

Release Notes

for the

ISR 9024

Rev 3.4.5

October 15, 2007

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1. Introduction

These release notes provide information on the new features and issues related to the Voltaire Grid Switch ISR 9024S-M and ISR 9024D-M running the software Rev. 3.4.5, as well as providing new functionality for the Voltaire Grid Switch ISR 9024S and ISR 9024D.

2. Voltaire Switch Software Rev. 3.4.5 Release Content

Component	Version
Linux	Linux Kernel V2.4.21
Firmware	0.8.4 for non DDR platforms 0.8.6 for DDR platforms (ISR 9024D and ISR 9024D-M)
Hardware	ISR 9024S-M & ISR 9024D-M & ISR 9024M
Management	1. Fabric Topology Map via HTTP 2. Software upgrade mechanism via CLI 3. CLI Telnet/console 4. Repository
Software sub-revision	Rev. 3.4.5 (Build 467)

3. ISR 9024 Overview

The ISR 9024D supports both SDR and DDR IB ports, with either copper or copper-to-optical converters (Media Converters).

The ISR 9024S and ISR 9024D systems are composed of the following modules:

- Baseboard, with optional management daughter card (factory option for internally managed switches only).
- Two mezzanines (top row of InfiniBand Ports)
- Two hot swappable power supply field replaceable units (PS-24)
- A hot swappable fan, field replaceable unit (FN-24)

4. System Requirements

4.1 InfiniScale III Firmware Revision

With Voltaire switch software Rev. 3.4.5, the minimum revision of InfiniScale III firmware is Rev. 0.8.4 (for SDR systems).

For DDR systems the minimum InfiniScale III firmware is Rev.0.8.6.

For more details regarding the upgrade procedure, please refer to the Software and Firmware Upgrade Process Section.

4.2 Java Run time Environment (JRE) V1.5

Voltaire switch software Rev. 3.4.5 GUI Requires JRE V1.5 (Former versions required JRE V1.4.) For JRE V1.5 installation package, please refer to Voltaire support site or the product CD supplied with the switch.

5. New Features for Rev 3.4.5

This section describes the feature related functionality added to the ISR 9024 Switch Rev 3.4.5.

5.1 Bug Fixes - Eliminated Flash Inflation due to Erroneous Prints to Persistent Log

#	Description
1	The Flash was inflated due to prints mistakenly reported into a persistent log located on the Flash. Once Flash is completely inflated, the system cannot operate and must undergo factory default setting.
2	These prints were reported as a result of a bug found in our Performance Manager that does not identify the FCC version of the ISR 9024-S/SM unit connected to the fabric. Upon recognizing such node, the PM issued the erroneous logs. The whole practice was triggered only in fabrics managed by an ISR 9024 running the GA version.
3	According to our calculations, the Flash got inflated after three months upon connecting a single ISR 9024-S/SM FCC device but could perform much faster if more such devices were connected.

#	Description
4	A comprehensive solution was introduced in V3.4.5 467, eliminating the faulty prints and monitoring the size of the logs inflating the Flash during boot and during the system operation. Oversized logs are deleted once recognized.

5.2 Full Support for New ISR 9024 Platforms

The following platforms are supported:

New platforms:

1. ISR 9024D
2. ISR 9024D-M
3. ISR 9024S
4. ISR 9024S-M

Backward compatibility with the former platform:

1. ISR 9024-M

5.3 Updated Firmware

Rev 3.4.5 supports the following firmware versions:

1. 0.8.4 for non DDR platforms
2. 0.8.6 for DDR platforms (ISR 9024D and ISR 9024D-M)

5.4 Firmware Upgrade

1. Added Firmware upgrade from FTP server (via CLI)
2. Inband Firmware upgrade for ISR 9024 platforms (via CLI)

5.5 Fabric Management

1. SM
 - a. System grouping for DDR systems
 - b. Weighted routing for DDR links
 - c. Routing – favoring DDR links over SDR ones
 - d. Events and traps support for new platforms (ISR9024 family) and modules (ISR 9288/9096 DDR modules)
2. Port counters files:
 - a. Added *speed* column
 - b. Support *xmitwait* port counter (for InfiniScale-III switch chips only)
3. Port manage utility - added change of link mode to DDR/SDR on the fly

4. port-verify utility:
 - a. Added option to see traffic counters
 - b. Added option to see all SDR ports in the fabric

5. Added madstat option:

```
madstat B <lid|path> [<port>] [<set enabled_speed>]
- Get/Set port enabled speed.
- port speeds: 1 [SDR], 2 [DDR], 4 [QDR]
```

6. Added netdiscover option that physically resets all 1x ports in fabric (e.g. for production test):

```
netdiscover -R noch r1x
```

Means: Reset no change (on port settings) reset 1x only

See Section Appendix A for a detail the new features.

5.6 Device Management for the new Managed ISR 9024 platforms (ISR 9024D-M, ISR 9024S-M)

- a. Optic ports - added fault recognition
- b. Added platform HW reset
- c. Support info LED
- d. Support SM LED
- e. VDM GUI: back panel for new platforms

See Section A.2 for a detail the new VDM Features.

5.7 Added DHCP Support for the ETH Interface

DHCP support was added for the ETH (Fast) interface.

By default DHCP is disabled. It can be activated via CLI.

6. Known Issues for the ISR 9024 Rev 3.4.5

Module	Description
CLI	The option "sm-info subnet-prefix set" should not start with 0x.
FM (GUI)	HCA with 2 ports, each port has a different IPoIB address - only one IP is displayed (the latest to register).
CLI	In the "PortCounters.csv" file the "Platform Type" and "Peer Platform Type" for ISR 9024 are sometimes printed as UNKNOWN. This only applies to new platforms.
FM (GUI)	The Rack name doesn't change after Grouping import.

Module	Description
FM (GUI)	Using the right-click menu to launch the Device Manager does not work when pointing at a device.
CLI	Wrong CLI help is displayed for "bad_ports_show" CLI.
CLI	After running exportLOGs option, there is an error when trying to open the LOGs in the browser.
CLI	When performing a software update, the previous default gateway configuration may not work. Workaround: Delete the default gateway and reconfigure a new gateway after software upgrade.
CLI	sMB show - This command is not relevant for ISR 9024 HW platforms.

