the revision as shown in the following table:

ModPHY Type	Part Number	Revision Level
E1 (2 Mb/s) UTP/ScTP	DAGE1-AA	C01 or higher
E3 (34 Mb/s) coaxial	DAGGE-AA	E01or higher
DS1/T1 (1.54 Mb/s) UTP/ScTP	DAGT1-AA	A01 or higher
DS3/T3 (44 Mb/s) coaxial	DAGGT-AA	A01 or higher
STS-3c (155 Mb/s) UTP/ScTP	DAGGU-AA	E01 or higher
OC-3 (155 Mb/s) MMF	DAGGM-AA	C01 or higher
OC-3 (155 Mb/s) SMF	DAGGS-AA	C01 or higher

ATM Bridge Tunnels and LECs

If the default LEC or bridge tunnel does not come up, one of the ATM logical interfaces may already be configured. Reset to factory settings (or at the Config> prompt, enter **clear ATM**) to use the default configuration.

ATM E1/T1 LAN Emulation Performance

LAN Emulation does not function for an ATM E1 or T1 ModPHY due to low line rates.

Split Path Routing Learning Problems with LAN Emulation

In certain IP network configurations, outbound packets between a source and a destination may take one path while inbound packets may take a different path on their return. This is known as Split Path Routing. If ATM LAN Emulation (LANE) is used to construct these paths, throughput reductions will be seen. The throughput will be reduced to anywhere from one packet per second to ten packets per second depending on the BUS (Broadcast and Unknown Server) rate throughput set in the VNswitch. The default rate is one frame per second and can be modified for each LEC interface using the **set max unknown frame count** and **set max unknown frame time** commands.

This situation occurs because traffic flow in these paths is unidirectional. In ATM LAN Emulation, the creation and subsequent use of a direct virtual circuit (VC) between LANE clients depends on traffic in both directions to prevent the VC from being aged out. With unidirectional traffic, the direct VC gets aged out (aging time = bridge aging time) and any subsequent traffic is sent through the BUS. The V1.0 LANE standard states that unknown unicast traffic on the BUS is limited to a maximum rate of ten frames per second. This problem can be avoided by reconfiguring the network to eliminate split paths.

ATM Link Down; Ethernet and VNbus UP

When the ATM PHY LEDs blink amber and ATM module LED blinks green (fatal ATM physical layer error), the ATM link is down, but the Ethernet and VNbus parts of the device are still functional. Make sure that the ATM daughter card is up to the ECO revision level 2.

ATM FDDI Bridge Tunnel to ATM Ethernet Bridge Tunnel Connection Not Recommended

You can manually configure an ATM FDDI bridge tunnel on one VNswitch module to connect to an ATM Ethernet bridge tunnel on another VNswitch module. While this configuration does allow the bridge tunnel to come up, the mismatch in tunnel types causes unwanted and unpredictable results. For this reason, we recommend that you do not attempt this configuration.

VNswitch 900FA Defaults to ATM Ethernet Bridge Tunnel

The plug-and-play values for the VNswitch 900FA module default to an ATM Ethernet bridge tunnel, even if two VNswitch 900FA modules are connected together. If an ATM FDDI bridge tunnel is desired, this must be manually configured.

Copying ATM Configurations to Another Module is Not Supported

VNswitch v3.0 does not support copying ATM configurations to another module. If you back up a module's configuration database to a server with the intention of later restoring it to a VNswitch module other than the one it was originally saved from, you must clear the ATM configuration (**Config> clear atm**) before saving the configuration.

ATM LEC Maximum Frame Size is Not Settable from the Web Management Interface

Do not use the VNswitch Web Management interface to set the ATM LEC maximum frame size. This causes the module to crash. You must use the CLI (**ATM/n LEC Config> set max_frame_size**) command to set ATM LEC maximum frame size.

