



Software Release Notes

Version 8.6.87

November 2012

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1. Introduction

Introduction

The previous Aprisa XE software version release relevant to this release is:

RF Variant	Software version	Release date
All	8.6.77	12 th April 2012

This release of Aprisa XE software is:

RF Variant	Software version	Release date
All	8.6.87	30 th November 2012

This document covers the major changes, product enhancements, new functionality, bug fixes and MIB changes since Aprisa XE software version 8.6.77.

4RF Support

Prior to upgrading Aprisa XE terminals with this software, please contact 4RF Customer Support at support@4rf.com to obtain the upgrade files and upgrade process.

Where possible, the customer should consider upgrading in a controlled environment before upgrading the entire network.

2. Released Files

The following is a list of files released for Aprisa XE software version 8.6.87.

File Name	File Type	File Function
_tftp_Upgrade_Options &_Modem_Info.txt	Information	Instructions relating to the software release
Rel_8_6_87_E0a.cfg	TFTP Upgrade	Type '8_6_87_E0a' for a 'full' TFTP upgrade for ETSI Type 1 variants
Rel_8_6_87_E0.cfg	TFTP Upgrade	Type '8_6_87_E0' for a 'standard' TFTP upgrade for ETSI Type 1 variants
Rel_8_6_87_E0h.cfg	TFTP Upgrade	Type '8_6_87_E0' for a 'standard' TFTP upgrade for HSD ETSI Type 1 variants
Rel_8_6_87_E0p.cfg	TFTP Upgrade	Type '8_6_87_E0p' for a 'partial' TFTP upgrade for ETSI Type 1 variants
Rel_8_6_87_E1a.cfg	TFTP Upgrade	Type '8_6_87_E1a' for a 'full' TFTP upgrade for ETSI Type 2 variants
Rel_8_6_87_E1.cfg	TFTP Upgrade	Type '8_6_87_E1' for a 'standard' TFTP upgrade for ETSI Type 2 variants
Rel_8_6_87_E1h.cfg	TFTP Upgrade	Type '8_6_87_E1' for a 'standard' TFTP upgrade for HSD ETSI Type 2 variants
Rel_8_6_87_E1p.cfg	TFTP Upgrade	Type '8_6_87_E1p' for a 'partial' TFTP upgrade for ETSI Type 2 variants
Rel_8_6_87_F0a.cfg	TFTP Upgrade	Type '8_6_87_F0a' for a 'full' TFTP upgrade for FCC Part 90 variants
Rel_8_6_87_F0.cfg	TFTP Upgrade	Type '8_6_87_F0' for a 'standard' TFTP upgrade for FCC Part 90 variants
Rel_8_6_87_F0p.cfg	TFTP Upgrade	Type '8_6_87_F0p' for a 'partial' TFTP upgrade for FCC Part 90 variants
Rel_8_6_87_F1.cfg	TFTP Upgrade	Type '8_6_87_F1' for a 'standard' TFTP upgrade for FCC Part 101 variants
Rel_8_6_87_F1a.cfg	TFTP Upgrade	Type '8_6_87_F1a' for a 'full' TFTP upgrade for FCC Part 101 variants
Rel_8_6_87_F1p.cfg	TFTP Upgrade	Type '8_6_87_F1p' for a 'partial' TFTP upgrade for FCC Part 101 variants
F1_8_6_8.cfg	TFTP Upgrade	Used to load images for the newest DFXO and DFXS cards (rev D)
F2_8_6_8.cfg	TFTP Upgrade	Used to load images for all revisions of DFXO and DFXS cards
F3_8_6_8.cfg	TFTP Upgrade	Used to load images for the newest Modem card (rev D)
F_8_6_8.cfg	Control file	Used for TFTP upgrade (FPGA firmware)
FH_8_6_8.cfg	Control file	Used for TFTP upgrade (HSD)
M_8_3_1.cfg	Control file	Used for TFTP upgrade (modem ETSI Type 1)
M_8_3_2.cfg	Control file	Used for TFTP upgrade (modem ETSI Type 2)
M_7_3_4.cfg	Control file	Used for TFTP upgrade (modem FCC part 90)
M_7_3_5.cfg	Control file	Used for TFTP upgrade (modem FCC part 101)
O_8_6_8.cfg	Control file	Used for TFTP upgrade (FPGA firmware old)
P_8_6_8.cfg	Control file	Used for TFTP upgrade (FPGA firmware partial)
R_8_3_0.cfg	Control file	Used for TFTP upgrade process (RF synth files)
S_8_6_8.cfg	Control file	Used for TFTP upgrade process (software)
X_8_6_8.cfg	Control file	Used for TFTP upgrade process (SNMP)
C-fpga_E1-0-7-0.img	Firmware Image	Motherboard 1 rev C image file
C-fpga_E1-1-7-4.img	Firmware Image	Motherboard 1 rev D image file
C-fpga_E2-0-5-3.img	Firmware Image	Motherboard 2 rev C image file
C-fpga_E2-1-5-4.img	Firmware Image	Motherboard 2 rev D image file
C-fpga_E5-0-8-5.img	Firmware Image	QJET image file
C-fpga_E7-1-3-3.img	Firmware Image	Q4EM image file
C-fpga_E7-2-3-3.img	Firmware Image	Q4EM image file
C-fpga_E7-5-0-2.img	Firmware Image	Q4EM image file
C-fpga_E8-1-4-0.img	Firmware Image	DFXO image file
C-fpga_E8-2-4-0.img	Firmware Image	DFXO image file
C-fpga_E8-3-5-3.img	Firmware Image	DFXO image file
C-fpga_E8-4-5-3.img	Firmware Image	DFXO image file
C-fpga_E9-0-4-1.img	Firmware Image	DFXS image file
C-fpga_E9-1-4-2.img	Firmware Image	DFXS image file
C-fpga_E9-2-4-1.img	Firmware Image	DFXS image file
C-fpga_E9-3-4-1.img	Firmware Image	DFXS image file

