DIGITAL GIGAswitch/IP Solution for ATM

Release Notes

Version 2.1-D

January 1998

Contents

CHAPTER 1   *New Features*

This release of DIGITAL GIGAswitch/IP Solution for ATM includes the following new features:

- *Software Rate Shaping*
- *PPP over V.35 and X.21*
- *Secondary Addressing*
- *Bootp Relay Enhancements*

Software Rate Shaping

Software rate shaping is similar to our current ASIC-based rate shaping, but does not depend upon the presence of an ATM network interface card. Rate queues with a fixed bandwidth are set up in clearVISN IP Switch Manager using the Config Tool. Supported features include the following:

- Works on all network interfaces (software or hardware rate shaping is chosen on a system-wide basis)
- Affects the forwarding capacity of the gateway or controller minimally (<5%) depending on the rule set applied to the interface
- Supports rate shaping MIBs
- Allows either hardware or software rate shaping on ATM interfaces

Software rate shaping offers you the ability to limit the rate at which traffic is forwarded through a gateway or controller. This allows tiered services to be offered to servers connected to DIGITAL networking equipment. Software rate shaping can be applied to traffic flowing between any two network interfaces. You can define fixed-rate buckets through clearVISN IP Switch Manager, and buckets can be assigned to a set of rules. If network-layer traffic matches the rules, the traffic is assigned to the bucket and is limited to the rate for the corresponding bucket. Software rate shaping supports fixed-rate queues only.

Hardware rate shaping relies on the underlying cell-pacing capability of ATM. This can only be applied to traffic being forwarded over an ATM link. Unlike the cell pacing, software shaping is packet based. Hardware rate shaping is suitable when all the traffic to be shaped is going over an ATM link, and it is desirable to do cell-based, fine-grain pacing as opposed to bursty packet-level pacing.

PPP over V.35 and X.21

IP over Point-to-Point Protocol (PPP) on V.35/X.21 WAN network interface cards (SDL Communications' WAN*ic* 405) is added to the system software. Configuration and monitoring of the interface is done in clearVISN IP Switch Manager using the Config Tool. Supported features include the following:

- Dual-port line card
- Line speed supported to full T1/E1
- Tracing through `tcpdump`
- Software rate shaping
- Conforms to RFC 1661, 1662, and 1332

Secondary Addressing

Secondary addressing allows multiple IP addresses (interface aliases) to be assigned to each LAN interface. Secondary addresses can now be set up in clearVISN IP Switch Manager using the Config Tool. Supported features include the following:

- Unlimited secondary addresses per interface
- Status page with a list of the IP addresses
- OSPF, RIPv1, IGRP routing to secondary

The following features are not currently supported:

- Multicast on secondary address
- Point-to point interfaces (ATM and serial)
- RIPv2 routing to secondary
- Multiple broadcast address per IP address

Bootp Relay Enhancements

Three primary improvements have been made to bootp functionality.

- Per-interface on/off. This feature gives the system administrator finer-grained control over the enabling of bootp.

- Per-interface specification of the confirmation server. This feature can be used to implement load balancing.

- Ability to relay to multiple configuration servers. This feature can be used to implement redundancy.

These enhancements can all be set up in clearVISN IP Switch Manager using the Config Tool.

CHAPTER 2 *Installing and Upgrading DIGITAL GIGAswitch/IP Software*

This chapter provides step-by-step instructions for upgrading or installing DIGITAL GIGAswitch/IP software version 2.1. The change can be accomplished by downloading the software from Digital Equipment Corporation using FTP.

If you're planning to do a full installation rather than just an upgrade, you'll need a boot floppy. The boot floppy *must* be the same revision as the software you're installing. If you don't have a boot floppy, see *Creating a Boot Floppy* on page 13 at the end of this chapter.

Before You Start

Always back up your configuration files before going to a new version of DIGITAL GIGAswitch/IP software. The backup configuration files are useful if your hard disk is lost or corrupted, or if you wish to duplicate the environment on another machine. Complete instructions are available online by selecting *Manage Configuration Set* from the **Config Tool** menu in clearVISN IP Switch Manager, then click **DOC**. First, enable FTP access, then back up to an FTP server, host machine, or disk.

Before upgrading to or installing to version 2.1, you must be running version 1.2 or later.

