SPECTRUM Software Release Notes (6.0.2)

SPECTRUM Enterprise Manager
Software Release Notes

Summary of Changes

SPECTRUM Software Release Notes

Version	Date	Reason for Change	Description of Change
9030743-07	March, 2001	Update to Added Features and Functionality	Instructions on converting the Empire Application.

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Contents

Overview

These SPECTRUM Software Release Notes (SSRN) accompanies each copy of the release package for version 6.0.2 of SPECTRUM.

Purpose of this Document

The SSRN is intended to accomplish the following:

- alert the user to product enhancements or changes
- system and platform requirements
- corrected and known anomalies
- identify any updates or corrections to related documentation
- any other information useful for this release.

Updates to this information will be issued and packaged with each subsequent release/revision of this product. It is strongly recommended that you read the accompanying document each time you receive an updated version of the software so that you will be aware of any changes in the product or the associated documentation.

This document does **not** contain installation instructions. To install SPECTRUM or any of its optional or included applications, or other related components, consult the ***SPECTRUM Installation Guide*** or hard copy instructions included with the installation media.

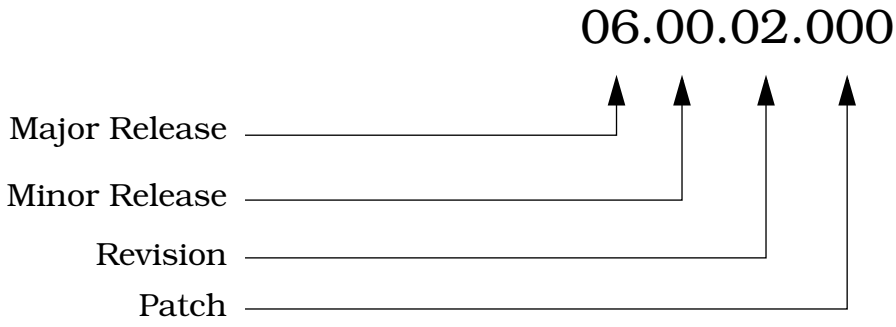
How This Manual Is Organized

The following outlines the organization of the SPECTRUM Software Release Notes for SPECTRUM 6.0.2.

Section	Description
Overview	The contents and purpose of the SSRN.
System and Platform Requirements	Describes operating system, hard disk, RAM, swap space and RAID requirements.
New Features and Functionalities	Describes the new features, supported versions, release advisories.
Corrected and Known Anomalies	Lists and describes the anomalies and problems in SPECTRUM core products, applications and management modules that have been corrected since the last major release of SPECTRUM. Lists and describes the known core product, applications and management module anomalies and problems that were identified and noted in this major release of SPECTRUM which will be addressed or corrected in post-release revisions.

Version Control

SPECTRUM's numbering scheme for version control consists of up to four numeric fields as well as an alphabetic descriptor as shown in the following diagram.



Major Release - Increments to the number in this field represent major changes in the product's design, functionality, or user interface. Major releases are planned well in advance and occur no more frequently than once per year.

Minor Release - Minor releases are scheduled product upgrades that provide new or enhanced features but do not represent functionality changes as significant as those involved in a major release. Minor releases may occur one or more times per year.

Revision - This field is incremented for subsequent revisions to a release and is reset to zero for each new major/minor release.

Patch - This field, previously used for internal tracking of individual builds under a particular revision and not usually visible to the customer, assumes special importance to the extension developer. The value of this field must be zero for the first release of a management module or application and must be incremented to a higher value.

System Requirements

The following subsections list the hardware and software required for the ***basic*** SPECTRUM Network Management package on each of the supported platforms. SPECTRUM may be configured with more than one SpectroGRAPH. Suggested Minimum and Recommended RAM, Disk Space and Processor requirements are presented under **Minimum Windows NT and Solaris Configurations** section. Amounts shown are in both megabytes and gigabytes.

Caution:

The loading and operation of both SpectroSERVER and SpectroGRAPH on the same physical workstations may not be advisable due to the complexities of polling frequency, device type, and number of devices within a network. It is impossible to define all possible configurations, and therefore impossible to determine the system requirements for all possible configurations. Aprisma suggests the figures in this document as an absolute minimum for installation and operation. Consult your Field Engineer or SPECTRUM Support Representative for assistance in determining the ideal configuration for your network.

In the listings of platform-specific system requirements in this section, the following three definitions should be noted:

1. RAM is the amount of physical memory installed in the system. The amount of RAM is reported by the console upon powerup.
2. Available Disk Space is the amount of space available after the OS and all other applications have been loaded. A large database or event and alarm log archive files requires additional space.
3. Swap Space is the amount of hard disk space allocated as additional memory to be used once the existing RAM has been exhausted. Swap Space is referred to as “Virtual Memory” in Windows NT.

4 SPECTRUM requires 24-bit color or a workstation with a graphics card or controller that supports 24-bit color.

The SPECTRUM Online Sizing Tool

The SPECTRUM Online Sizer determines the number of SpectroSERVERS your enterprise needs to efficiently manage your distributed network. This is an especially useful tool if you are adding SPECTRUM to your enterprise for the first time or if you are creating a distributed SpectroSERVER environment for the first time. For more information about network sizing, contact your SPECTRUM sales person.

Determining RAM and Disk Space Requirements

Aprisma proposes RAM and Disk Space Requirements for each of the platforms included in these Software Release Notes as being the *minimum* requirements. However, your enterprise environment may require more RAM and disk space that exceeds the *minimum* requirements.

If SPECTRUM does not run adequately in your environment, consider the following questions:

- Is the server's swap space sufficiently set?
- Does your server use a lot of Virtual Memory? If so, allocate more swap space.
- Does your server have enough disk space left over to run SPECTRUM?
- Does your network have a lot of models for SPECTRUM to manage?
- Does your database have a lot of landscapes for SPECTRUM to manage?
- Are many applications associated with your VNM?

If your environment has these characteristics, you should consider adding an additional SpectroSERVER and/or installing more RAM.

Note: For platforms with an xdm-config file, the `terminate Server` entry should be set to "True." This helps control the size of the Xserver process by restarting it each time the user logs out of the SpectroGRAPH machine.

Note: For users who intend to employ the SPECTRUM Level 2 Toolkits, a C++ compiler is required. Refer to the Level 2 Toolkit Software Release Notes (SRN) for C++ compiler version information.

Sun SPARCstation/Solaris 7 and 8

SPECTRUM supports the Solaris 7 and 8 operating systems running on at least an UltraSPARC I at 167MHz.

SPECTRUM will install and run on Solaris 7 with CDE 1.3.

SPECTRUM will install and run on Solaris 8 with CDE 1.4.

SPECTRUM is compiled with C++ version 5.0 to run on Solaris 7 and Solaris 8, plus C++ patch.

For the optimum performance, Aprisma recommends running SPECTRUM with multiple Ultra Wide SCSI drives or Enhanced IDE (EIDE) drives using RAID disk striping technologies. SPECTRUM requires high-performance disk I/O optimized for small random writes. Please contact your hardware vendor for an appropriate RAID solution.

Aprisma also recommends a video subsystem capable of 65k colors at 1280 x 1024 resolution and a 20" (or larger) monitor.

Aprisma recommends that you install the "Entire Distribution plus OEM System Support" if this option exists on your Solaris Distribution. This option adds approximately 8MB to the install size.

Additional Requirements

1. Check with your system vendor to ensure your CD-ROM system is compatible with your hardware configuration. (Aprisma currently uses Toshiba TXM-3301 Epsilon 1 double-speed CD-ROM drives.) You may also use the CD-ROM that is bundled with your Sun workstation.
2. Under CDE's Window Style Manager, be sure to check the "Allow Primary Windows On Top" check box in order to permit pop-up dialog boxes to appear on top of a SpectroGRAPH view.
3. Under CDE's Window Style Manager, be sure to deselect the "Raise Window When Made Active" check box in order to easily dismiss the first displayed dialog box out of multiple dialog boxes.

4 Under CDE's Color Style Manager, be sure to choose "More Colors for Applications" in order to permit SPECTRUM to display in all its colors.

Note:

SPECTRUM links the X libraries (libX11, libXt, and libXm) dynamically. On most systems, soft links from /usr/lib to the appropriate directories are created as defaults. If not, set the following environment variable in the SPECTRUM user's environment:

sh:
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/lib:/usr/openwin/lib:/usr/dt/lib
export LD_LIBRARY_PATH

ksh:
export
LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/usr/lib:/usr/openwin/lib:/usr/dt/lib

csh:
setenv LD_LIBRARY_PATH
$LD_LIBRARY_PATH:/usr/lib:/usr/openwin/lib:/usr/dt/lib
(if LD_LIBRARY_PATH is already set)

OR:

setenv LD_LIBRARY_PATH /usr/lib:/usr/openwin/lib:/usr/dt/lib
(if the path is not already set)

If the X libraries are in a different directory, then add that directory to the path, separated by a colon.

Note:

When installing on Solaris the user will need to include the following paths in their PATH variable:
/usr/bin
/usr/openwin/bin
/usr/ccs/bin

For C-Shell:
setenv PATH /usr/bin:/usr/openwin/bin:/usr/ccs/bin: ${PATH}

For K-Shell:
export PATH =/usr/bin:/usr/openwin/bin:/usr/ccs/bin: $PATH

For Bourne Shell:
PATH=/usr/bin:/usr/openwin/bin:/usr/ccs/bin: $PATH
export PATH

Note:

Solaris 7 Patches

Aprisma recommends the following patches from Sun Microsystems in order to run SPECTRUM efficiently. These patches are subject to change as Sun Microsystems adds new patches or makes changes to existing patches.

The patches for **Solaris 7** listed in this note are available from Sun Microsystems.

Solaris 7 Patches

106144-20 SunOS 5.7: Elite3D AFB Graphics Patch
106145-17 SunOS 5.7: Creator 7 FFB Graphics Patch
106146-14 SunOS 5.7: M64 Graphics Patch
106147-06 SunOS 5.7: VIS/XIL Graphics Patch
106148-12 SunOS 5.7: XFB Graphics Patch
106327-08 SunOS 5.7: Shared library patch for C++
106541-12 SunOS 5.7: Kernel update patch
106944-03 SunOS 5.7: /kernel/fs/fifofs and /kernel/fs/sparcv9/fifofs patch
106950-13 SunOS 5.7: Linker Patch
106980-13 SunOS 5.7: libthread patch
107081-22 Motif 1.2.7 and 2.1.1: Runtime library patch Solaris 7
107359-02 SunOS 5.7: Patch for SPARCompiler Binary Compatibility
107448-01 SunOS 5.7: /usr/lib/fs/cachefs/cachefsd patch
107450-01 SunOS 5.7: /platform/SUNW,Ultra-Enterprise-10000/lib/cvcd patch
107458-10 SunOS 5.7: sd & ssd drivers patch
107636-05 SunOS 5.7: X Input & Output Method patch
107709-07 SunOS 5.7: libssasnmp/libssagent/snmpdx/mibiisa patch
107716-10 SunOS 5.7: PGX32 Graphics Patch
108376-12 OpenWindows 3.6.1: Xsun Patch
109104-04 SunOS 5.7: /kernel/fs/sockfs patch

Note:

Solaris 8 Patches

Aprisma recommends the following patches from Sun Microsystems in order to run SPECTRUM efficiently. These patches are subject to change as Sun Microsystems adds new patches or makes changes to existing patches.

The patches for **Solaris 8** listed in this note are available from Sun Microsystems.

Solaris 8 Patches

108434-01 SunOS 8: Shared library patch for C++
108528-02 SunOS 5.8: kernel update patch
108576-06 SunOS 5.8: Expert3D IFB Graphics Patch
108604-10 SunOS 5.8: Elite3D AFB Graphics Patch
108605-10 SunOS 5.8: Creator 8 FFB Graphics Patch
108606-07 SunOS 5.8: M64 Graphics Patch
108652-16 X11 6.4.1 Xsun patch
108827-01 SunOS 5.8: libthread patch
108869-02 SunOS 5.8: snmpdx/mibiisa/libssasnmp/snmplib patch
108921-07 CDE 1.4: dtwm patch
108940-10 Motif 2.1.1: Runtime library patch for Solaris 8
108991-02 SunOS 5.8: libc and watchmalloc patch
109147-06 SunOS 5.8: linker patch
109154-04 SunOS 5.8: PGX32 Graphics Patch
109472-02 SunOS 5.8: /kernel/drv/tcp and /kernel/drv/sparcv9/tcp patch

Configuring a 24-bit Color Card

Note: A 24-bit color card is required for SPECTRUM. This allows more colors to be displayed.

To allow your Sun workstation to display more colors with the windowing manager, be certain your 24-bit color card has been *configured* to do so. If you purchase a 24-bit color card, be certain to follow all installation instructions in the manual that comes with the card. You must first determine if your workstation has a 24-bit frame buffer. Complete the following steps to determine this:

1. Become `root`.
2. Type the command: `prtconf -F`

   This command returns your actual frame buffer device. If it contains any of the following, it is an 8-bit frame buffer:
   `cgfour cgthree cgsix`

   If it contains any of the following, it is a 24-bit frame buffer and you can continue with the rest of these instructions:
   `afb cgeight ffb gfxp tcx`

   If it contains the following, it is a 8/24 bit frame buffer that is configured, by default, for 8-bit operation:
   `m64`

   If you see `m64`, you must perform the following before going on to the next step:

- As root, create an empty file named `S99m64setup` in the /etc/rc2.d directory and copy the following within the `S99m64setup` file:

```
prtcon -F | /usr/xpg4/bin/grep -q m64
if [ $? = 0 ]
then
m64config -depth 24 -res 1152 now
fi
```

- Change the file permission as follows:

```
chmod u=rwx, go=r S99m64setup
```

Check for the existence of the following file:

```
/etc/dt/config/Xservers
```

If it exists, make sure the following string is in the etc/dt/config/Xservers file:

```
Local local_uid@console root /usr/openwin/bin/Xsun :0
-nobanner -dev /dev/fb 0 defclass TrueColor defdepth 24
```

The above string must be one continuous string on one line. It forces the windowing manager to take full advantage of a 24-bit color card. The string contains zeros, NOT uppercase o's.

3 Reboot.

Note: All video card manufacturers write their card's video drivers to Sun's standard and therefore report type of card correctly. But if the type is something different than what is listed in these instructions, you should consult the video card supplier or manufacturer for configuring it for 24-bit TrueColor capability.

If a 24-bit color card is already installed but your workstation is not in 24-bit color mode, complete the following configuration instructions:

1. Become `root`
2. Create your own, user-defined `config` directory by typing at the command line:

   ```
   mkdir -p /etc/dt/config
   ```

3. Navigate to the new `config` directory by typing:

   ```
   cd /etc/dt/config
   ```

4. Create a file and name it `Xservers` by typing:

   ```
   vi Xservers
   ```

5. Enter the following one line string in the new `Xservers` file:

   ```
   Local local_uid@console root /usr/openwin/bin/Xsun :0
   -nobanner -dev /dev/fb 0 defclass TrueColor defdepth 24
   ```

   Save and exit the `Xservers` file.

   The above string must be one continuous string on one line. It forces the windowing manager to take full advantage of a 24-bit color card. The string contains zeros, NOT uppercase o's.

6. Reboot or restart the Xserver.

If your workstation still is not in 24-bit color mode after following installation instructions in the manual that came with the card or after editing the `/etc/dt/config` file, contact Sun Microsystems for further assistance.

Microsoft Windows NT (OS 4.0 and 2000)

SPECTRUM supports Microsoft's Windows NT 4.0 and Windows 2000 on Intel-based systems with 500 MHz (or faster) Pentium III CPUs.

To run SPECTRUM on a Windows NT 4.0 system, you must have Service Pack SP5 or Service Pack SP6a installed.

SPECTRUM is compiled with Visual C++ version 6.0 with Service Pack 3.

Service Packs are not required to run SPECTRUM on systems running Windows 2000. While not required, Service Pack 1 for Windows 2000 is a tested and supported configuration.

For the optimum performance, Aprisma recommends running SPECTRUM with multiple Ultra Wide SCSI drives or Enhanced IDE (EIDE) drives using RAID disk striping technologies. SPECTRUM requires high-performance disk I/O optimized for small random writes. Please contact your hardware vendor for an appropriate RAID solution.

Additional Requirements

1. A 4X CD-ROM drive is necessary for loading SPECTRUM.
2. A 2 MB PCI Bus Video Card that supports a recommended minimum of 65K colors at a 1280 x 1024 resolution.
3. A 20-inch (or larger) color monitor for workstations running GUI clients.

Note: SPECTRUM must be installed by a member of the local Administrators group.

Note:

To ensure that SPECTRUM successfully installs, be sure Virtual Memory has been set appropriately. For a full explanation on Virtual Memory settings and procedure, refer to the ***SPECTRUM Installation Guide***.

Note:

The installation process creates a local user group called "SPECTRUM Users." This group has Full Control permissions to the SPECTRUM directory tree.

All users, including domain and trusted domain users, who are going to run SPECTRUM locally must be members of the SPECTRUM Users group in addition to being added to the SPECTRUM user database. Remote users of SPECTRUM only need to be added to the SPECTRUM user database and do not need to be added to the SPECTRUM Users group.

Note:

Aprisma recommends that SPECTRUM not be installed on a Domain Controller for performance reasons.

Note:

In order to maintain compliance with Microsoft's End User License Agreement for NT Workstation 4.0, Aprisma recommends installing SpectroSERVER and server applications on NT Server 4.0. Please refer to your NT Workstation 4.0 End User License Agreement and Server 4.0 End User License Agreement for complete details.

If you experience problems with window elements appearing incorrectly such as inverted or partially displayed text, make sure you are using the latest drivers for your video card.

To successfully run a shell script from the Scheduler on Windows NT, the command must precede the name of the script. For example, to run a bash script named, “test.ksh”, you need to type, “bash test.ksh” (no quotes).

On the NT platform with User Auditing turned on, every action is audited resulting in many entries to the EventLog causing the workstation to become extremely slow. Aprisma suggests that NT’s User Auditing not be turned on as it will hinder system performance causing SPECTRUM not to work as intended. User Auditing can be disabled in **Start|Programs|Administrative Tools(Common)|User Manager|Policies|Audit**.

Minimum Windows NT and Solaris Configurations

The following sets of numbers represent the minimum configurations required for SPECTRUM in order for it to take maximum advantage of all its resources and in order for it to run at peak efficiency. The maximum benefit is achieved from any system when all three system resources (CPU, memory, disk) are plentiful enough such that neither limits any of the others. With recent technology producing powerful processors, we are able to manage more devices and do more work with SPECTRUM on one machine. Therefore, memory must be increased to handle that load, otherwise the system would be saturated at a lower CPU utilization than

would normally be considered a healthy maximum (~80%) thus under-utilizing the workstation's potential. Similarly, high-speed disk I/O is required to handle these loads.

Due to the excessive memory utilization of Java processes on Solaris, more RAM is required to run SpectroGRAPH and its applications on Solaris. Therefore, all memory requirements associated with a SpectroGRAPH presented below includes this factor.

Tier 1: Less than 500 managed devices

(assuming an average of 24 ports per device)

Memory

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	512 MB	256 MB	768 MB
Solaris	512 MB	256 MB	768 MB

Processor

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	PIII-500	PIII-500	PIII-500
Solaris	Ultra1 / 167	Ultra1 / 167	Ultra1 / 167

Disk

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	3 x 4.0 gig *	1 x 4.0 gig	3 x 4.0 gig *
Solaris	3 x 4.0 gig **	1 x 4.0 gig	3 x 4.0 gig **

Tier 2: More than 500 managed devices
(assuming an average of 24 ports per device)

Memory

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	1024 MB	256 MB	1280 MB
Solaris	1024 MB	256 MB	1280 MB

Processor

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	PIII-733	PIII-733	PIII-733
Solaris	Ultra60 / 360	Ultra1 /167	Ultra60 / 360

Disk

Platform	SpectroServer Only	SpectroGRAPH Only	SpectroSERVER and SpectroGRAPH
Windows NT	3 x 4.0 gig *	1 x 4.0 gig	3 x 4.0 gig *
Solaris	3 x 4.0 gig **	1 x 4.0 gig	3 x 4.0 gig **

*** Disk set on Windows NT:**

disk1 = OS and swap
disk2 & 3 = SPECTRUM/DDM stripe set

**** 3 Disk Stripe set on Solaris:**

disk1 = OS and swap
disk2 = SPECTRUM
disk3 = DDM

Disk Requirements (Disk Striping)

For optimum performance, Aprisma recommends running SPECTRUM on systems with multiple ultra-wide SCSI or EIDE drives using RAID disk striping technologies. SPECTRUM requires high-performance disk I/O optimized for small random writes. Please contact your hardware vendor for an appropriate RAID solution.

SOLARIS

The REQUIRED configuration is to install SPECTRUM on a separate disk other than the operating system and install DDM on a separate disk (on a separate disk away from the rest of the SPECTRUM install) for a total of 3 disks*.

A BETTER configuration is to install SPECTRUM (with DDM) on a 3-disk stripe set. The stripe set can be set up by either using the Solstice Disk Suite software package or through the use of a raid controller (RAID 0).

The BEST solution for disk performance is to install SPECTRUM and DDM each on their own 3-disk stripe set (a combination of the above two solutions).

To summarize the above Solaris scenarios:

	OS	SPECTRUM	DDM
Required	disk1	disk2	disk3
Better	disk1	3 disk stripe set	
Best	disk1	3 disk stripe set	3 disk stripe set

To move the DDM directory onto to a disk separate from Solaris, perform the following actions:

1. **mv DDM** to a temporary directory (DDM_TMP)
2. create an empty DDM directory in SS (**mkdir DDM**)
3. mount the new disk to $SPECROOT/SS/DDM
4. **cp DDM_TMP/*DDM** (remember to also get .configrc)

Windows NT (only)

Currently, it is not possible to separate the DDM from the rest of the SPECTRUM installation on Windows NT. Therefore, the required configuration is to install SPECTRUM (with DDM) on its own 3-disk stripe set which is separate from the disk holding the operating system. The stripe set can be set up using the NT Disk Administrator.