Released Files (cont)

File Name	File Type	File Function
C-fpga_EA-0-5-2.img	Firmware Image	Modem image file
C-fpga_EA-1-0-3.img	Firmware Image	Modem image file
C-fpga_EB-0-1-1.img	Firmware Image	QV24 async image file
C-fpga_FB-0-1-3.img	Firmware Image	QV24 sync image file
C-fpga_EC-0-1-4.img	Firmware Image	HSS image file
C-fpga_EC-1-1-7.img	Firmware Image	HSS image file
C-fpga_ED-0-1-0.img	Firmware Image	PSC image file
C-fpga_EE-0-1-0.img	Firmware Image	PIC image file
C-fpga_FA-1-1-0.img	Firmware Image	HSD Modem image file
C-CC-K-6_0_0.img	Kernel Image	Linux Kernel
C-CC-R-8_6_8.img	Software Image	Root File System
modem_8_3_1.cfg	Configuration	Modem Upgrade file (ETSI Type 1 variants)
modem_8_3_2.cfg	Configuration	Modem Upgrade file (ETSI Type 2 variants)
modem_7_3_4.cfg	Configuration	Modem Upgrade file (FCC part 90 variants)
modem_7_3_5.cfg	Configuration	Modem Upgrade file (FCC part 101 variants)
compare_oids_8_6_8.cfg	Configuration	List of HSD common parameter OIDs
snmp_exclude_8_6_8.cfg	Configuration	Used by system for Aprisa XS / Aprisa XE OID exclusion
XE_300_400_type_1_synth.cfg	Configuration	Synthesizer Upgrade file for 300, 400 MHz frequency bands - BB synthesizer
XE_300_400_type_2_synth.cfg	Configuration	Synthesizer Upgrade file for 300, 400 MHz frequency bands - E3 synthesizer
XE_300_400_type_3_synth.cfg	Configuration	Synthesizer Upgrade file for 300, 400 MHz frequency bands - 5 kHz Synthesizer Step
XE_600_700_800_900_synth.cfg	Configuration	Synthesizer Upgrade file for 600, 700, 800, 900 MHz frequency bands
XE_1400_synth.cfg	Configuration	Synthesizer Upgrade file for 1400 MHz frequency band
XE_1400TCVR_synth.cfg	Configuration	Synthesizer Upgrade file for 1400 MHz frequency band - new transceiver
XE_1800_synth.cfg	Configuration	Synthesizer Upgrade file for 1800 MHz frequency band
XE_2000_2500_synth.cfg	Configuration	Synthesizer Upgrade file for 2000, 2500 MHz frequency bands
C-crossconnect_8_6_8.cfg	Configuration	Cross Connect upgrade file
C-crossconnect_8_6_8.jar	Java Application	Cross Connect application - used when running 7.1.4 or later
C-ccapp_exe_8_6_8.jar	Java Application	Cross Connect (stand alone application)
C-CC-B-7_1_1.srec	System	Bootloader for rev C motherboard (cannot be uploaded)
C-CC-B-8_1_4.srec	System	Bootloader for rev D motherboard (cannot be uploaded)
C-CC-F-8_6_8.img	System	Flash File System (cannot be uploaded)
C-swi_8_6_87_E0.swi	Inventory File	ETSI Type 1 variants
C-swi_8_6_87_E1.swi	Inventory File	ETSI Type 2 variants
C-swi_8_6_87_EA.swi	Inventory File	ETSI Type 1 variants HSD
C-swi_8_6_87_EB.swi	Inventory File	ETSI Type 2 variants HSD
C-swi_8_6_87_F0.swi	Inventory File	FCC part 90 variants
C-swi_8_6_87_F1.swi	Inventory File	FCC part 101 variants
I_8_6_87_E0.cfg	Configuration	Inventory Configuration File (ETSI Type 1 variants)
I_8_6_87_EA.cfg	Configuration	Inventory Configuration File (HSD ETSI Type 1 variants)
I_8_6_87_E1.cfg	Configuration	Inventory Configuration File (ETSI Type 2 variants)
I_8_6_87_EB.cfg	Configuration	Inventory Configuration File (HSD ETSI Type 2 variants)
I_8_6_87_F0.cfg	Configuration	Inventory Configuration File (FCC part 90 variants)
I_8_6_87_F1.cfg	Configuration	Inventory Configuration File (FCC part 101 variants)
C-alarm_history_8_6_8.cfg	Configuration	Alarm Logging upgrade file
C-alarm_history_8_6_8.jar	Java Application	Alarm Logging application
4RF-MIB.mib	SNMP MIB file	Top level MIB
4RF-COMMON-MIB.mib	SNMP MIB file	Common MIB
4RF-COMMON-TC.mib	SNMP MIB file	Common Textual Conventions MIB
4RF-PRODUCTS-MIB.mib	SNMP MIB file	Products MIB
4RF-APRISAXE-EVENTS.mib	SNMP MIB file	Aprisa XE Events MIB
4RF-APRISAXE-MIB.mib	SNMP MIB file	Aprisa XE MIB
4RF-APRISAXE-TC.mib	SNMP MIB file	Aprisa XE Textual Conventions MIB