If you're upgrading the software, execute the setup program in the IP Switch Processor. If you're doing a complete installation (for example, installing the software for the first time), boot the system from the boot floppy.

If you're downloading the software from DIGITAL, go to *Downloading from DIGITAL* on page 6.

Downloading from DIGITAL

All the downloadable files have been compressed with gzip to reduce their size and shorten their download time. The first step is to download the appropriate file to your machine. Make sure you have enough disk space to receive the file. You can name the file anything you like, but the defaults should work just fine.

If you're doing an upgrade, download **ipso-upgrade-2.1-D.tgz.** If you're doing a full installation, download **ipso-2.1-D.tgz**. Download the DIGITAL GIGAswitch/IP software from one of the following DIGITAL web sites:

North America: http://www.networks.digital.com/dr/gigaip/firmware/

Europe: http://www.networks.europe.digital.com/dr/gigaip/firmware/

Asia Pacific: http://www.networks.digital.com.au/dr/gigaip/firmware/

DIGITAL has included an md5 checksum with each file. The md5 program is available on most UNIX platforms including the IP Switch Processor. While not required, it's a good idea to use md5 to ensure that the file you downloaded is not corrupted. Below is an example of this command:

```
saturn# md5 ipso-2.1.tar.gz

MD5 (filename) =
09e45b2fa4586442fe02918a3d796aa1
```

If you're doing a full installation, skip forward to *Performing a Full Installation Using Downloaded Software* on page 11.

Performing an Upgrade Using Downloaded Software

An *upgrade* image of each release (**ipso-upgrade-2.1-D.tgz**) is available to install over existing installations. This upgrade will not harm the existing database on the unit.

The file that was downloaded needs to be made available to the machine being upgraded. FTP can be used to copy the file to the machine or you can let the setup program do the FTP for you. Either way, you will need to copy the file to an FTP server.

1. Log in to the IP Switch Processor.

2. When you're prompted for the terminal type, press **RETURN** to choose the default, or type in the appropriate terminal type.

For terminals connected to the serial port, the default is `vt100`.

For most terminals connected through telnet, the correct setting is automatically set up as the default. If the default is not set up correctly, you may override it by entering your terminal type at this prompt.

3. Start the setup tool.

```
# setup
```

4. The Software Setup Utility screen is displayed. There is a slight pause while the existing software is checked to see which previous versions have been installed. When the system completes the software check, the installation menu is displayed, as shown below.

```
Please select one of the following:

1. Install/upgrade new software
2. Check existing software installations
3. Restore to previous installation
4. Delete backup files from previous
     installations
5. Quit (and exit this program)

Please enter your choice [ 1 ]:
```

The default choice is `1. Install/upgrade new software`. Press **RETURN** to install the new software.

5. The install media type prompt displays. Press **2** to indicate that you are installing from FTP and press **RETURN**.

```
Please select install media type:

1. File from local file system
2. FTP with username and passwd
3. Anonymous FTP
4. File from local CDROM
5. Quit this menu.

Enter choice [ 1 ] :
```

NOTE: Your choice from this menu depends on where the installation files are located in your network. In this example, we are assuming that you are installing from an FTP server on your network using FTP with a username and password.

If you select 3 . Anonymous FTP, you do not need to supply a username or password and may skip to step 7.

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6. Log in to your FTP site. Enter the IP address of the FTP server and your username and password.

7. The install file name prompt is displayed. With each upgrade, you will be supplied with the proper target name to type at this point. Enter it as a relative pathname from your FTP user login directory.

```
        Enter install file name: file.name
```

The target name for the 2.1 upgrade file is as follows:

```
        ipso-upgrade-2.1.tar.gz
```

8. A summary of your entries is presented, as shown in the following example. If you are satisfied with this information, type **Y** (yes) or press **RETURN**.

```
        You have entered the following
        information:

        FTP Site: 10.1.1.8
        username: install
        passwd: ***
        target: ipso-upgrade-2.1.tar.gz

        Proceed with the above information? [y]
```

9. A message similar to the following is displayed. Type **Y** (yes) to proceed with the upgrade.

```
        Attempting to FTP the target...succeeded
        in getting the new image tar file!

        Installation/Upgrade option(s): (this
        may take some time...)

        Product    Version    Created On
        -------    -------    ----------
        IPSO       2.1        10/17/97
```

```
Total number of new files: 15
```
```
Would you like to install the new files?
[y]
```

10. When the upgrade is complete, you will see messages similar to the following. If you want to save the tar file, type **Y** (yes) to put the tar file on your local file system.