Setting up the above 3-disk stripe set with the use of a raid controller instead of NT Disk Administrator, provides even better performance.

*Disk on NT
disk1 = OS and SWAP
disk2 & 3 = SPECTRUM/DDM stripe set.

Web Browser Recommendations

On Solaris systems, Aprisma recommends using Netscape 4.7x or later with the Java 1.3.0_01 run-time environment and plug-in Web Server. The Apache Web server included on the self-extracting archive is recommended.

On Windows NT systems, Aprisma recommends Microsoft® Internet Explorer 5.0 or Netscape 4.7x or later with the Java 1.3.0_01 run-time environment and plug-in Web Server.

New Features in SPECTRUM 6.0.2

This section lists the new features and functionalities plus other release advisories in SPECTRUM 6.0.2

SPECTRUM Web Operator Foundation (WOF) 2.5

The SPECTRUM Web Operator Foundation (WOF) is now available on the SPECTRUM 6.0.2 product CD. Included on the CD are the following two files related to WOF: Install.html and ReadMe.html. Please refer to these files on installation instructions and known anomalies.

Improved Model Management

Version 2.5 adds the ability to create and destroy containers, models, and pipes. It also allows the administrator to define entry points into the topology for users that do not have top level access. Among the improvements include:

Improved User Administration

Allows the Web Operator administrator to add, delete, edit (password change) and group users. Access to individual applications may be granted or revoked on a per-user or per-group basis.

Improved Installation

All components required to provide the Web Operator service are now part of the installation with a new graphical user interface available on both platforms.

BMC PEM Integration

BMC Patrol Enterprise Manager (PEM) Integration allows system administrators to analyze SPECTRUM alarms from a centralized console. This is accomplished through a PEM filter pathway setup to specifically receive alerts. New features in this release include: a reconnect with the BMC side following a shutdown; auto-assigning of alerts on the BMC side based on either policy standards or a resource file; and the ability to define a PEM filter path name in a resource file. When purchased, the BMC PEM Gateway is extractable from the SPECTRUM product CD.

Release Advisories and Special Considerations

This section provides any late-breaking information, or information that is mandatory or useful for the successful operation of SPECTRUM.

Multiple SpectroGRAPHS on a Single Workstation

SPECTRUM does not support running two or multiple SpectroGRAPHS on the same display from a single SpectroSERVER.

SpectroGRAPH Connection to Older SpectroSERVERS

SPECTRUM does not support new connections of SpectroGRAPH 6.0.0 clients to a SPECTRUM 5.0rev1 SpectroSERVER. Many applications will not connect and those that do will render unpredictable behavior.

SPECTRUM supports neither a 6.0.0, 6.0.1, nor a 6.0.2 SpectroGRAPH connection to pre-6.0rev0 SpectroSERVERS.

With the release of 6.0.2, a SpectroGRAPH connection to a pre-6.0rev0 SpectroSERVER may result in warnings or errors.

Installing SPECTRUM on Windows NT

When installing SPECTRUM on Windows NT, make certain that at least a subdirectory of the root hard drive exists. Use this directory for installing SPECTRUM. For example, install into **`d:\SPECTRUM\`** instead of **`d:\`**. Failure to install into a directory of the root hard drive will cause applications not to launch.

BMC Patrol Integration

Note: Version 2.3.00 of Patrol Integration for SPECTRUM (the version which integrates SPECTRUM 6.0.1 and BMC's Patrol 2000) may be delayed due to BMC's Quality Assurance testing and BMC's Beta Cycle.

Corrected and Known Anomalies

This section lists the known irregularities or anomalies that have been corrected since the previous revision of SPECTRUM and current known anomalies. Corrected and known anomalies are listed under the particular core, application, management module or toolkit component with which the anomaly is associated.Miscellaneous issues may also be included.

Alarm Notification Manager (SANM)

SPECTRUM Alarm Notification Manager (SANM) enhances the functionality of SANM-compatible, SPECTRUM-client applications that respond in various ways (e-mail notifications, trouble tickets, etc.) to alarms generated by SPECTRUM. SANM's Policy Administrator, an alarm filter configuration tool, enables you to specify and associate alarm notification policies with applications. A policy enables you to specify the types of alarms you want an alarm-processing application to receive and to filter out the alarms that you consider unimportant.

Considerations

You should be aware of the following considerations when using SANM:

1 When you define a new policy with the Policy Administrator, the policy is saved to the initial SpectroSERVER. If this SpectroSERVER goes down while you are defining a new policy, you cannot save the policy or create any further policies.

Scheduler Requirements for Windows NT

Because NT uses the Schedule Service (instead of the `cron` utility) to schedule tasks, NT users should make sure these additional requirements are met before using SANM's Scheduler:

- The NT Schedule Service must be running in order for the Scheduler to function. Set the Startup Type for the Schedule Service to "Automatic" so that the Schedule Service is started automatically whenever the computer is restarted.
- The Schedule Service must also log on with the proper User Account. Be sure to specify that the Schedule Service logs on as a member of either the Administrator's group or the Backup Operator's group. (Do

not specify the System Account — it cannot access the network.) Then make sure the user or user group assigned to the Schedule Service is also defined as a SPECTRUM user in SpectroGRAPH.

If you find that the Scheduler is not performing SANM tasks as scheduled, check the NT Schedule Service Startup parameters. Even when these Schedule Service parameters are incorrect, you can schedule associations. The Scheduler, however, will not be able to perform the association.

When Microsoft Internet Explorer 5.0 is installed on your PC, the Windows NT 4.0 Schedule Service (`Atsvc.exe`) is upgraded to the Task Scheduler Service (`mstask.exe`), which enables you to assign different user accounts to run scheduled tasks. See ***About the SPECTRUM Control Panel*** for more information about configuring the Task Scheduler Service for scheduled SPECTRUM tasks.

Corrected SANM Anomalies in SPECTRUM 6.0.2

1. Previously, if the SpectroSERVERs in your SPECTRUM landscape map used different naming services such as Network Information Service (NIS) and Domain Name Service (DNS), you had to use Landscape parameters instead of SpectroSERVER Host parameters when creating or modifying the filters in a policy. This problem has been corrected.
2. You now can use SpectroSERVER host parameters when creating or modifying filters in a policy.
3. Policy Administrator now correctly displays text for probable cause codes beginning with the value **f** (for example, `fxxxxxxx`, where `x`=any value). It also correctly saves them into filters as `fxxxxxxx`.
4. Previously, when using SANM to filter alarm information from AlarmNotifier, created events and probable cause codes beginning

with the value **f** would correctly display in the Event View and Alarm View, but not in AlarmNotifier. This problem has been corrected.

5 Previously, when using SANM to filter alarm information from AlarmNotifier, multiple SETs and CLEARs for the same device(s) and alarm ID(s) could be seen in log files following communications interruptions, such as can occur during online backups, for example. This problem has been corrected.

6 Following communications interruptions such as those described above, multiple SETs and CLEARs for the same device(s) and alarm ID(s) no longer appear in log files.

7 Previously, when using SANM to filter alarm information from AlarmNotifier, if `GET_EXISTING_ALARMS` was set to "`false`" in the `<$SPECROOT>/Notifier/.alarmrc` resource file, then AlarmNotifier was re-started, new alarms with creation dates previous to when AlarmNotifier was re-started could be seen. This was because updates to those "prior" alarms (which were cleared when AlarmNotifier was re-started) were interpreted as new alarms. This problem has been corrected.

8 A new filtering mechanism has been included in AlarmNotifier that correctly interprets such updates, and they are no longer sent to AlarmNotifier, nor ultimately, to SANM.

9 Previously, when using trace files to determine SANM policy functionality with AlarmNotifier, intermittent segmentation faults would occur from AlarmNotifier. This problem has been corrected.

10 A change in the way filter values are truncated in the trace files has eliminated the segmentation faults in these instances.

11 When you use the Policy Administrator on NT, text no longer fails to appear in the title bars of message windows and dialog boxes. On Windows NT, users who are selected to receive e-mail notification data now receive the e-mail.

Known SANM Anomalies in SPECTRUM 6.0.2

Problem 1: When you run SANM-enabled AlarmNotifier on the Solaris platform with the option `-ts` set less than the number of models you are filtering (e.g.: if you have 1000 models, you should not set the option `-ts` to be `500`), the swap space will eventually be used up causing SpectroSERVER to segmentation fault.

Solution: When setting up the trace file, be careful about its size in relation to the number of models specified in the policy filter. To be safe, accept the default size of `10000`.

Problem 2: If, in a distributed SpectroSERVER environment, policies are created and stored on different SpectroSERVERs by running Policy Administrator against different initial SpectroSERVERs and schedules are created to associate these policies with a particular application, the scheduled associations will fail.

Solution: Ensure that all policies are stored on one SpectroSERVER by always running Policy Administrator against the same initial SpectroSERVER.

Problem 3: On Windows NT, users selected to receive e-mail notification data may not receive e-mail. The users' login IDs are used by default to identify to whom notification data is sent.

Solution: Manually enter the complete e-mail addresses (not just the login IDs) of the users selected to receive e-mail into the Notification Data field in Policy Administrator. This will be corrected in a future release of SPECTRUM.

Problem 4: The Policy Administrator on Windows NT allows a maximum of 32,767 models to be displayed in the Add Filter Values view for Model Names.

Solution: In order to reduce the number of models within a list, filter models by model type and/or landscape and then by model name.

Problem 5: If you change a SANM policy association while AlarmNotifier is running, and the value for GET_EXISTING_ALARMS in the .alarmrc resource file is TRUE, then the states of all previously existing alarms are displayed as NEW, rather than EXISTING.

Solution: To ensure that previously existing alarms are displayed as EXISTING, restart AlarmNotifier after the SANM policy association change takes place.

Enterprise Alarm Manager

Alarm Manager and Enterprise Alarm Manager provide the user with a dynamic view of SpectroSERVER alarms. If your network is modeled using a distributed SpectroSERVER, you may have several landscape icons in SpectroGRAPH, each representing its own SpectroSERVER. You can opt to view all or some of these landscapes in EAM.

Known Alarm Manager Anomalies in SPECTRUM 6.0.2

Problem 1: Newly created Alarm Descriptions in SpectroWATCH will not display in the Alarm Manager if the Alarm Manager was running at the time the watch and its custom Alarm Description was created. The alarm itself is displayed but without the custom new Alarm Description.

Solution: Exit then restart the Alarm Manager. The new view will be updated with your custom alarm description. This problem will be corrected in a future release of SPECTRUM.

Problem 2: On the Windows NT platform, the Auto Raise option does not bring the Alarm Manager to the front when a new alarm is created.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 3: When you have both the Netscape mail window and the main Netscape window iconified, when you click the Hints button the Netscape browser window toggles between the main Hints page and Netscape mail window.

Solution: This is a problem with Netscape 4.0.3 and 4.0.4.

Problem 4: On the Solaris platform, when you create a duplicate model, open the Alarm Manager from the duplicate model, open the popup view

navigator menu off the alarm model, then select **Device -> Chassis**, you receive the message: `SpectroSERVER Error: Cannot recover, must return to previous view.`

Solution: Return to the previous view. This does not have any adverse affects and seems to occur on the Olicom Wire Speed Bridge program Model type GNSNMPDev. This problem will be corrected in the next major release of SPECTRUM.

Problem 5: When the Alarm Manager receives a Link Down trap from a device modeled in the database, SPECTRUM asserts a Red alarm on the interface model that generated the trap, and a Yellow alarm on the device. If that same device receives a second Link Down trap from a different interface, that interface also turns Red. But when the device receives a Link Up trap from the second interface, SPECTRUM clears the red alarm on the second interface and the Yellow alarm on the device model. This results in a Red alarm on the first down interface model but no associated Yellow alarm on the device model.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 6: When printing an alarm report with multiple probable causes from the Alarm Manager using a Windows NT workstation, you may get the following printing problems:

1. The second listed probable cause (not shown in Alarm Manager without scrolling down) will bleed through the printout outside of the tab.

2. Selected alarms prints blacked out without being able to read it.

3. The probable cause column title bleeds through the scroll bar on the Windows NT printout.

Solution: These printouts require that you use a Level 2 Postscript printer which eliminates the printing problems.

Problem 7: Currently, alarm IDs may not be unique during a single runtime session of SpectroSERVER. One possible outcome could be when you attempt to clear one alarm, a different alarm is cleared instead.

Solution: The chance that this problem will occur is very low. This problem will be corrected in a future release of SPECTRUM.

Problem 8: On the Solaris platform, after creating a pingable in a topology view, enter a model name in the Filter area, select the model name table, then type in the model name entry, the filter interface closes and you are taken back to the main Enterprise Alarm Manager view.

Solution: It has been determined that this is a Neuron Data problem and that pressing this button is unreliable and may not work. SPECTRUM is working with Neuron Data on this problem.When you filter by "Probable Cause ID", everything is filtered out. When you filter by Search and you set the button to Probable Cause ID, no alarms are selected.

Solution: Paste the entire ID into the field instead of typing it one character at a time. This problem will be addressed in a future release of SPECTRUM.

Problem 9: In Alarm Manager, when a person's name (as opposed to a valid email address or username) is entered in the Troubleshooter/Name field, mail in Alarm Notifier will fail when it is sent to that person.

Solution: Enter either the person's email address or username as the Troubleshooter Name when entering Troubleshooter information. It can be the same as the email address entered in the email address field. This problem will be corrected in a future release of SPECTRUM.

Problem 10: When you are in Enterprise Alarm Manager and a landscape has been modeled with an alarm on it, when you right click and choose either Topology, Location, or Organization, you are forced to open a new SpectroGRAPH even though SpectroGRAPH is currently running.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 11: The Enterprise Alarm Manager view resizes itself after you maximize the window, open the **View** menu, and select Show Toolbar. It will also resize itself after you open the **View** menu, and choose Show Filter/Search Panel.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 12: When you run Enterprise Alarm Manager (within a distributed environment) against a SpectroSERVER which does not have all model types linked in and which is modeling a landscape which contains some of these extra model types, the extra model types will not show up in the model type list of the filter dialog, but any alarms on the extra model types will be displayed in the alarm list.

Solution: Be sure the server has all model types (within a distributed environment) needed to display in the model type list.

Problem 13: When changing column sizes while the Model list is updating, the EAM application will crash.

Solution: Wait until the Model list completes updating and then resize columns. This has been found to be related to Neuron Data which has this case under review (case # 45409).

Problem 14: If the Model menu or the Icon Subviews menu (accessed by right clicking the device icon) is open at the time the device is removed from the view (for example, the alarm is cleared or the device is destroyed), accessing the menu causes the application to crash.

Solution: If the Model or Icon Subviews menu is open when the device is removed from the view, close the menu (release the right mouse button or click elsewhere in the view) and reopen the menu for the newly selected item. Aprisma and Neuron Data are continuing to investigate a fix or workaround for this problem.

Problem 15: When using the Enterprise Alarm Manager (EAM) on systems running Windows NT, 4.0, and 2000, if you hit the `Return` or

`Enter` keys while entering a text string in the **Alarm Status** field, the data reflected in the **Alarm Status** field in the AlarmNotifier will be truncated or include garbage characters. In addition, the values for fields following **Alarm Status** in the AlarmNotifier will also contain garbage characters. This is a problem if you are using AlarmNotifier in conjunction with EAM.

Problem 16: Do not press the `Return` or `Enter` keys while entering text in the **Alarm Status** field since text will automatically wrap. This problem will be corrected in the next major release of SPECTRUM. When you assign a troubleshooter to a remote SpectroSERVER and that server is later shut down and restarted, the assignment still exists.

Solution: This problem will be addressed in a future release of SPECTRUM.

AR System Gateway

The AR System Gateway provides you with many tools for managing network problems. The timely resolution of problems and service requests is one of the fundamental requirements of a network management system. The AR System Gateway provides the tools to efficiently detect, track, and resolve these network problems and service requests. The AR System Gateway ties SPECTRUM alarms into the Action Request System developed by the Remedy Corporation, thereby enabling network administrators to create a workflow process for support staff while automatically capturing a database of information for use in problem solving. Both end users and support staff can take advantage of the AR System Gateway.

Considerations

You should be aware of the following considerations when installing or using the AR System Gateway:

All Platforms

- Both the file system where you install the AR System Gateway and its file creation mask should be set up with **read/write (rw) access** for all users of the AR System Gateway.
- If you perform an auto install of the AR System Gateway, **Install** assumes that the AR System Server and SpectroSERVER are on the local machine, and that the AR System Installation directory is in the `/usr/ar` directory on UNIX or in the `c:\Program Files\Remedy` folder on NT. If your network configuration differs from these defaults, make sure you use the `reconfig` tool to perform the steps described in the ***SPECTRUM*** AR System Gateway ***User's Guide***.
- If more than one model/device has the same IP address, the DevTop View displayed in Show SPECTRUM View may not be the device for which the trouble ticket was generated.

- While using the SPECTRUM Trouble Ticket Form, the active links (SimilarTickets and SpectrumView) may fail. This will happen if the AR System Gateway installation directory paths are different on the Remedy server and the Remedy client machines. This is because active links are executed on the client machine and the form on the server machine is using the AR System Gateway installation path on the server machine.

  Keep in mind that you can modify the active link command line to use the AR System Gateway installation path on the client machine. Or (on your current machine), you could create a directory with the same path as the Remedy Server and copy the scripts "SimilarTickets" and "SpectrumView" into your directory.

- When the **Show Trouble Tickets** menu option is selected in the SPECTRUM Alarm Manager, models with blank IP addresses will show ALL trouble tickets. This is because the Show Trouble Tickets macro is querying on the IP address, which is not unique for models with blank IP addresses.

  To cause the Show Trouble Tickets option to show only those trouble tickets pertaining to a particular model, even if the IP address is blank, *and if you have defined your own form that contains the Model Handle field*, you can change the macro to query on the Model Handle. This will require that the `showTT.arq` and `ShowTroubleTickets` files be modified accordingly.

  If you are using the default SPECTRUM form, *or your own user-defined form does not contain the Model Handle field*, you can still improve the query accuracy by modifying the Show Trouble Tickets macro to query on both the IP address and the model type, for example.

- The `arsgated` does not read changes in the `.arsgrc` dynamically. On the Solaris platform, to have the `arsgated` reread the `.arsgrc`, you can send a "`kill -USR1 <pid>`" signal (from a script, for example). This will cause the `arsgated` to reread both the `.arsgrc` and `.filterc` files. You can get the `pid` from the `.arspid` file, where the `arsgated` writes it at startup. If the `arsgated` is not running, then the `pid` is 0.

This solution will not work on the NT platform, since there is no signalling in Windows NT.

- If contact with the AR System Server is interrupted, an error is sent to the UNIX syslog file *or* the Windows NT Event Viewer. Any trouble tickets generated by the SPECTRUM AR System Gateway between the time contact is interrupted and then reestablished are lost.
- Beginning with 6.0, the gateway will be started by `processd`. In order for a successful start, a SpectroSERVER needs to be already running.

Network Configuration Requirements

If you are using the base level AR System Gateway (the AR System Gateway without SANM) to generate automatic trouble tickets in a distributed SpectroSERVER environment, you need to set up the network configuration following these general rules:

- The system where you install the AR System Gateway should have both SpectroGRAPH and the AR System Client tools[1] on it.
- Install one AR System Gateway for each SpectroSERVER generating trouble tickets.

Each copy of the Gateway connects one SpectroSERVER to one AR System Server. In order for *n* SpectroSERVER(s) to generate trouble tickets, you need *n* AR System Gateway(s) and *n* system(s) with SpectroGRAPH(s) and AR System Client tools. Since each SPECTRUM trouble ticket has a field that displays the SpectroSERVER system that generates the ticket, you know exactly where the ticket comes from.

If you are using the advanced level AR System Gateway (with SANM), you need not perform the above configuration steps. One AR System Gateway can then connect to multiple SpectroSERVERs.

[1] On the Solaris platform, the AR System Client tools must be downloaded from Remedy's web site. On the NT platform, the tools can be installed directly from the Remedy AR System installation CD.

Note:

If you are not interested in automatic trouble ticket generation and you want to use the AR System Gateway just to submit trouble tickets manually, you need to install only one AR System Gateway for one SpectroSERVER. When you use the SpectroGRAPH that is on the node with AR System Gateway, you can still submit trouble tickets for alarms from any landscape modeled on that node's SpectroGRAPH. Just select a landscape icon, open the Alarm View window, and submit a trouble ticket for any of the alarms visible in the Alarm View window.

Order of Installation for Components

Solaris Only

The Admin and User Client tools for Solaris are not included on the Remedy AR System version 4.5 installation CD. Please note the following:

- If you install the Remedy AR System version 4.5, *and have not installed an earlier version before*, you can download the version 4.5 Client tools from the Remedy site (www.remedy.com) after the installation is complete.

  or,

- If you install the Remedy AR System version 4.5 *over version 3.2*, you retain the version 3.2 Client tools. You can download the version 4.5 Client tools from the Remedy site (www.remedy.com).

NT and Solaris Platforms

Aprisma recommends that you install the Remedy AR System *before* you install SPECTRUM and the AR System Gateway.

However, if you do not or cannot install the Remedy AR System first, you can still install it in one of the following ways:

- When you do install the Remedy AR System *after* the Gateway, make sure that the AR System Server and the SpectroSERVER are installed on the same system as the Gateway and the AR System Client Tools

are in the `/usr/ar` directory on UNIX systems (or in the `c:\Program Files\Remedy` folder on NT systems). These are the default locations set up by the AR System Gateway installation.