3. Software Upgrade Process

Software Upgrade Process Steps

The following steps are required for the software upgrade process:

1. Unzip and save the following files to your hard drive:
8.6.87 Software
tftpd32.exe
2. Identify the correct TFTP upgrade type.
3. If the terminals are operating software prior to 8.3.40:
Upload the Root File System
Upload the Motherboard Images.
4. Reboot the terminal.
5. Go through the steps of the TFTP upgrade process.
6. Upgrade for new FXO / FXS and modem images
7. Reboot the terminal.
8. Clear the Java and web browser caches.

If the TFTP upload process fails, an 'Upload Fail' alarm is raised. If the TFTP upload process fails due to a power failure, the alarm is raised upon power recovery.

3.1. Identify the Correct TFTP Upgrade Type

TFTP Upgrade Type

The correct TFTP upgrade type will depend on both the Bootloader Version and the Software Version Type.

Aprisa XE terminals running the older bootloader software (bootloader version 0) have a limitation on the number of software images that can be loaded simultaneously into a terminal.

Identify the Bootloader Version

Determine which bootloader version your terminal is running by using the SuperVisor menu item Maintenance > Support Summary and look for the 'Bootloader Version' number.

- (1) If your terminal is running bootloader version 1 or greater, use the TFTP full upgrade process.
 - (2) If your terminal is running bootloader version 0 and running a software version prior to 7.0.6, use the TFTP partial upgrade process.
 - (3) If your terminal is running bootloader version 0 and running a software version 7.0.6 or later, use the TFTP standard upgrade process.
 - (4) HSD terminals cannot run with bootloader version 0.
-

Identify the Software Version Type

There are six different software version types; ETSI type 1, ETSI type 1 HSD, ETSI type 2, ETSI type 2 HSD, FCC Part 101 and FCC Part 90.