Default DEC ATM MIB Values Changed

In the V3.0 release, the default values for the following DEC ATM MIB values are changed:

- adpReceiveBuffers = 0 (used to be 20)
- adpMaxReceiveBufferCounter = 20 (used to be 0)

RMON

Support for RMON Capable Ethernet Daughter Cards (10BaseT and 10BaseFL)

This release of the firmware supports new versions of the 12-port 10BaseT and 12-port 10BaseFL modules. These newer versions provide support for RMON Ethernet counters. To determine if your module has this new functionality, check the product revision against the following table:

Module	Revision
DVNEA-MX	H01 or higher
DVNEE-MA	F01 or higher
DVNEF-MM	F01 or higher
DVNEF-MX	F01 or higher
DVNEX-MX	J01 or higher
DVNLL-MA	B01 or higher

If your unit is already installed, you can issue the Monitor> **list all** command. The hardware version of the VNswitch is displayed in the HW= field. The current Ethernet adapter card has the designator E and a newer RMON capable Ethernet card has an e designator. For example, the hardware field for an older version VNswitch 900EF might look like HW=70F0E1. This same VNswitch with a RMON capable card would look like this: HW=70F0e0. Note that the REV-id for the newer RMON capable card starts at zero (0).

Note: The power requirements for the modules are slightly higher to accommodate this new functionality. The power ratings are listed on the serial label for the product.

RMON Statistics Counter Differences (10BaseT or 10BaseFL)

RMON statistics conform to the RMON RFC, except for the following counter differences:

- The octet (etherStatsOctets) and packet (etherStatsPkts) counters will not include all error packets.

- The number of collisions in the collision counter (etherStatsCollisions) will be understated.

- The undersize packet (etherStatsUndersizePkts) value is always listed as 0 and included as part of the fragment counter (etherStatsFragments).

- The oversize packet (etherStatsOversizePkts) value is always listed as 0 and included as part of the jabbers counter (etherStatsJabbers).

- The broadcast packet (etherStatsBroadcastPkts) value is always listed as 0 and included as part of the multicast counter (etherStatsMulticastPkts).

To display RMON statistics for interface 7 using the CLI, for example, perform the following command:
Monitor>**interface statistics 7**

RMON Restrictions with NetScout Manager

When using the NetScout Manager application, the following restrictions apply:

- Since the VNswitch supports only the four basic RMON groups, NetScout applications that rely on the other groups, such as Top N Talkers, will return an error.

- The interface number supplied should be equal to the port number of the desired port. For example, to monitor Ethernet port 2 use interface number 2.

- The interface name returned using the Test Agent command is incorrect and should be ignored.

- When monitoring Ethernet Port 1, ignore NetScout Manager applications displaying information pertaining to an FDDI type device. Note that the percentage utilization is wrong.

- Using the Switch option results in the wrong set of ports. For example, the VNswitch 900EE ports will be defined as ports 2 through 25 instead of ports 1 through 24.

- The reporting of multicast packets in the short term history display has a significant variance between intervals. The smaller the interval time, the greater the variance. For accurate interval multicast packet counts, it is recommended to have an interval time of at least 10 minutes.

Routing

Momentary Routing Performance Impact for Large IP Networks

It is possible that certain customers with large IP networks that have also enabled **IP Access Controls** on the VNswitch 900 may observe a momentary performance impact for routed traffic. If this performance impact does occur, it is most likely to happen during a Spanning Tree topology change in the network. This momentary slow down will affect routing only and does **not** affect the bridging performance of the VNswitch. The most noticeable symptom is that a CLI session to the VNswitch will be slower than normal.

Clearing the ARP Cache when Routing Enable/Disable is Changed

If you change your routing configuration from enabled to disabled, or from disabled to enabled, you must clear your ARP cache (`Config>` **clear arp**) and reconfigure the ARP configuration data.

BGP and RIP Route Limitations

You cannot import subnetted routes (routes with a mask that is not the natural mask for a Class A, B or C network) learned from the BGP protocol into RIP. Note that non-subnetted BGP routes can be imported into RIP without any problem.

clearVISN

IP Services Module Address

If you take the IP address of any module that is serving as the IP Services module for the DIGITAL MultiSwitch 900 and reassign it to the VNswitch module, you must remove (power-cycle) the other module (from which the IP address was taken) before this VNswitch module can assume the new address and operate as an IP Services module.

