Cisco RF Gateway 1 Software Release Notes, Release 2.02.22

Overview

Introduction

Software Release 2.02.22 contains improvements to MPTS stream handling when the PMT PID or a referenced PID is shared by multiple programs. The RF Gateway 1 now fully supports ROSA EM-driven N+1 QAM redundancy.

Purpose

The purpose of this document is to notify RF Gateway 1 users of the enhancements included in the current release, and informs users of any special upgrade procedures needed for using Release 2.02.22.

Audience

This document is intended for system engineers and managers responsible for operating and/or maintaining this product.

Related Publications

Refer to the following documents for additional information regarding hardware and software.

- *Cisco RF Gateway 1 Configuration Guide*, part number 4025112
- *Cisco RF Gateway 1 System Guide*, part number 4024958

Safe Operation for Software Controlling Optical Transmission Equipment

If this document discusses software, the software described is used to monitor and/or control ours and other vendors' electrical and optical equipment designed to transmit video, voice, or data signals. Certain safety precautions should be observed when operating equipment of this nature.

For equipment specific safety requirements, refer to the appropriate section of the equipment documentation.

For safe operation of this software, refer to the following warnings.

WARNINGS:

- Ensure that all optical connections are complete or terminated before using this equipment to remotely control a laser device. An optical or laser device can pose a hazard to remotely located personnel when operated without their knowledge.
- Allow only personnel trained in laser safety to operate this software. Otherwise, injuries to personnel may occur.
- Restrict access of this software to authorized personnel only.
- Install this software in equipment that is located in a restricted access area.

In This Document

ROSA EM N+1 EQAM Redundancy

The ROSA EM supports a feature which allows a QAM port to be a redundant QAM port for a number "N"other QAM ports. When one of the "N" QAM ports fail, the ROSA EM moves the stream map entries and RF parameters from the failed QAM port to the redundant QAM port. In previous releases, it was possible for the redundant RFGW-1 to end up with an incorrect PAT table being inserted on the output carriers (depending on the stream map entries being moved).

In the 2.02.22 release, the RFGW-1 has been enhanced to properly handle the dynamic provisioning of stream map entries in all possible scenarios. Thus, the ROSA EM Redundancy feature now works correctly.

Blocking a Program in an MPTS with Shared PIDs

In previous releases, the RFGW-1 did not consistently handle MPTS streams with shared PIDs. A Shared PID is a PID that is referenced in more than one program's PMT. When a program in the MPTS was blocked (by adding the PMT PID to the blocked PID list), all PIDs referenced by the PMT were blocked from passing through to the output, including the shared PIDs (which are needed by the un-blocked programs).

In the 2.02.22 release, the RFGW-1 is more careful about whether to block a PID that is part of a blocked program. Now the RFGW-1 only blocks PIDs that are not referenced in any other PMTs.

Support MPTS Streams with Multiple PMTs on the same PID

In previous releases, the RFGW-1 did not properly handle an incoming MPTS if more than one PMT shared a PID. The stream was declared as "Bad Input" and was not routed to the output.

In the 2.02.22 release, the RFGW-1 properly handles incoming MPTS streams that have multiple PMTs arriving on the same PID. The SI Extraction algorithm was adjusted to allow this to work.

Miscellaneous Improvements

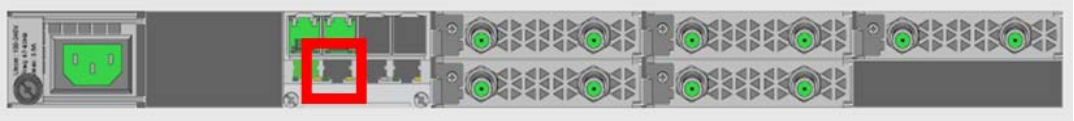
The following miscellaneous improvements have been made in release 2.02.22.

- Relax frequency range alarm limits for the FPGA's 79.992 MHz clock
- Fix for the problem of routing entries on the CA Port causing an RFGW-1 reboot when the CA port is disabled.
- Add error checking in the SI Extraction engine to prevent it from becoming unresponsive without software's knowledge.

Known Issues

The following list identifies known limitations planned to be resolved as part of an upcoming GA release.