NOTE


FM: It is recommended to run the GUI rev 3.4.5 using a screen resolution of 1024x768. Screen resolutions 1280x1024 and 800x600 may provide a limited view.

Appendix A New ISR 9024 Features

A.1 CLI

A.1.1 Exec (ADMIN) Mode

The commands available in the Exec (Admin) mode and their descriptions are listed below.

NOTE



The following commands are only supported on the ISR9024D-M & ISR9024S-M (new managed ISR9024 platforms).

```
fan show
optic-ports show
```

The new commands are in bold.

ISR9024D> ?	
?	Displays list of available commands.
? command	Displays the command usage string.
clock show	Shows the system clock.
enable	Changes to PRIVILEGED mode.
end	Ends the CLI.
exit	Exits to previous menu.
fan show	Shows the fans state and rate.
(New Platforms only)	
fast-interface show	Shows the interface IP address and configuration.
ftp show	Shows FTP client configuration.
ib-interface show	Shows the InfiniBand interface IPoIB address and configuration.
module-firmware show	Shows switch modules firmware and GUID information.
optic-ports show	Shows the state of the Optical Media Converters.
ping	Sends echo messages.
power-supply show	Shows the state of the power supplies.
route default-gw show	Shows the default gateway IP address.
sm-info show	Shows the Subnet Manager (SM) parameters.
smb-state show	Shows the SMB redundancy status.
snmp community show	Shows the SNMP communities.
temperature show	Shows the board temperature in Celsius and Fahrenheit.
version show	Shows the software version information.

The following details the commands available in Exec mode:

Command: fan show

Description: Shows the status of the fans

Syntax fan show

Example:

```
ISR9024D> fan show
Fan #1: ok, Rate: turbo
Fan #2: fault, Rate: N/A
```

Command: optic ports show

Description: Shows the state of the Optical Media Converters.

Syntax optic-ports show

Example:

```
ISR9024D> optic-ports show
Port #4: state ok
Port #5: state ok
Port #6: state ok
```

Command: power-supply show

Description: Shows the state of the power supplies.

Syntax power-supply show

Example:

```
ISR9024D> power-supply show
PS #1: not present
PS #2: ok
```

Command: temperature show

Description: Shows the board temperature in Celsius and Fahrenheit.

Syntax temperature show

Example:

```
ISR9024D> temperature show
Temperature sensor #1[normal (T<60)]: 34[C], 93[F]
Temperature sensor #2[normal (T<60)]: 39[C], 102[F]
```

A.1.2 Privileged Mode

The commands available in the Privileged mode and their descriptions are listed below.

NOTE

The following commands are only supported on the ISR9024D-M & ISR9024S-M (new managed ISR9024 platforms).



```
fan show
info-led set
info-led show
optic-ports show
reset hardware
```

The new commands are in bold.

ISR9024D# ?	
?	Displays the list of available commands.
? command	Displays the command usage string
clock set	Sets the system clock.
clock show	Shows the system clock.
config	Changes to Configuration mode.
debug	Changes to Debug mode.
devicePortCounter portReset	Resets the port counter settings.
devicePortCounter reset	Resets the device port counter settings.
devicePortCounter show	Shows the device port counter settings.
dhcp set	Enables/Disables the DHCP client.
disable	Changes to Admin mode.
end	Ends the CLI.
exit	Exits to previous menu.
fan show	Shows the fans state and rate.
fast-interface show	Shows the interface IP address and configuration.
ftp show	Shows the FTP client configuration
info-led set	Sets the info LED state (off on blink).
info-led show	Shows the info LED state.
logs	Displays logs menu.
optic-ports show	Shows the state of the Optical Media Converters.
password update	Changes admin or enable password.
ping	Send echo messages.
power-supply show	Shows the state of the power supplies.
qos-info show	Shows the QoS parameters.
reset hardware	Resets the switch hardware.
reset software	Resets the switch software.
route default-gw show	Shows the default gateway IP address.
sm-info show	Shows the Subnet Manager (SM) parameters.
smb-state show	Shows the SMB redundancy status.
snmp community show	Shows the SNMP communities.

temperature show	Shows the board temperature in Celsius and Fahrenheit.
update firmware	Updates the firmware version.(Embedded in the software update).
update remote-firmware	Updates firmware version.
update software	Updates the software version. (Set remote server information from the FTP submenu under Configuration mode).
utilities	Changes to switch debug Utilities mode.
version show	Shows the software version information.
vpd show	Shows the VPD

Syntax usage is as follows in Privileged mode Menu:

devicePortCounter portReset	devicePortCounter portReset [port-number]
devicePortCounter reset	devicePortCounter reset
devicePortCounter show	devicePortCounter show
dhcp set	dhcp set [disable, enable]
fan show	fan show
info-led set	info-led set {off on blink}
info-led show	info-led show
optic-ports show	optic-ports show
power-supply show	power-supply show
reset hardware	reset hardware
reset software	reset software
reset software	reset software
temperature show	temperature show
vpd show	vpd show

Commands are detailed below:

Command: devicePortCounter portReset

Description: Resets the counter settings of a specific port on the device.

Syntax devicePortCounter portReset [port-number]

Example:

```
ISR9024D# devicePortCounter portReset 6
```

Expected results:

```
ISR9024D# devicePortCounter show
```

#	xmitData	rcvData	xmitPkts	rcvPkts	symErr	lnkRcvr	lnkDwn	rcvErr
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	2880	2304	40	32	65535	0	1	0
8	11376	4176	158	58	65535	0	2	0

Command: devicePortCounter reset

Description: Resets the counter settings of all ports on the device.

Syntax devicePortCounter reset

Example:

```
ISR9024-058c# devicePortCounter reset
```

Command: devicePortCounter show

Description: Shows the settings of the device port counter.

Syntax devicePortCounter show

Example:

```
ISR9024d# devicePortCounter show
```

#	xmitData	rcvData	xmitPkts	rcvPkts	symErr	lnkRcvr	lnkDwn	rcvErr
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	5904	5904	82	82	65535	0	1	0
7	2880	2304	40	32	65535	0	1	0
8	11376	4176	158	58	65535	0	2	0
9	0	0	0	0	0	0	0	0
10	2880	2304	40	32	2	1	1	0
11	5904	5904	82	82	65535	0	2	2
12	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
21	1944	1368	27	19	65535	0	1	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
24	8424	2016	117	28	65535	0	1	1

#	rcvRemtPhy	rcvSwitRly	xmtDiscard	xmtCnstr	rcvCnstr	lnkIntg	bufOvr	VL15Drp
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	0	0	2	0	0	0	0	0
12	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0

18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0

Command: dhcp set

Description: Enables/Disables the DHCP client.