VNswitch Configuration on the VNbus

The primary mechanism for configuring the VNbus is clearVISN LAN-interconnect. If this management tool is unavailable, you may use the VNbus-AutoConnect feature of the DIGITAL MultiSwitch 900. The VNbus-AutoConnect feature should not be enabled when the clearVISN management tool is used to configure any LAN-interconnect.

Configuring Two Ethernet Ports on the Same VNswitch to the Same Backplane Channel

The VNswitch module does not support the mapping of two or more Ethernet ports on the same VNswitch module to the same MultiSwitch 900 backplane channel. In the VNswitch V3.0 release, if this operation is attempted, the second port remains in the DOWN state until it is configured to either a different backplane channel and manually enabled *or* to a front panel port and manually enabled.

Configuring VNswitch IP Addresses in a MultiSwitch 900

A problem occurs when IP addresses are configured for a VNswitch module installed in a Multiswitch 900 and the module is managed by the clearVISN MultiChassis Manager (MCM). The VNswitch module requires a restart when a new or changed IP address is entered.

Problems Configuring VNswitch 900 ATM Modules Using clearVISN MCM

Problems and solutions configuring the VNswitch 900 ATM modules with the clearVISN MultiChassis Manager (MCM) are as follows:

- **Problem:** Enabling a configured LEC does not result in the LEC being moved to the enable window. No error or warning indication is given.

  Solution: Verify that no LAN name conflict exists. The VNswitch 900EA does not allow more than one LEC with the same LAN name to be enabled. This includes multiple LECs with blank (i.e. default) LAN names.

- **Problem:** Enabling a configured FDDI bridge tunnel does not result in the tunnel being moved to the enable window. No error or warning indication is given.

  Solution: The FDDI bridge tunnel may recently have been configured without performing a required restart of the VNswitch 900 ATM module. To restart the module use MCM's RESET button in the VNswitch Switch Summary view, or use the VNswitch 900EA Command Line Interface Restart command from the configuration menu.

General

No Frame Interval Functionality

The "No Frame Interval" functionality is not supported in this firmware release.

Out-of Band Management (OBM)

The OBM baud rate cannot be set to 4800 when the VNswitch 900 is in the MultiSwitch 900. However, 4800 is a valid speed when the module is in a DEChub ONE docking station.

Clearing SNMP Configuration

When clearing SNMP configuration (using Clear all or Clear SNMP commands), you must restart the module for the clear to take effect.

Nonsupport of FDDI Port Redirection to Back of DEChub ONE-MX

This release does not support redirection of the FDDI port to the back of the DEChub ONE-MX docking station.

Duplicate MAC Address

For networks in which the same MAC address appears within more than one VSD (Duplicate MAC), it is necessary to configure the duplicated addresses as static duplicate MAC addresses using the command BRIDGE config>set duplicated-address .

Power Consideration

The power consumption of the VNswitch 900LL module necessitates these configuration considerations:

- A maximum of six (6) VNswitch 900LL (DNVLL) modules can be placed in a DIGITAL MultiSwitch 900 chassis. This configuration requires three 140- or 163-watt power supplies, or four 140- or 163-watt power supplies for N+1 redundancy.

- The DEChub ONE and DEChub ONE-MX docking stations support the VNswitch 900LL module. However, a comparison of the power label on the DEChub ONE docking station and the power requirements of the VNswitch 900LL modules may indicate otherwise.

Diagnostic Failures

If a hardware problem is detected during diagnostics, an entry is made in the diagnostic log. You can view this log from the web-based application (System Error Log window), from the Command Line Interface (CLI) using Monitor> **err-log list diag**, or using Option 7 from the VNswitch 900 INSTALLATION MENU. If any diagnostic entries are present, it is a hardware failure and the module should be replaced.