- However, if you cannot install the Remedy AR System and SpectroSERVER on the same system as the Gateway or the AR System Client Tools in the `/usr/ar` directory on UNIX systems (or in the `C:\Program Files\Remedy` folder on NT systems), install the Remedy AR System and then use the reconfig tool to change the defaults. See the ***SPECTRUM*** AR System Gateway ***User's Guide*** for instructions on how to use the reconfig tool.

Note:

If you are purchasing Remedy's ARS 4.5 application NEW, you will need to download (from the Remedy website) Remedy's ARS v4.0.2 and install that version BEFORE installing Remedy ARS v4.5. SPECTRUM 6.0.2 requires special files in Remedy v4.0.2, such as DLLs, etc, in order to integrate with Remedy v4.5.

Existing SPECTRUM/Remedy v4.0.2 users will not have any problems with SPECTRUM 6.0.2.

Existing SPECTRUM/Remedy v4.0.2 users upgrading to Remedy v.4.5 will not have any problems with SPECTRUM 6.0.2.

If you change the AR System Server that you plan to run against, be sure to modify the `/etc/ar` (or on NT, the `ar` file in the AR System Gateway folder, that is, `$SPECROOT\ars_gateway\ar`) with the new AR System Server name.

AR and AR System Gateway Compatibility

SPECTRUM AR System Gateway 6.0 is a Remedy AR System 4.0 client, and is fully interoperable with Remedy AR System 3.*x* and 4.0 servers.

Corrected ARS Gateway Anomalies in SPECTRUM 6.0.2

1. After installing SPECTRUM on Windows NT, when you open the **Remedy ->Admin Tool** and you select **Forms** to import a definition, you can now import **SpectrumForm**.
2. Previously, when performing a manual submit, and "Always Prompt for Login" was set to "**Prompt**" in the "User" form preferences, the manual submit would fail with an error similar to the following:
   "User:Server:<Remedy_server>
   A User name must be supplied in the control record. (ARERR 149)
   Action Request System, ARUser Tool version 3.2...<copyrightinfo>"
3. Previously, when performing a Manual Submit on Windows NT from the SPECTRUM Alarm Manager, a blank pop-up message would appear and no trouble ticket was generated.
4. Previously, a spurious, empty folder, `ARS_GATE`, was sometimes created in the `$SPECROOT` folder on Windows NT when the SPECTRUM user's home folder was set to `$SPECROOT\ars_gateway` instead of the default `C:\HOME`.
5. Previously, when performing a Manual Submit on Windows NT via the SPECTRUM Alarm Manager, the submit failed if a new active link was created for the SPECTRUM Trouble Ticket Form.

Known ARS Gateway Anomalies in SPECTRUM 6.0.2

Problem 1: On Windows NT, when you launch AR System Gateway, a bash shell launches and starts to scroll continuous error messages. If you type CTRL-C in the shell, the Policy Administrator crashes and you receive a Dr. Watson error message.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 2: When you run SANM-enabled AR System Gateway on the Solaris platform with the `-ts` option set less than the number of models you are filtering (e.g.: if you have 1000 models, you should not set the option `-ts` to be 500), the swap space will eventually be used up causing a SpectroSERVER segmentation fault.

Solution: When setting up the trace file, be careful about its size in relation to the number of models specified in the policy filter. To be safe, accept the default size of 10000.

Problem 3: When arsgated is run with -tl or -tn option, the file it should create in trace directory is missing. This is due to the arguments not being passed to the arsgated.demon.

Solution: This is being fixed in a later release.

Problem 4: Base-level (no SANM) only (Windows NT)— If you modify your filters when the Automatic Trouble Ticket Generator (arsgated) is running, the modifications are not known by the arsgated.

Solution: Stop and restart the `arsgated` after changing any filters.

Problem 5: When the **Show Similar Tickets** button is pressed on Windows NT from the SPECTRUM Trouble Ticket, the similar tickets are displayed but the resolution field is not exploded.

Solution: This will be corrected in a future release of SPECTRUM AR System Gateway.

Problem 6: When running the `arsgated`, if the Remedy AR System Server password is not entered on the command line *or* is not present in the resource file, you are not prompted for your password.

Solution: The Remedy AR System Server password must be either entered on the command line *or* present in the resource file. This will be corrected in a future release of SPECTRUM AR System Gateway.

Problem 7: When performing a Manual Submit via the SPECTRUM Alarm Manager, the submit fails when the probable cause text string is too long. An example is the text string for probable cause ID `0x10c0b`.

Solution: Select **Show Trouble Tickets** from the SPECTRUM Alarm Manager to verify that trouble tickets are submitted. This will be corrected in a future release of SPECTRUM AR System Gateway.

Annotation Toolbox

The Annotation Toolbox, allows you to edit SPECTRUM views by adding lines, circles, boxes, and text. The toolbox provides several graphic tools to enhance a view's background by adding extra graphics or text.

Known Toolbox Anomalies in SPECTRUM 6.0.2

Problem 1: The following fonts may not work correctly:

The **Application** font (at any size) changes to Symbol when not bolded or italicized;

A wrong font displays when you change the **Fixed** font to a different font (not bolded) at sizes 0, 16, and 24. If bolded, the font works correctly;

When you choose the **Mincho** font, it displays with foreign lettering regardless of size, slant, and height;

When you enlarge the **Open Look Glyph** font, the letters become too high and get cut off.

Solution: The above font behaviors are not SPECTRUM font errors but are based on the font architecture themselves.

Problem 2: When you select the **Mincho** font and select both the Keep Tool and Font Tool, nothing appears when you type in the SPECTRUM edit screen. When you click and drag a box around the typed area, highlighted spaces appear which can be erased. If you click and drag a box around the area again, nothing is highlighted. Everything you previously typed has been erased.

Solution: The existing Annotation Toolbox will be replaced with a new and improved version in a future release of SPECTRUM.

AutoDiscovery

AutoDiscovery is SPECTRUM's automatic topology mapping facility. AutoDiscovery offers three Discovery Methods:

• **IP List** maps a discovered device's IP address to a physical (MAC) address.When this method is used, AutoDiscovery will attempt to contact and identify only those devices at the IP addresses you specify when you create the configuration.

• **Range** uses ICMP echo requests (pings) to test each of the IP addresses within the range or ranges you specify in the IP Address Ranges panel. When this method is used, AutoDiscovery will attempt to contact and identify devices at each IP address within the range(s) bounded by the pair(s) of low and high addresses you specify.

• **Router** examines the route tables in your network's routers to establish the high-level topology of your network, creating subnets and LANs. Router discovery configurations require both a range of IP addresses (to establish the boundaries of the discovery) and one or more IP addresses for routers that AutoDiscovery will use as "seed" routers. The route information table and/or the routing neighbor tables of each seed router will then be queried to determine the addresses of neighboring routers. If these addresses are within the specified range, they too are queried, and the process is repeated until all known neighbors within the range(s) have been queried.

Corrected AutoDiscovery Anomalies in SPECTRUM 6.0.2

1 When AutoDiscovery is run on a network containing two SmartSwitch routers connected with only a WAN link, the discovery does not create the WAN_Link between the routers and could appear as LANs.

Known AutoDiscovery Anomalies in SPECTRUM 6.0.2

Problem 1: AutoDiscovery may fail to discover a Token Ring the first time AutoDiscovery is run. It may find one ring while failing to find another ring.

Solution: Run Ring Discovery, and the missing ring will be found.

Problem 2: On Windows NT, if you search for IP an ATT1000 model, it is found as a pingable. If you destroy the device and model it by IP, it is discovered as an ATT_SmartHub.

Solution: This device does not support the necessary MIBs that allow AutoDiscovery to classify it as an SNMP agent. Aprisma may reconsider this problem in a future release of SPECTRUM.

Problem 3: When working in JAVA-based applications such as AutoDiscovery and MibTools, you are able to cut/copy and paste multiple lines from an Xterm window into JAVA-based text fields that only accepts one value such as the “IP Address List”, or the “Community String.” When you do this, you get unwanted results such as lists of text lines or IP addresses you pasted in, and possibly other strange results. You also receive the following error message:

```
Attempt to enter an IP Address that does not conform to
standards, please correct the IP Address entered.
```

This problem also occurs when using the copy/cut and paste hotkeys.

Solution: Avoid pasting multiple lines of text in fields. This problem will be fixed in a future release of SPECTRUM.

BMC PEM Integration

BMC Patrol Enterprise Manager (PEM) Integration allows system administrators to analyze SPECTRUM alarms from a centralized console. This is accomplished through a PEM filter pathway setup to specifically receive alerts.

Known BMC PEM Integration Anomalies in SPECTRUM 6.0.2

Problem 1: When .pempiperc is run without the PEM_FILTER_NAME resource having a value or with an invalid value, no error messages are generated.

Solution: Before running .pempiperc, make certain the PEM_FILTER_NAME resource contains a value (name) and that the name matches the filter running on the PEM server. This problem will be corrected in a future release of SPECTRUM.

Command Line Interface (CLI)

The Command Line Interface (CLI) provides access to the SpectroSERVER in situations where it is not possible or not desirable to use the SpectroGRAPH graphical user interface. One such situation is the use of a character-based terminal to remotely access the SpectroSERVER.

Corrected CLI Anomalies in SPECTRUM 6.0.2

1 The syntax, `create event -a` as documented in the Command Line Interface User's Guide now works correctly .

Known CLI Anomalies in SPECTRUM 6.0.2

Problem 1: When using the "`-a`" switch (create event alarm), it can sometimes take longer for the event to appear in the event list. The command exits successfully (`0`) but displays no output. If the user attempts a subsequent **show events** command on the model handle (if no model handle was given, set as current or a landscape handle was used, then execute the **show events** command on the user's model handle), the event will show up.

Solution: This problem will be corrected in a future release of SPECTRUM.

Control Panel (CPanel)

The SPECTRUM Control Panel is a convenient Point and Click interface that provides facilities that let you configure SPECTRUM resources, start and stop SpectroSERVER, start SpectroGRAPH, perform database administration and maintain your SPECTRUM installation.

Known CPanel Anomalies in SPECTRUM 6.0.2

Problem 1: When the processd is shutdown, the Control Panel dialog boxes have no title causing you not to know where these errors originated from or what the errors are unless you click it.

Solution: This problem will be corrected in the next release of SPECTRUM.

Data Export

Data Export extracts archived events and statistics data from SPECTRUM DDM (Distributed Data Manager) databases and current data for object entities stored in VNM databases. Data Export converts extracted data to the output format that you specify — either ASCII, SAS, or SQL. Data Export connects to a single SpectroSERVER in a distributed server environment and can extract data from any of the landscapes registered with that SpectroSERVER. The data can then be imported into a report generator, database, spreadsheet, or statistics-analysis application of your choice.

Corrected Data Export Anomalies in SPECTRUM 6.0.2

Note:

Consider the following when you use SPECTRUM Data Export:

On the Solaris platform, if scheduled exports are not occurring at their specified time it may be necessary to stop and restart your cron daemon. Contact your system administrator for more details regarding cron on your workstation.

Oracle exports will not import all of the data to the Oracle database if the table space is inadequate. Make sure that the Oracle database contains enough table space to import all Oracle data.

The SPECTRUM 6.0 version of Data Export is supported by a SPECTRUM 5.0 Rev 1 SpectroSERVER. However, Statistics and Events exports with ranges of Week and Month will only get the first day's worth of data.

1. Saving a definition file in SAS output format no longer is saved with an output mode of Date.
2. SAS exports no longer fail on the Windows NT platform.

3 On the Windows NT platform, filter operations no longer produce inconsistent results.

4 Data from SAS exports now reports the time from different time zones correctly.

5 The **Clear All Entries** and **Reset To Defaults** options on the Edit menu now clear and reset all values for underlaying layers of events or statistics.

6 On the Windows NT platform, you can now schedule more than one definition file to run at a time.

7 The user interface no longer freezes when a landscape that is in the preferred landscape list is shut down while you are in a Statistics or Events dialog box.

8 When exporting to Oracle, a log file is now created if the SDE definition file has the same name as the table name.

Known Data Export Anomalies in SPECTRUM 6.0.2

Problem 1: An error may occur if several models are selected from multiple landscapes and re-selecting the Events filter box. You receive the error message, “Unable to obtain any models from all preferred landscapes.”

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 2: SAS export may not complete if multiple landscapes were selected and one of those landscapes failed during the export.

Solution: This problem should be corrected in a future release of SPECTRUM.

Problem 3: When you export using a UNIX based Oracle server and

Windows NT as the client the export completes but you are unable to view the table even though the table exists in the database. Since the Oracle server is on UNIX and the client is on NT, this becomes a heterogeneous environment when a homogenous environment is needed. You receive an error message that says:

```
"Error checking path homogeneity
ORA-02352: Direct path connection must be homogeneous"
```

Solution: Oracle exports in a heterogeneous environment (i.e., across NT and UNIX platforms) are not supported. Both the Oracle client and Server must be the same platform (i.e., NT to NT or UNIX to UNIX). (***An NT client export to a UNIX server will work in Oracle 8 but not in Oracle 7.***) If the client and server are not of the same platform, you must use a conventional path load... "Use conventional path load." This is discussed in Chapter 9, "Direct Path Loads" of the *Oracle 7 Server Utility User's Guide.*

Problem 4: Exports to Sybase on the Windows NT platform fail because the 10.0 /10.0.3 versions of Sybase Open Client do not correctly handle the syntax, ! !, on Windows NT.

Solution: Aprisma recommends that you upgrade to Sybase Open Client, Release 11.

Problem 5: When trying to export to SAS, it fails with error messages. A syntax error in the SAS autoexec.sas file, config.sas, can cause these messages. Examples of the messages are:

```
Mar 21 16:02:19 Description: Export Definition Description
SpectroSERVERS: svaa0026 0x2f80000
Mar 21 16:02:19 Begin Models export to model
```

Solution: Do not change the autoexec.sas file for data export as inconsistent results may occur. This problem will be addressed in a future release of SPECTRUM.

Problem 6: When SDE exports Models to an existing table, the existing table is truncated rather than dropped, leaving intact the table column characteristics. If you have increased the default model name length (via

the SDE_OUTPUT_MODEL_LEN variable in the dtxscript) and the ensuing export contains models with names longer than the previous default, the export will likely fail with an Oracle error indicating that the insert value was too large for the column.

Solution: Manually drop the existing table and then perform the export. This will establish the column width to the value specified in the dtxscript.

Problem 7: Statistical exports fail to SQL databases because of an incorrect echo statement in the scripts that when run perform database insertions.

Solution: In the `echo_no_cr()` function, there is a case statement with the following line:

```
AIX|SunOS|ULTRIX) # berkeley; use -n option
```

The above statement should be changed to:

```
AIX|SunOS|ULTRIX|Windows_NT # berkeley; use -n option
```

In addition, the following two lines:

```
# append \c
echo "$*\c"
```

should be changed to:

```
# append -n
echo -n "$*"
```

Event Configuration Editor(ECE)

The Event Configuration Editor ECEditor) allows creation, deletion, modification, and browsing of the following information in SPECTRUM: Alert Map, Event Disposition, Event Format, and Alarm Probable Cause files.

Known ECE Anomalies in SPECTRUM 6.0.2

Problem 1: Not all vendor event files that are shipped with SPECTRUM are read/writable. This affects the use of the Event Configuration Editor since some event files need to have their permissions changed to make them read/writable.

Solution: To make a vendor file read/writable, you may have to change permissions to the files found in the following directories including the directories themselves: CsVendor, CsEvFormat, and CsPCause. This problem will be corrected in a future of SPECTRUM.

Problem 2: When you edit EventDisp to allow an alarm or log an event on just one model type, the change you made for one vendor becomes true for many vendors. This causes all model types to respond to in the same way to a specific trap. Redefining an event contained in the EventDisp file in a vendor-specific directory is ignored since the event is also in the Aprisma EventDisp file. SPECTRUM does not allow overriding a definition in the EventDisp file once an event is defined in the table.

Solution: This problem will be corrected in a future of SPECTRUM.

Problem 3: When you edit EventDisp to allow an alarm or log an event on just one model type, the change you made for one vendor becomes true for many vendors. This causes all model types to process those events in a the same way. A user-defined event contained in the EventDisp file in a vendor-specific directory is ignored if the event has been defined in another EventDisp File which has been read first.

Solution: This problem will be corrected in a future release of SPECTRUM.

Enterprise Configuration Manager (ECM)

Enterprise Configuration Manager (ECM) is an application that enables customers to monitor, document, troubleshoot, and control the configuration of network devices.

New Features

- Runtime selection of models or model types.
  You no longer have to exit and restart ECM to work with different models or model types.
- Selective writing to RAM or NVRAM on Cisco routers.
  You now can selectively copy the host configuration of Cisco routers to RAM, or commit it to NVRAM.
- User-friendly text strings.
  Enumerated attribute values now display as meaningful text strings, rather than numeric values.
- Cabletron SmartSwitch Router host configuration load/capture capability.
  This ECM capability is now fully functional.
- Cisco LightStream ATM switch host configuration load/capture capability.
  This ECM capability is now fully functional.
- Cisco Catalyst Switch host configuration load/capture capability.
  This ECM capability is now fully functional.
- Long model name support for templates and configurations.
  ECM can now store model names up to 1024 characters in length.
- Find/Find Again tool added to the Host Configuration window.

Host Configuration strings are now easily editable by using Cut/Copy/Paste operations along with the Find/Find Again tool.

- Global editing of Host Configuration Mask strings.
  Mask strings can now be appended globally to selected configurations.
- Latest configuration updates can now be overwritten.
  A user preference can now be set such that when a selected configuration is updated, the configuration's latest version number remains constant.

Special Requirements for NT Users

Scheduler Requirements

Because NT uses the Schedule Service (instead of the `cron` utility) to schedule tasks, NT users should make sure these additional requirements are met before using ECM's Scheduler:

- The NT Schedule Service must be running in order for the Scheduler to function. Set the Startup Type for the Schedule Service to "Automatic" so that the Schedule Service is started automatically whenever the computer is restarted.
- The Schedule Service must also log on with the proper User Account. Be sure to specify that the Schedule Service logs on as a member of either the Administrator's group or the Backup Operator's group. (Do not specify the System Account—it cannot access the network.) Then make sure the user or user group assigned to the Schedule Service is also defined as a SPECTRUM user in SpectroGRAPH.

If you find that the Scheduler is not performing ECM tasks as scheduled, check the NT Schedule Service Startup parameters. Even when these Schedule Service parameters are incorrect, you can schedule ECM operations — captures, loads, and verifications. The Scheduler, however, will not be able to perform these operations.

When Microsoft Internet Explorer 5.0 is installed on your PC, the Windows NT 4.0 Schedule Service (`Atsvc.exe`) is upgraded to the Task Scheduler Service (`mstask.exe`), which enables you to assign different user accounts to run scheduled tasks. See ***About the SPECTRUM Control Panel*** for more information about configuring the Task Scheduler Service for scheduled SPECTRUM tasks.

Cisco Router Requirements

If you are planning to work with Cisco routers in an NT environment, you must perform additional steps after you install the Enterprise Configuration Manager. Cisco routers use TFTP (Trivial File Transfer Protocol) to transfer configuration files. Therefore, you have to make sure your workstation is set up as a TFTP server.

To set up your NT machine to support TFTP after you install the Enterprise Configuration Manager, do the following:

1. At the command prompt, navigate to the `system32` directory under the system root directory (which is likely to be the `C:\Winnt` directory):

   ```
   cd C:\Winnt\system32
   ```

2. Copy the `*.dll` files from the `C:\Win32App\Spectrum\tftpboot` directory into this directory:

   ```
   cp C:\Win32App\Spectrum\tftpboot\*.dll .
   ```

3. In MS Windows NT you can start up the `tftpserver` (located in the `C:\Win32App\Spectrum\tftpboot` directory) in either of two ways:

   - Double-click on the file name in File Manager or NT Explorer.
   - Start up the server using the Startup file folder in Windows. For details on doing this, refer to your Windows NT user documentation.

Considerations

You should be aware of the following considerations when using ECM:

- ECM cannot successfully *capture* a device's attributes unless the community string matches the community string in the SNMP-managed device itself. Likewise, ECM cannot successfully *load* external attributes to a device unless the community string matches the community string that has write permission in the SNMP-managed device itself. If you need to change the device's community string, you can do so by loading a new configuration with the correct `Community_Name` attribute value to the device.
- ECM may not successfully capture attributes that require instance IDs if you are working with early management modules (in particular, those that support Cabletron proprietary protocol devices such as the IRM). If you need to capture a configuration from one of these devices, create a configuration manually (without a template) containing only attributes that *do not* require instance IDs. Then manually insert the attributes with the known instance IDs and the attribute values in the configuration.
- If you are working in a distributed SpectroSERVER environment, make sure you manually add your user account to each landscape on which you intend to perform ECM functions. ECM will not be able to contact a landscape if the landscape lacks the proper user accounts.
- If configurations are created for an extremely large number of models, the scrollable box located in the Overview list, to the left of the Configuration list, will disappear from view if dragged downward, and the Overview list will not appear scrollable.
- Host Configuration operations will only work for Cisco Catalyst devices after navigating to the CatStack application.
- Background operations for Cisco Catalyst devices will only work if the model handle used is that of the CatStack application, not of the device itself.

Considerations for Running ECM from the Command Line

Solaris Platform Only

- Before you can run ECM manually from the command line, you must define the `XUSERFILESEARCHPATH` variable.
- Use the appropriate command for your shell to set the `XUSERFILESEARCHPATH` variable to the value:

  `<SPECTRUM directory>/app-defaults/%N`

- If the `XUSERFILESEARCHPATH` variable is already set, then append **`<SPECTRUM directory>/app-defaults/%N`** to the end of the value, inserting a colon (:) separator between the values.