- The RF Gateway 1 Web interface is not fully tested with IE-8 and FireFox-3.5 or newer. The RF Gateway 1 web management interface is tested with IE-6 or FireFox-2.0.0.14 and above. Use of Java 1.6.x is also recommended.
- The Summary page displays the unit rear panel with Conditional Access (CA) port enabled/disabled as green/grey. The CA port indication represents the on/off setting and does not represent actual link status.



- The database Restore feature in 2.02.22 requires disabling trap settings (in the restore from database file prior to release 2.01.09) before starting the restore procedure. This can be done before starting a restore configuration in 2.02.22. The procedure is needed to allow compatibility with the enhanced SNMP version 1 and 2 trap support in 2.02.22.
- SNMP community strings are provided in 2.02.22 to support SNMP v1 and v2 traps. Prior to release 2.01.09, there was a single community string applicable to all five trap receivers configurable for the operator. In release 2.02.11, in addition to supporting SNMPv1 and v2 traps, each of the five trap receivers has a separate configurable trap community string. This may cause a possible loss of SNMP trap community strings during an upgrade or downgrade procedure. An operator should carefully verify their trap community strings when upgrading to 2.02.22 or downgrading from 2.02.22, if they are being used.
- An upgrade to 2.02.22 from pre-2.01.09 automatically enables insertion of the Network PID into the PAT. If this is an issue in the user's system, it may be disabled on the *System/System Configuration* page.
- The system uptime counter rolls over to zero after approximately 49 days of continuous use. This behavior manifests on the web management GUI and via SNMP. The rollover does not cause any operational problems or side effects on active services.

  Note: A power cycle or reboot of the RF Gateway 1 resets the system uptime counter as part of normal operation.

Licensing

After an upgrade to 2.02.22, a system license is required for the following features. Refer to Licensing in the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112.

- Data streams requiring use of the DOCSIS® Timing Interface
- DVB® Encryption

Most systems delivered with 1.02.20 or later using a data part number included a license file pre-installed at the factory. For these systems, an FTP transfer is not necessary.

All systems delivered prior to 1.02.20 and some systems delivered with 01.02.20 require a license file. This can be obtained from Cisco after an upgrade to 2.02.22. Contact your account representative for details on obtaining your license files.

Note: Performing an upgrade without a license file will generate an alarm, informing the user that a license file is not present. The unit continues to function until configuration changes are made. However, performing the upgrade may impact functionality of licensed features.

For systems requiring a license upgrade, a licensing capable RF Gateway 1 provides the operator with a new tree menu, located under the System tab, *License Management*. It provides an FTP mechanism to transfer license files to the device. It is recommended that the operator monitor the file transfer status using feedback from the FTP server.

Upgrade Information

An RF Gateway 1 unit running release 1.02.20 can be upgraded directly to 2.02.22. Refer to Chapter 3, *General Configuration and Monitoring (Release Management)* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112 for more information. The RF Gateway 1 reboots automatically at the end of the upgrade process. However, when upgrading to 2.02.22 from 1.02.09, an intermediate step of using the bridge release 1.02.19 to arrive at 1.02.20 and finally 2.02.22 must be followed. The bridge release designated as 1.02.19 has been created to provide a secure and robust upgrade path. Releases 1.02.19 (bridge) and 1.02.20 (final) have identical user features and functionality. See ***Upgrade Procedure for Customers Running 1.02.09*** (on page 11).

WARNING:

Upgrading to 1.02.20 or above directly from 1.02.09 must not be attempted. This may cause the RF Gateway 1 to be non-operational.

Refer to Known Issues (on page 7) for SNMP related upgrade, downgrade and database restore considerations.

IP Port Configuration Changes

There is a bug in 1.02.09 that causes the following IP port configuration parameters to have inverted values saved in the configuration file.

- Negotiation Mode (On/Off) - one for each port (total 4)
- Redundancy Mode (Auto/Manual) - one for each port pair (total 2)
- Revert Mode (Enable/Disable) - one for each port pair (total 2)

For details on these parameters, see Chapter 3, *General Configuration and Monitoring* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112.

This bug has been corrected in the configuration file in 1.02.19. Upon upgrade to 1.02.19, these three parameters will appear to have changed value as seen in the *System/IP Network* page of the web GUI. As a result, the IP ports may not be configured properly for operation immediately after upgrade (after the subsequent reboot that follows activation).