Syntax dhcp set [disable, enable]

Example:

```
ISR9024D# dhcp set enable
```

Command: fan show

Description: Shows the fans state and rate.

Syntax fan show

Example:

```
ISR9024D# fan show
Fan #1: ok, Rate: turbo
Fan #2: fault, Rate: N/A
```

Command: info-led set

Description: Sets the info LED state (off|on|blink).

Syntax info-led set

Example:

```
ISR9024D# info-led set on
```

Expected Result:

```
ISR9024D# info-led show
Info LED is on
```

Command: info-led show

Description: Shows the info LED state.

Syntax info-led show

Example:

```
ISR9024D# info-led show
Info LED is off
```

Command: optic-ports show

Description: Shows the state of the Optical Media Converters.

Syntax optic-ports show

Example:

```
ISR9024D> optic-ports show
Port #4:      state ok
Port #5:      state ok
Port #6:      state ok
```

Command: power-supply show

Description: Shows the state of the power supplies.

Syntax power-supply show

Example:

```
ISR9024D# power-supply show
PS #1: not present
PS #2: ok
```

Command: reset hardware

Description: Resets the switch hardware.

Syntax reset hardware

Example:

```
ISR9024D# reset hardware
```

Command: Reset software

Description: Resets the switch software.

Syntax reset software

Example:

```
ISR9024D# Reset software
```

Command: temperature show

Description: Shows the board temperature in Celsius and Fahrenheit.

Syntax temperature show

Example:

```
ISR9024D# temperature show
Temperature sensor #1[normal (T<60)]: 34[C], 93[F]
Temperature sensor #2[normal (T<60)]: 39[C], 102[F]
```

Command: vpd show

Description: Shows the VPD.

Syntax vpd show

Example:

```
ISR9024D# vpd show
Module Name:          ISR9024S
Part Number:          501S30063
Hardware Version:     AAB
Serial Number:        AAPY31040001
Production Date:      07062006

Module Name:          4x-S-Mezz-0
Part Number:          503C00055
Hardware Version:     AAB
Serial Number:        AAPY31040001

Module Name:          4x-S-Mezz-1
Part Number:          503C00055
Hardware Version:     AAB
Serial Number:        AAPY31040001
```

A.1.3 Config Mode

The commands available in the Config mode and their descriptions are listed below.

The new commands are in bold.

```
ISR9024D#(config)# ?
?                Displays the list of available commands.
? command        Displays the command usage string.
alarms           Changes to Alarms configuration mode.
end              Ends the CLI
exit             Exits to previous menu.
factory-default  Switches back to factory default, and reboots the
                 system.
ftp              Changes to FTP configuration mode.
group            Changes to Group configuration mode.
interface IB     Changes to IB Interface configuration mode.
interface fast   Changes to Fast Interface configuration mode.
names           Changes to Name configuration mode.
ping            Sends echo messages.
pm              Changes to PM configuration mode.
route           Changes to Route configuration mode.
sm              Changes to SM configuration mode.
snmp            Changes to SNMP configuration mode
```

A.1.4 Update Remote-Firmware Command

Command: update remote-firmware

Description: Updates the firmware version on remote ISR 9024 systems and resets the board. The image can be downloaded from the previously defined ftp server or from the local file system.

Important:

The image on the ftp must have the following name **voltaire_fw_images.tar**, otherwise the update remote-firmware command will not work.

Syntax: update remote-firmware update remote-firmware
[lid#,all] [update-file-dir]

Where:

lid is the ISR 9024 lid

All applies to all the ISR 9024 systems in the network.

[update-file-dir] is the ftp server path where the images reside.

NOTE

If you omit to specify the ftp, the update firmware command will take the ISR 9024 image(s) from the local file system.



If a remote unit is an ISR 9024M (managed), use telnet/ssh to perform a software reset (this limitation does not apply to the ISR 9024D-M, ISR 9024S-M)

Example:

```
ISR9096-3009# update remote-firmware all
----- SCAN STARTED -----
----- SCAN FINISHED --> START BURN ---
Log File : /tmp/firmware_larimar_upgrade.log
Total ISR9024 systems: 1
ISR9024_12 :0
ISR9024 :0
ISR9024D-M :1
ISR9024D :0
ISR9024S-M :0
ISR9024S :0
Estimated burning time : 0 hr. 1 min. 40 sec. .
-----

Found : 1 ISR9024_DM elements
1 lid 216 guid 0x0008f10400412c9a
FirmwareImage = /mnt/tmpfs_fw/firmware.ISR9024_DM.img
```



```
LID connection test: (send/receive 43 pkt.)
*****
Write-Protect disabled for lid 216
FirmwareVersion = 0.8.4
SystemGUID      = 0008f10400412c9b
NodeGUID        = 0008f10400412c9a
Burning ...
BURN - 100%
Verifying ...
VERIFY - 100%
Write-Protect enabled for lid 216
1 lid 216 guid 0x0008f10400412c9a burned_ok
Estimated time left: 0 hr. 0 min. 0 sec. .
-----
-----
-----
-----
1 System ISR9024_DM hop 2 lid 216 guid 0x0008f10400412c9a reset
passed
-----
-----
Log File : /tmp/firmware_larimar_upgrade.log
Done.
```

UTILITIES MENU

IMPORTANT



The `error-find`, `find_bad_ports` and `width_check` scripts currently remain in the utilities menu for backward compatibility with software versions 3.4.2 and earlier. However, it is highly recommended not to use these scripts; instead use the `port-verify` utility.

```
Switch(utilities) ?
?           Displays the list of available commands.
? command  Displays the command usage string.
end         Ends the CLI.
error-find Scans active ports in the fabric for abnormal port
             counters.
exit       Exits to previous menu.
find_bad_ports Detects possible bad ports in fabric.
findpath   Finds a path to port GUID.
getpathrecord Performs a getpathrecord command.
lidtrace   Performs a trace between two fabric LIDs.
madstat    Performs a madstat port query command.
mcmember   Performs a mcmember command.
mctrace    Perform multicast trace command.
netdiscover Displays the entire InfiniBand fabric topology.
port-manage Performs a port-manage command.
port-verify Performs a port-verify command.
sminfo     Queries information from active Subnet Manager
           (SM).
smpdump    Dumps Subnet Manager (SM) attributes and
           information.
smpex      Utility used to send MAD packets to a destination
           LID.
switchlock Performs a switchlock command
vendstat   Queries vendor specific information of a switch
           LID.
width-check Scans active ports in fabric for reduced link
             widths.
zero-counters Zeroes all port counter information in fabric.
```