Displaying Event Log Messages

When you display events using the Main> **events** command or indirectly using the Config>**set output console** command, be aware that you can retrieve event log messages only once. That is, once an event log message is displayed, it cannot be viewed again. Therefore, if you want to save event log messages for later analysis, save the display output using an appropriate method, such as logging/saving a terminal session.

Ping Packets Greater than 1500 Bytes

The VNswitch 900 module does not reply to ping packets that are greater than 1500 bytes.

Incorrect False Carrier Sense Counter Values

The false carrier sense counter (FCSR) is incorrectly incrementing for the VNswitch 900EX, VNswitch 900XX, VNswitch 900XA, and the VNswitch 900FX modules and, therefore, the counter value may not be valid.

Firmware Upgrades

Refer to Chapter 10 in *DIGITAL VNswitch 900 Series Switch Management* for instructions on how to perform firmware upgrades, including a boot block software installation. You can use the Command Line Interface (CLI) or the web-based management application to upgrade the module.

If you are using the CLI to perform the upgrade, do not log out from the Main prompt during the upgrade.

Note: You must install the V3.0 boot block software first. Then install the Version 3.0 firmware.

The VNswitch modules do not support firmware upgrades using the DIGITAL MultiSwitch 900 Downline Upgrade menu option. You can perform firmware upgrades for the VNswitch modules using the CLI **reload** or **load remote** commands or using the clearVISN Flash Loader application or Web management.

Note: The **reload** and **load remote** commands rely on IP Host Services being configured.

If you are using an OpenVMS system and VMS UCX (V4.0 and earlier) as the TFTP load server for the firmware upgrade, the TFTP load may fail. As a workaround, convert the firmware image file format from Fixed-512 to Stream_LF record format.

Upgrading to VNswitch Version 3.0

Note: Before upgrading to the VNswitch Version 3.0 firmware, you need to install the boot block software, dvnbb301.bin. For more information refer to the section titled Firmware Upgrades.

You can use the Command Line Interface (CLI), VNswitch Web management or *clear*VISN Flash Loader to upgrade the module.

The VNswitch 3.0 images can be upgraded from a V2.0.6 image only. If an attempt is made to upgrade a module that is running a version earlier than V2.0.6, the update will fail with either a **timeout** or **out of memory** error message.

Upgrading from V1.1/V1.5 to V3.0

To upgrade from V1.1 or V1.5 to V3.0, you must upgrade to V1.6.2 first, then to V2.0.6. When upgrading to V1.6.2, please review the V1.6.2 release notes as they contain important information with respect to the upgrade process.

Note: Before upgrading to the VNswitch Version 3.0 firmware, you need to install the boot block software, dvnbb301.bin. For more information refer to the section titled Firmware Upgrades.

The VNswitch 3.0 images can be upgraded from a V2.0.6 image only. If an attempt is made to upgrade a VNswitch module that is running a version earlier than V2.0.6, either via the clearVISN Flash Loader program or via the CLI **load remote** or **reload** commands, the update will fail with either a timeout or out of memory error message.

Clearing the ARP Cache

You must clear your ARP cache (Config> **clear arp**) and reconfigure the ARP configuration data at the completion of your upgrade, unless routing was enabled prior to the upgrade and it remains enabled at the completion of the upgrade.

Incorrect Boot Block Upgrade Procedure

Chapter 10 in the *DIGITAL VNswitch 900 Series Switch Management* guide incorrectly states that upon the completion of a boot block upgrade, the yellow and green LEDs remain lit until you power-cycle the module. With boot block version V3.0, you do not have to power-cycle the module, the yellow and green LEDs turn off automatically.

Documentation

The following documentation supports the VNswitch Version 3.0 firmware release:

- *DIGITAL VNswitch 900 Series Technical Overview*

- *DIGITAL VNswitch 900 Series Switch Management*

- *DIGITAL VNswitch 900 Series Router Management*

These documents exist in Adobe Acrobat online readable and printable (PDF) format on the documentation CD-ROM that ships with the module.

VNswitch MIB Support

The VNswitch supports the following MIBs. If a MIB is defined in more than one RFC, the supported RFC is listed first and the other RFCs are listed on a separate line. The MIB handlers do not support SNMP set requests unless otherwise noted.

