# cisco.

Cisco RF Gateway 1 Remote Provisioning Utility (RPU) User Guide

## For Your Safety

#### **Explanation of Warning and Caution Icons**

Avoid personal injury and product damage! Do not proceed beyond any symbol until you fully understand the indicated conditions.

The following warning and caution icons alert you to important information about the safe operation of this product:

You may find this symbol in the document that accompanies this product. This symbol indicates important operating or maintenance instructions.

- You may find this symbol affixed to the product. This symbol indicates a live terminal where a dangerous voltage may be present; the tip of the flash points to the terminal device.
- ( You may find this symbol affixed to the product. This symbol indicates a protective ground terminal.
- You may find this symbol affixed to the product. This symbol indicates a chassis terminal (normally used for equipotential bonding).
- You may find this symbol affixed to the product. This symbol warns of a potentially hot surface.
- You may find this symbol affixed to the product and in this document. This symbol indicates an infrared laser that transmits intensity-modulated light and emits invisible laser radiation or an LED that transmits intensity-modulated light.

#### Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

## **Notices**

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# 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 must 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.

#### WARNING:

- 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.

# 1

## Introduction

### Overview

The Cisco RF Gateway 1 (RFGW-1) Remote Provisioning Utility (RPU) is a Windows-based tool designed to simplify initial provisioning of multiple RFGW-1 units in an operator's system.

## Purpose

This user guide provides the necessary information to install, operate, maintain, and upgrade the RPU application.

## Who Should Use This Document

This document is intended for authorized service personnel who have experience working with the RFGW-1 or similar equipment. The service personnel should have appropriate background and knowledge to complete the procedures described in this document.

## **Qualified Personnel**

Only appropriately qualified and skilled personnel should attempt to install, operate, maintain, and service this product.



Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.

## In This Chapter

## **Features and Benefits**

#### **Primary Benefits**

The RPU provides the following benefits:

- Enables mass initial provisioning of RFGW-1 databases in SDV deployments. Provisioning of 48 and 96 channel RFGW-1 hardware configurations is supported.
- Enables mass upgrade provisioning of RFGW-1 databases from 48 channels to 96 channels.
- Enables bulk provisioning of run-time port and channel control settings.
- Generates configuration files in JavaScript Object Notation (JSON) format for export.

# 2

## Provisioning

This chapter describes the components for provisioning the RPU.

## In This Chapter

Before You Begin	4
Provisioning Overview	5

## **Before You Begin**

Before you begin, make sure to check the following:

- Your server is running Windows XP or Windows 7.
- Microsoft Office Excel 97 or later must be installed on the server.
- You have the RPU distribution CD or have downloaded the RPU installer.
- You can connect to the Cisco product server.

## **Provisioning Overview**

The RPU merges a common reference database with unique parameters such as IP address, Transport Stream Identifier (TSID), and frequency information from a SDV Design File to generate and distribute configuration files for each RFGW-1. These operations can also be performed on a per-QAM basis by accessing the embedded Web GUI of the RFGW-1.

The following diagram provides an overview of the RPU application.



The RFGW-1 provisioning parameters are stored internally in .xml database format. The provisioning parameters are usually manipulated either using the Web GUI or via SNMP sets.

The RPU uses provisioning data configured in an SDV Design File to create the internal .xml RFGW-1 database files. The SDV Design File uses a Microsoft Excel spreadsheet. The RPU accesses the SDV Design File and creates RFGW-1 formatted database files. These database files are then uploaded via FTP to the RFGW-1.

#### **Reference Database**

The Reference Database is used by the RPU as a template for all RFGW-1 initial provisioning settings not configured by the RPU. The Reference Database is configured via the Web GUI by the customer on an arbitrarily selected "reference" RFGW-1. The RPU imports the database files from the reference RFGW-1. These database files will then be used by the RPU to create the database files for each RFGW-1 selected.

#### **SDV Design File**

SDV Design Files are commonly used by SDV customers to maintain an accounting of configuration parameters and service group associations for the various devices in the network. The SDV Design File was originally conceived to capture legacy SDV Server/GQAM networks in a single common file that could be shared between Cisco network engineering and customers. The SDV Design File now supports USRM and RFGW-1.

SDV Design Files have multiple tabs offering various perspectives of how SDV equipment is arranged hierarchically into headends, hubs, and service groups. Generally, there is a single tab that itemizes all hubs in a network by location name, followed by a series of sheets detailing the QAM/service group associations including frequency, and TSID assignments.

#### **1st Generation SDV Design File**

The following worksheet shows a GQAM arrangement in the 1st generation SDV Design File. To capture the striping plan of various physical RF ports, GQAM chassis are organized in columns (vertically), while service groups are organized across rows (horizontally).

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#### 2nd Generation SDV Design File

The following sections describe the five tabs of the SDV Design File.