Port Manage Command

New syntax:

```
[-S lid port] - Reset the port and set Enabled Speed to SDR  
[-D lid port] - Reset the port and set Enabled Speed to  
SDR/DDR
```

Command: port-manage

Description: This is a debugging utility for advanced users only. This utility enables the user to manage ports on the fabric and to change the status of a port (enable/disable, etc.)

port-manage is used to trigger a physical state change of the specified port. This command is useful in case the active Width/Speed of a specific port must be changed without actual cable reconnection.

This utility also enables to set a port to SDR and refresh back to DDR, changing the link mode on the fly. Note that this option is intrusive and may disrupt the traffic going through this link.

Syntax: port-manage [-v] [-f] <-d|-e|-r> <LID> <PORT>

Options:

```
[-v] - Increase output verbosity level  
[-f] - Force disabling or resetting a port even when  
the port is located on the Access Path  
(path/way to the specific port)  
[-d lid port] - Disable the port  
[-e lid port] - Enable the port (set port state machine to  
polling state)  
[-r lid port] - Reset the port  
[-S lid port] - Reset the port and set Enabled Speed to SDR  
[-D lid port] - Reset the port and set Enabled Speed to  
SDR/DDR  
[-h] - Show this help
```

Example:

```
#port-manage -r 17 21
```

Where r = reset, LID=17, PORT=21

New Madstat Commands

```
madstat Y <lid|path> [<port>] [<set phys_state>] - Get/Set
port phys_state port physical states: 1 [Sleep], 2 [Polling], 3
[Disabled]
madstat W <lid|path> [<port>] [<set enabled_width>] - Get/Set
port enabled width port widths: 1 [1x], 2 [4x], 4 [8x], 8 [12x]
madstat B <lid|path> [<port>] [<set enabled_speed>] - Get/Set
port enabled speed port speeds: 1 [SDR], 2 [DDR], 4 [QDR]
```

New Port-Verify Options

```
[-S] - Check port(s) Speed - any SDR link considered as bad link."
[-f] - Show flow counters (only 64 bit counters, valid on Voltaire
switches only).
```

New Netdiscover Options (for debug or development purposes only)

```
[-g] : show grouping info.
[-S [mono|bad|mbad][sdr]] : speed check.
width remains unchanged.
<rlx> : Reset only 1x ports .
```

A.1.5 Config Mode

Fast Interface Menu - link speed set Command

Command: link-speed set

Description: Sets the speed of the ETH link to: auto-negotiation, 10baseT-HD, 10baseT-FD, 100baseTx-HD, or 100baseTx-FD

Syntax: link-speed set [auto-negotiation, 10baseT-HD, 10baseT-FD, 100baseTx-HD, 100baseTx-FD]

Example:

```
Switch(config-if-fast)# link-speed set
link-speed set auto-negotiation
```

Expected results:

```
ISR9096-3321(config-if-fast)# ip-address-fast show
fast interface ip is 172.25.22.103
ip mask is 255.255.0.0
broadcast ip is 172.25.255.255
management interface is eth0:1
link speed is auto-negotiation
ISR9096-3321(config-if-fast)#
```

Local Interface Menu - ip-broadcast-local set Command

Command: ip-broadcast-local set

Description: Sets the local broadcast address.

Syntax: ip-broadcast-local set [ip address]

Example:

```
Switch(config-if-LOCAL)# ip-broadcast-local set 172.25.7.10
```

Expected Results:

```
Switch(config-if-LOCAL)# ip-address-local show
local ip is 172.25.7.10
ip mask is 255.255.0.0
```

A.2 GridVision Device Manager (DM)

NOTE

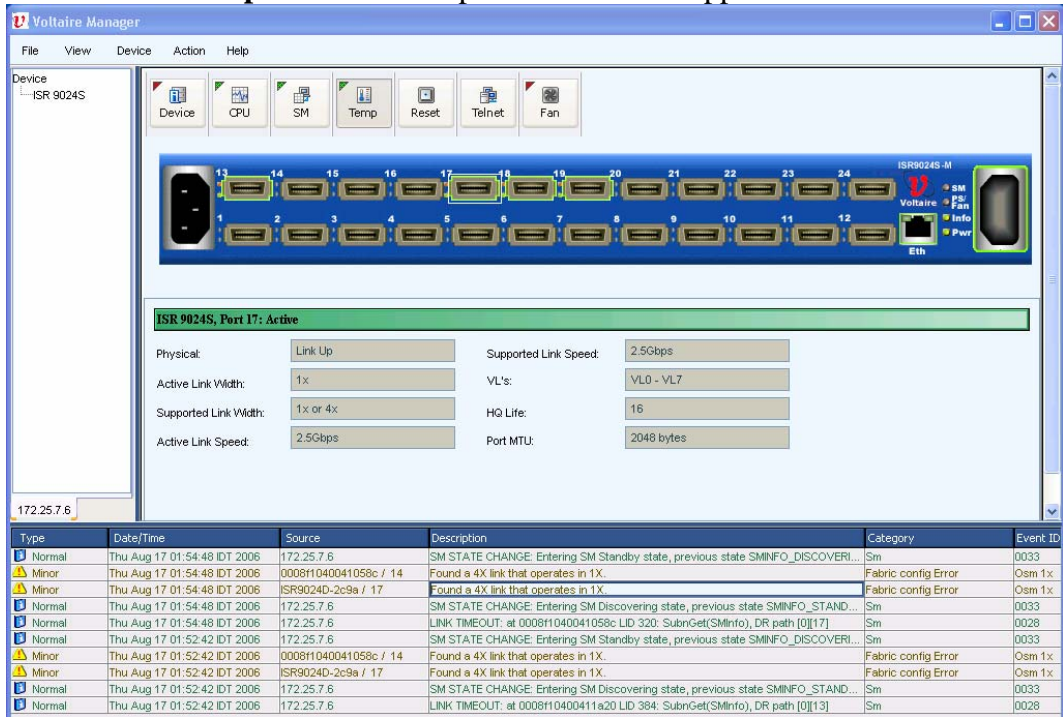


The new features detailed in this Section only apply to the ISR9024D-M & ISR9024S-M (new managed ISR9024 platforms).