MIB	RFC/GROUP	
mib-2	iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1)	
	rfc-1213 rfc-1158 -> rfc-1213	
	system(1)	(set)
	interfaces(2)	
	ifAdminStatus(7)	(set)
	at(3)	
	ip(4)	
	ipDefaultTTL(2)	(set)
	icmp(5)	
	tcp(6)	
	udp(7)	
	egp(8)	
	transmission(10)	(interface mibs)
	snmp(11)	
ethernet	.mib-2(1).transmission(10).dot3(7)	
	rfc-1643 rfc-1284 -> rfc-1398 -> rfc-1623 -> rfc-1643	
	dot3StatsTable(2)	
	dot3CollEntry(5)	
	dot3Tests(6)	<oid pointers>
	dot3Errors(7)	<oid pointers>
	dot3ChipSets(8)	<oid pointers>
fddi	.mib-2(1).transmission(10).fddi(15).fddimib(73)	
	rfc-1512 rfc-1285 -> rfc-1512	
	fddimibSMT(1)	
	fddimibMAC(2)	
	fddimibPATH(3)	
	ddimibPORT(4)	
ds1	.mib-2(1).transmission(10).ds1(30)	
	rfc-1406	
	dsx1ConfigTable(6)	(set)
	dsx1CurrentTable(7)	
	dsx1IntervalTable(8)	
	dsx1TotalTable(9)	
	dsx1FarEndCurrent(10)	Not supported
	dsx1Interval(11)	Not supported
	dsx1total(12)	Not supported
	dsx1FracTable(13)	Not supported

MIB	RFC/GROUP		
ds3	.mib-2(1).transmission(10).ds3(30)		
	rfc-1407		
	dsx3ConfigTable(5)	(set)	
	dsx3CurrentTable(6)		
	dsx3IntervalTable(7)		
	dsx3TotalTable(8)		
	dsx3FarEndConfigTable(9)	Not supported	
	dsx3FracTable(13)		Not supported
rmon	.mib-2(1).rmon(16)		
	rfc-1757		
	statistics(1)	(set)	
	history(2)	(set)	
	alarm(3)	(set)	
	event(9)		(set)
mau	.mib-2(1).snmpDot3MauMgt(26)		
	draft-ietf-hubmib-mau-mib-03.txt		
	dot3RpMauBasicGroup(1)	Not applicable	
	dot3IfMauBasicGroup(2)		
	dot3BroadMauBasicGroup(3)	Not applicable	
	dot3IfMauAutoNegGroup(5)		
sonet	.mib-2(1).transmission(10).sonetMIB(39)		
	rfc-1595		
	sonetObjects(1)		
	sonetMedium(1)		
	sonetSection(2)		
	sonetSectionIntervalTable(2)		
	sonetLine(3)		
	sonetLineIntervalTable(2)		
	sonetFarEndLine(4)	Not supported	
	sonetObjectsPath(2)		
	sonetPath(1)		
	sonetPathCurrentTable		
	sonetPathIntervalTable		
	sonetFarEndPath(2)	Not supported	
	sonetObjectsVT(3)	Not supported	
	sonetVT(1)	Not supported	
	sonetFarEndVT(2)		Not supported