#### Hub\_Info Sheet

The following worksheet shows the Hub\_Info sheet.

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#### **RFGW-1 QAMS and System Sheet**

The QAMS and System sheet corresponds to the QAMS and System tabs on the RFGW-1 GUI. These tabs are included in the SDV Design File as a common location to facilitate communication and discussion regarding an operator's preferences for the settings in the Reference Database. Either Cisco network engineering or an operator can fill out the parameters in these tabs and share the file with various stakeholders.

Use of these tabs is optional. Currently, neither the RPU nor any other tool reads these parameters from the SDV Design File. They are included only for discussion and accounting purposes.

#### Chapter 2 Provisioning

The following worksheets show the QAMS and System sheets.

**QAMS** Sheet



#### System Sheet

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16	De-jitter Buffer Depth (ms)					
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20	Static Route Entry1: Gateway IP Address					
21	Static Route Entry1: Subnet Mask					
22	Static Route Entry2: Destination & Address Static Route Entry2: Gateway IP Address					
24	Static Route Entry2: Subnet Mask					
25	Static Route Entry3: Destination IP Address					
26	Static Route Entry3: Gateway IP Address					
21	Static Route Entry & Subnet Mask					
29	(add more in increasary)	Management Port	Gbe Port 1	Gbe Port 2	Gbe Port 3	Gbe Port 4
30	Static ARP Entry1: Destination IP Address					
31	Static ARP Entry1: Ethernet Address					
32	Static ARP Entry1: Flags					
34	Static ARP Entry2: Ethernet Address					
35	Static ARP Entry2: Flags					
36	Static ARP Entry3: Destination IP Address					
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Device Info Sheet

The Device\_Info sheet is the primary configuration used for RPU data.

The following worksheet shows the Device\_Info sheet.

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	Headend	Dunan (A)	PLOPINCAPPORT	17116.98.96	172.14.00.126	295.295.295.192		172.56.89.529	255,255,255,240	172.16.09.100	NEA	NEA	171.14.09.000	17136.94.96	255,255,255,240	10196.96
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17	Headerall	Duhan (A)	PLOHNCAPFORD	17110-08-005	172.16.86.126	255,255,255,192		172.16.89.803	255,255,255,248	172.16.09.054	NA	NEA	172.16.09.054	171.96.94.219	255,255,255,248	0114.00
10	Headend	Duthath [A]	FLOHNCARFORD	171.96.88.902	172.16.86.526	205.205.205.182		172.16.09.161	255,255,255,248	17216-09.962	NIA	NIA	172.16.09.162	171.%.%.327	255,255,255,248	171.16.96
19	Headend	Duitum (A)	FLOHACARFORM	17116-00.003	172.16.86.126	255,255,255,152		172.16.89.909	255,255,255,248	172.16.09.070	NIA	NEA	172.14.89.070	172.16.06.235	255,255,255,248	172.16.96
20	Headend	Duhan (A)	PLOHNCAPFORE	17116-00.004	172.16.08.126	255,255,255,162		172.16.09.077	255,255,255,248	172.16.89.079	NeA	FanA	172 14.05.070	172.16.01.243	255,255,255,248	OTH N
1.2	Headend	Duhan (4)	PLOHNCAPPOIN	01110.00.005	17216.88.295	205,205,205,02		172.16.00.005	255,255,255,240	17216.00.006	NeA	Park.	172 14.09.006	171.96.96.263	255,255,255,244	01.00 M
	Manhood .	Custom (A)	PLOPEL APPOINT	172 16 28 102	171.56.06.056	100.100.100.002		172.16.89.190	255,255,255,248	172.16.00.004	Table I	nen .	171.16.00.04	172 14:32 25	200.200.200.248	172 16 10
24	Headend	Duhan (A)	PLOHNCAPFOIRD	172.16.88.308	171 16 28 296	255,255,255,192		171168209	255,255,255,240	171 1489.210	NUA	NEA	17116-09210	172.16.10.00	255,255,255,248	172.16.52
28	Headerull	Duhan [A]	FLGHNCARF0820	1721636.009	171 16 28 28	205.205.205.152		171.14.09.217	255,255,255,248	171.16.09.210	NIA	NIA	172.16.89.218	171.14.30.91	255,255,255,248	171.14.92
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The RPU data is divided into two major sections:

- Identification and IP Configuration
- Port and Channel Frequency and TSID Configuration

The following parameters are included in Identification and IP Configuration:

- Headend Name of the Headend the RFGW-1 is configured with on the network.
- Hub Name of the installation location.
- Equipment Name Name of the RFGW-1 configured for the equipment name database field.
- Management IP, Gateway, Mask, MAC IP configuration parameters for the management port.
- Port IP, Mask, Virtual IP GbE input port IP configuration parameters.