A.2.1 Temperature Window

To view temperature information:

- Click the **Temp** Icon. The Temperature Window appears.



Type	Date/Time	Source	Description	Category	Event ID
Normal	Thu Aug 17 01:54:48 IDT 2006	172.25.7.6	SM STATE CHANGE: Entering SM Standby state, previous state SMINFO_DISCOVERI...	Sm	0033
Minor	Thu Aug 17 01:54:48 IDT 2006	0008f1040041058c / 14	Found a 4X link that operates in 1X.	Fabric config Error	Osm 1x
Minor	Thu Aug 17 01:54:48 IDT 2006	ISR9024D-2c9a / 17	Found a 4X link that operates in 1X.	Fabric config Error	Osm 1x
Normal	Thu Aug 17 01:54:48 IDT 2006	172.25.7.6	SM STATE CHANGE: Entering SM Discovering state, previous state SMINFO_STAND...	Sm	0033
Normal	Thu Aug 17 01:54:48 IDT 2006	172.25.7.6	LINK TIMEOUT: at 0008f1040041058c LID 320: SubnGet(SMInfo), DR path [0][17]	Sm	0028
Normal	Thu Aug 17 01:52:42 IDT 2006	172.25.7.6	SM STATE CHANGE: Entering SM Standby state, previous state SMINFO_DISCOVERI...	Sm	0033
Minor	Thu Aug 17 01:52:42 IDT 2006	0008f1040041058c / 14	Found a 4X link that operates in 1X.	Fabric config Error	Osm 1x
Minor	Thu Aug 17 01:52:42 IDT 2006	ISR9024D-2c9a / 17	Found a 4X link that operates in 1X.	Fabric config Error	Osm 1x
Normal	Thu Aug 17 01:52:42 IDT 2006	172.25.7.6	SM STATE CHANGE: Entering SM Discovering state, previous state SMINFO_STAND...	Sm	0033
Normal	Thu Aug 17 01:52:42 IDT 2006	172.25.7.6	LINK TIMEOUT: at 0008f10400411a20 LID 384: SubnGet(SMInfo), DR path [0][13]	Sm	0028

Figure 1. Temperature Window

Active Link Speed	Displays the current signaling rate of the link: current default for SDR is 2.5 Gbps, current default for DDR is 5 Gbps.
-------------------	---

A.2.2 Fan Window

To view Fan Status:

- Click the **Fan** Icon. The Fan Window appears showing the fan status.

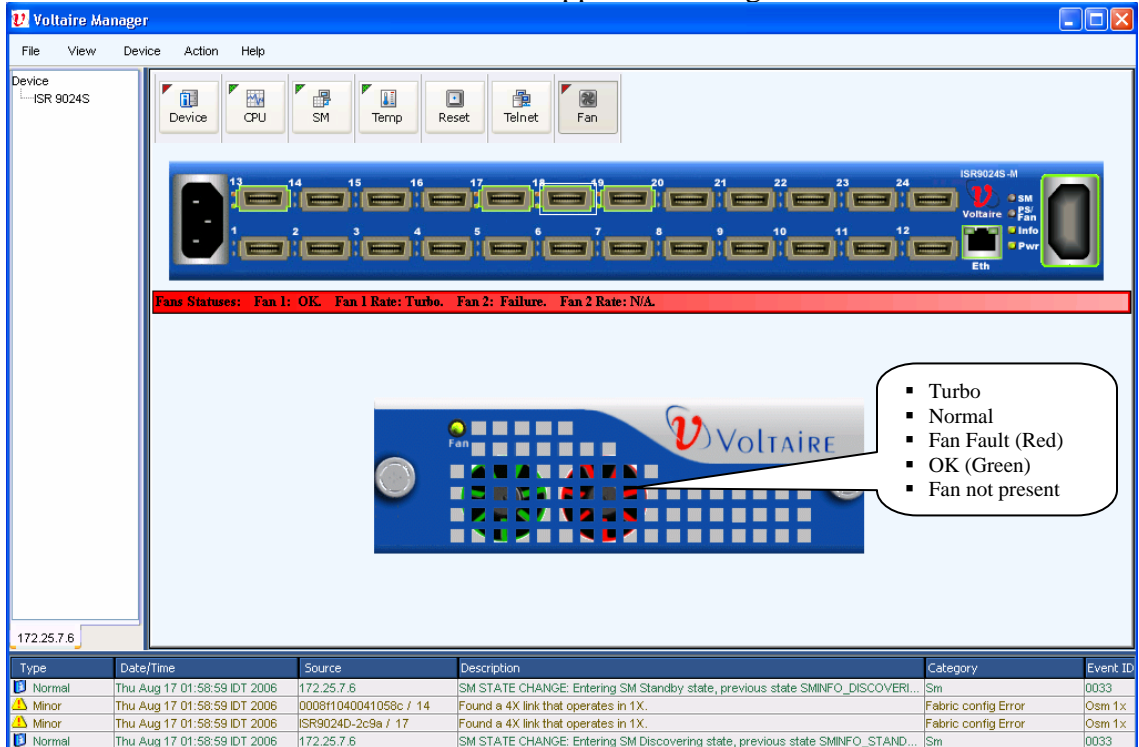


Figure 2. Fan Window

Fan status is as follows:

- Red – not present/Faulty fan
- Green – OK

A.2.3 Reset

The reset button invokes a dialog-box with two options (radio-buttons):