Corrected ECM Anomalies in SPECTRUM 6.0.2

1 Previously, the SPECTRUM database converter `<$SPECROOT>/SS-Tools/dbpart1/converter` failed when attempting to convert Enterprise Configuration Manager Model Types. This problem occurred during an upgrade that involved changing a SpectroSERVER's Landscape Handle, such as during database partitioning.

2 Previously, if you launched ECM against a particular model and type, then navigated to **Model->Select Model->Model Type Name** and selected another model of the same type from the resulting popup window, the information in the main ECM window's Devices field did not update. The text at the top of the ECM main window bar updated correctly.

Known ECM Anomalies in SPECTRUM 6.0.2

Problem 1: The ECM cannot use External List-typed Attributes that have OID References within configurations. If you create or capture a configuration in ECM you receive the error message, “No instance exists.” for any External List-type Attributes that have an OID Reference.

Solution: Use the Model Type Editor to create an identical Attribute to the one you need to use in configurations, but not make it List-type. Then use that new Attribute in configurations to access and set the value on the device. This problem will be corrected in a future release of SPECTRUM.

Problem 2: When switching between specific, and shared configuration modes and vice versa, the Configuration window may not show an expanded list.

Solution: In the Configuration window, click the specific/desired mode under the View menu. The list of configurations will be appropriately refreshed. This problem will be corrected in a future release of SPECTRUM.

Problem 3: The Detail Result windows of Load, Capture, or Verify, do not show friendly strings for `enum` attributes. This is the same for the `ecmbg` log.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 4: When you install SPECTRUM 6.0.0 on a Windows NT workstation that previously had SPECTRUM 5.0 installed, the Enterprise Configuration Manager (ECM) will show no data for a load or capture if you fail to use the appropriate tftpserv executable, even though the tftp server popup window says, “completed transfer” and the ECM view states, “Success.”

Solution: When you install SPECTRUM 6.0.0 on an NT workstation where a previous SPECTRUM 5.0 existed, you must use the following tftpserv executable for a successful capture or load in the ECM:

```
$SPECHOME/tftpboot/tftpserv.exe
```

Problem 5: Sometimes the keyboard focus is lost. For example, you may not be able to edit the value of a configuration in the Configurations window.

Solution: Move the mouse outside of the window and then bring it back into the window.

Problem 6: The X window manager may perform unpredictably when you select attributes from devices that display duplicate attributes. If you select a range of attributes that includes duplicates, the duplicate attributes may not remain selected.

Solution: Whenever you are adding or cutting a range of selected attributes that include duplicates, scan the selected list and make sure duplicate attributes are selected.

Problem 7: When displaying long attribute values, the Verify Detail window sometimes truncates the left portion of the display. This may happen when you scroll to the right in the Verify Detail window, cancel out of the window, and then re-enter the Verify Detail window.

Solution: Once the truncation has occurred, click on the middle of the horizontal scroll bar. ECM resets the display so that it is left justified.

Problem 8: The following problem occurs when you select an attribute that has no attribute value in the Configurations window and then you try to enter a value for the attribute in the Convert dialog box. When you enter the value and then press **OK** or **Apply** in the Convert dialog box, no value appears in the Configurations window.

Solution: If an attribute has no value, enter a temporary value in the Configurations window before you open the Convert dialog box. As long as there is some value in the attribute value field, ECM will add the new information from the Convert dialog box.

Problem 9: Some attributes such as `AT_Net_Addr` are no longer maintained by the designers of the device. In the MIB, these variables have the status of "Deprecated." Attempts to read or write to these attributes will meet with unpredictable results.

Solution: If you have problems reading or writing to certain attributes, use the SPECTRUM MIB tools to see if the status is specified as "`Deprecated`." If so, omit the attribute from the configuration or template.

Problem 10: Background Host Configuration operations fail for Cisco Catalyst devices regardless of whether or not they are performed against the corresponding CatStack application.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 11: The online ***Enterprise Configuration Manager User's Guide*** does not display when you select **Help->User's Guide** from the ECM menu bar. A dialog window appears with the following error message:

> "`The SPECTRUM Online Manuals are not available at the specified location.`
>
> `Please insert the CD-ROM containing SPECTRUM Online Manuals or enter another location.`"

Solution: This problem will be corrected in a future release of SPECTRUM.

Known Scheduler Anomalies on the Solaris Platform

Problem 1: When you use the **Once** frequency to schedule an operation, the Scheduler performs the task and then updates the entry in the Scheduled Entries field so that the task is scheduled for next year at the same time.

Solution: If you see entries for a future year that you did not schedule, just delete them.

Problem 2: Sometimes operations scheduled in the ECM Scheduler may not occur at their specified times. Stop and restart your **`cron`** daemon.

Solution: Contact your system administrator for more details about **`cron`** and your workstation.

EventLog

The Event Log is a fault isolation tool that allows network administrators access to the historically archived database of all events associated with a single landscape. Event Log provides the following features:

• Viewing of archived events by a user defined range, or by the most current range of events across a single landscape.

• Three tier sorting of events. Sort fields include: model name, model type name, event code, user name, date and time, and event message.

• Advance filtering mechanism that allows for precise filter of events.

• Context-sensitive help and online documentation.

• Display to allow viewing of a user defined range of events.

• Print mechanism to make a hard copy of the Event Log.

• The ability to access and display archived events seamlessly as if the events were not archived.

Known EventLog Anomalies in SPECTRUM 6.0.2

Problem 1: On Windows NT, the Mysqld process (mysqld-nt.exe) consumes 100% of CPU resources when you use an advanced filter with at least 2 entries on many (near 10,000) events. This may cause the EventLog to hang, and be placed into the "Not Responding" state in the Windows NT Task Manager. The query will run but it may take some time.

Solution: Be careful not to construct a filter that will generate so many events that could hang the mysqld-nt.exe process.

Network Configuration Utilities (NCU)

Network Configuration Utilities is a set of applications, accessible from SPECTRUM Search Manager, that enables you to perform the following device management tasks for Cabletron devices that are modeled in SPECTRUM:

• Configure and execute TFTP firmware image downloads using the Firmware Download Tool.

• Modify community strings using the Modify Community Strings Tool.

Corrected NCU Anomalies in SPECTRUM 6.0.2

1 The Firmware Download Tool now checks to ensure that the reboot is successful and that the rebooted device(s) are in a known good state. Community strings are now successfully updated on older SmartSwitch 9000 blades, whose SPECTRUM device models include the SS9000ChasApp model type, when using the Modify Community Strings Tool. The **OK** button is no longer disabled on the Name Change Information window when you select devices in Search Manager, then invoke the Modify Community Strings Tool. SPECTRUM Network Configuration Utilities (Firmware Download and Modify Community Strings Tools) now supports the Cabletron SmartSwitch Router family of devices.

Known NCU Anomalies in SPECTRUM 6.0.2

Problem 1: The Modify Community Strings Tool does not allow you to modify community strings on devices with which SPECTRUM has no contact (orange, red, gray, brown, and blue alarms).

Solution: Make certain that the SPECTRUM model community name matches any one of the valid community names on the device. Telnet to the device and change the community strings via local management. You can also change the SPECTRUM community string in the information GIB using the GIB Editor. See the ***GIB Editor User's Guide*** for more information. This will be corrected in a future release of SPECTRUM.

Problem 2: Offline downloads (*.hex files) are not supported by the Network Configuration Utility (NCU). However, some devices and firmware revisions support only offline downloads. If you attempt an online download to a device that supports only offline downloads, it may cause the device to go into BOOTP mode.

Solution: Do not attempt a NCU firmware download to devices which do not support online downloads.

Problem 3: When changing the SPECTRUM community string on certain Cabletron SmartSwitch 9000 blades (such as the 9E133-36 and 9E132-15) with the Modify Community Strings tool, success is reported in both the Operation Status tab panel and the device list's Status column. However, the change is not made, which can be verified as follows:

1. Right-click the **device model** in SpectroGRAPH.
2. Select **Model Information.**

Notice that the **Security String** still has the original value.

Solution: To change the SPECTRUM community string for these devices:

1. Right-click the **device model** in SpectroGRAPH
2. Select **Model Information**.
3. Change the **Security String** to the proper value.

This will be corrected in a future release of SPECTRUM.

SPECTRUM Installation Program

Information on installing SPECTRUM on Solaris, Windows NT and 2000, system requirements, RAM, and hard disk requirements plus any other information needed for a successful install of SPECTRUM may be found earlier in this documentation.

Known Installation Anomalies in SPECTRUM 6.0.2

Problem 1: During an installation on a Windows NT workstation, you may receive the message, `"! The Security log file is full."`

Solution: You may safely ignore this message. It can be avoided by increasing the size of the NT Security Log, purging the NT Security Log or instructing the Security Log to overwrite older events as needed. These changes can be made in Start|Programs|Administrative Tools|(Common)|Event Viewer|Log|Log Settings. You may also want to disable security auditing since it affects performance. Security auditing can be turned off in NT Explorer by right-clicking the directory which is being audited and selecting Properties|Security|Auditing.

Problem 2: After installing SPECTRUM on a Windows 2000 workstation, a user who is a member of the Administrator User Group is removed from this group and made part of the SPECTRUM User Group. This occurs only if you used the WIN2000 User Manager to view your Group permissions and then click **OK.** This is an unexpected behavior in Windows 2000 and has been brought to the attention of Microsoft (case #SRX000428601204).

Solution: Login as an Administrator and re-add the user(s) to the Administrators User Group.

Problem 3: When you run host_eval on Windows NT with a foreign operating system, you receive a message warning that you have a missing operating system patch and to contact your system administrator to correct the problem. This warning appears when host_eval fails to detect either Service Pack 5 or 6.

Solution: Service Packs 5 or 6a are required to run SPECTRUM.

Problem 4: On the Solaris platform, SPECTRUM cannot be installed in the `/opt/SPECTRUM` directory.

Solution: This problem will be addressed in a future release of SPECTRUM.

Problem 5: On the Windows NT platform, you are not allowed to perform an installation into a directory that contains a space. You are forced to install into the `win32app` as the default directory.

Solution: This problem will be addressed in a future release of SPECTRUM.

Problem 6: When installing SPECTRUM on a Windows NT workstation containing MKS, SPECTRUM installation will fail.

Solution: If your workstation has MKS, uninstall it prior to installing SPECTRUM. If your system requires that you have MKS, move the MKS in the install path to the very end of the path.

Problem 7: On Windows NT, if the DISPLAY environment variable is set, the eXceed server (eXceed 6.2) will not start automatically causing SpectroGRAPH and other X applications not to start.

Solution: Aprisma is in progress of debugging this problem for a solution.

Problem 8: On Solaris 2.7 platform, when you upgrade in place from SPECTRUM 5.0rev1with CS3 MMS3 to SPECTRUM 6.0, the installation fails because the SpectroSERVER and Archive Manager were never run prior to the migration. You receive the error message,

`** Error during Creation of DDM database save file`
The ddm_save program fails to save a database which never had data archived to it. Users normally do not migrate empty databases.

Solution: (1) If migration of the current DDM landscape handle is not possible, instead of initializing the DDM database prior to the migration installation, simply delete the whole `DDM` directory. To delete the `DDM` directory, navigate to the install directory and type:
`rm –rf SS/DDM`
The SPECTRUM 6.0 installation will initialize the DDM database without attempting to perform a `ddm_save`.
-or-
(2) Run the previous release of SPECTRUM long enough to populate the DDM database with some events or statistics, then shutdown and perform the migration installation. Aprisma is investigating the root causes of this problem.

Problem 9: On Solaris 2.7 platform, when you upgrade in place from SPECTRUM 5.0rev1with CS3 MMS3 to SPECTRUM 6.0 and the DDM database fails to install, if you move the DDM directory to `DDM_old`, click the Cancel button and continue the installation, the installation will segmentation fault.

Solution: Aprisma is investigating the root causes of this problem.

JMibTools

JMibTools is a suite of applications that lets you access and manage any SNMP-compliant — device through its Management Information Bases (MIBs). A MIB is a database maintained by the device that stores all its known management information. Each individual element of information in the MIB is termed an Object.

Known MIBTools Anomalies in SPECTRUM 6.0.2

Problem 1: When you try to run more than one session of MIBTools on the same workstation, you may receive a blank warning message. You are prevented from running more than one session of MIBTools on the same workstation.

Solution: This still is a problem and is being considered in a future release of SPECTRUM.

Problem 2: On the Solaris 2.7 platform, you may receive an error message when invoking MibTools. The message is similar to the following:

```
Error restoring application state.
Version mismatch between stored and application class for:
<location>

Hit OK
```

A new JMibTools-specific file, `MibTools-<username>.ser`, (where `<username>` is your login name) has been created in your home directory. Remove `MibTools-<username>.ser` and re-invoke MibTools. This problem will be corrected in a future release of SPECTRUM.

Search Manager (SM)

The Search Manager application allows you to search for specific models in the SPECTRUM database. You can either search for models using predefined criteria or create your own customized searches. Search Manager also provides access to attributes in the SPECTRUM database, allowing you to change attribute settings on individual models or globally for all models of a type.

Known SM Anomalies in SPECTRUM 6.0.2

Problem 1: After saving and adding searches to the Predefined list and then you choose Erase User Preferences (or Group Preferences as well) under the Options menu, all of the saved searches are cleared and lost when you launch Search Manager again.

Solution: Avoid using the Erase User Preferences (or Group Preferences) option. This problem will be addressed in a future release of SPECTRUM.

Problem 2: On the Solaris platform, the Search Editor does not pop to the foreground when opened through a Search Manager Main Window selection and remains open and hidden behind other open windows.

Solution: This is a behavioral problem with the Solaris Common Desktop Environment (CDE) and can be corrected by deselecting the “Raise window when made active” option in the Style Manager-Window popup dialog.

Problem 3: When switches, bridges, or hubs are AutoDiscovered or modeled by IP on Windows NT, they are not found in a Predefined Search in Search Manager. Instead, they are found as a “node.”

Solution: This is a problem stemming from an incorrect attribute value being set. You can set the correct value via the command line by entering the following (must be a valid user or superuser):

1. cd to the **`$SPECROOT/vnmsh`** directory

2../connect (to start the command line session)
3../show models | grep SwCat35xx (to display all the Cat 3500 models in the database.
4. Find the model handle of the Cat 3500 model in the left column of the list you wish to use.
5../update mh=<mh of cat model> attr-0x11a3d,val=2

This problem will be corrected in a future release of SPECTRUM.

SpectroRX

SpectroRx uses a problem-solving technique called case-based reasoning to organize the knowledge about network problems. A case consists of the alarm resolution information that you enter and additional alarm information provided by SPECTRUM. As you enter information about new alarms, SpectroRx adds the case to its case library. When you request information about solutions for a current alarm, SpectroRx finds the cases that are similar to that alarm and sorts them according to their degree of similarity to the alarm situation. The most similar case is displayed first, the least similar last. You review these past cases and adapt the solutions to the current problem.

SpectroRX Conversion Instructors

The location of SpectroRx has changed from `${SPECROOT}/CBR` to `${SPECROOT}/SG-Tools/CBR`. With this change, the location of the database files has also changed. These files (`cbr.db`, `cbr.map`, `prob_list`, and `sol_list`) now default to `${SPECROOT}/SG-Tools/CBR/SpecRx`. To change this default, please refer to the section in your manual that discusses “Customizing the Environment.”

In addition, the structure of the database has changed, both to allow more freedom in documenting problems (in the Probable Cause files) and for greater efficiency in accessing the database.

In order to use your existing database(s) with the new SpectroRx, some changes to the database files will be needed. The first step in this process is to move the files from their current location (the previous default was `${SPECROOT}/CBR`) to the new location (as mentioned above). The following files need to be moved (this list is comprehensive if you are missing any file other than the first four, there is no need for concern): `cbr.db cbr.map prob_list sol_list cbr_back.db cbr_back.map prob_list.bak sol_list.bak`

Once these files have been copied to the new location, each must be modified (make a backup copy first). The changes are as follows (please

note that the **quotation** marks are provided simply to delimit the strings, and should not be considered part of the change):

File To be Modified

`cbr.db, cbr_back.db.`

If the first line of this file starts with the word “begin” - delete the line.

If the second line of this file starts with the string “`cnum=0|`”, change it to read “`cnum=0\205`” (note that the “`\205`” is the hex code for the à character).

For each succeeding line, change the following:

“`|pk=`” => “`\205pk=`” (again, `\205` is the à character)
“`|pt=`” => “`\205pt=`”
“`|rd=`” => “`\205rd=`”
“`|sol=`” => “`\205sol=`”
“`|exe_sol=`” => “`\205exe_sol=`”
“`|res=`” => “`\205res=`”
“`|notes=`” => “`\205notes=`”
“`|solcat=`” => “`\205solcat=`”

File To be Modified

`cbr.map, cbr_back.map`.

If the first line of this file starts with the word “`begin`” - delete the line. Globally search and replace in the order listed the following two operations:
“`:cnum=`” => “`:`”
“`cnum=`” => “`:`”

Files To be Modified

`sol_list, prob_list, sol_list.bak, prob_list.bak`.

The following operations must be applied to each of the above files:

Delete any leading spaces on all lines.
Delete any leading numbers (if followed by either a “`)`” or “`.`”).

Delete any leading spaces on all lines.
Verify that there are no duplicate lines in the file.

Once you have done this, you will also have to update any backup copies of these files made by SpectroRx. The location of these files can be determined by checking the `db_dir_backup` variable (as documented in the "Customizing the Environment" section of the SpectroRx manual).

Corrected SpectroRX Anomalies in SPECTRUM 6.0.2

1 When using SpectroRX on Windows NT, a series of bash shells no longer flash or persist on the screen.

Known SpectroRX Anomalies in SPECTRUM 6.0.2

Problem 1: SpectroRx Perl scripts may not run from a command window on the Windows NT or Windows 2000 platforms.

Solution: This problem concerns file associations and the version(s) of Perl that is (are) installed on the system. The associations between the SpectroRx scripts and the SPECTRUM installed version of Perl (5.004_04) have not been created. If a different version of Perl has been installed, and file associations created, that version of Perl will be used execute the scripts. As a result, the scripts may fail.

Ensure that the file associations are created to either the SPECTRUM installed version of Perl, or if you use another Perl installation, that it is version 5.004_04. This will be corrected in a future release.

Problem 2: Using meta characters (e.g., *) or unmatched quotation marks in a query will result in undefined search results.

Problem 3: When running SpectroRx from a command line, warning messages of the following type may appear on your screen:

"Use of uninitialized value at <script_name> line xxx"

This problem concerns the use of the -w option when executing Perl (from within the cbr executable). These messages can be safely ignored. This will be corrected in a future release.

RingView for Token Ring

RingView for Token Ring is a SPECTRUM application program that provides enhanced capabilities for modeling and displaying the ring of devices and connections that make up a Token Ring (802.5) LAN. An important feature of the RingView application is that it allows for several different ways of displaying a Token Ring LAN within a SPECTRUM Topology view. For example, you can choose to view the topology in an actual ring, or in a “condensed” configuration that requires less onscreen space. You can also choose between Token Ring stations being depicted as physical devices or MAC entities.

Known RingView For Token Ring Anomalies in SPECTRUM 6.0.2

Problem 1: RingView cannot fully map connections within a ring that is configured with multiple hubs or concentrators. This is because the Token Ring device firmware stops mapping MAC addresses to specific ports as soon as it encounters one of the Ring In/Ring Out ports through which the hubs are connected. Since SPECTRUM’s fault isolation is based on connections between models, this firmware limitation may result in situations where alarms are not reported or are reported incorrectly. Normally, if SpectroSERVER loses contact with a router that connects to a Token Ring LAN, the icons within the LAN’s Topology view flash gray to indicate that their condition was unknown. If connections within the ring were not fully mapped, then the Token Ring devices would have no known neighbors as far as SPECTRUM is concerned, and would thus flash red.

Solution: When Ring In/Ring Out ports are being used to connect hubs within a Token Ring LAN, you must resolve port connections manually to ensure accurate alarms and fault isolation.

SPECTRUM Reports

SPECTRUM's design is based on a client-server model where the SpectroSERVER (VNM) includes a database. This database provides storage for the specific device configurations and contains a modeling catalog (model types and relations) that is the structure for all your network information. By modeling devices in the database, SPECTRUM provides a wide range of information about network devices and network structure even when a device is powered-off or contact is lost. While this information resides in the database it serves no purpose to you unless it is retrieved and displayed in a report. The SPECTRUM Report Generator application performs this task for you. The Report Generator is your guide through the history of your network. You can use this tool to help gain a better understanding of what has happened to your network. Through a good understanding of past performance, you can prevent problems in the future and continue efficient operations.

Note:

Be aware of the following when you use SPECTRUM Reports:

- Relational reports are no longer supported.
- In the Report Formatter, if the expression exists within a report format that you want to modify, do not remove any attributes that are located in columns before the expression column.
- If you are using top-n in the line data of a Statistical report, the summary portion, where the totals are displayed, is based on the entire report, not just the sorted data.
- On the Solaris platform, if scheduled reports are not occurring at their specified time, it may be necessary to stop and restart your cron daemon. Contact your system administrator for more details regarding cron on your workstation.
- The <poll time> fixed data type should not be used in an expression.
- In Graphical Reports, if data cannot be obtained from a device or a model at a given time, the data for that time is graphed as 0.
- In Graphical Reports, respecifying a .GRF file is treated the same way as Loading one. That is, if any options are stored in the .GRF file, they will be reloaded whenever a Respecify or Load is performed.
- If you create an attribute with the Model Type Editor and want to place it in a Report Header, you must set the Readable, Writable, and Database flags for that attribute; otherwise, that attribute will be blank.