If you do not want to save the tar file, type **N** (no) and press **RETURN**.
```
Backing up files... done.
```
```
Extracting software from tar file...
done.
```
```
Updating setup MANIFEST file...done.
```
```
Would you like to save the install tar
file on a local file system? [y]
```

11. Your software upgrade is now complete. The initial installation menu is displayed (the same menu displayed in step 4). Press **5** and **RETURN** to exit.
```
Please select one of the following:

1. Install/upgrade new software
2. Check existing software installations
3. Restore to previous installation
4. Delete backup files from previous
      installations
5. Quit (and exit this program)

Please enter your choice [ 1 ]:
```

12. Reboot the IP Switch Processor for the software upgrade to take effect.

13. If your installation includes a GIGAswitch/ATM, upgrade your GIGAswitch/ATM firmware now.

This completes the software upgrade.

Performing a Full Installation Using Downloaded Software

A *full* image of the release (**ipso-2.1-D.tgz**) is available for first-time or replacement installation. This full installation will *delete* the existing database on the unit.

Place this image on an FTP server local to the machine you are loading. The server should accept anonymous login. If you have not configured anonymous login or if you want to use a different User ID, then the User ID must be set after booting from the boot floppy under the following menu:

Options-->Options-->FTP user name

NOTE: When you unpack the tar image on the FTP server, it will create two directories: floppies and ipso.

During the installation process, the installation program looks for the floppies and ipso directories in the User Login Directory. If the tar image is placed elsewhere, you must specify the relative path when you specify the IP address of the FTP server during installation.

Example: ftp://205.226.3.11/install tells the installation program that the floppies and ipso directories are in the ~/install directory.

After you copy the downloaded file to an FTP server, the file needs to be unpacked. On the FTP server, execute the following commands:

prompt% **cd** *directory-with-downloaded-file*

prompt% **gunzip <** *downloaded-file* **| tar -xvf -**

This creates the floppies and ipso directories. The ipso directory will contain ipso.tgz. The floppies directory will contain the boot.flp and root.flp files.

The file that was downloaded needs to be made available to the machine being upgraded. FTP can be used to copy the file to the machine or you can let the floppy boot program do the FTP for you. Either way you will need to copy the file to an FTP server.

1. Place the boot floppy in drive A.

2. Power up or reboot the unit.

3. When the machine boots from the floppy, you will be presented with a menu. Select the medium from the menu.

Select `Install` from an `FTP` server.

4. You will then be presented with a second menu. Input the following information:

`ftp:`//*<ftp server IP address><relative directory path to the downloaded image>*

For example:

`ftp:`**//205.226.3.1/install**

5. Select an interface from which to install (`ethernet`, for example).

6. Input the following information:

`Hostname:` *<hostname of the switch or gateway>*

`Domain:` *<your company domain>*

`Gateway:` *<gateway/router IP address>* `"If local segment not important"`

`Name server:` *<domain name server IP address>* `"If local segment not important"`

`IP address:` *<IP address in this segment for your switch or gateway>*

`Netmask:` *<net mask for the IP address above>*

`Extra Option:` *<additional interface configuration options, example: "link2" for 100 Mbps>*

7. Tab through the rest of the Media menu.

8. Select **<OK>**. This will return you to the main menu.

9. Select **Commit** and confirm installation of DIGITAL GIGAswitch/IP software. This will install the software onto the hard drive and may take several minutes (dots **• • • • • • • • • • •** are displayed during this step).

> **NOTE:** After the system reboots, you need to provide the following information:

- Serial number of the unit: *from the yellow sticker on the back of the unit*
- License information
- Two passwords: *one each for admin and monitor*

10. If your installation includes a GIGAswitch/ATM, upgrade your GIGAswitch/ATM firmware now.

This completes the full installation of the software.