**Note:** If the value for any of the Virtual IP address fields is set to **independent**, the database field GbE Data Port Mode will be set to **Four Port Independent**.

 QAM Type – Identifies the type of QAM device. GQAM and RFGW-1 are the only supported types.

**Note:** The RPU will not create databases or configure GQAM type devices. GQAM configuration data will be used in the Data Integrity Tests, and the GQAM data will be displayed in the RPU data display dialogs.

 Max QAM – Identifies the number of QAM channels for the entire device. 48 or 96 are the supported values.

The following parameters are included in Port and Channel Frequency and TSID Configuration:

• SG ID – Service Group ID to which this port is assigned.

Note: This SGID must be configured in the SG\_Info sheet.

- Primary USRM Name of the Primary USRM (SDV Server) to which this port is configured.
- Backup USRM Name of the Primary USRM (SDV Server) to which this port is configured.
- Freq 1 The base frequency assigned to channel 1.
   Note: This frequency must be a standard frequency.
- TSID 1 to 4 The TSID assignments for TSID settings for channels 1 to 4.
- Freq 5 The base frequency assigned to channel 1.
   Note: This frequency must be a standard frequency.
- TSID 5 to 8 The TSID assignments for TSID settings for channels 5 to 8.

SG\_Info Sheet

The SG\_Info sheet is used to configure SDB Service Group information. The following parameters must be configured for use by the RPU:

- SGID
- SG Name
- Primary SDV Server

The other parameters are used for other system configuration purposes. The RPU requires that any service group listed on the Device\_Info sheet be defined in the SG\_Info sheet.

The following worksheet shows the SG\_Info sheet.

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LGHNCA-SG5906						RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	6	1	232 132 201 6	RLGHNCAGQM001 - 3/2 1	Disable   Unm
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LGHNCA-SG5919						RLGHINC-SDVSRV-01	RLGHINC-SDVSRV-61	19	1	232 132 201 19		
LGHNCA-SG5920						RLGHNC-SDVSRV-01	RLGHINC-SDVSRV-51	20	1	232 132 201 20		
LGHNCA-SG5921						RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-61	21	1	232 132 201 21		
LGHNCA-SG5922						RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	22	1	232 132 201 22		
LGHNCA-SG5923						RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	23	1	232 132 201 23		
GHNCA-S05924						RLGHNC-SDVSRV-01	RLGHNC-SOVSRV-61	24	1	232 132 201 24		
LOPINCA-SG5925						REGHINC-SOVSRV-01	RLOHNC-SDVSRV-51	25	1	232 132 201 25		
CUNICA-SUSSI26						PLOPING-SUVSRV-01	PLOTING-SUVSRV-51	20	1	232 132 201 26		
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GHNCA-SG5929						RIGHNC-SDVSRV.02	RI GHNC-SDVSRV-61	29	1	232 132 201 29		
LGHNCA-SG5930						RLGHNC-SDVSRV-02	RLGHNC-SDVSRV-41	30	1	232 132 201 30		
LGHNCA-SG5931						RLGHNC-SDVSRV-02	RLGHNC-SDVSRV-51	31	1	232 132 201 31		
LGHNCA-SG5932						RLGHNC-SDVSRV-02	RLGHINC-SDVSRV-51	32	1	232 132 201 32		
LGHNCA-SG5933						RLGHNC-SDVSRV-02	RLGHINC-SDVSRV-51	33	1	232 132 201 33		
LGHNCA-SG5934						RLGHNC-SDVSRV-02	RLGHINC-SDVSRV-51	34	1	232 132 201 34		
LGHNCA-SG5935						RLGHNC-SDVSRV-02	RLGHNC-SDVSRV-51	35	1	232 132 201 35		
LGHNCA-SG5936						RLGHNC-SDVSRV-02	RLGHNC-SDVSRV-51	36	1	232 132 201 36		
LGHNCA-SG5937						REGHINC-SDVSRV-02	RLGHINC-SDVSRV-61	37	1	232 132 201 37		
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#### **3rd Generation SDV Design File**

The 3rd generation SDV design file contains all of the information provided in the 2nd generation design file plus a new D6\_Info sheet. The 3rd generation design file also replicates QAM details for each RFGW-1 in the RFGW-1 QAMS sheet.

#### Note:

- In the 2nd generation design file, RFGW-1 QAMS sheet is used for reference only; these fields are not manipulated.
- If the latest version of RPU1 is imported with a 2nd generation design file, it will display the message shown below and disable the controls for JSON file export as described in *Generating the JSON File (Phase 2 Step 2e)* (on page 31).



#### **RFGW-1 QAMs Sheet**

The fields on this sheet are the same as those in the corresponding sheet in the 2nd generation design file, but with the addition of fields used to generate a JSON file that can be exported via HTTP POST method.