- HW reset
- CPU reset

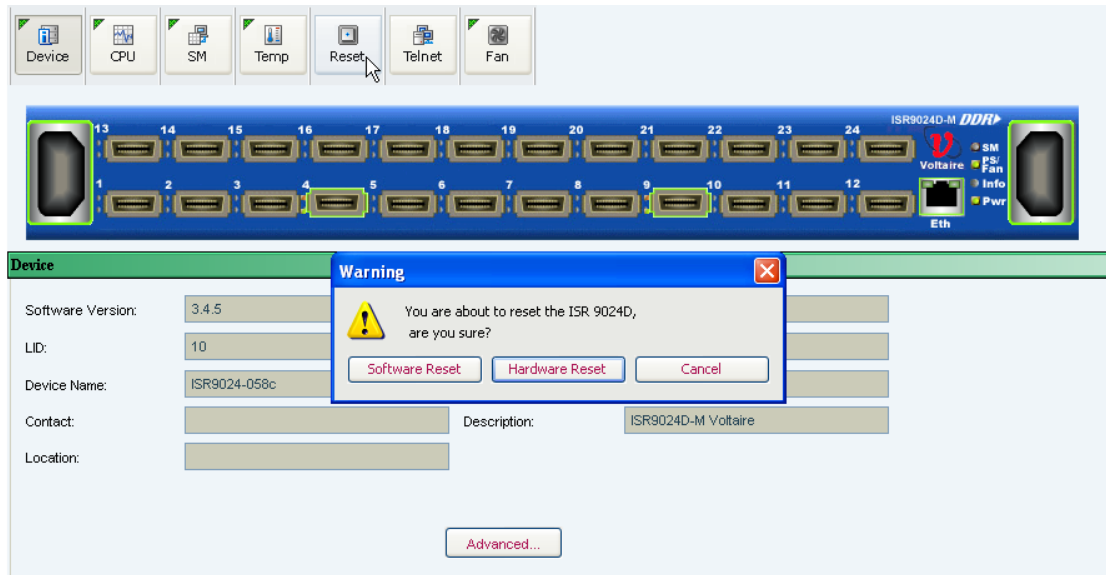


Figure 3. ISR 9024 Reset (Software/Hardware)

A.2.4 Optic Indications

- Optical icon of the port if optic exists.
- Red frame on fault indication.

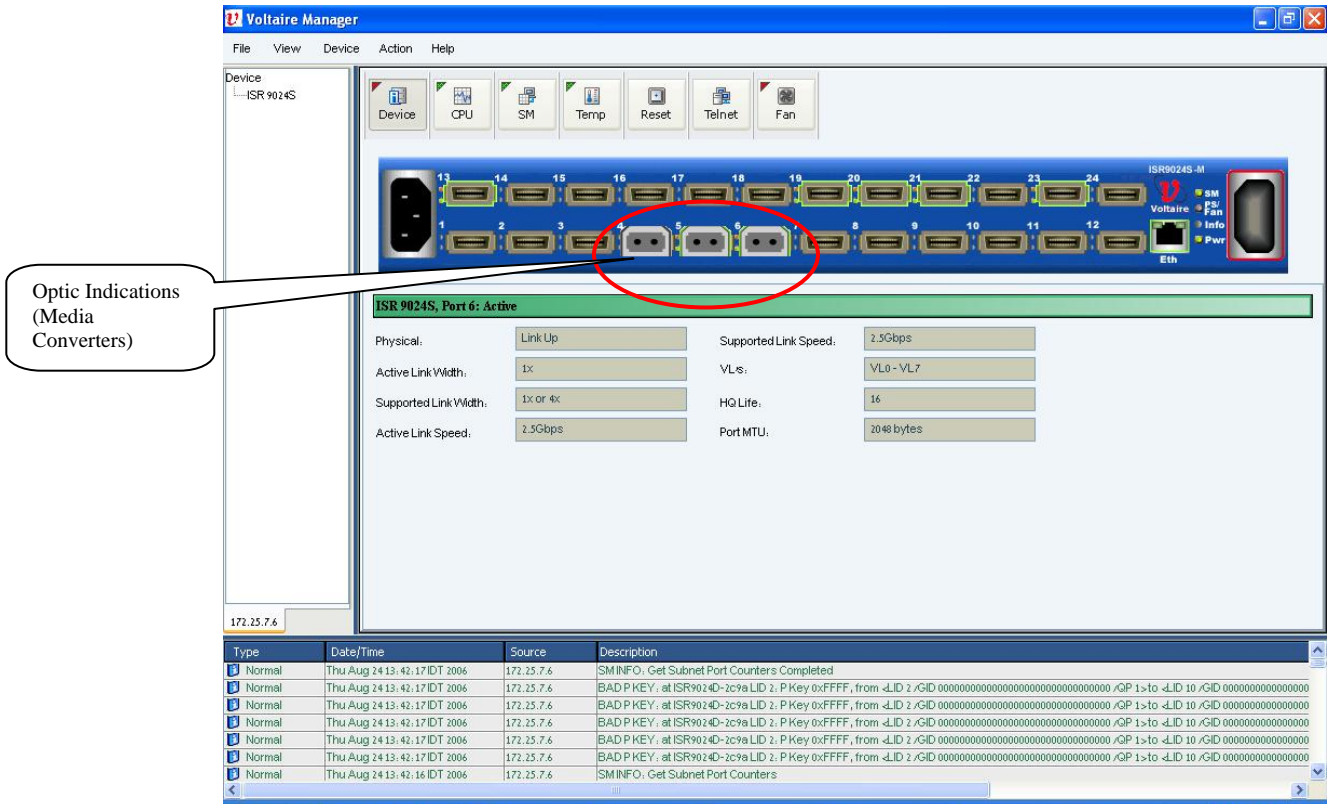


Figure 4. ISR 9024 Fabric Manager – Media Converters

A.3 GridVision Fabric Manager (FM)

Figure 5 shows the main Window of a ISR 9024D Fabric Manager:

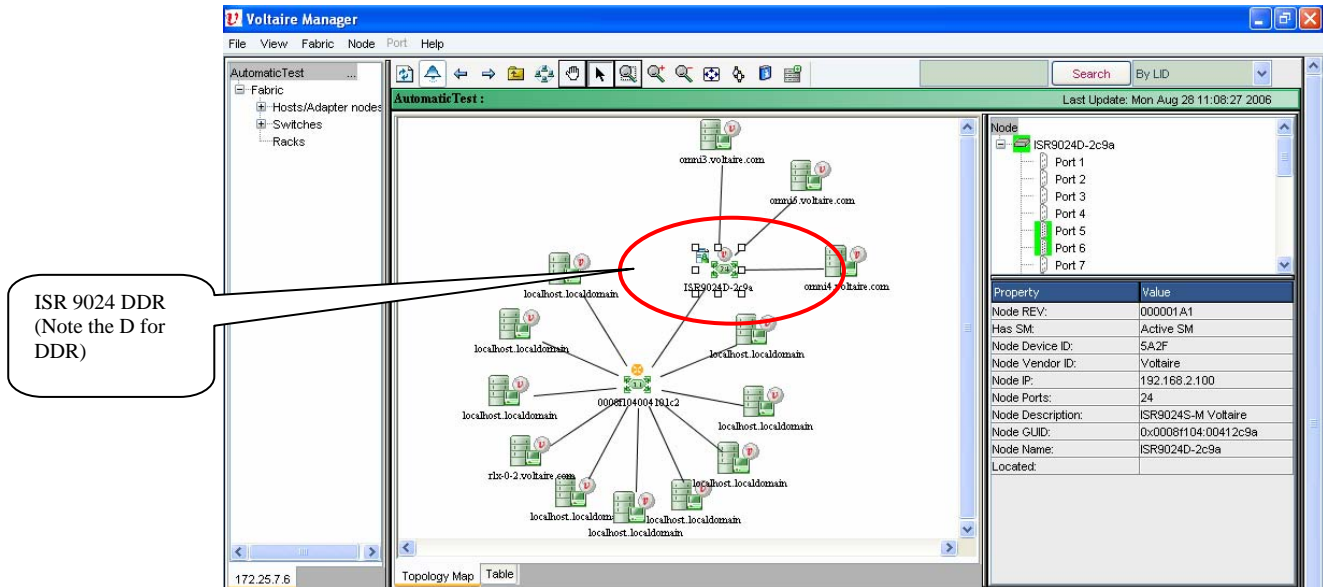


Figure 5. ISR 9024 DDR Fabric Manager - Main Window

A.3.1 Grouping in VFM for DDR Platforms

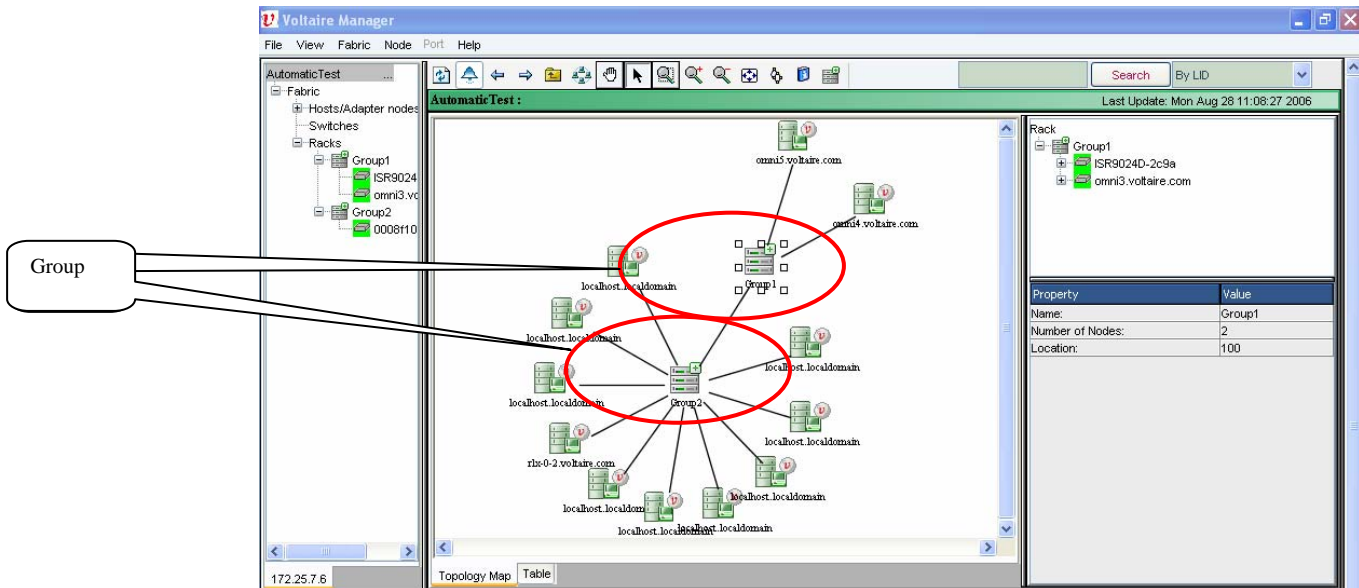


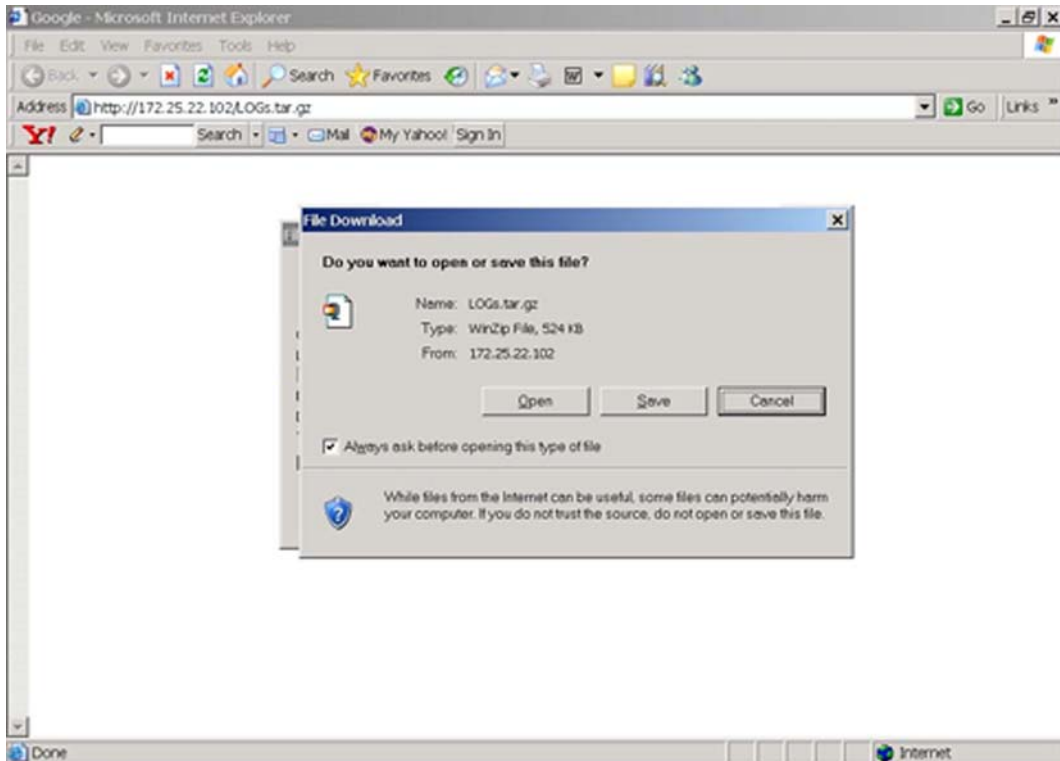
Figure 6. Example of Grouping in VFM for DDR Platforms