Creating a Boot Floppy

A boot floppy is required when doing a complete installation. If your boot floppy is not available, you can create a new one. To create a boot floppy:

1. Insert a UNIX formatted floppy into the floppy drive. Be sure it is write-enabled.

2. Execute the following commands:
```
prompt% cd <dir-with-downloaded-file>/
floppies

prompt% dd if=boot.flp of=/dev/rfd0
```

> **NOTE:** The boot floppy *must* be the same revision as the software you're installing.

CHAPTER 3 *Problems Fixed*

This section describes problems fixed in Release 2.1:

- Save current state to new config database also restores the old database at the same time.
- Multiple changes made via IP Broadcast Helper is not saved when applied.
- Some debug information printed under the dctl state command is wrong.
- Editing a rule where the interface has a logical name pulls up the wrong IF in editor.
- The mrouted fails to detect that the interface is down.

CHAPTER 4

Open Problems

DIGITAL Multivendor Customer Service believes strongly in providing you with any information that may be useful in the maintenance and support of your DIGITAL equipment. To demonstrate this commitment, we have provided this chapter of problem summaries taken directly from our problem database in their "raw" form.

NOTE: These problems have NOT yet been acknowledged or verified as defects in DIGITAL equipment. They represent work in progress only. Some of these problems may be erroneous or eventually be isolated to networking problems completely unrelated to DIGITAL equipment.

These problem summaries are presented here in the spirit of cooperation and openness with the belief that arming you with some information is more useful than providing you with no insight at all into potential issues. Also, we would be very interested to hear about information you may have regarding these open reports. If you have any information that will be useful in isolating these issues or have any questions about a specific problem, please contact your local DIGITAL Multivendor Customer Service office.

This section describes known problems and workarounds. The following problems are listed in this section:

- **vi exits with an error and freezes the terminal session.**
  When using the `vi` editor on a serial console, the program sometimes exits with the following message:

  ```
  endwin inappropriate ioctl for device tty
  freezup
  ```

  This causes the `tty` to freeze up. The only way to restart it is to `telnet` in and kill the immediate child of `getty`, thus initiating a new login.

- **RFC1812 violation—broadcast is forwarded.**
  Using `ping` to a host not on the local subnet using the link layer broadcast address should not work.

- **netstat generates a spurious error message: netstat: kvm_read: kvm_read: Bad address.**
  When the utility is run during a route flap, it cannot cope with information changing while it is running. Simply re-run the program and it should function normally.

- **Under Mosaic 2.7b4, Monitor Tool Switch View links do not work.**

- **SNMP returns ifType as fibreChannel(56) and ipSwitch(78) when it should return ifType as Ethernet(6) and SONET(39).**
  This may be fixed in future releases.

- **It is not possible to create a QoS rule using the Lynx interface.**
  When Lynx is used to create a new rule, even if inbound and outbound options are checked, an error is returned stating that the rule is not specified.

- **Field error check messages don't tell you which parameter is incorrect.**
  On screens where you may enter multiple entries on the same commit, the error checking message does not tell you which field is actually invalid.

- **SNMP agents on corporate network are showing invalid routes.**
  All of the corporate network routers are showing invalid routes in MIB-II. These routes do not show up in `netstat`.

- **Panic in `driver_control_input` on controller.**
- **Traversal of clearVISN IP Switch Manager fails due to recursive URL.**
  When you turn on help from the rate shaping statistics page and then select the **EVENTS** button, continuing to select the **EVENTS** button generates a new URL each time. The traversal never ends.
- **Possible multicast tunnel corruption when packet size is greater than the MTU.**
  Problem trying to use multicast tunnels with precept software. In native multicast mode, the application works fine. However, if the multicast UDP packets are tunneled, the application does not work.

  The originating application is sending UDP packets of size 1452. The packets coming out of the tunnel appear to have some strange fragment values.
- **Number of IFMP clients not displayed when configured during full installation.**
  If you do a full installation on a unit and specify a number of IFMP clients, this will not be displayed in clearVISN IP Switch Manager when you view the license information.
- **The current status of Ethernet is not checked when sending routing updates.**
  If the port cable is disconnected, the system still thinks the Ethernet port is up.
- **VRRP flow state is causing duplicate packets during failover.**
- **Simple authentication for VRRP produces parse error.**
- **Entering an illegal cluster value of 257 for VRRP still shows the interface page with that value on the GUI.**
  Entering an illegal value in clearVISN IP Switch Manager does the correct thing in not entering it in the system database, but it still shows the interface page to be configured with that illegal cluster value in clearVISN IP Switch Manager.
- **Multicast forwarding may not work in certain circumstances.**
- **Rate shape rule corruption in clearVISN IP Switch Manager (Name field).**
  This was not reproducible.