Corrected Reports Anomalies in SPECTRUM 6.0.2

1 Repeatedly generating a report with the same output filename no longer causes the message, "`Unable to open file`" to appear and no longer necessitates restarting the Report Generator.

2 The alarm number no longer is missing when you generate an event report in which two events of the same event type occur at the same time. In addition, none of the events will be missing when you filter on an alarm condition.

3 On the Windows NT platform, generating and scheduling `.gif` and `.grf.ps` output files now works correctly.

4 When you run a report on an attribute for which data does not yet exist, the value for that attribute now correctly appears as a dash.

5 Tabular event reports no longer contain duplicate events or events with missing pieces in the Event Message.

6 On the NT platform, scheduled Alarm reports no longer are missing all of the line data.

7 Poll times now appear correctly in Statistical graphical reports.

8 Event reports no longer omit the alarm id.

9 The message in the Report Completed dialog box now shows the report filename.

10 Model names in event messages now appear truncated according to the length specified by the `REPORT_MODEL_NAME_LEN` environment variable in the `rptsscript` file.

11 Menu picks for Relational report templates and Rib files no longer show in the Rib Editor menus.

12 The Report Generator no longer freezes when you click the **OK** button in the Report Completed dialog box while the **Applications** menu is selected.

13 Statistical data information no longer displays negative numbers incorrectly.

14 Since SPECTRUM now uses a Location Server, the Reports interface no longer fails to display (**File -> Reports -> Generate**) if you change the landscape of your database through lh-set on Windows NT.

15 When you run a report on a GnSNMPDev device, you now generate information.

16 SPECTRUM allowing reporting on secure models, even though user access to these models is denied in SpectroGRAPH is no longer a problem.

17 If a landscape in the preferred landscape list is shut down while you are in a Statistics or Events dialog box, a subsequent attempt to expand a model type no longer causes the user interface to freeze.

18 On the NT platform, the scroll bars for tabular reports now function properly because SPECTRUM no longer relies on NutCracker. The reports now utilizes NT's Notepad utility.

19 On the NT platform, tabular displays are 80 columns wide. NT's Notepad now is used to display the report.

20 On the Solaris platform, both regular and error dialog boxes can no longer be covered by their parent dialog box if the user clicks on the title bar of the parent window.

21 If you are working in the Rib Editor and the SpectroSERVER crashes, all unsaved data is not lost when you use the Save As option to save your file.

22 If you are running more than one Report Generator on the same machine, when a report completes, a "Report Completed" dialog box no longer appears for every Report Generator that is running on that machine.

Known Reports Anomalies in SPECTRUM 6.0.2

Problem 1: On the Solaris platform, if a Rib file does not exist for a selected model type, saving a file using the Statistics template under the Report Formatter causes the file to be saved in the `Templates` directory rather than in the `Statistics` directory.

Solution: Choose the **Save As** command and navigate to the appropriate model type directory to save your file.

Problem 2: If a reports output directory specified in the `Reports` resource file does not exist and you try to bring up the Reports Display, you get a list of all files in the current directory.

Solution: Make a backup copy of the `Reports` resource file. Edit the output directory parameter in the Reports resource file so it specifies a valid directory.

Problem 3: Using the Window Manager to close windows may cause inconsistent results.

Solution: Use the **OK** or **Cancel** buttons to close dialog boxes.

Problem 4: In the Report Formatter, if you attempt to add a Compute field at the end of either the Line Data or Summary Data regions, data corruption may occur.

Solution: If you need to place a `Compute` field at the end of a line, make sure first that the Page Width setting is large enough to accommodate the `Compute` field.

Problem 5: In the Report Formatter on the NT platform, if you preview the Rib file currently being worked on, the last line may contain a couple of extra characters.

Solution: The extraneous characters do not appear in the saved Rib file or in the report.

Problem 6: On the NT platform, colors on Up/Down Time report pie graphs that have small percentages of uptime or downtime may not appear correctly (either no color appears or colors are inverted).

Solution: This is not a problem with SPECTRUM Reports but rather with a defect with Neuron Data (their defect #10660).

Problem 7: On the NT platform, colors on Alarm report pie graphs may not appear correctly or may be obscured. For example, pie pieces are colored over by other pie pieces when values are close to zero (0).

Solution: This is not a problem with SPECTRUM Reports but rather a limitation of Neuron Data.

Problem 8: The Rib Editor previewer goes blank after a few minutes. In addition, when you try to load another file, the file selection box will not let you change directories; clicking **OK** then causes the Rib Editor to exit.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 9: On the Windows NT platform, a user who is not a member of the Administrator's group cannot run the NT Scheduler. This is a restriction of Microsoft's NT Schedule Service.

Solution: When Microsoft Internet Explorer 5.0 is installed on your PC, the Windows NT 4.0 Schedule Service (`Atsvc.exe`) is upgraded to the Task Scheduler Service (`mstask.exe`), which enables you to assign different user accounts to run scheduled tasks.

Problem 10: On a Windows NT SpectroGRAPH that is running against a Solaris SpectroSERVER, if you try to start the Report Generator, the executable starts and tries to appear but then blinks and fails to start.

Solution: Add the remote server's landscape handle in the `*PreferredLandscapes` handle found in the Reports file located in: `$SPECROOT/app-defaults/Reports`. Scroll down to `*PreferredLandscapes` and add the remote server's landscape handle.

Problem 11: When displaying a report graphically on Windows NT, the pie graph appears white instead of red when it has a value. This occurs regardless of the type of report such as Up/Down, Alarm, Event, etc.

Solution: This is a known problem with Neuron Data. Blaze Software has assigned case # 15981 to this problem.

Problem 12: On Windows NT, when you print multiple pages, each page that gets printed has an NT print dialog displayed asking for the printer selection. Printing does take place, however, each page will have the Print dialog display asking for the printer to be selected. It occurs on Solaris if an invalid printer name is entered.

Solution: This problem is under study and will be addressed in a future release of SPECTRUM.

Problem 13: When running a Graphical Report on Windows NT, the pie chart displays wrong colors for alarms in its pie slices.

Solution: This is a known problem with Neuron Data. Blaze Software has assigned case # 40684 to this problem.

Problem 14: When you open (and leave open) the Reports Generator and set up an Alarm report on Windows NT, the second dialog that tells you that the report has completed contains no data.

Solution: Select the second dialog and physically move it to another location on the screen. This repaints the windows with the data. This problem will be addressed in a future release of SPECTRUM.

Problem 15: You are unable to print multiple copies of a report even after inserting a value greater than one (1).

Problem 16: This is Neuron Data bug, # 5166 and Blaze Software is aware of this problem. On the Solaris platform, the Graphical Report connects two data points when the SpectroSERVER is shutdown without showing it shutdown as a gap. You have to infer from the polling times that there existed a period when data was not getting logged into the database.

Solution: This is a limitation of Neuron Data's graphing implementation. The gaps in the polling and log times are represented in the data points.

Problem 17: If a user chooses to edit SpectroGRAPH by selecting **Respecify...** from the Edit menu and then decides to exit without change (choosing **Cancel**), all existing data is lost.

Solution: From the **Specify Data** window, choose **OK** instead of **Cancel** to exit without modification.

SpectroGRAPH (SG) (UI)

SpectroGRAPH provides the graphical user interface that you will use to monitor your network and launch other client applications. SpectroGRAPH's views contain a variety of icons that represent the different elements of your network, including devices, users, and "conceptual" elements such as LAN segments. Each icon presents status information and provides access to management facilities specific to the network element it represents. The information presented by an icon is retrieved from a corresponding model that is maintained in the SpectroSERVER database.

Corrected SG Anomalies in SPECTRUM 6.0.2

1. When you save Preferences in the preferences dialog, it no longer overrides preferences you set for that application at the command line.
2. On Windows NT, the date and time zone does now displays fully on the Performance Graph.
3. The SPECTRUM VNM icon no longer remains in the Initial blue state.

Known SpectroGRAPH Anomalies in SPECTRUM 6.0.2

Problem 1: In the Stack Link View on the Windows NT platform, the pipe connecting the two model is split horizontally with black on top and green on the bottom.

Solution: This is a visual problem only derived from a bug in Neuron Data's toolkit (ND Defect #11069). This problem will be corrected in a future release of SPECTRUM.

Problem 2: On the Windows NT platform, when you enable "`See contents of windows while dragging`" in the Control Panel, the display and performance of various SPECTRUM applications (i.e., SpectroGRAPH and Model Type Editor) may be affected.

Solution: Avoid enabling opaque window dragging by not turning on "`Show window contents while dragging`." This feature can be turned off in **Control Panel|Display|Plus!**. This problem will be corrected in a future release of SPECTRUM.

Problem 3: On the Solaris platform, when you change the background size of the Universe view to a larger size than the default size, close the edit, maximize the view, and then move the view, the menus appear to remain back at the position where the view was before moving it. Menu appear to be floating outside the view.

Solution: This is a problem with MOTIF. Sun Microsystems has been alerted to this problem which is under investigation. Try to avoid resizing the SpectroGRAPH window.

Problem 4: When printing from a Windows NT workstation to a non-postscript printer, the output will be in black and white with no grayscale. Icons and highlighted text become difficult to read. Plain text, however, is readable.

Solution: Print to a postscript printer when you need to maintain

grayscale images. This problem has been a known limitation of the Neuron Data toolkit on Windows NT.

Problem 5: On the Windows NT platform, when you print a .GRF report on a Hewlett-Packard series 5 printer, the X and Y axis as well as part of the heading are missing. However, on screen they display correctly.

Solution: This is a Neuron Data problem (Neuron Data bug problem ID #8843).

Problem 6: On Windows NT, SPECTRUM applications do not respond after selecting "Minimize All Windows."

Solution: This is a Neuron Data problem ND bug #10530 and SPECTRUM case #42435. Although not a problem with SPECTRUM itself, SPECTRUM is nevertheless working with Neuron Data on this problem.

Problem 7: When a user is running an application against a server from another workstation other than the one they were created on, that user will not receive updated changes to the Preference files. This is a normal condition. When preferences are modified from the original defaulted values, the changes get saved to the .*prf file in the user's home directory. Since the file is in the user's home directory, other users in the group are not able to "share" the modified preference values if they are running applications from a remote desktop.

Solution: This is a normal result of SPECTRUM security. Aprisma may investigate a way to change preference setting to distinguish between preconnect preferences and those preferences that get saved to the Server in the User Group model.

Problem 8: On Windows NT, individual user preference configuration files from the User Editor (.prf files) are stored in the root directory instead of the user's directory after their creation. If later another user launches the application, those files get overwritten.

Solution: Create a Home Directory for each User Profile using the NT User Manager. This ensures that each user has a unique home directory, unless the NT administrator set it to the same value for each user.

Problem 9: On Windows NT 4.0 Server with Service Pack 6a, when you double click a SPECTRUM .prf file, the operating system mistakenly launches Microsoft's Content Advisor for Internet Explorer 5.0. There is a Registry entry under HKEY_CLASSES_ROOT that identifies .prf files as "PICSRules Files" (also a .prf) which conflicts with SPECTRUM's .prf files. To edit a SPECTRUM .prf file, open it with a text editor. Selecting and opening the .prf file has no adverse effects.
Secondly, another conflict exists between .crt files created by Search Manager when exporting a Search, and Microsoft's .crt files which identifies Microsoft's Security Certificates. Search .crt cannot be edited manually and should not be directly opened. This extension conflict has been resolved with the release of SPECTRUM 6.0rev1.

Solution: These problems will be addressed in a future release of SPECTRUM.

Problem 10: When some applications on a Solaris workstation are remotely displayed on a Windows NT workstation you can no longer use the keypad to enter numbers into an IP address field or any other field requiring numeric input.

Solution: This is a known bug with Neuron Data and not with SPECTRUM. Neuron Data has been made aware of it and they have assigned Bug number: 9458 to the problem.

Problem 11: When a SPECTRUM 6.0.0 version of SpectroGRAPH is connected to an older 5.0rev1 SpectroSERVER, some applications may not be able to secure a connection.

Solution: SPECTRUM does not support new connections of SpectroGRAPH 6.0.0 clients to a SPECTRUM 5.0rev1 SpectroSERVER. Many applications will not connect and those that do will render unpredictable behavior.

SPECTRUM supports neither a 6.0.0, 6.0.1, nor a 6.0.2 SpectroGRAPH connection to pre-6.0rev0 SpectroSERVERS.

With the release of 6.0.2, a SpectroGRAPH connection to a pre-6.0rev0 SpectroSERVER may result in warnings or errors.

Problem 12: The multi-attribute line graph on a device's Performance view does not represent accurate 10 minute blocks of time in the X-Axis labels when you scroll back in time for data.

Solution: The documentation explaining how this graph displays and interprets data will be clarified. This problem will be corrected in a future release of SPECTRUM.

Problem 13: When the `createdate -- 0x00011b47` attribute is used (such as in the Attribute Browser) it returns erroneous data.

Solution: Use the `createtime` attribute which deals with both date and time. The `createdate` attribute will be removed from the database in a future release of SPECTRUM.

SpectroSERVER (VNM)

SPECTRUM's design is based on a client/server model. The server, SpectroSERVER (or VNM – Virtual Network Machine), includes the SPECTRUM database and provides security, modeling capabilities, and device management facilities. SpectroSERVER supports a suite of client applications through its Application Program Interface (SSAPI). The first client application you will see when you start SPECTRUM is SpectroGRAPH.

Note: Database recovery is required following all segmentation faults in SPECTRUM 6.0. Failure to do so could result in further difficulties and database corruption.

Known SpectroSERVER Anomalies in SPECTRUM 6.0.2

Problem 1: On the NT platform, SPECTRUM will not recognize NT user accounts even though they exist in the SPECTRUM User Database.

Solution: Ensure that the SPECTRUM user name and NT account name are spelled identically and have the same case.

Problem 2: SPECTRUM 6.0 does not log External List-type Attributes that have an OID Reference. If you have set the Logged flag in the Model Type Editor for an Attribute that has the External flag set (that is a List-type with an OID Reference) you cannot access data for the Attribute using Data Export, Reports, or a GIB Graph.

Solution: Create a SpectroWATCH for the Attribute that simply logs the value of the Attribute. Then use the Watch's destination Attribute ID in place of the original Attribute's ID in any Report, Data Export definition, or GIB graph. Alternatively, you can use the Model Type Editor to create an

Attribute that is a duplicate of the Attribute you intend to log, but not make it List-type. Then use this duplicate in place of the original Attribute. This problem will be corrected in a future release of SPECTRUM.

Problem 3: External List-type Attributes which have an OID Reference display with, "[ ]" in the Attribute Browser, but you are not required to enter an instance to access its value as required for other Attributes displayed with "[ ]."

Solution: Ignore the "[ ]" indicator in the Attribute Browser when accessing External List-type Attributes that have an OID Reference. Aprisma will investigate this inconsistency.

Problem 4: On the Windows NT server, the Archive Manager could take up most memory after running for a period of time. SpectroSERVER could also fail or cause an "out of memory" error message.

Solution: If this is a problem for you, do the following: Set the server optimization from the default of "`maximize throughput for file sharing`" to "`balance`" under the Properties tab located in **Control Panel-> Network-> Services->Server->Properties**.

Problem 5: The Event Log and Alarm Manager will give you misleading connection status. If the Archive Manager runs with the wrong landscape handle, it will correctly generate an orange alarm indicating that no connection has been established. Yet, the connection status dialog in Alarm Manager and Event Log is green indicating that they are connected to the Events Service.

Solution: The Alarm Manager receives its alarms from SpectroSERVER's landscape. When an attempt is made to connect to the Archive Manager to get the events associated with the selected alarm, that connection is routed to the "default service" which is the SpectroSERVER. The SpectroSERVER supports the default, but the requests will fail. However, the connection to the server as the event service (default) is up/established - thus, the connection dialog shows the green connection to events. The default service is in place as all service was previously defaulted to the SpectroSERVER.

Problem 6: When you attempt to stop the MySQL service on Windows 2000 the service will not stop. This problem is due to a bug in the current version of MySQL server.

Solution: A fix is in progress and will be made available as soon as it is developed. As a workaround perform the following:
1. In a bash or DOS shell, navigate to the MySQL binary directory in `$SPECROOT/SS/DDM/mysql/bin`.
2. Bring up the Services Manager and attempt to stop the MySQL service.
3. When you see the message in the Service Control popup message box, *"Windows is attempting to stop the following service on <local computer> MySQL"*, type in the bash or DOS shell window the following command: `mysqlshow`
4. When a Microsoft Management Console message box appears with the message, `"Could not stop the MySQL service on <local computer>...."` dismiss the message box with the **OK** button. The Services Manager window should now indicate that the MySQL service is no longer running.

Problem 7: When a SPECTRUM Windows 2000 workstation experiences a loss of network connection, the SpectroSERVER, and Distributed Data Manager (DDM) may unexpectedly shutdown.

Solution: This is a not a problem with SPECTRUM but with Inprise Corporation's Visibroker 3.3.3 on systems running Windows 2000. Aprisma has opened case number 446463 with Inprise and is awaiting their response.

Problem 8: When you start SpectroSERVER on the Solaris platform and stop processd then restart processed, the SpectroSERVER does not reconnect making it impossible for clients to be launched. Although Control Panel shows a SpectroSERVER is running, when a SpectroGRAPH is launched you will receive the error message:

```
Could not find any SpectroSERVERs. The Location Server may be
improperly configured, there may be no SpectroSERVERs, or the
host configuration access privileges may be improperly
configured.
```

Solution: Avoid stopping processd without first stopping the SpectroSERVER. This is known problem with third party software from Visigenics and is not SPECTRUM problem. Visigenics has been apprised of the issue (their case #455220) and are examining the problem.

SpectroWATCH

The Watch Manager and Watch Editor applications provide you with a mechanism for easily adding thresholds and logging historical data without having to program new modules or modify standard Generic Information Block (GIB) views. These applications allow selected elements to be monitored at a higher level of detail while providing data to be used with other tools used in network analysis.
Watches allow selected elements in SPECTRUM, such as a router, to be monitored with a high level of detail while providing fresh and current data to be used with other SPECTRUM tools in network analysis.
You can dynamically apply watches on any type of attribute, log historical values of attributes, and monitor attributes against thresholds to generate events and alarms.

Known SpectroWATCH Anomalies in SPECTRUM 6.0.2

Problem 1: Watches which produce a result that is greater than a 32-bit integer cause an error message to appear in the watch's Status in **Watch Editor** which reads:
`Failed - Overflow in binaryoperator.` ,
and the message,
`Failed in the Performance View's Value column.`
This problem affects watches derived from the `Packet_Rate, Error_Rate`, and `Discard_Rate` attributes, respectively. Each of these watches also use the `Total_Packets_Delivered` attribute.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 2: On the Solaris platform, if more than 34 models are selected before WatchManager and WatchEditor are invoked, you cannot see all of the models in the `Jump` menu.

Solution: This problem will be corrected in a future release of SPECTRUM.

Problem 3: When you create a watch, give it an attribute, and you do not set or change it to the appropriate Data Type (defaults to Boolean), after you create a Threshold violation that requires Integer as the Data Type, when you click **OK** to finally create the watch you receive an error message that indicates "`Incompatible types.`" But when you attempt to change the Data Type from Boolean to Integer, you receive a second message which says:
`Could not create the watch. Watch Source: Existing assignment is of type Boolean, user specified type integer.`

`You can't correct the mistake and must restart the watch creation process.`

Solution: This problem will be corrected in a future release of SPECTRUM.

User Editor

The User Editor allows you to manage network security and simplify management of your network by providing you with the option of managing users as individuals or as groups of related users (User Groups). The User Editor lets you create, modify, delete, copy, find, move, and perform domain maintenance for User Groups and Users.

Corrected User Editor Anomalies in SPECTRUM 6.0.2

1 When you copy one UserGroup from one Landscape to another Landscape, the Users inside the UserGroup now are copied over with the UserGroup.

Level I Developer's Toolkit

The SPECTRUM Level I Developer's Tools are designed to allow OEM developers to integrate their products into SPECTRUM, and to allow developers at customer sites to customize SPECTRUM to suit the site's specific needs.

Product Description

Packaged as optionally-purchasable modules, the following Level I Developer's Tools are available:

- **SPECTRUM Model Type Editor (MTE)** - The primary tool used to create and modify SPECTRUM model types. With the MTE, developers can customize existing model types to meet specific needs, or derive new model types, attributes, and extensions from previously defined ones. The MTE allows customer control over each model type attribute, beyond the limited access available with the basic SPECTRUM core product and allows developers to import proprietary vendor MIBs into the SPECTRUM knowledge base.
- **SPECTRUM Basic Extensions Toolkit** - The Basic Extensions Toolkit has been improved in the following ways: the `mmbuild` tool can be used to create or remove SPECTRUM files (EventDisp, Alertmap, PIBs, GIBs; IIBs, etc.) associated with new model types.The `mmship` tool can be used to create index files for distribution of new model types.
- **SPECTRUM Generic Information Block (GIB) Editor** - Provides the means for on-line creation and modification of SPECTRUM information views within the SpectroGRAPH User Interface. The GIB Editor allows customers to customize the data and graphs associated with information views. Links can be established between model or device information views and each instance with this editor.
- **SPECTRUM Extensions Integration (SEI) Toolkit** - Intended for customers or VAR developers who wish to package and sell a SPECTRUM extension they have developed. This toolkit enables a developer to produce a complete, ready-to-install SPECTRUM

extension. The toolkit includes tools and information for integrating a customer-developed extension with the SPECTRUM CD formats and the SPECTRUM installation script. CDs created using the SEI Toolkit utilities will be installed at a customer's site. Tools are also provided to export models from the SPECTRUM database, icons from SpectroGRAPH, and protocols from SPECTRUM. Purchasers of the toolkit receive a unique Developer Identification Code to ensure that their SPECTRUM extensions can be integrated into any SPECTRUM site in the world.