To determine which Software Version Type is currently installed on the terminal, take note of the 'Software Version' on SuperVisor Summary page. The last three characters indicate the Software Version Type (E0 ETSI shown):

Software Version	8_4_20_E0
Software Status	Standard Software Release
Serial Number	21801450

ETSI Compliance Body

X_X_XX_ E0	The E0 variant supports ETSI (Type 1) 1+0 and MHSB terminals with the same variants as Aprisa XE software version 8.4.40.
X_X_XX_ E1	The E1 variant supports ETSI (Type 2) 1+0 and MHSB terminals with the same variants as Aprisa XE software version 8.4.40 except for the 400 MHz 25 kHz and 50 kHz which has been replaced with 900 MHz 25 kHz and 50 kHz.
X_X_XX_ E0h	The E0h variant supports ETSI (Type 1) Hitless Space Diversity (HSD) terminals with the same variants as Aprisa XE software version 8.4.40.
X_X_XX_ E1h	The E1 variant supports ETSI (Type 2) Hitless Space Diversity (HSD) terminals with the same variants as Aprisa XE software version 8.4.40 except for the 400 MHz 25 kHz and 50 kHz which has been replaced with 900 MHz 25 kHz and 50 kHz.

FCC Compliance Body

X_X_XX_ F0	The F0 variant supports FCC part 90 1+0 and MHSB terminals.
X_X_XX_ F0h	The F0h variant supports FCC part 90 Hitless Space Diversity (HSD) terminals.
X_X_XX_ F1	The F1 variant supports FCC part 101 1+0 and MHSB terminals.
X_X_XX_ F1h	The F1h variant supports FCC part 101 Hitless Space Diversity (HSD) terminals.

Upgrade File Usage

The following table defines the purpose of the upgrade version files:

Upgrade Version	Upgrade Type	Variant
8_6_87_E0a	Full TFTP upgrade	ETSI TYPE 1
8_6_87_E0	Standard TFTP upgrade	ETSI TYPE 1
8_6_87_E0h	Standard TFTP upgrade	ETSI TYPE 1 HSD
8_6_87_E0p	Partial TFTP upgrade	ETSI TYPE 1
8_6_87_E1a	Full TFTP upgrade	ETSI TYPE 2
8_6_87_E1	Standard TFTP upgrade	ETSI TYPE 2
8_6_87_E1h	Standard TFTP upgrade	ETSI TYPE 2 HSD
8_6_87_E1p	Partial TFTP upgrade	ETSI TYPE 2
8_6_87_F0a	Full TFTP upgrade	FCC Part 90
8_6_87_F0	Standard TFTP upgrade	FCC Part 90
8_6_87_F0p	Partial TFTP upgrade	FCC Part 90
8_6_87_F1a	Full TFTP upgrade	FCC Part 101
8_6_87_F1	Standard TFTP upgrade	FCC Part 101
8_6_87_F1p	Partial TFTP upgrade	FCC Part 101

3.2. Upload the Root File System

Root File System Upgrade

If the terminals are operating software prior to 8.3.40, upload the Root File System file.

Note: Uploading of image files can only be performed to the local terminal i.e. not via the link to the remote terminal.

1. Logon to the local terminal as admin.
 2. Go to SuperVisor > Local > Maintenance > Upload > Software.
 3. Browse to the 8.6.87 Software folder and select 'C-CC-R-8_6_8.img'.
 4. Click Upload and wait for the upload status to display Succeeded.
 5. Go to SuperVisor > Local > Maintenance > Image Table.
 6. Select Software 'C-CC-R-8_6_8.img' and click edit.
 7. At the command drop down box select activate and click apply.
-

3.3. Upload the Motherboard Images

[Check
Motherboard
Image Files](#)

The E1 and E2 motherboard images do not update as part of the TFTP upgrade.

Check if the correct motherboard images are loaded with SuperVisor Local > Maintenance > Image Table.

Example: Radio on V8.4.6 with a Rev C motherboard.