- **Upgrade from 1.3 to 2.0 does not convert gateway/controller in license page.**
- **Handling of deletes causes switch to go into a delete responding loop session and never recover.**
- **IP identifier byte swapped in fragments.**
  The ip_id byte swapped on the first fragment.
- **IP fragments reordered during forwarding.**
  In sending some IP packets that are sent as two fragments, on the incoming interface the packets consistently show up with the first fragment first, and the second fragment second. On the outgoing interface, the fragments are re-ordered.
- **Certain characters have problems with rate shape rules (# and &).**
  The # character will cause all characters to the right to not be displayed.

  The & character will cause the entire name to not be recognized.
- **Unable to do full installation on half-duplex, 100 Mb/s Ethernet link.**
  Attempted to do a full installation on a 100 Mb/s Ethernet card with half-duplex setting on specific NICs. Fails while trying to do the initial FTP session.
- **Initial attempt of a full installation using some types of Ethernet NICs fail for full-duplex, 100 Mb/s link.**
  Attempted to do a full installation using the 100 Mb/s option and the full-duplex mode. Initially it failed, but the next attempt succeeded.
- **Controller goes into a constant reboot cycle.**
  Switch controller is in a constant reboot cycle and never comes out of it. A power cycle seems to help. This has happened once in the past.
- **IPX shows ON for all interfaces when clearVISN IP Switch Manager has it displayed off.**
- **xpand is leaking memory.**
- **IPX SAP GNS cannot be disabled through clearVISN IP Switch Manager or Lynx.**

- **"Manual remote address" when disabled (from an enabled state) still retains all info.**
- **DIGITAL IP Switch Gateway to 3Com Switched Media hub (Linkbuilder 1000) performance is slow.**
- **When setting RIP v1 broadcast a syntax error is produced.**
- **No VRRP information displays on the Configuration Summary page.**
- **Fragmented packets cause the `crc_error,sml_fbq_empty` and `max_len_err` to go up constantly.**
  Fragmented packets cause the following counters to go up on a controller:

  `rx_crc_errors`

  `rcv_max_len_err`

  `sml_fbq_empty`

  traffic is as follows:

  > host ->ear->controller->gateway->host

  VRRP is configured on the ear interface. The ATM NIC on the controller is an IDT NIC (Rev E).

- **`vmstat -m` doesn't work.**
- **In certain rare instances, rate shaping rules don't take effect, even with Apply button.**
  Customers will rarely, if ever, want to disable switching, so this probably has low impact.
- **DIGITAL GIGAswitch/IP Switch Processor forwards broadcast packets as multicast on same interface.**
- **IPSRD is dumping core during generation of `/etc/ipsrd.conf`.**
  Not reproducible.
- **Turning Bootp relay enable *off* does not stop the `bootpgw` process.**
- **IPSRD core dumps:`task_block_sbrk:` sbrk(4096): Cannot allocate memory.**

- **At times under flows in Monitor Tool, inaccurate numbers (much too high) are displayed.**
- **Upgrade from 1.3 to 2.0 causes problems with RIP to OSPF configuration.**
  When a system is upgraded from 1.3 to 2.0 and RIP-to-OSPF exports are configured, the active file will become corrupted and prevent the user from making any changes at all to the RIP portion of the unit.

  clearVISN IP Switch Manager displays the following message:

  ```
  When exporting routes into rip, a metric
  value must be set.
  ```
- **No entry for VRRP in /etc/ipsrd.conf even though it is in the active database file.**
  Configured VRRP using the new syntax after removing the old VRRP lines in the database file. There were no syntax errors but the IPSRD.conf doesn't contain any VRRP entries even after a commit.
- **VRRP committer doesn't complain if cluster is not specified.**
- **When using the FDDI interface, cannot access the SMT information, such as the downstream neighbor, the connection type, etc.**
- **The port displays for the Interface Configuration page and the Configuration Summary page differ in clearVISN IP Switch Manager.**
- **tcpdump does not provide the decodes for VRRP.**
- **Ping to a broadcast address provides the real IP address instead of the VRRP address.**
- **Syntax of addif does not give an error message for creating a interface.**
  Results of the command state that the device is created; however, if you try to view it, the device is not there. You can add devices and create PVCs via the Web clearVISN IP Switch Manager.
- **Matrox card boots at 100 Mb/s when connected to 10 Mb/s network.**
- **Kernel panic in ips_routerx.**
- **Man page source in /etc/fw is not usable.**