MIB	RFC/GROUP
bridge	.mib-2(1).dot1dBridge(17)
	(multiple spanning tree support)
	rfc-1493
	rfc-1286 -> rfc-1493 & rfc-1525
	dot1dBase(1)
	dot1dStp(2) (set)
	dot1dSr(3) Not applicable
	dot1dTp(4) (set)
	not implemented:
	dot1dStatic destination address filtering
	dot1dStaticTable(1)
	traps
interfaces	.mib-2(1).ifMIB(31).ifMIBObjects(1)
	rfc-1573
	ifStackTable(2)
digital	.private(4).enterprises(1).dec(36).ema(2)
	mib-extensions-1(18)
elan	elanext(1).efddi(1) (set)
	elanext(1).ebridge(4) (set)
	ebrIfSpanTable Not supported
	ebrTwoPortStatic Not supported
	ebrTwoProtoFilt Not supported
	ebrNTP Not supported
hub	dec_elan_vendor_mib_v30.mib
	decHub900(11).pubCommon(2)
	pcomHub(2)
	pcomLed(3) (set)
	pcomLoad(4) (set)
	pcomSnmpAuth(5)
	pcomSnmpAuthTrap(1) (set)
atm	.mib-2(1).atmMIB(37)
	rfc-1695
	atmInterfaceConfTable(2) (set) atmInterfaceDs3PlcpTable(3)
	atmInterfaceTCTable(4)
	atmTrafficDescrParamTable(5)
	atmVplTable(6)
	atmVclTable(7)
	atmVpCrossConnectIndexNext(8) Not supported
	atmVpCrossConnectTable(9) Not supported
	atmVcCrossConnectTable Not supported
	aal5VccTable
comet	comet-mib(2)
	cinterface(1)

MIB	RFC/GROUP
vlan	vlan_v1.mib
	pe2000(33).bridgeGroup(1) (set)
	bridgeGroupPortTable(4)
	bridgeGroupNameTable(5)
	bridgeGroupPeBusTagTable(7)
	bridgeGroup atomics
proteon	.private(4).enterprises(1).dec(36).ema(2). mib-extensions-1(18).cometBROUTERS(20).proteon-mib(1)
	no rfc - proteon mib text
	fully supported including sets
	admin(1).oid(1)
	admin(1).status(2)
	admin(1).els(3)
	admin(1).xface(4)
	admin(1).private(5) (no documentation)
	nvram(1)
	reset(2)
	xface(2)
	proto(3)
atm	dec_atm.mib
	atmExpand(17)
	ad(1)
	dxatm(2) Not supported
atm bridge tunnel	decAtmBridgeTunnel.mib
	decAtmBridgeTunnel(28)
atm lec	.private(4).enterprises(1).atmForum(353). atmForumNetworkManagement(5).atmfLanEmulation(3) leClientMIB(1).leClientMIBObjects
	atmLecClient.mib
	lecConfigTable(1) (set)
	lecStatusTable(2) Not supported in v1.0
	lecMappingTable(3) Not supported in v1.0
	lecStatisticsTable(4) Not supported in v1.0
	lecServerVccTable(5) Not supported in v1.0
	lecAtmAddressTable(6) Not supported in v1.0
	lecMacAddressTable(7) Not supported in v1.0
	lecRouteDescrTable(8) Not supported in v1.0
	leArpTable(9) Not supported in v1.0
	leRDArpTable(10) Not supported in v1.0

MIB	RFC/GROUP
icom	internal(0).intCommon(1)
	int-common.mib
	The icom MIB objects are normally only visible to the MAM on the chassis backplane serial line

icomHlap(1)
icomRoot(2)   Table not populated
icomHub(3)
icomStatus(4)
icomTrap(5)   Not supported
icomIps(6)
icomEnviron(7)
icomPower(8)

icomIntProtInstrumentation(9)   Not supported
icomBp(10)

  icomBpTotalConfigChanges(1)
  icomBpIfNumEntries(2)
  icomBpIfTable(3)
  icomBpPortDescrTable(4)   Missing in walk
  icomBpIfSubtypeNumEntries(5)
  icomBpIfSubtypeTable(6)
  icomBpSignalSetNumEntries(7)
  icomBpSignalSetTable(8)
  icomBpConnNumEntries(9)
  icomBpConnTable(10)
  icomSlot(11)
  icomEntity(12)
  icomRemotePoll(14)   Not supported
  icomLigo(15)

icomLast   Not supported

Accessing Online Information

Documentation Comments

If you have comments or suggestions about this document, send them to
TechWriting@cabletron.com

Online Services

To locate product-specific information, refer to one of the following World Wide Web sites:

Americas:	http://www.networks.digital.com or http://www.cabletron.com**/**
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Asia Pacific	http://www.networks.digital.com.au