IMAGE TABLE						
Index	Type	Status	Image Size	Version	Select	
0	Kernel	Active	589980	C-CC-K-8_0_0.img	<input checked="" type="radio"/>	
2	Software	Active	2897185	C-CC-R-8_4_8.img	<input type="radio"/>	
3	Software	Inactive	2151772	C-CC-R-8_4_5.img	<input type="radio"/>	
4	Firmware	Active	141876	C-fpga_E1-0-7-0.img	<input type="radio"/>	
7	Firmware	Active	141876	C-fpga_E2-0-5-3.img	<input type="radio"/>	

The Motherboard Firmware images for this software version are:

Motherboard Type	Image Files Required
Rev C	C-fpga_E1-0-7-0.img (Motherboard 1) C-fpga_E2-0-5-3.img (Motherboard 2)
Rev D	C-fpga_E1-1-7-4.img (Motherboard 1) C-fpga_E2-1-5-4.img (Motherboard 2)

[Upload
Motherboard
Image Files](#)

If the motherboard image files are not correct, upload the relevant image files.

Note: Uploading of image files can only be performed to the local terminal i.e. not via the link to the remote terminal.

1. Logon to the local terminal as admin
2. Go to SuperVisor > Local > Maintenance > Upload > Firmware.
3. Browse to the 8.6.87 Software folder and select 'C-fpga_Ex-x-x-x.img'.
4. Click Upload and wait for the upload status to display Succeeded.
5. Go to SuperVisor > Local > Maintenance > Image Table.
6. Select Software 'C-fpga_Ex-x-x-x.img' and click edit.
7. At the command drop down box select activate and click apply.

3.4. TFTP Upgrade Process

TFTP Upgrade Process

To run a TFTP upgrade process (example of ETSI upgrade):

Note: Make sure that the SuperVisor Local terminal is the near end terminal. The **Near** end terminal is the terminal that has its ethernet port physically connected to your IP network.

1. Run the TFTP server program and set the 'Current Directory' to the root directory on the Aprisa CD.
 2. Select the SuperVisor menu item Remote > Maintenance > Upload > TFTP Upgrade
 3. Type the IP address of the TFTP server in the **TFTP Server** field.
 4. Type the version number in the **Upgrade Version** field e.g. '**8_6_87_E0**'.
 5. Click the Apply button and wait for the upgrade process to complete and report 'success'.
 6. Reboot the remote terminal.

 7. Select the SuperVisor menu item Local > Maintenance > Upload > TFTP Upgrade
 8. Type the IP address of the TFTP server in the **TFTP Server** field.
 9. Type the version number in the **Upgrade Version** field e.g. '**8_6_87_E0**'.
 10. Click the Apply button and wait for the upgrade process to complete and report 'success'.
 11. Reboot the local terminal.
-

TFTP Upgrade Types

TFTP Partial Upgrade Process

Run the TFTP upgrade process by typing **8_6_87_E0p** in the Upgrade Version field.

This will perform a partial upgrade which will delete unnecessary image files that might be taking up space in the Image Table (which could prevent a normal upgrade).

Reboot the terminal.

Run a TFTP standard upgrade process on the terminal.

Reboot the terminal again.

TFTP Standard Upgrade Process

This TFTP standard upgrade process excludes FPGA images for the newly introduced revisions of the Modem, DFXO and DFXS cards.

Run the TFTP upgrade process by typing **'8_6_87_E0'** in the Upgrade Version field.

If the standard upgrade fails, it may be necessary to make space for the new images by manually deleting 'Inactive' firmware image files.

To delete a firmware image file, select the SuperVisor menu item Maintenance > Image Table, select the firmware image and click on Edit. Set the IMAGE DETAILS Command to 'Delete' and click 'Apply'.

Reboot the terminal.

Additional TFTP upgrade options have been provided to load the new images separately. Run the TFTP upgrade process using the file:

- **'F1_8_6_8'** to load images for the newer DFXO and DFXS cards (rev D).
- **'F2_8_6_8'** to load images for all revisions of DFXO and DFXS cards.
- **'F3_8_6_8'** to load images for the newest Modem card (rev D).

Reboot the terminal again.

TFTP Full Upgrade Process

Run the TFTP upgrade process by typing **'8_6_87_E0a'** in the Upgrade Version field.

Reboot the terminal.