- **Multiple changes made via IP Broadcast Helper not saved when applied.**
  In IP Broadcast Helper, if you have two UDP ports defined, a user can add two IP addresses before doing an apply. However, after the apply, only one of the newly entered IP addresses will have been saved/learned.
- **Negative percentage for network usage reported with `netstat -m`.**
- **Kernel leaks multicast control packets through an interface that is turned off.**
- **Request for support on VC activity messages in the Controller.**
- **Problems setting up default connections for amazon ports.**
- **Deleting interface IP addresses loses IP multicast state.**
- **Request on-line help for the limitation of RIP and IGRP in aggregation page.**
- **Redundancy with MPIF on Multicast traffic does not work.**
- **Processor ipsrd[136]: KRT SENT type ADD(1) flags UP CLONING(101)error 17: File exists.**
- **Request for new flow information/MIB table.**
- **ANVL dumps core while running IGRP-4.12 test.**
- **LCP Conf-Req options.**
- **Handling of unsolicited term-reqs.**
- **LCP conf-reqs in infinite loop.**
- **Controller in a constant panic reboot cycle - until kbrd device - sc0 was disabled.**
- **Controller (amazon) page faults while connections were being set up on the switch.**
- **GSMP sync problems - Controller related?**
- **Controller NIC lockup issue? - possible IDT NIC problem.**
- **Controller page faults in [current process = 133 (ifconfig)].**
- **Controller panic - "idt_rxChannelClose: not a receive channel"?**
- **Controller page fault - [current process = 162 (ipsrd)].**

- **Controller page fault: process mrouted.**
- **Controller panic - process 161 (ifconfig).**
- **Controller panic.**
- **System fails to dispatch WarmStart trap.**
- **Authentication option negotiation.**
- **Handling LCP conf-reqs with incorrect length.**
- **LCP Conf-Acks with bad length are not discarded.**
- **Bad len LCP Term-Reqs are not discarded.**
- **Action on incoming protocol-reject.**
- **Handling of echo-reqs with incorrect length.**
- **Retransmission of LCP echo-requests.**
- **Handling LCP echo-reqs with non-zero magic numbers.**
- **Handling LCP echo-reqs with bad magic numbers.**
- **Handling LCP Conf-Reqs with incorrect length containing MRU option.**
- **Handling magic-number option with incorrect length.**
- **Handling magic-number option with incorrect length.**
- **Handling of zero magic-numbers in LCP conf-reqs.**
- **Handling duplicate options in LCP config-reqs.**
- **ANVL tests based on PAP and CHAP support.**
- **ANVL tests based on LQM (Link Quality Monitoring) option.**
- **ANVL tests based on PFC (Protocol Field Compression) option.**
- **ANVL tests based on ACFC (Address and Control Field Compression) option.**
- **Non-configurable LCP restart-timer value.**
- **Non-configurable maximum no of LCP term-reqs to be retransmitted.**
- **Non-configurable max no of LCP config reqs to be sent to open connection.**
- **GETIP utility for mib_wlk is not working.**
- **Route type mismatch with Cisco can cause non-optimal routing.**
- **IFMP presented as an option when configuring a 1483 PVC.**