Aprisma encourages purchasers to become SPECTRUM Partners. We are committed to keeping the SPECTRUM Partners Program dynamically responsive to your needs, and we welcome new partners who can further extend the range and flexibility of solutions available through SPECTRUM. For more information and an application to become a SPECTRUM Partner, please contact **SPECTRUM Partner Development** (email: spectromail@aprisma.com; phone:++1-877-437-0291; www: http://www.aprisma.com).

Extensions Categories

Several categories of extensions are developed using Level I Developer's Tools:

- Simple model types and relations (those that involve only the addition of attributes) can be derived from existing ones by using tools such as the Model Type Editor (MTE).
- The process of adding new alerts, mapping alerts to events, and events to alarms (for simple model types or for complex ones) does not involve writing C++ code. SPECTRUM's Event Configuration (EC) Editor may be used to add or edit events, generate an alarm from an event, and delete events.
- New base icons can be created by simply creating a new information block. Views can be made to display new icons by modifying the Perspective Information Blocks (PIBs) associated with them.

Also, simple views can be created by modifying a GIB information block. These extensions can be accomplished using the Basic Extensions Toolkit, and the GIB Editor.

Extensions developed using the Level I or Level II Developer's Tools can be packaged to distribution media for resale, and installed at a customer site using the standard SPECTRUM installation process. By using the SPECTRUM Extensions Integration Toolkit, a VAR developer can build a Level I or Level II extension product that can be fully integrated into any SPECTRUM site.

Corrected Level I Developer's Toolkit Anomalies

Spectrum Extensions Integration Toolkit

1. Messages that formerly appeared during the install process, such as "**`chmod [filename] Not Owner`**" no longer appear.

Model Type Editor (MTE)

1. The MTE properly supports the MODULE IDENTITY (used to define a node in the OID tree.)
2. On Solaris platforms, creating .e export files with either the MTE export command or dbtool export command no longer causes the MTE to crash.
3. On NT, entering default/shared values for integer-type attributes within the range from -2147483648 to 2147483647 no longer causes incorrect values to appear.

Corrected Anomalies in Level I Developer's Toolkit

1 In the GIB Editor, after changing an attribute value within a SPECTRUM view, clicking the keyboard's Return button or clicking the Cancel button now will save or change the value.

Known Anomalies in Level I Developer's Toolkit

MTE

Problem 1: Attributes of an unsupported type must be created manually. Attempts to use the MIB compiler causes the Model Type Editor to report the attribute type is unsupported and the attribute will not be created.

Solution: Refer to Chapter 2 of the MTE User's Guide for clarification.

Problem 2: MIB object names with a length greater than 31 characters are truncated to a length of 31 characters in MTE MIB import. When these truncated names duplicate a pre-existing SPECTRUM attribute name, the names are discarded by the MTE MIB import facility.

Solution: This problem will be fixed in a future release.

Level II Developer's Toolkit

This section provides a description of the SPECTRUM Level II Developer's Tools for 6.0 rev1. This section also identifies operational constraints that pertain to the last major release, and any corrected and known anomalies.

Product Description

The SPECTRUM Level II Developer's Tools provide C/C++ programming interfaces for developing advanced extensions to SPECTRUM. These tools include header files, object libraries, sample source code, complete documentation, and support from Aprisma. For information on the Aprisma Channel Partners Program, call 877-487-7735 or refer to the following:

`http://www.aprisma.com/partners/resellers/index1.html`

Level II developer's training is available and can be purchased at extra cost.

The following Level II Developer's Tools are available:

- **SPECTRUM SpectroSERVER Application Program Interface (SSAPI) -** The SpectroSERVER API is the primary communications interface between the SpectroSERVER and client processes such as SpectroGRAPH. The API provides both an asynchronous interface (for interactive and windowed applications) and a synchronous interface (for query and report requests to SPECTRUM).
- **SPECTRUM View Application Program Interface (View API)** - The View API helps developers integrate new or modified views into the SPECTRUM environment. Full cut-and-paste functionality is supported, and generic views detailing aspects of the model state are accomplished with the View API. Non-Aprisma product views can be accessed, and external processes can be initiated from SPECTRUM with this toolkit.

- **SPECTRUM Virtual Network Machine Parameter Block API (VPAPI)** - This toolkit includes the VnmParmBlock C++ Class Libraries, which are essential to the development of C++ objects and programs that integrate with SpectroSERVER. The VnmParmBlock classes are used to define objects that allow access to specific SPECTRUM model types, attributes, aspects, and processes. VPAPI is used with the Inference Handler API, View API, and SpectroSERVER APIs.
- **SPECTRUM Inference Handler Application Program Interface (IHAPI)** - This toolkit provides source code and documentation for the development of Inference Handlers, which add artificial intelligence to user/VAR-developed model types within SPECTRUM. You can create Inference Handlers that will allow SPECTRUM to manage new objects or devices by defining their possible interactions between SPECTRUM and the objects. The IHAPI Toolkit includes C++ object libraries, header files, and tutorials based on sample source code that guide developers through the process of creating new Inference Handlers. Also included, is a discussion of debugging techniques applicable to the SPECTRUM multi-threaded environment.
- **SPECTRUM Management Station Access Provider External Protocol Interface (MSAP/EPI)** - This toolkit allows you to map generic interfaces to a device's protocol. MSAP/EPI provides an object with access to a SpectroSERVER or other management station. Protocols can be written in C and Assembler, and integrated through a straight-forward interface layer, with no need to access or modify SPECTRUM internals. This toolkit also defines the requirements for building management modules for device and MSAP model types.
- **SPECTRUM Map API**- This toolkit allows modification of the attributes that control map-type views (Topology, Location, and Organization). The following can be changed: icon or annotation positions or groupings, the size of the view, and the icon or annotation's zoom level. Additionally, either the view's background color or raster can be changed with the Map API toolkit. Annotations can be added/removed, and models or connections can be read within the view or via the relations. A personalized map-type view containing specific data-types can also be created with this toolkit.

- **Global Classes** - The Global C++ class library is used to create and manipulate buffers for the Inference Handler API, the View API, and SpectroSERVER API. Refer to the ***SPECTRUM Global Classes Reference*** for more information.

With the SPECTRUM Level II Developer's Tools, you can create advanced extensions by integrating new objects and programs into the SPECTRUM knowledge-base. The new VAR-developed management modules with third party applications can be used at multiple customer sites. Examples of the usage of the most common Level II extensions are listed below:

- Although a device management module can be developed with the Level I Developer's Tools, appropriate physical or logical device information will be missing.
  - Use the Asynchronous SpectroSERVER API and the View API to develop the new Logical or Physical Device view(s).
  - Use the Asynchronous SpectroSERVER API to set complete read/write access to the device model and create a new SpectroGRAPH view with current model state information.
  - Use the View API to provide access to generic SPECTRUM views. You can copy, cut, and paste models into some of these views.
- Use the EPI API to add new SPECTRUM protocols for managing devices that do not support SNMP. Each new protocol leads to an additional EPI process that translates SpectroSERVER EPI requests into appropriate proprietary requests.
- Integration of new or existing applications to the SPECTRUM platform. Depending on the type of application being integrated and the integration level, use one or more Level II Developer's Tools. For example:
  - Use either the Synchronous or Asynchronous SpectroSERVER APIs to permit application access to SPECTRUM data.
  - Use the View API to show an application as being integrated at the user interface level.
  - Use the Inference Handler API when the application requires adding intelligence to the SpectroSERVER.

- Implementation of a gateway between SPECTRUM and another network management system using the Asynchronous SpectroSERVER API. A gateway allows the sharing of alarm information between network management systems and allows centralized management of a network whose subcomponents are managed by different network management systems.
- Development of new intelligence circuits that add new or customized management functions to SPECTRUM using the Inference Handler API. Inference handlers provide the procedural knowledge that controls how a model type reacts to changes in its environment. Creating an inference handler requires the development of C++ code that registers the inference handler to monitor environmental conditions and defines the model type's reaction to changes in these conditions.

Major Level II Toolkit Changes for 6.0

This section describes new features for the Level II toolkits.

1. In SSAPI, two CsMailService object constructors are commented; these constructors are scheduled for deprecation in a future release. Do not use these constructors.

2. The Level 2 Toolkits now include the following portability headers:

   - fstream.h
   - iomanip.h
   - ios.h
   - iosfwd.h
   - iostream.h
   - istream.h
   - ostream.h
   - strstream.h

   In order for you to do any development work on either platform, you must use the Aprisma-developed portability layer (instead of directly

referencing system headers). For more information, review the readme file in the following SPECTRUM directory:

```
<Spectrumdir>/SDK/README
```

CORBA

CORBA is similar to the Level II toolkits (SS API, VP API, IH API, and the communications library). CORBA provides server infrastructure including connection management, security, and location services.

The SPECTRUM CORBA API is used to write applications. The API provides a set of objects and methods that allow an application to access SPECTRUM models, model types, associations, relations, alarms, events, and statistics.

Unlike the SS API that requires applications to be written with C++, the CORBA application may be written in Java or C++. This API uses exceptions for error reporting, and supports native and internationalized multithreaded applications.

The SPECTRUM CORBA API provides password-access to SPECTRUM. The API includes helper classes to set the login and maintain the secure connection. It includes example programs and web-enabled API documentation.

Known Level II Developer's Toolkit Anomalies

SDK

Aprisma will ship the following port headers, which are wrappers to the appropriate stream headers based on the Operating System:

- fstream.h
- iomanip.h
- ios.h iosfwd.h
- iostream.h
- istream.h
- ostream.h
- strstream.h

SSAPI

Problem 1: AsyncDemo on NT fails, and default landscape messages display.

Solution: This problem will be fixed in a future release.

Management Module Software

Management Module Software accompanies the release package for SPECTRUM version 6.0.2. This section of the SPECTRUM Software Release Notes is intended to alert you to product enhancements or changes, problem resolutions, and anomalies associated with SPECTRUM Management Modules.

Updates to SPECTRUM Management Modules are issued and packaged with each release of SPECTRUM. We urge you to read this document thoroughly so that you will be aware of any changes in the product that could affect your network.

Installation instructions are not included in this document. Consult the ***SPECTRUM Installation Guide*** for details concerning the SPECTRUM installation process.

The remainder of this SRN contains the following sections:

New Modules and Functionality

This section identifies management modules that have been added since the last release as well as new functionality that has been added to existing modules.

The information within each section listed below is organized numerically by management module number.

New Management Modules

The following management modules have been added since the last release of SPECTRUM (revision 6.0).

SM-ADT1000, ADTRAN

This new management module supports the ADTRAN Frame Relay Performance Monitoring devices (DSU, TSU, and ESP series of devices); T1 Multiplexers; and Enterprise Integrated Access devices.

SM-CIS1010, Cisco 6400 DSL

This management module supports the Cisco 6400 Series Access Concentrators that utilize Cisco Internetworking Operating System IOS RSP Software, Version 12.1.

SM-CIS1011, Cisco PIX

This management module supports the Cisco Secure PIX Firewall having version 5.2 firmware.

SM-CIS1012, Cisco Device Fault Management Support

This management module supports the CiscoWorks2000 module, which uses the DFM software to monitor Cisco devices.

SM-CIS1013, Cisco Service Level Agreement Manager

This management module allows users to acess services and features of the Cisco Service Level Agreement Manager (SLAM) through Cisco Extensible Markup Language interfaces.

SM-CPQ1000, Host Compaq

This management module provides device management support for Compaq devices that support Compaq Insight Manager.

SM-EMP1000, Empire Agent

This management module currently lets you model the Empire Agent that runs on NT or Unix systems. Empire Agent provides application-specific information for NT and Unix Empire Agents.

SM-MOT1001, Motorola Cable Router

This management module supports the Motorola Cable Data Link Protocol Cable Router, which is an IP device located at the head end of a Hybrid Fiber Coax distribution network.

SM-NTL1001, Nortel Shasta 5000

This management module supports the Nortel Shasta 5000 device for version 2.0(1).

SM-NTL1002, Alteon CACHE Director, ACEdirector

This management module supports the Nortel Alteon WebSystems ACEdirector 8-port 10/100 Mbps Ethernet web switch and CACHEdirector 8-port 10/100 Mbps web switch.

SM-PRD1000, Paradyne FrameSaver

This management module supports the Paradyne FrameSaver 9000 Series of devices running firmware 01.02.00.

SM-RDB1000. Redback SMS 1800/500

This management module supports the Redback Networks' Subscriber Management Systems 1800 and 500 devices, which provide connection

services between telco central office or cable/wireless head-ends and service provider routers.

SM-SFA1000, Scientific Atlanta Explorer HCT

This management module supports the power TV operating system run by the Scientific Atlanta set top boxes and provides statistics about service and performance in a subscription area.

SM-TRN1000, Terayon TL1000 and Broadband Edge 2000

This management module supports the following Terayon Communications Systems devices: (1) the Broadband Edge 2000/2800, which are DOCSIS-compliant Cable Modem Termination Systems; (2) the TeraLink 1000 Data Channel Controller and Multiplexer, which provides control management and data transport functions for the TeraPro Cable modems; and (3) the TeraLink Gateway Scalable Edge Concentrator.

Added Features, Changes and Functionality

The functionality changes have been made since the last release of SPECTRUM (revision 6.0.1).

Empire Application

The model type for this application has been changed to a device model type. All users of the Empire application should run the conversion script "`Conv_to_Emp.script`" located in the `SS-Tools/Convert_to_EMP` directory. This script converts all existing models of the type `Host_NT` and `Host_Sun` that contain an Empire application model to the new Empire device model type, i.e., `Host_Empire`. This update applies to management modules `SM-GH01001` and `SM-GH01004`.

SPMA Discontinuation

The plan is to remove SPMA functionality from SPECTRUM over a period of time. This release of SPECTRUM begins that process. For this release, the following SPMA functionality has been removed. The Bridge view is no longer launched via the **Utilities > Applications** menu option from the Gen_Bridge_App application. The Generic SNMP (MIB I and II) SPMA is no

longer launched via the **Utilities > Applications** menu option from the SNMP2_Agent application. The Logical Device view has been removed for the ELS and FNET devices.

SmartSwitch 6000

This management module has been enhanced to provide support for an intelligent chassis container model type. This container can be used to organize modules contained within the SmartSwitch 6000 chassis. For this release, the container is modeled manually and not by AutoDiscovery.

SmartSwitch 9000

This management module has been enhanced to provide support for an intelligent chassis container model type. This container can be used to organize modules contained within the SmartSwitch 9000 chassis. For this release, the container is modeled manually and not by AutoDiscovery.

SM-CHT1000, Cheetah Gateway Integration

This management module provides a model through which additional traps and alarms can be received via SPECTRUM. Basically, AlertMap and EventDisp entries have been added to support the oid-based trap mechanism from Cheetah's NetMentor software.

SM-CSI1017, Generic SNMP Devices

This management module was updated to correct some problems with GnSNMPDev.

SM-GEXT, Qbridge Add-In GIBs

An Application view has been added to models of devices that support the VLAN Bridge MIB for managing virtual bridged LANs, as defined by IEEE 802.1Q-1998. The views let you access 802.1 information.

SM-JPR1000, Juniper Networks

Support was added for the M5 and M10 devices using the same model type (JNPR-Mxxx) and incorporating the MIBs already included.

SM-KEN1001, Kentrox

This management module was enhanced to include additional MIB support and traps.

SM-LUC1001, Definity Switch DNM Integration

This management module was updated to include DNM integration.

SM-CSI1091, SSR Upgrades

Enhancements to this management module included added support for the VRRP MIB and modifications to the Environmental and Chassis views.

SM-FOR1000, ForeRunner

This management module was enhanced to provide support for ForeThought 6.0.

SM-APC1000

A new application model type (PowerNet2_APP) was created for the APC 9605 UPS that displays appropriate configuration information.

Corrected & Current Anomalies

This section identifies the anomalies that have been corrected since the last release and the anomalies that are known to exist in the current release.

This information is presented alphabetically by device manufacturer name. For each manufacturer, the information is listed in the following format, when applicable:

- Table listing the device support
- Corrected Anomalies
- Known Anomalies
  - Problem
  - Solution

Note: Any anomalies affecting multiple management modules are listed first. Any SPMA anomalies affecting various SPECTRUM management modules are listed last.

Multiple Management Modules

Problem 1: The following devices and/or model types (and possibly more) are not clearing a link down alarm with a link up trap.

DOCSIS	Accelar 1200	StrataCom	SSR 245
DECGigaSwitch	MD110 PBX	ForeASX200	Host Compaq
LanCity	MotorolaMPRouter	HubSyn29xx	HubUB700
9H532-18	HubSyn5xxx	ESXMIM	9A000
Hub3COMSSTR_A	HubUSRMP	7C04	9E106-06
Micro-22T	9E423-24	9E132-15	9E138-12
CSX200	9G426-02	2M46-04	9T425-16
6H133-37	Rtr_Bay_Wflet	HubSyn27xx	HubCat5000
LS3300	STS 16	UpsApc29xx	ST-1000
AT&T SmartHub	9H421-12	ELS10-26	

Solution: This problem will be corrected in a future release.

3Com FMS/MSH

SPECTRUM Part Name	Device	Firmware	MM Version
SM-3CM1004	10BTi FMS SuperStack II MSH Hubs	1.32 2.02 4.01	6.0 Rev 0

Known Anomalies:

Problem 1: If you select the icon in the Alarm view of a Hub3ComMSH and then open the Applications view, a small primary application button appears in the view's banner.

Solution: This problem will be addressed in a future release.

Problem 2: For the Hub3ComFMS, the 3ComPollApp's Poll Table view shows an incorrect last "Next Free Index" table value.

Solution: This is a firmware problem; the correct MIB value for "Next Free Index" is not being read and is therefore not being returned.

3Com LinkSwitch 1100/3300

SPECTRUM Part Name	Devices	Firmware	MM Version
SM-3CM1011	LS1100, LS3300	1.06	6.0 Rev 0

Known Anomalies:

Problem 1: In the Hub3ComLS3300's Model Information view, changing the Community Name to something other than Public results in the view's Description field becoming red-boxed.

Solution: This device is operating with a non-compliant SNMP agent, which appears to be a firmware problem.

3Com NetBuilder II

SPECTRUM Part Name	Device	Firmware	MM Version
SM-3CM1001	3Com NetBuilder	N/A	6.0 Rev 0

Known Anomalies:

Problem 1: In the 3Com NetBuilder II's IP Security Control Table, the columns `Control, Packet Default Auth`, and `Packet System Auth` show a value of "|" (pipe).

Solution: This problem will be fixed in a future release.

3Com PortSwitch Family

SPECTRUM Part Name	Device	Firmware	MM Version
SM-3CM1008	3Com PortSwitch Family Hub	N/A	6.0 Rev 0

Known Anomalies:

Problem 1: In the 3ComRmonExtApp application, the print buttons located in the Configuration view's rfc1516 Extensions, Host, and Alarm Event tables cause SpectroGRAPH to crash.

Solution: This problem will be addressed in a future release.

Adtran DSU/CSU

SPECTRUM Part Name	Device	Firmware	MM Version
SM-ADT1000	DSU/CSU	3.31	6.0.2

Known Anomalies:

Problem 1: Devices DSU IQ, TSU IQ, TSU IQ+, and IQ Probe display red boxes in the DLCI Port Configuration view.

Solution: This is a firmware related problem.

AT & T StarLAN10 SmartHUB

SPECTRUM Part Name	Device	Firmware	MM Version
SM-ATT1000	SmartHUB	10.0	6.0 Rev 0

Known Anomalies:

Problem 1: The SNMP Agent Detail view, accessed from the Application or Performance views, shows pie charts with missing data breakdown fields.

Solution: The AT& T StarLAN10 SmartHUB does not fully support MIB I. Some views will not show any information.

Bay Centillion 100

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-BAN1001	Bay Centillion 100	2.2.4	6.0 Rev 0

Known Anomalies:

Problem 1: Interface icons in the Device Interface and Device Topology views display port and board labels with an incorrect value of “0.”

Solution: This is a firmware problem.

BayStack Ethernet Hubs

Part Number	Device	Firmware	MM Version
SM-BAY1000	HubBaySt10x/20x		6.0.2

Known Anomalies:

Problem 1: Modeling by IP gives different results than AutoDiscovery. Modeling by IP results in a HubBayStxx/xxx model icon in the Topology view that has incorrect labeling and Icon Subviews menu options. AutoDiscovery correctly results in the creation of a BSEnetRptr model icon.

Solution: This functions as designed in order to provide the functionality of port resolution for the HubBaySt10/150.

Cayman GatorStar Repeater/Router

SPECTRUM Part Name	Device	Firmware	MM Version
SM-CAY1001	RtrCayGBox RtrCayGMIM RtrCayGStar	3.0.3/2.2.0 3.0.3/2.2.0 3.0.3/2.2.0	6.0 Rev 0

Known Anomalies:

Problem 1: For Cayman GatorStar models, using the Interface Configuration view to change the Admin status to Off' causes the following pop-up dialog box to display:

```
            Update Failed for the following attributes:

Attribute 0x100ca - DCM-OPERATION_FAILED,0x40000006

            or:

Attribute 0x100ca - Attribute does not exist on device, 0x200000a
```

Solution: Cayman does not allow any SNMP sets by remote management. The management module functions as designed.

Problem 2: The UDP2_App's UDP Listener Table shows only UDP Local Address information. Other information, including UDP Port, does not appear.

Solution: This is a firmware problem.