3.5. Clear the Java and web browser caches

Clear Caches

Once the Software Upgrade process is complete, clear the browser and java caches as described below:

Clear the browser cache (restart browser after clearing the cache)

If using Mozilla Firefox:

1. Go to Tools.
2. Clear Private Data.
3. Select all options.
4. Click clear private data now.

If using Internet Explorer:

1. Go to tools > Internet Options.
2. Under browser history in the general tab click delete.
3. Click delete all.

Clear the java cache

1. Go to your PC control panel.
 2. Open the java application.
 3. Click settings under Temporary Internet Files.
 4. Click delete files.
-

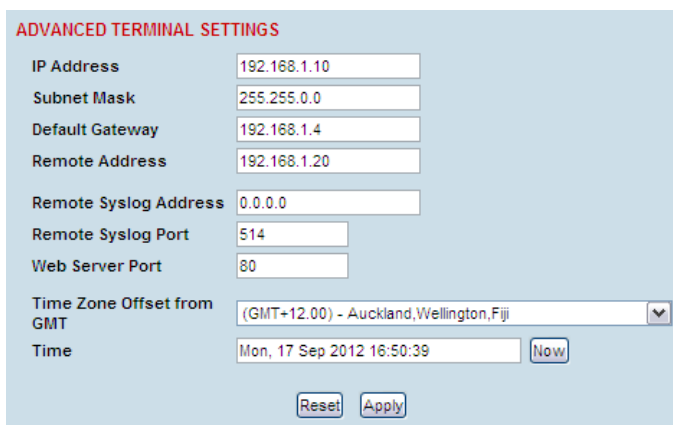
4. Enhancements

4.1. Major Enhancements

None

4.2. Minor Enhancements

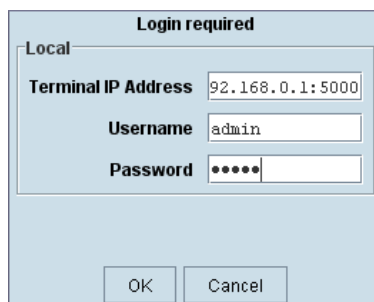
Web Server Port Previously, the Web Server Port was fixed at port 80.
Software version 8.6.87 provides the ability to change the Web Server Port:



See Aprisa XE User Manual 8.6.87 'Configuring the IP Settings' for port restrictions.

If you wish to run the Cross Connections application directly i.e. not from the radio, and your application version is C-ccapp_exe_8_6_6.jar or earlier, you will need to get the current application version from this software release C-ccapp_exe_8_6_8.jar.

If the port number is not port 80, you will also need to append the port number to the IP address. The port number is set at the end of the ip address separated by a colon.



Web Server Port SNMP In software version 8.6.87, an SNMP command has been added to change the Web Server Port.

The new OID is 'fourRFSsystemWebServerPort'.

MHSB Standby Radio Interface Card Alarms

Previously, traffic loss alarms from interface cards in the standby radio of an MHSB 1+1 terminal were not suppressed.

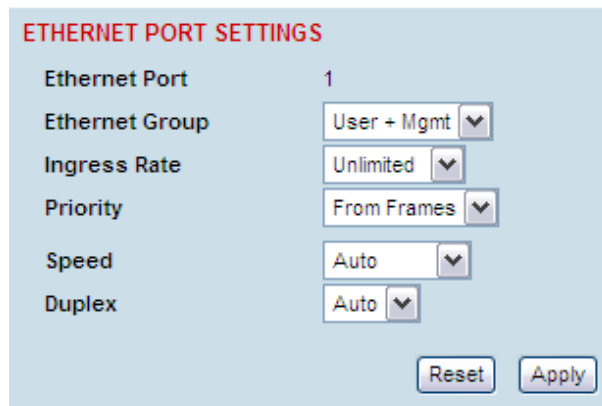
In software version 8.6.87, the following interface card alarms are suppressed from the standby radio:

Interface Card	Alarm
QJET	LOS
DFXO	FXOUnplug
QV24	V24CtrlLineLoss
HSS	hssLoss

Ethernet Port Speed and Duplex

Previously, the Ethernet port speed and duplex settings were fixed at Auto select.

In software version 8.6.87, the Ethernet port speed and duplex can be manually set.



5. Bug Fixes

5.1. Major Bug Fixes

None

5.2. Minor Bug Fixes

Previously, intermittently when a user attempted to login to the local terminal, the local terminal would reboot. The user could login to the remote terminal and establish remote management to the local terminal. A reboot of the remote terminal then allowed a local terminal login.

This bug was found to be caused by the remote terminal's SNMPv3 engine not responding to transactions from the local terminal.

This bug has been corrected in software version 8.6.87.