- **Setting local MRU (Maximum Receive Unit) for PPP.**
- **Controller (amazon) crash [191 (policy)].**
- **Deleting secondary addresses leaves ipaddr stem in the database.**
- **Unable to load HP OpenView plugin (for Solaris).**
- **HP OpenView Toolkit Installation Guide is incorrect.**
- **Applying the rip page resets the interface subnets to rip config.**
- **Set flowtype to 1 manually to force a type1 sw shaping rule to kick in.**
- **Controller (amazon) panics in [process 97 (ipsftd)].**
- **Double page fault on controller (process -IDLE) happened soon after coming up.**
- **Tests for Compression Protocol Option in IPCP.**
- **Handling peer ends MRU during session.**
- **Conformance issue in IPCP IP-address negotiation.**
- **Tests to be run when IP Address Negotiation is supported in IPSO.**
- **Controller page faults in process 'syslogd'.**
- **Controller (amazon) complains about "Received EISCONN on packet send" - no buffer space available.**
- **IDT - memory allocation errors seen on controller.**
- **[Amazon]: Error msg on switch console: failed to issue a 'queue-cell'.**
- **Panic condition in 'idt_rcvIndication'.Possible corruption scenario.**
- **Controller page faults in IDLE process.**
- **Controller Panic - sbflush 2. COre files in boneyard.**
- **Controller panic - (process perl).**
- **The Idt Driver locks up.**
- **Controller panics in ips_vcmforward. COre files in boneyard.**
- **Controller panics in driver_control_input. COre files in boneyard.**
- **No traffic running in network, just routing protocols.**

- At lowest bucket setting (64 kbps) the output rate under smart bits testing is not quite accurate.
- Panic condition when Matrox card was being initialized and an interrupt came in.
- Panic in idt_timeout.
- Buffer overflow messages seen on gateway.
- ARP requests over serial are not responded.
- Processing of LCP conf-req: Broken.
- 2ifmp ipsctl address reporting.
- rs_xlate gives "inex-controller-1 rs_xlate[2044]: Received SIGSEGV - exiting."
- Creating a new sw rate shaping rule sometimes replaces an already existing rule.
- Panic occurred while configuring new sw rate shaping rules and traffic flowing on an existing rule.
- Switch and controller don't synchronize after connection is lost.
- Panic on gateway g2: <pmap_use_pt+48>.
- Panic on controller c1: <idt_justOneBufferPlease+282>:.
- Need online help for software rate shaping feature.
- Need to update docs to include serial interfaces features.
- Changing the clock source needs interface up->down->up operation.
- Changing the internal clock from on to off.
- Serial interface not coming up at all.
- Error messages on screen with both ports of SDLcom card in action.
- IP statistics cannot be seen for serial interfaces.
- Controller in a hung state: Forced core dump indicates looping behavior possibly due to mbuf corruption.
- Routes not installed - ipsrd busy processing RTM_MISS route socket response.
- Controller crash in idt_rcvIndication. Running Debug Kernel.

- **Serial interface causing problems in operation of network.**
- **Making one port of serial card needs all ports down->uped.**
- **[Amazon]: OC3 downloads on right half of the chassis fails.**
- **Would like a knob for "preference level" in router discovery.**
- **Rebooting a machine fails while traffic is coming from the smart bits.**
- **Problems with Lynx QoS and Forwarding Configuration Views/ Pages.**
- **Panic in tulip_rx_intr in one of Zetanet Gateways.**
- **User allowed to enter duplicate rate shaping queues.**
- **Unit crashed (panic) while rebooting.**
- **The order rule binding for hardware rate shaping is per system, not per interface. Thus, hardware rate shaping cannot support more than one ATM interface.**
- **System panic when running 100% CPU.**
- **Amazon controller freezes for rx_cells greater then 32K.**
- **VRRP problems seen on corpnet rtr (amazon).**
- **Crash during NEST on g34. stack trace is not very informative.**
- **[Amazon]: Switch crashes during downloading after a power off/ power on.**
- **Enforce a minimum bucket rate of 64 Kb/s.**
- **ARP is not sent on the secondary address network.**
- **VRRP quirks seen in corpnet amazon.**
- **Amazon Controller hangs.**
- **Allow up to 48 characters for interface names in bucket names.**
- **In Version 2.0.1-D or 2.1-D of clearVISN IP Switch Manager, the following informational messages are displayed on the console when the Help On button on the Monitor Tools page is clicked:**
  ```
  Nov 11 13:35:23  switch[4227]: In Help_on

  Nov 11 13:35:23  switch[4227]: leaving Help_on
  ```
  While it might appear annoying, it does not have any effect on the system.

No user actions required.

- **When upgrading to Version 2.1-D using setup, the configuration database is automatically converted.**
  Before performing an upgrade to Version 2.1-D, back up the configuration database. If you need to restore the previously installed release, you can still use setup, then replace the original database.