Cisco Catalyst

SPECTRUM Part Name	Device	Firmware	MM Version
SM-CAT1000	SwCat 1200 (Catalyst Workgroup Switch)	4.1, 4.21	6.0 Rev 0 6.0.2
SM-CAT1001	HubCat 1400 (Catalyst Workgroup Concentrator)	1.5	6.0 Rev 0
SM-CAT1002	HubCat 5xxx (Catalyst 5xxx)	2.1	6.0 Rev 0

Known Anomalies:

Problem 1: The HubCat5000 and HubCat5500 Interface Translation table shows only Interface Index 1.

Solution: This is a firmware problem; the management module functions as designed.

Problem 2: Modeling the HubCat5000, opening the Interface Device or Device Topology views, and exiting after the ports configure, causes multiple lines of the following message to appear:

```
CsDIEnumText: No match for Enumerated Value 268836429
```

Solution: This is a firmware problem; the management module functions as designed. The device is sending incorrect interface information to SPECTRUM.

Problem 3: For SwCat1200 models, clicking the CATStackApp's Configuration view Clear MAC or Clear Ports button causes a SpectroGRAPH error message to display.

Solution: Use the read/write Community Name when modeling the device. Then, each time you click either button, it clears and sets all MAC and port counter attribute values to "0."

Problem 4: For SwCat1200 models, double-clicking any interface's IF Status label displays the Interface Status view with a red-boxed Port Oper Status field.

Solution: For switches with firmware versions not supporting the trunking status attribute, Port Oper Status will be red-boxed.

Problem 5: In the Device Topology view of the SwCat5505, reconfigured (swapped) boards appear in incorrect numeric order.

Solution: The port information is correct. This is a firmware problem; SPECTRUM reads incorrect CATStackMib MIB attribute values and therefore cannot reorganize or update the interfaces in a logical order.

Cisco Access Server

SPECTRUM Part Number	Device	Firmware Version	MM Version
SM-CIS1004	AS5x00 (Cisco Access Server)	Experimental Version 12.0	6.0 Rev 0

Known Anomalies:

Problem 1: The AS5x00 T1 port interfaces 4 and 5 show red-boxed attributes in the Interface Configuration view. Interfaces 1-3 and 6-51 show correct values.

Solution: This is a firmware problem with the Experimental Version 12.0; MIB information for the two attributes is not accessible and red-boxing is appropriate.

Cisco Router

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CIS1001	Rtr_Cisco (Cisco Router 2) Rtr_CiscoIGS, CGS, AGS, MGS, 2500, 3000, 4000, 7000	11.1(8) 11.2	6.0 Rev 0
SM-CIS1002	Lightstream 10.10 (ATM Support)	11.2(5)/ wa3(2b)	6.0 Rev 0

Known Anomalies:

Problem 1: The Cisco 3T MIM is not recognized in hub or MMAC chassis views.

Solution: This is a Cisco 3T MIM firmware problem.

Problem 2: Modeling a Cisco 4000 with the Rtr_Cisco4000 model type generates a wrong model type alarm.

Solution: All Cisco routers of firmware version 10 and above should be modeled with the Rtr_Cisco model type.

Problem 3: The CiscoPingApp currently supports only the IP and DECnet protocols. The Ping Request Entry Table cannot display multiple protocol address formats using a single table icon. For that reason, non-IP protocols may display their respective addresses incorrectly in the table view but the device receives the address as entered in the “Add Request” window.

Solution: Additional protocols will be supported in a future release of the

management module.

Problem 4: Clicking the Ciscoview menu choice, or the CiscoView button in the Cisco Router MM, does not work.

Solution: For the Ciscoview functionality, the user must first install the Ciscoview product. Additionally, the path to the executable must be located in the user path. If these two conditions are not met, the Ciscoview cannot be accessed.

Problem 5: When the Cisco router is modeled with a Rtr_Cisco model type, some application models do not appear.

Solution: This problem occurs with firmware version 8.1 and earlier. The Cisco management module now supports 10.0; with this firmware, the application models should appear.

Problem 6: Some modeled Cisco devices allow you to enter any string under Community Name, or leave this field blank. The model remains green unless you remove the entered string, then the model displays an orange alarm state.

Solution: The Cisco devices respond to all SNMP requests without checking the community name.

Cisco Works Integration

Known Anomalies:

Problem 1: For any Cisco and Cisco Catalyst models, if Ciscoworks is not correctly installed in your path, then the CiscoView selection on the Cisco model Icon Subviews menu will not work correctly and the following error message will appear:

```
Stop Process Daemon:nmcview –host – No Such File or directory.
```

(This affects Cisco model icons that appear in core application views if Ciscoworks is not installed).

Solution: Make sure you have properly configured the CiscoView product in your path.

Copper Mountain Networks

Part Number	Devices	Firmware Version	MM Version
SM-CPM1000	CopperEdge 150/200 DSL Concentrators	2.20.61	6.0.2

Corrected Anomalies:

1 The Device icon in the Model Events view now contains a device label, and all menu options are available.

CSX200/400

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1077	CSX200/400	1.03.13 2.01.10	6.0 Rev 0
SM-CSI1077	CSX5500, CSX7000		

Known Anomalies:

Problem 1: The fr1315App's Frame Relay Data Link Connection Management table for the CSX200 and CSX400 may incorrectly show the State value as "6." If you double-click on State, the Data Link Connection Management table view shows "???" for the State value.

Solution: This is a firmware problem.

Problem 2: After modeling a CSX5500, 7000, or 9w006/7, and navigating to the WAN Configuration view, Seg Violation messages may appear (depending upon the platform) and the Configuration view disappears.

Solution: This problem will be fixed in a future release.

Problem 3: Changes made to the CtIpOspfApp's SPMA OSPF Neighbor table for the CSX200 cannot be saved, and error messages may appear.

Solution: This is a firmware problem; the CSX200 does not support OSPF.

DBconv Tool ($SPECROOT/SS-Tools)

Corrected Anomalies:

1 When running the DBconv tool to convert a GnSNMPDev to another model type, the device no longer disappears from the Location or Org-Chart view and is no longer placed the Lost and Found after the conversion.

Known Anomalies:

None

ELS100-24TXG

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1064	ELS100-24TXG	2.01.07	6.0 Rev 0

Known Anomalies:

Problem 1: The Port Information view for the ELS100_TxG incorrectly displays the Port Speed for ports 25 and 26 as “3.”

Solution: This is a firmware problem that was corrected with firmware version 2.02.01.

EMME/EMM-E6

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1004	EMME/EMME - Routing	3.08.01 1.01.02	6.0 Rev 0
SM-CSI1004	EMM-E6 EMM-E6 ADV	3.22.01 4.01.12	6.0 Rev 0

Known Anomalies:

Problem 1: When you attempt to save created entries within the Static Bridging application's Static Bridging Table from the EMM-E6, the following error message may display:

```
Update failed for the following attributes:
Attribute 0x1194c -
Attribute doesn't exist on device,0x200000a
```

Solution: In order for the Static Bridging Table to work correctly, a MacAddr.receiveport entry must be provided. Before pressing the button to create the static database entry, confirm the MacAddr.receive value's existence.

Empire Agent

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-EMP1000	Empire Agent		6.0.2

Known Anomalies:

Problem 1: The Empire_NT, Empire_Ext, and Empire_Unix applications contain views (configuration and/or performance) that show red boxes.

Solution: This will be fixed in a future release.

Ethernet Hubs

SPECTRUM Part Name	Device	Firmware Revision	MM Version
SM-CSI1000	IRBM, IRM-2, IRM-3	1.07.02	6.0 Rev 0
SM-CSI1000	IRM-3 BP	2.00.01	6.0 Rev 0
SM-CSI1000	MINI-MMAC	2.03.04	6.0 Rev 0
SM-CSI1000	MRXI 22/24	1.11.09	6.0 Rev 0
SM-CSI1000	MRXI-2E	2.03.02	6.0 Rev 0
SM-CSI1000	MRXI-93 SNMP IRM	2.03.02	6.0 Rev 0

Known Anomalies:

Problem 1: In the IRBM's Device Topology view, the Edit menu's New Model option does not list LAN802.3 or LAN802.5 models as models that can be created.

Solution: If you wish to connect these types of LAN models to the IRBM ports, exit the DevTop view and create the LAN models at the same topology level as the IRBM, then connect them to the IRBM with pipes. Go back into the DevTop view and drag the resultant Off-Page Reference icons down onto the desired ports.

Problem 2: Generating either the "New MIB Environment Temp Normal Trap" or the "New MIB Environment Voltage Normal Trap" for an IRBM results in an unknown trap alert message in the Event view instead of trap notification.

Solution: This problem will be corrected in a future release.

Extreme Devices

Part Number	Devices	Firmware Version	MM Version
SM-EXT1000	Extreme Summit switches and BlackDiamond 6808 Core Switch	For Summit: ExtremeWare 2.1.7 For BlackDiamond: ExtremeWare 3.09b4 and Version 5.0 for policy management	6.0.2

Corrected Anomalies:

1 In the DevTop > Interface view, the slot number and port number information is no longer incorrect. When sending traps to an Extreme device, the Event message for some traps is no longer incorrect, since it does display the system description text string.

Known Anomalies:

None

F5 Networks

Part Number	Device	Firmware Version	MM Version
SM-F5N1000	F5 BigIp Load Balancer family	3.1.1	6.0.2

Corrected Anomalies:

1 Several views accessed from the BigIpApp icon no longer have the Description field red boxed.

Known Anomalies:

Problem 1: The Interface Configuration view displays fields that are red boxed.

Solution: This is a firmware related problem.

FDM

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1012	FDMMIM FDMMIM-04	4.07.06	6.0 Rev 0

Known Anomalies:

Problem 1: There are no statistical reports being generated for the BdgCSIFDM icon.

Solution: Run the reports on the applications for the HubCSIFDDI icon to review the statistical information; the statistical reports function as designed.

Problem 2: When you enter “Delete-on-Reset” or “Delete-on-Timeout” in the Static Database Table, it does not appear, although it does appear in the CT_Tp_App Table, Transparent Bridge Information Table, and Forwarding Database Table. Due to this entry not being in the Static Table, you cannot change the status or use “Invalid” to remove the entry.

Solution: You must reset the FDM or use local management in order to remove the entry. This problem will be corrected in a future release of the FDM firmware.

Problem 3: In the Device Topology view of the BdgCSIFDM, the Simplified Device view shows the FDM in slot 2, regardless of its true position within the chassis.

Solution: This is a firmware problem; the Device Topology view shows incorrect information. Once the model has been resolved to the appropriate place in an EMME or IRM chassis, the FDM model will appear in the correct slot within both the FDM and EMME/IRM Device views.

ForeRunner Series of ATM Switches

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-FOR1000	ASX-100 ASX-200 9A000 ASX-1000 ASX-4000	5.3.1	6.0 Rev 0

Known Anomalies:

Problem 1: Some fields for ASX and OC3 models are red-boxed in the Application Port view (accessed from the Application Configuration view's Port Table).

Solution: The management module functions as designed. This is a firmware problem.

Problem 2: Areas within the Forerunner's Performance, Detail, and More Detail views are red-boxed.

Solution: This is a firmware problem.

Problem 3: If you try to use the Find view to find the Fore_SONET_App by Model type, the lower portion of the Device view is blank or shows incorrect information.

Solution: Do not use the Find view for this purpose; use the conventional methods of accessing the Device view.

Problem 4: Attempts to model a ForeSwitch as a GenSNMPDev show the model type as a ForeSystems Workstation, eventually changing to a ForeSys RT router model type. After navigating into the Device Topology or the Application views, ForeUserApp icons appear within the views.

Solution: This is a firmware problem

Problem 5: A yellow alarm occurs if multiple ForeWorkstations are modeled in SPECTRUM. The alarms only appear on ForeWorkstation models using an older (previous) version of the Fore adaptor card.

Solution: Install FORE's ATM adapter card software, the Solaris_5.0.0.5_28757.tar version or later.

Foundry Network Devices

SPECTRUM Part Name	Device	Firmware	MM Version
SM-FDR1000	ServerIron, NetIron, BigIron, FastIron, TurboIron	07.0.10T53	6.0.2

Known Anomalies:

Problem 1: Red boxes appear in several fields in the Chassis General Information view.

Solution: This is a firmware problem that will be fixed in a future version of SPECTRUM.

Problem 2: Red boxes appear around the Last Change and Queue Length fields in the Interface Configuration view, which is accessed by double-clicking an entry in the Interface Configuration table.

Solution: This is a firmware related issue.

Generic SNMP Devices

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1017	Generic SNMP	N/A	6.0 Rev 0

Known Anomalies:

Problem 1: When some devices are modeled as GnSNMPDev, the Topology view may show the GnSNMPDev models with incorrect name labels.

Solution: Generally, this label on the GnSNMPDev model type denotes the name of the manufacturer that initially wrote the firmware. The management module functions as designed.

Host Compaq Module

SPECTRUM Part Name	Device	MM Version
SM-GHO1007	Host Compaq	6.0 Rev 0

Known Anomalies:

Problem 1: The SNMP Agent Detail View is not showing statistical information. Also, the view's Auth Trap field and the Detail 2 view's Receive Breakdown and Transmit fields are red-boxed. Changing the Auth Traps from disabled to enabled causes an attribute error message to appear.

Solution: This is a firmware problem.
Compaq Server's SNMP2_Agent does not fully support MIB-II.

Host HP

SPECTRUM Part Name	Device	MM Version
SM-GHO1003	HP_Host	6.0 Rev 0

Known Anomalies:

Problem 1: For HP_Host, the MIB-II Detail 1 view's Auth Traps button shows "???" instead of enabled or disabled. The device is not reading the proper value (enabled or disabled) from the MIB.

Solution: This is a firmware problem.

Problem 2: Creating a model using Model by IP and changing the Community Name, or assigning an incorrect community name in the Model Information view, does not cause an alarm.

Solution: This is a firmware problem; due to incorrect read-write privileges, any Community Name can be assigned and no warning message will be sent.

Host NT Module

SPECTRUM Part Name	Device	MM Version
SM-GHO1004	Windows NT (pc)	6.0 Rev 0

Known Anomalies:

Problem 1: For the IP2_App application of Host_NT models, the IP Routing view does not display all appropriate fields.

Solution: The table is seeing a premature “end of table” being sent from the device. The table then continues to process errors. This is a firmware problem; the management module functions as designed.

Host Sun

Part Number	Device	Firmware	MM Version
SM-GHO1001	Sun platforms		6.0.2

Known Anomalies:

Problem 1: On some Sun platforms, modeling results in a GenSNMPDev model, which has no connectivity associated with it.

Solution: This is a firmware related issue.

Juniper Networks

Part Number	Device	Firmware	MM Version
SM-JPR1000	M20, M40, M160 Internet Backbone Routers	JUNOS 4.0R1.2	6.0.2

Known Anomalies:

Problem 1: Juniper Internet JUNOS may send OSPF traps SNMP Version 1 with a non-standard specific trap number. Traps will be sent with a specific trap number of 9-24, which should be 1-16. As a result, SPECTRUM will show these traps as UNKNOWN to the Juniper Model or will display the wrong Event/Alarm.

Solution: This is a firmware related issue.

Problem 2: Juniper Internet JUNOS may send Juniper MPLS traps SNMP Version 1 with a generic trap number of 0. This should be a 6. As a result, SPECTRUM will show these traps as UNKNOWN to the Juniper Model.

Solution: This is a firmware related issue.

Problem 3: Juniper Internet JUNOS 4.2 may not populate the table entry ifStackStatus OID: 1.3.6.1.2.1.31.1.2.1.3. As a result, subinterfaces will not be correctly mapped; thus, all subinterfaces will show up in the Device Interface and Device Topology views.

Solution: This is a firmware related issue.

Kentrox DataSMART

SPECTRUM Part Name	Device	Firmware	MM Version
SM-KEN1001	Kentrox DataSMART_680, DataSMART_688	1.43	6.0 Rev 0

Known Anomalies:

Problem 1: Several views for the Kentrox DataSMARTApp contain red-boxed attributes.

Solution: This problem occurs because the device is not returning any values for these attributes. The management module functions as designed; this is a firmware problem.

Problem 2: The Kentrox DSU/CSU interface DLCI_Ports for Frame Relay show a value of "???"; the management module cannot read the MIB values for the device interfaces. Therefore, the values returned by SpectroGRAPH are not true indicators.

Solution: This is a Kentrox firmware problem.

Problem 3: In the DataSMART 688 model, the DLCI_port (subinterface dcz of T1 port) in the Device Interface view displays "???" instead of a valid value.

Solution: This is a firmware related problem.

Motorola Vanguard

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-MOT1000	6520, 6560, 320		6.0.2

Known Anomalies:

Problem 1: The Bridge Traffic view displays blank fields.

Solution: This a firmware issue.

Nokia Firewall

Part Number	Devices	Firmware Version	MM Version
SM-NOK1000	Nokia Firewall family	3.2.1	6.01

Corrected Anomalies:

1 The Checkpoint App's name no longer appears as "7" in the Application view when it is in the List mode.

Known Anomalies

None

Packeteer PacketShaper

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-PKT1000	Packeteer Family	4.2.0	6.0.2

Corrected Anomalies:

1 There are no longer red boxes around the Description field in the Partition table accessed from the PSCommonApp Performance view. The ninth variable in the AlertMap file no longer contains a typographical error (that is, 1.3.6.1.4.1.2334.2.1.8.1.8.9 (8,0) instead of 1.3.6.1.4.1.2334.2.1.8.1.8.9 (9,0).

Known Anomalies:

Problem 1: The Performance view displays incorrect load values.

Solution: This is a firmware issue that will be corrected in a later version.

Paradyne FrameSaver

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-PRD1000	FrameSaver		6.0.2

Known Anomalies:

Problem 1: The Alarm Relay Cutoff field in the Configuration view accessed from the PdnCommonApp Icon Subviews menu may be red boxed.

Solution: This a firmware issue. The attribute value may not be present in the MIB. Use the SPECTRUM MIB Tool to see if it is.

RMON Application

Known Anomalies:

Problem 1: A search for RMONApp, RMONEthProbe, or RMONTRProbe results in icons with inconsistent menu picks as compared to the Topology menu picks.

Solution: This will not be changed.

Problem 2: There may be problems with window displays associated with RMON statistics errors. Multiple windows may appear and/or error messages may occur.

Solution: This is an issue related to the firmware and MIB.

RMON Management Module

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1014	Remote Monitoring	N/A	6.0 Rev 0

Known Anomalies:

Problem 1: After launching the RMON Suite from the command line of a Cisco Frontier Switch Probe modeled as GnSNMPDev, MAC addresses in the Host Matrix table appear incorrectly. Also, the wrong MAC addresses for the source and destination appear in the Matrix Source to Destination view, and incorrect MAC destination addresses appear in the Matrix Destination to Source Destination view.

Solution: The Cisco Frontier Switch Probe is not handling SNMP getnext requests properly; this is a firmware problem.

Problem 2: When using RMON and the RMON Suite, if you click the Guide button nothing happens. This will be fixed in a future release.

SEHI Hubs

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1020	SEHI (Stackable Hubs) SEHI-22 SEHI-24 SEHI-32 SEHI-34	1.10.04	6.0 Rev 0

Known Anomalies:

Problem 1: When you highlight a port in the Device view and choose Port Frame Size & Protocols from the Icon Subviews menu, the view that displays has Frame Size information only.

Solution: Port protocols are not supported by the SEHI device and will, therefore, not show up in the view.

SFSmartCell Switch (9A656-04, 9A686-04)

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1073	SmartSwitch 9A656_04 SmartSwitch 9A686_04	2.04.09	6.0 Rev 0

Known Anomalies:

Problem 1: The SFCS device's Interface Configuration Table view's Clocking to Mother Board field is empty, and the same field in the SFCS Interface Configuration view is red boxed for devices using the 02.02.03 firmware.

Solution: This is a firmware related issue.

Problem 2: AutoDiscovery does not resolve the port connection for the 9A656-04. Although you may see a connection between the switches, you will need to resolve the port manually.

Solution: To find the port, read the atmInterfaceMyNeighborIpAddress and atmInterfaceMyNeighborIfName from the ATM MIB. (Not all devices fill in atmInterfaceMyNeighborIfName with the port number.) The devices should show atmInterfaceMyNeighborIfName with the port number, and not the ifDescr value. This attribute is read-write; you can change this name to another interface name. This way, you can show two ports on one switch connected to two ports of another switch.

Problem 3: The ANIM Configuration view on a incorrectly identifies a 3-port 155Mbps SC ANIM as a 2-port 622Mbps SC ANIM.

Solution: This is a firmware related issue.

SmartSwitch 2000 Family

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1068	2Exx-xx	4.09.08	6.0 Rev 0
SM-CSI1080	2H2x-xxx 2H3x-xxx	4.09.08	6.0 Rev 0
SM-CSI1087	2M46-04R 2M46-04RDC	4.09.08	6.0 Rev 0

Known Anomalies:

Problem 1: When an ATM HSIM is installed in a SmartSwitch 2000 device and the Application Display is set to Bridging, then the interface label for the ATM HSIM in the Device Chassis view displays “UNK” (or unknown connection) instead of “FWD” for the ATM connection.

Solution: This is a firmware related issue.

SmartSwitch 6000 Chassis

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1088	6C105 6C110	4.01.10	6.0 Rev 0

Known Anomalies:

Problem 1: Duplicate models will cause erroneous yellow alarm conditions to appear in the 6C105 chassis. The duplicates are overwriting existing models; models are being shifted from correct slot positions and the duplicates are being incorrectly placed into empty chassis slots. You can see the duplicates when navigating to the Chassis, Physical, Environmental, or Backplane device views.

Solution: Do not create duplicate models, as duplicates will slow overall performance, in addition to the view problem described above. This will be addressed in a future release.