A.4 Diagnostics

A.4.1 Viewing and Downloading Logs from a Browser

You can view error and event logs in a browser by entering the IP address and errorlog.txt or eventlog.txt by specifying in the address field the Host IP and the log file name, as shown in the following example: <http://172.25.3.16/errorlog.txt>.

You can also download logs from the web using a browser by specifying in the address field the IP and the Exported Log file name, provided such a file exists on the ftp, as shown in the following example: <http://172.25.22.102/LOGs.tar.gz>



This downloads all the logs gathered and uploaded to the ftp in a single zip file for debugging purposes.

portcounters.csv

Speed	Link speed: SDR – 2.5 Gbps, DDR – 5 Gbps
-------	--

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Mon Aug 28 15:29:15 2006													
2	LID	IBPort	PortGUID	NodeType	Width	State	MTU	NumVLS	HOQLif	PlatformType	ModuleType	ModuleIndex	Port	Name
3	4	1	0008f104c	Switch	4X	ACTIVE	2048	VLD-VL7	16	RLX	System	0	1	0008f104004101c2
4	2	5	0008f104c	Switch	1X	ACTIVE	2048	VLD-VL7	16	ISR 9024S-M	System	0	5	ISR9024D-2c9a
5	2	6	0008f104c	Switch	1X	ACTIVE	2048	VLD-VL7	16	ISR 9024S-M	System	0	6	ISR9024D-2c9a
6	2	20	0008f104c	Switch	4X	ACTIVE	2048	VLD-VL7	16	ISR 9024S-M	System	0	20	ISR9024D-2c9a
7	2	21	0008f104c	Switch	4X	ACTIVE	2048	VLD-VL7	16	ISR 9024S-M	System	0	21	ISR9024D-2c9a
8	6	1	0008f104c	Channel A	4X	ACTIVE	2048	VLD-VL7	16	HCA 400	HCA	0	1	omni3.voltaire.com
9	8	1	0008f104c	Channel A	4X	ACTIVE	2048	VLD-VL7	16	HCA 400	HCA	0	1	omni5.voltaire.com
10	32	1	0008f104c	Channel A	4X	ACTIVE	2048	VLD-VL7	16	HCA 400	HCA	0	1	rlx-0-2.voltaire.com
11														
12	Port Counters Summary													
13														
14	=====													
15	Alert Ports: 5													
16	Total Switches: 2													
17	Switch Ports: 17													
18	Switch Alert Ports: 2													
19	Total HCAs: 13													
20	HCA Ports: 13													
21	HCA Alert Ports: 3													

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1															
2	NodeIP	DeviceID	MLID(Join)	SymErr	LinkRecon	LinkDown	RcvErr	RcvRemot	RcvSwitch	XmtDisca	XmtConst	RcvConst	LocalLink	ExcessBu	VL15Drop
3	0.0.0.0	5a20	0000(#0)	0	0	0	0	0	35672	0	0	0	0	0	0
4	192.168.2	5a2f	c000(#1)	1	57	1	1	0	0	0	0	0	0	0	0
5	192.168.2	5a2f	c000(#1)	22631	74	2	3	0	0	0	0	0	0	0	0
6	192.168.2	5a2f	c000(#1)	0	0	0	0	0	0	0	0	0	0	0	0
7	192.168.2	5a2f	c000(#1)	0	0	0	0	0	1	0	0	0	0	0	0
8	192.168.6	5a44	c000(#1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	192.168.6	5a44	c000(#1)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	192.168.6	5a04	c000(#1)	0	0	0	0	0	0	0	0	0	0	0	0

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
1															
2	XmitBytes	XmitBytes	RcvBytes	RcvBytes	XmitPkts	XmitPkts/	RcvPkts	RcvPkts/S	XmitWaits	PeerLID	PeerIBPo	PeerPortC	PeerPlatf	PeerModu	PeerModu
3	0.03	0	0.04	0	120223	0	155895	0	N/A	2	20	0008f104c	ISR 9024	System	0
4	0	0	0	0	32	0	32	0	0	2	6	0008f104c	ISR 9024	System	0
5	0	0	0	0	36	0	36	0	0	2	5	0008f104c	ISR 9024	System	0
6	0.04	0	0.03	0	155270	0	119679	0	0	4	1	0008f104c	RLX	System	0
7	0.01	0	0	0	37890	0	2005	0	22	8	1	0008f104c	HCA 400	HCA	0
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	19	0008f104c	ISR 9024	System	0
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	21	0008f104c	ISR 9024	System	0
10	0	0	0.01	0	2075	0	37746	0	N/A	4	12	0008f104c	RLX	System	0

	AS	AT	AU	AV	AW
1					
2	PeerPort	PeerName	Speed	Status	
3	20	ISR9024D	2.5 GBs	OK	
4	6	ISR9024D	2.5 GBs	ALERT	
5	5	ISR9024D	2.5 GBs	ALERT	
6	1	0008f104c	2.5 GBs	OK	
7	1	omni5.volt	2.5 GBs	OK	
8	19	ISR9024D	2.5 GBs	ALERT_IB_TIMEOUT	
9	21	ISR9024D	2.5 GBs	ALERT_IB_TIMEOUT	
10	12	0008f104c	2.5 GBs	OK	

Figure 7. PortCounters.csv File – Example