See ***Upgrade Procedure for Customers Running 1.02.09*** (on page 11).

Upgrade Procedure for Customers Running 1.02.09

WARNING:

Upgrading to 2.02.22 directly from 1.02.09 must not be attempted. This may cause the RF Gateway 1 to become non-operational.

1. Before starting the upgrade, backup the system configuration. Refer to Chapter 3, *General Configuration and Monitoring (Configuration Backup)* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112. Name the file appropriately to identify it as a configuration that corresponds to 1.02.09. This file will be necessary later if the user decides to revert back to 1.02.09.
2. Record the IP port configuration parameters by saving a screen capture of the *System/IP Network* page. See ***Recording IP Port Configuration Settings*** (on page 14).
3. Download and activate 1.02.19. Refer to Chapter 3, *General Configuration and Monitoring (Release Management)* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112. The RF Gateway 1 reboots automatically at the end of the upgrade process.
4. After reboot, display the *System/IP Network* page. See ***Displaying IP Port Configuration Settings*** (on page 13).
5. Verify the IP port configuration parameters by checking them against those recorded in step 2 (prior to the upgrade as done in step 3). The Negotiation Mode, Redundancy Mode, and Revert Mode parameter values are inverted. See ***Displaying IP Port Configuration Settings*** (on page 13). Change the differing parameter values to match those recorded before download and activation. Be sure to click **Apply** after making your changes.
6. Once step 5 is completed, save the configuration which includes the IP port configuration parameters. Going forward, these values will not change.
7. Validate/qualify/soak release 1.02.19 in its application to establish confidence the release is operating at the same level as 1.02.09. In the very unlikely event that service is impacted by 1.02.19, reverting back to 1.02.09 may be done to re-establish operations. If reverting back to 1.02.09 is necessary, the IP port configuration parameters must be swapped back and the configuration saved in step 2 restored.

8 After satisfactory completion of step 7, upgrade from 1.02.19 to 1.02.20. These two releases have identical performance and behavior. Release 1.02.20 includes a boot code upgrade that readily supports future roadmap features/releases without the need for subsequent two-step bridge upgrade processes.

9 Download and activate 2.01.09. Refer to Chapter 3, *General Configuration and Monitoring (Release Management)* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112. The RF Gateway 1 reboots automatically at the end of the upgrade process.

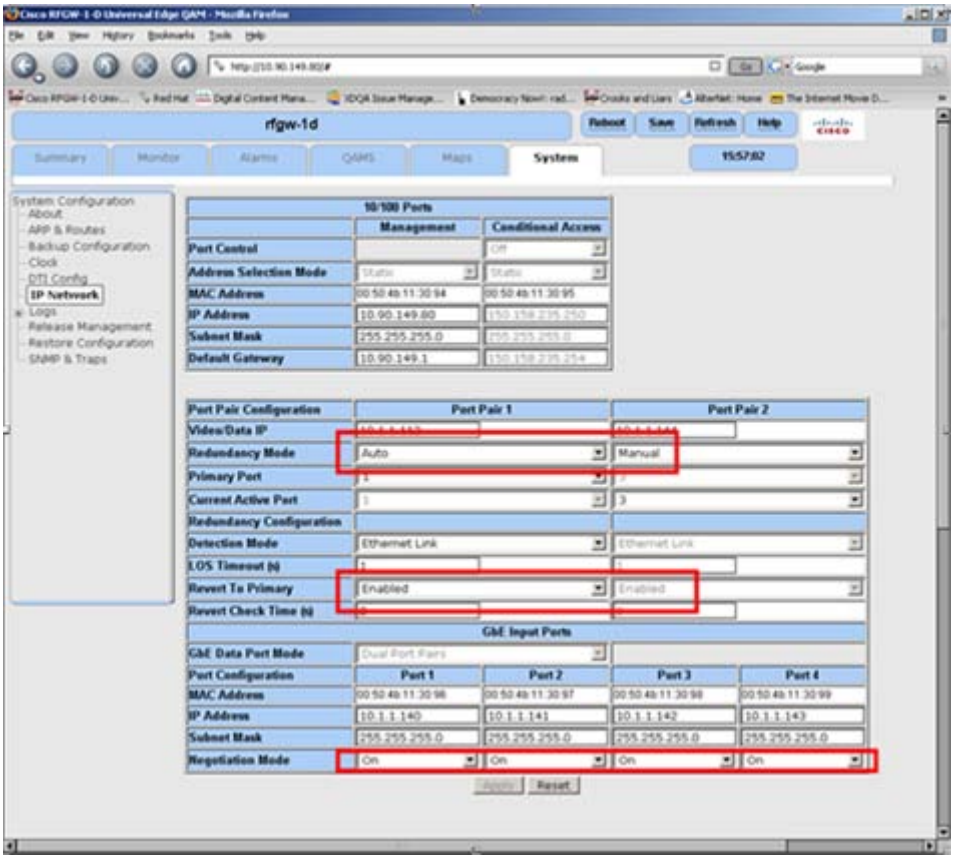
IP Port Configuration Parameter Settings