SmartSwitch 6000 Family

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1076	6E122-26, 6E123-26, 6E123-50, 6E128-26, 6E129-26, 6E132-25 6E133-25, 6E133-37, 6E133-49, 6E138-25, 6E139-25 6E233-49	4.01.10	6.0 Rev 0
SM-CSI1082	6H122-08, 6H122-16, 6H123-50, 6H128-08, 6H129-08, 6H133-37 6H202-24, 6H252-17	4.01.10 1.01.10 1.01.10	6.0 Rev 0
SM-CSI1088	6M146-04	4.01.10	6.0 Rev 0

Known Anomalies:

Problem 1: Attempts to create a 6E138-25 or 6E128-26 model by IP or through AutoDiscovery result in the model appearing as a gen6000 device. Attempts to model the 6E138-25 by model type result in wrong model type alarm messages.

Solution: This firmware problem will be addressed in a future release.

Problem 2: In the Chassis Device view's Physical Application Display view for the 6E123-50 and 6H133-37, selecting Port Display Form's Speed menu choice then selecting the Repeater Port Display Form's Speed menu choice causes a value of INV (Invalid) to appear for ports.

Solution: The Port Display Form speed of 10 mb is correct. The Repeater Port Form speed menu is incorrect and will be removed in a future release.

SmartSwitch 9000 Dual Backplane

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1098	9C114 9C106		6.0 Rev 0

Known Anomalies:

Problem 1: Duplicate models will cause erroneous yellow alarm conditions to appear in any SmartSwitch 9000 chassis. The duplicates are overwriting existing models; models are being shifted from correct slot positions and the duplicates are being incorrectly placed into empty chassis slots. You can see the duplicates when navigating to the Chassis, Physical, Environmental, or Backplane device views.

Solution: Do not create duplicate models, as duplicates will slow overall performance, in addition to the view problem described above. This will be addressed in a future release.

SmartSwitch 9000/9500

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1030	9E13x-xx	2.06.10	6.0 Rev 0
SM-CSI1031	9F116-01	2.00.06	6.0 Rev 0
SM-CSI1032	9F1xx-xx 9F2xx-xx	2.00.10	6.0 Rev 0
SM-CSI1035	9F4xx-xx 9F31x-xx	1.12.05, 6.00.15 1.00.30	6.0 Rev 0
SM-CSI1036	9E3xx-xx 9E4xx-xx	1.12.05	6.0 Rev 0
SM-CSI1038	9T122-xx 9T125-xx	1.08.07, 1.02.17	6.0 Rev 0
SM-CSI1055	9E106-06	2.10.06	6.0 Rev 0
SM-CSI1059	9A128-01 9A426-xx	2.10.17 5.00.08	6.0 Rev 0
SM-CSI1066	9H42x-xx	1.12.05 3.01.06	6.0 Rev 0
SM-CSI1073	9A656-04 9A686-04	3.00.04	6.0 Rev 0
SM-CSI1074	9G42x-xx	1.12.05	6.0 Rev 0
SM-CSI1083	9T425-16 9T428-16 9T427-16	1.12.05	6.0 Rev 0
SM-CSI1092	9M426-02	2.01.02	6.0 Rev 0

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1098	9E5xx-xx 9G5xx-xx 9H5xx-xx	1.02.09	6.0 Rev 0

Common Anomalies - SmartSwitch 9000/9500

The following affect two or more management modules and the associated devices.

Known Anomalies:

Problem 1: Currently, you can create SmartSwitch 9000 models in Location or Organization views, even though a Contains relation cannot be established with the SmartSwitch chassis model, and the models do not show up in the Device view of the SmartSwitch.

Solution: Do not create any SmartSwitch 9000 models in the Location or Organization views; instead create the model in the Topology view and then copy the device icon from the Universe Topology view into the Location view. The SmartSwitch chassis model has a Container view which contains Location view icons for all modeled SmartSwitch modules. This ensures that the proper relationship between the models exists.

Problem 2: 9E42x-x and 9H42x-xx device Transparent Bridging Port tables show no MIB-II Interface statistic for INB interfaces for Port In Frames, Port Out Frames, and Port In Discards.

Solution: This will be addressed in a future release.

Problem 3: When modeling a 9A6x6 as a standalone, the Chassis Device view incorrectly displays the backplane interfaces.

Solution: This is a firmware problem; upgrade to 3.00.04 or a later firmware version.

Problem 4: Error messages may appear when you attempt to save created

entries within the Static Bridging application's Static Bridging Table. This only happens with some SmartSwitch 9000 modules; for example; the 9E133-36, 9E138-36, 9E423-24, and 9F310-02 SmartSwitch models display the following:

```
Update failed for the following attributes:

Attribute 0x1194c - Attribute doesn't exist on
device,0x200000a
```

Solution: In order for the Static Bridging Table to work correctly, a "MacAddr.receiveport" entry must be provided. Then, click the Create Static Database Entry, confirm the"MacAddr.receive" value's existence, click Close, and click Save again. This saves the MAC address as a Static Database Entry, and the error message will not appear.

Problem 5: For the 9T125_08 and 9T122_24, the CsTRing1App's Cabletron Token Ring Ring Configuration View shows ?? within the Beacon State field.

Solution: This is a firmware problem.

Problem 6: After modeling a 9E312_12 device, the port interfaces in Device Topology and Device views are not appearing. Twelve interface ports should appear in the views. Also, the Model Information view displays the model state value as "Error."

Solution: This firmware problem will be addressed in a future release.

Problem 7: You may have difficulty creating (and removing) PVCs and PVPs from SmartCell, 9A656_04, and 9A686_04 devices.

Solution: Use the Virtual Channel views available for your device to create PVCs and the Virtual Path views to create PVPs. The creation procedures are the same. Basically, creating a PVC involves defining individual links (VPI/VCI) on each of two ports and then cross connecting the ports. You use a virtual channel link view to define the links on each port and then use a cross connect view to cross connect the ports. Check the following before you begin: you must have write privileges for the device; the traffic parameters for the ports must be set properly; and the

ILMI parameters must be set. (Use local management to do this.) The following summarizes the creation procedure using a Zeitnet device. The procedure will be similar for the other devices.

1. In a Virtual Channel Link view, set the link information (IF Index, VPI, and VCI). For example, **`20101.0.160`**.
2. Save the link by pressing <Return> and then clicking the **Create Link** button. The VCL Row Status view displays.
3. Assign traffic parameters for transmit and receive and then click <Return> to save.
4. Click the **Validate Row** button and then wait to see that the row status changes from `Not Ready` to `Active`.
5. Return to the Virtual Channel Link Table view to validate that the link was defined with the assigned traffic parameters.
6. That completes the link definition for the first port to be cross connected. Now repeat the above steps to complete the link definition for the other port.
7. When the links are defined correctly for both ports, go to the Virtual Channel Cross Connect view and follow the instructions in this view to cross connect the two ports for which you defined links. Cross connecting establishes the PVC.
8. You should return to the Virtual Channel Link view to ensure that the PVC has been set properly.

Problem 8: When the Community Name is changed in the Model Information view of a SmartSwitch 9000 device, the interfaces in the Chassis Device view do not display a status change but remain in whatever state they were in when contact was lost with the device.

Solution: The interface number field turns gray to alert you that contact was lost; however, knowing the previous state of the interface is considered to be useful information.

Problem 9: The graph in the ATM Performance view seems to display

information incorrectly. For example, the Log and Lin graphs may appear to show 100 % of capacity when the cell rate exceeds a certain value.

Solution: This problem comes about because the graph is used to show both percentages and rates and has a limitation as to the total cell rate that can be depicted in the graph. Percentages obviously do not exceed 100 % and the rates on the other hand have a multiplier associated with them (noted by an asterisk next to the attribute). When the cell rate exceeds the graph's ability to show actual value, the % line will appear flat on the graph. The actual tick for tick value of the rate is shown in the table beside the graph.

SmartSwitch ATM - Zeitnet Switch (2500, 6500, 6A000, 9A100)

SPECTRUM Part Name	Switches	Firmware Version	MM Version
SM-CSI1085	SmartSwitch 2500 (standalone ATM; the former Zeitnet ZX-250) SmartSwitch 6A000 (ATM module) SmartSwitch 9A100 (ATM module) SmartSwitch 6500 (ATM backbone)	2.04.09	6.0 Rev 0

Known Anomalies:

Problem 1: In the Device Topology view for the ZX_250 model type, the Port Load Status field is blank.

Solution: This is a firmware problem.

Problem 2: PVC links, cross connections, paths and channels cannot be created on a on a Zeitnet device. This happens with the 9A100 or SmartSwitch 6500 with the Write community name and the trusted NMS address set correctly.

Solution: This problem will be addressed in a future release.

Problem 3: The Zeitnet System Information view for the SmartSwitch 6500 displays red-boxed fields.

Solution: This is a firmware problem.

Problem 4: For the Zeitnet devices, some interfaces within the Interface Device and Device Topology views show incorrect IP or MAC addresses.

Solution: This is a firmware problem.

Problem 5: The ZX_250 Switch Application Port view shows the Number

of Ports field as “7”, while the Port table displays eight rows of port data.
Solution: This is a firmware problem.

Problem 6: Modeled 6Exxx cards (with the ZX-250 SW_Link) do not provide Port Performance view statistics. The “Device not configured” error message appears instead, or the Performance view shows red-boxed attributes.

Solution: This is a firmware problem. Upgrade to the SmartSwitch 6500 with 2.4 firmware, which provides the MIB-II performance parameters. Set Primary Application to MIB-II; launch the Performance view from the device model.

Problem 7: In the ATM Switch Application Virtual Path Links table view for the SmartSwitch 2500/ZX_250SwitchApp, the Admin Status field shows a “0” value. Double-clicking any table entry displays the ATM Switch Application VPL table view, showing the Admin Status field with a “???” value. In both views, the device should return a “1” value for Up, or “2” for Down.

Solution: This firmware problem will be addressed in a future release.

Problem 8: The ZX250SwitchApp for the SS6500_CSM is displaying some red-boxed fields in the Switch Memory/Heap Stats view firmware 2.04(9).

Solution: This is a firmware related problem.

Problem 9: The ZX_250 Switch application’s Configuration view shows red-boxed fields.

Solution: This is a firmware related problem.

Problem 10: The SmartSwitch 6500’s Zeitnet Systems Extensions view shows red-boxed fields.

Solution: This is a firmware problem for the SmartSwitch 6500; the field attributes are not supported.

Problem 11: You will be unable to update the Admin Status of an active port of an 9A100 device in the Application view > Large Icon > Device

Interface view > IF Configuration view. An error message will be displayed.

Solution: This is a firmware related problem.

Problem 12: The 6A000 model may display “Failure” or no values in some of the fields in the Gen_IF_Port Performance view.

Solution: This is a firmware related problem.

SmartSwitch FDDI (9F310-02, 9F426-02, 9F426-03)

SPECTRUM Part Name	Devices	Firmware Version	MM Version
SM-CSI1035	SmartSwitch 9F426_02 SmartSwitch 9F426_03 SmartSwitch 9F310_02	1.06.09	6.0 Rev 0

Known Anomalies:

Problem 1: In the Interface Device view of a 9F426-02, three possible interfaces can appear. One is the INB interface and the others are FDDI interfaces. The FDDI interfaces can be Front Panel 1 and Front Panel 2, Front Panel 1 and FNB, or Front Panel 2 and FNB. However, if one panel is the FNB, the view does not identify which one.

Solution: You can find the desired internal connections information by opening the Utilities > Applications > FNB Configuration view and find the desired FDDI information via the FddiMACApp icon in the Applications view.

SmartSwitch Router (SSR) 250/2000/8000/8600

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1092	SSR2000	3.0.0b.14	6.0 Rev 0
SM-CSI1092	SSR8000/8600	3.1.0.0 3.1.C.5	6.0 Rev 0
SM-CSI1096	SSR-250	3.0.8	6.0 Rev 0
SM-ENT	6-SSRM		6.0.2

Known Anomalies:

Problem 1: For Generic_SSR_FP models, the Interface Device view's Console Interface (#3) shows "???" on the Interface Type label.

Solution: This firmware problem will be addressed in a future release.

Problem 2: The Port Performance view for the SSR8000 incorrectly shows in_error and error_rate values of 100%. The value should be 0 when no connection exists.

Solution: This firmware problem will be addressed in a future release.

Problem 3: After you run a router discovery on SSR's with firmware 3.0, connections to interfaces on the SSR do not become resolved.

Solution: Manually establish the connects_to relationship between each router and the DLCI sub interface to complete the connection.

Problem 4: Serial interfaces for the SSR8600 incorrectly show "10000000" for the ifSpeed.

Solution: This firmware problem will be addressed in a future release.

Problem 5: When you attempt to run AutoDiscovery using the SmartSwitch router as the seed router, no LANs are created.

Solution: This problem will be fixed in future release of SPECTRUM.

Problem 6: Fast Ethernet ports are not being created in the Application view. Only the RMONEthProbe on the Ethernet ports appear.

Solution: RMON probes are not created for Gigabit Ethernet ports. Gigabit interface types are currently not supported by Rmon code and therefore are not modeled as RMONEthProbes.

Problem 7: Red boxes appear in the Configuration and Performance views of rfc2338App.

Solution: This is a firmware issue that will be fixed in a future release of SPECTRUM.

Problem 8: The VRRP Configuration view (rfc2338App) displays red boxes on certain fields.

Solution: This problem may be fixed in a future release of SPECTRUM.

Problem 9: For devices running the 8.0.1.0 firmware, the Chassis view does not display port or chassis models.

Solution: This is a firmware related problem.

SmartSwitch FDDI MicroLAN Switches

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1095	STS16 Token Ring (formerly Olicom TR16)	3.1.0	6.0 Rev 0

Known Anomalies:

Problem 1: When you have improper firmware, AutoDiscovery does not place the concentrator boards in the container view of the 9F12x-xx or 9F241-12. When you model the 9F12x-xx or 9F241-12 by IP address from the Device Topology view, that model is being placed correctly.

Solution: In Edit mode, cut the models from the Lost and Found view and paste them into the container view of the 9CXXX model to resolve the "Contains" relation. The 9F12x-xx and 9F241-12 modules are FDDI concentrators and are not designed to be created in the Device Topology view.

SynOptics 5000 Hubs

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-SYN1003	53xx Enet 55xx TR 59xx FDDI	1.5.1 1.5.1 2.2.6	6.0 Rev 0
SM-SYN1007	SynOptics D5xxx	1.5.0	6.0 Rev 0

Corrected Anomalies:

1 In the Configuration view for the HubSyn5xxx model, Chassis Contact and Chassis Location MIB objects are read-write on the device and the device can now be set with SNMP.The SM-SYN1003 management module now supports the 5005 chassis.

Known Anomalies:

Problem 1: SynOptics only counts Good Frames when monitoring Ethernet traffic. As the number of frames with errors goes up, the number of Good Frames goes down, and this directly affects the Load value in the Port, Segment, Cluster, and Attachment Performance views.

Solution: This is an agent problem. Users must evaluate the %Errors in the Performance views and know that when the %Errors goes up, the Load displayed does not reflect the actual load on the Ethernet segment.

Problem 2: Opening certain SPECTRUM views may cause link error messages to appear in the SpectroGRAPH window. These messages will not affect the operation of SPECTRUM.

Solution: This problem will be addressed in a future release.

Problem 3: Traps are only generated against the IP address of the first Data Collection Engine (DCE) on an Ethernet or Token Ring Network Management Module (NMM). If contact is lost with the first DCE, the user will not receive traps.

Solution: This is a firmware problem.

Problem 4: In the Device view, TR DCE icons may disappear and the NMM Module menu selections will change to a default (Module Notes and Module Configuration.)

Solution: This is a firmware problem where the TR NMM is rebooting and the TR NMM entry disappears from the device's module table.

Problem 5: Information deleted from the Config File Name and/or Image File Name fields in the DCE Agent Configuration view reappears in the view after the view's next poll cycle.

Solution: Replace the entries to be deleted with null characters or blank spaces. This is a firmware problem.

Problem 6: In the Ring In/Ring Out Extension Information view, the Ring In UNA and the Ring Out UNA may be "0.0.0.0.0.0," or both values may be the same.

Solution: This is a firmware problem.

Problem 7: Attempts to change all Module Ring attachments and Module Ring Speed for all attachments in a TR Module Configuration view fail when done simultaneously during the editing session.

Solution: Change the Module Ring Attachments first followed by the Module Ring Speed, or vice versa. Do not attempt to change both at the same time. This is a firmware problem.

Problem 8: The HubSyn5DNxx does not appear in the Topology view when modeled by IP.

Solution: Exit the Edit mode; the model will then appear in the Topology view. The recommended method is to model the HubSyn5DNxx using the "by Model Type" option.

Problem 9: The Performance views accessed for the HubSyn5xxx may show red boxes.

Solution: This may be fixed in a future release.

SynOptics Modules

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-SYN1001	HubSyn3FDDI (SynOptics 3000)	5.1.0	6.0 Rev 0
SM-SYN1002	HubSynEnet28xx(SynOptics 28xx)	5.3.1	6.0 Rev 0
SM-SYN1004	SynOptics 332xS (Enet Bridge)	1.0.0	6.0 Rev 0
SM-SYN1005	SynOptics 39xx (FDDI)	2.0.48	6.0 Rev 0
SM-SYN1006	SynOptics 28xxx	2.0.3	6.0 Rev 0
SM-SYN1008	HubSyn27xx (SynOptics 27xx)	5.11	6.0 Rev 0
SM-SYN1009	HubSyn29xx (SynOptics 29xx)	2.2.4	6.0 Rev 0

Corrected Anomalies:

1 Red-boxed fields no longer display in the HubSyn3FDDI's Port Profile view.

Known Anomalies:

Problem 1: For SynOptics 3xxx and 28xx Hubs modeled with the GnSNMPDev model type, the Gen_IF_Port application Performance view shows inaccurate statistics.

Solution: This problem will be addressed in a future release.

Problem 2: The 3000 Series chassis has one Ethernet backplane, which can be broken into multiple segments so that more than one Network Management Module (NMM) can exist in the same chassis. HubSynSer3xxx Device views show all the Ethernet modules on the chassis instead of just the modules on the segment. Only the modules on the segment, however, have port information and configuration capability.

Solution: This problem will be addressed in a future release.

Problem 3: For the BdgSyn332xS model type, the Syn3EBdgApp's Ethernet Local Bridge Filter Table Entry Configuration view shows an "Update Failed" error message when you attempt to edit the Mac Address or Disposition values.

Solution: Mac Address and Disposition are read-only in this view; do not attempt to change these fields. This will be addressed in a future release.

Problem 4: The statistics in the SynOptics Port Performance view may not completely accurate.

Solution: This problem is related to firmware.

TRMM and TRMMIM Token Ring Modules

SPECTRUM Part Name	Device	Firmware Version	MM Version
SM-CSI1023	TRMM	3.01.06	6.0 Rev 0
SM-CSI1025	TRMMIM TRMMIM-1	3.01.01	6.0 Rev 0

Known Anomalies:

Problem 1: The TRMM does not recognize Router CRM-3T models; they appear as “unknown” in the TRMM’s Device Topology view and cannot be resolved.

Solution: This is a firmware problem. The management module functions as designed.

TRMM-2 and TRMM-4 Token Ring Modules

SPECTRUM Part Name	Device	Firmware	MM Version
SM-CSI1040	TRMM-2	2.00.03	6.0 Rev 0
SM-CSI1041	TRMM-4	2.00.03	6.0 Rev 0

Known Anomalies:

Problem 1: If the HubCSITRMM2 is used as a monitor point for the 802.5 LAN, the SystemUpTime is 0, Ring Speed is 0, and no statistical data is calculated.

Solution: A model representing the appropriate ring must be chosen; use the HubCSITR model as a monitor point. This problem will be addressed in a future release.

Xylogics Terminal Server II

SPECTRUM Part Name	Device	Firmware	MM Version
SM-XYL1001	Annex3 Annex3-UX	11.0	6.0 Rev 0

Known Anomalies:

Problem 1: For Xyl_CSMIM and Xyl_AnnexII models of devices with firmware versions less than 9.0, the serial number fields in the Device and Application views remain empty.

Solution: For versions 9.0 and greater, all views have been updated to support the serial number field.

Wellfleet Routers

SPECTRUM Part Name	Device	Firmware	MM Version
SM-WEL1003	Rtr_Bay_Wflet (Wellfleet Router 2)	14.0	6.0 Rev 0
SM-WEL1002	Rtr_Wfleet5xx (Wellfleet Series 5 Router)	5.77	6.0 Rev 0

Known Anomalies:

Problem 1: For Rtr_Wfleet models of devices with firmware 7.56 and 7.57, the Configuration view's Console Configuration field is red-boxed.

Solution: Firmware 7.80 replaces firmware 7.56 and 7.57; correct information displays with the newer firmware.

Problem 2: In the Performance view of the wf01BridgeApp the Value column fields read FAILURE.

Solution: This problem only occurs on devices with firmware version 8.0. The most current devices use version 12.0, which does not have the problem.

Problem 3: For Rtr_Bay_Wfleet models of devices with firmware 8.0 and older, the wf01VinesApp's Configuration view fields are red-boxed.

Solution: This is a firmware problem. The management module functions as designed.

SPMA (SPECTRUM Portable Management Applications)

Known Anomalies:

Problem 1: Some of the SPMA applications create/use files to store user-defined information. These files are placed in the directory pointed to by the environment variable CTRONDB. By default, the script used to launch SPMA applications sets the CTRONDB variable to:

```
{Install Directory}/SPMA/db directory
```

The retrieved files are owned by the first person to use the SPMA applications. Subsequent changes by other users will not be saved because they do not have write permission to those database files. Only the creator of those files can modify them.

Solution: CTRONDB functions as designed. You can set the environment variable CTRONDB to point to some location other than the default location before bringing up SpectroGRAPH. This will allow you to modify the retrieved files.

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