The RF Gateway 1 has four physical GbE input ports that receive video and data streams from the upstream network. These ports may be used independently (in software releases 02.02.22 or later) or configured to implement input redundancy. See Chapter 3, *General Configuration and Monitoring* of the *Cisco RF Gateway 1 Configuration Guide*, part number 4025112 for specific details.

Displaying IP Port Configuration Settings

Follow these instructions to display the *System/IP Network* page.

1. Launch your web browser.
2. In the IP Address field, enter the RF Gateway 1 IP address.
3. Click **Enter**.
4. Click the *System/IP Network* tab and review the IP settings. Refer to the following screen.



Recording IP Port Configuration Settings

Follow these instructions to record IP port configuration settings.

1. Navigate to the *System/IP Network* page.
2. Click the **Alt-PrtScrn** keys to copy the IP Network parameter settings to the clipboard.
3. Launch Microsoft Word (or WordPad if you don't have Microsoft Word) and paste the clipboard contents to page 1.
4. Save the Microsoft Word document as ipsettings.doc.

For Information

Support Telephone Numbers

This table lists the Technical Support and Customer Service numbers for your area.

Region	Centers	Telephone and Fax Numbers
North America	Cisco Services Atlanta, Georgia United States	For *Technical Support*, call: ■ Toll-free: 1-800-722-2009 ■ Local: 678-277-1120 (Press **2** at the prompt) For *Customer Service*, call: ■ Toll-free: 1-800-722-2009 ■ Local: 678-277-1120 (Press **3** at the prompt) ■ Fax: 770-236-5477 ■ Email: customer-service@cisco.com
Europe, Middle East, Africa	Belgium	For *Technical Support*, call: ■ Telephone: 32-56-445-197 or 32-56-445-155 ■ Fax: 32-56-445-061 For *Customer Service*, call: ■ Telephone: 32-56-445-444 ■ Fax: 32-56-445-051 ■ Email: service-elc@cisco.com
Japan	Japan	■ Telephone: 81-3-5908-2153 or +81-3-5908-2154 ■ Fax: 81-3-5908-2155
Korea	Korea	■ Telephone: 82-2-3429-8800 ■ Fax: 82-2-3452-9748 ■ Email: songk@cisco.com
China (mainland)	China	■ Telephone: 86-21-2401-4433 ■ Fax: 86-21-2401-4455 ■ Email: xishan@cisco.com
All other Asia Pacific countries & Australia	Hong Kong	■ Telephone: 852-2588-4746 ■ Fax: 852-2588-3139 ■ Email: saapac-support@cisco.com
Brazil	Brazil	■ Telephone: 11-55-08-9999 ■ Fax: 11-55-08-9998 ■ Email: fattinl@cisco.com or ecavalhe@cisco.com
Mexico, Central America, Caribbean	Mexico	For *Technical Support*, call: ■ Telephone: 52-3515152599 ■ Fax: 52-3515152599 For *Customer Service*, call: ■ Telephone: 52-55-50-81-8425 ■ Fax: 52-55-52-61-0893 ■ Email: sa-latam-cs@cisco.com

Region	Centers	Telephone and Fax Numbers
All other Latin America countries	Argentina	For *Technical Support*, call: ■ Telephone: 54-23-20-403340 ext 109 ■ Fax: 54-23-20-403340 ext 103 For *Customer Service*, call: ■ Telephone: 770-236-5662 ■ Fax: 770-236-5888 ■ Email: keillov@cisco.com

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Printed in United States of America
September 2010
Part Number 7021681 Rev A