All fields that are color-coded green are mandatory, and each RFGW-1 should have an entry in these fields. All other fields can be ignored.

The QAM details for each RFGW-1 are divided into two groups. One group contains RFGW-1 RF Port details, and the other contains RFGW-1 channel details.

The Port group includes the following parameters:

- RF Port Port ID of RFGW-1.
- Port Control Possible values are On or Off.
- Spacing Defaults to 6 MHZ for all channels.
- Modulation Possible values are QAM64 or QAM256.
- Output Level Power level in dBmV of the QAM channel.
- Symbol Rate Symbol rate of the QAM channel.
- Combined Carrier Number of channels going out from the port. Possible values are None, Single, Dual, Triple, or Quad.

The Channel group includes the following parameters:

- QAM Channel Channel ID of RFGW-1.
- ON ID ON ID assigned for each channel in the RFGW-1.
- Mode Possible values are Normal, Mute, or CW.

- Spectrum Inversion Possible values are Normal or Swap.
- PRBS Stuffing Possible values are On or Off.
- Application Mode Mode in which the RFGW-1s QAM channel should act. Possible values are VoD Only, Broadcast Only, SDV Only, or Shared.
- Interleave Depth Interleave Depth of a given QAM channel.
- PMT Rate Rate at which the PMT table should be generated in the output TS.
- PAT Rate Rate at which the PAT table should be generated in the TS.
- QAM Status Required field; possible values are OPERATIONAL, OFFLINE, or QUIESE.

The following worksheet shows the RFGW-1 QAMS sheet.

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#### D6\_Info Sheet

This sheet contains the details of the edge device.

The Channel group includes the following parameters:

- Equipment Name Name of the edge device; should match the Equipment Name value in the Device\_Info sheet.
- Controller Name and Controller Id User-configurable entry for the controller.
- Model Name Name of the model configured via the GQI model; should be UniQAM.
- Streaming Zone Streaming zone assigned to the QAM.
- Annex ITU mode in which the QAM is working.

- Device Status Operational status of the entire edge device. Possible values are OPERATIONAL, OFFLINE, or QUIESE.
- Name (of Port) Name assigned to the port of the edge device.
- MAC Address (of port) MAC address of the port of the edge device.
- Bandwidth (of port) Bandwidth of the port in kbps.
- Status (of port) Operational status of the port. Possible values are OPERATIONAL, OFFLINE, or QUIESE.

The following worksheet shows the D6\_Info sheet.



# 3

# Installation and General Operation

This chapter describes how to install and operate the RPU.

## In This Chapter

Installing the RPU	18
Initial Provisioning Mode	21
Creating Databases and Programming the RFGW-1	26
RFGW-1 Bulk Provisioning	34
RPU Menu Options	38

## Installing the RPU

Before installing a new version of the Cisco RPU, you must first uninstall any older versions present on the system.

#### Uninstalling the Old RPU

- 1 On the windows menu, choose **Start > Control Panel**.
- **2** Double-click **Add or Remove Programs**. The program window is displayed.
- **3** Highlight the Cisco RFGW Remote Provisioning Utility and click **Remove**.

If the RPU uninstall programs asks if you want to remove shared components, click **Remove All**.

#### Installing the New RPU

1 Insert the RPU Installation CD. Contact your RFGW-1 product manager for installation CD.

The following dialog box is displayed.

**Note:** If the installer warns that your computer has a more recent version of a component being installed, select the option to not install the older component.

	W Remote Provisioning Ut Welcome to the Cisco RFGW	ility Setup Remote Provisioning Utility installation	<u>د</u> [
Setup car Before pr be runnin	program. not install system files or upda oceeding, we recommend that g.	te shared files if they are in use. you close any applications you may	

2 Click OK.

The following dialog box is displayed.

Begin the installation by clicking	ioning Utility Setup the button below.	
Click this but the specified	tton to install Cisco RFGW Remote d destination directory.	e Provisioning Utility software to
Directory: C:\Program Files\Cisco RFGW Re	emote Provisioning Utility\	Change Directory
	Exit Setup	

3 Click the **Computer** button to start the installation.

The following dialog box is displayed.

🖶 Cisco RFGW Remote Provisioning Utility - Choose Progra 🔀
Setup will add items to the group shown in the Program Group box. You can enter a new group name or select one from the Existing Groups list.
Program Group:
LISCO REGW Remote Provisioning Utility
Existing Groups:
Accessories Cisco REGW Remote Provisioning Litility
FileZilla Server
Google Chrome
IReasoning MergeSection
Startup
WebEx Recorder & Player
Cancel

#### Chapter 3 Installation and General Operation

4 Click Continue.

The following dialog box is displayed (depending upon your computer's configuration).

Version Conflict	×
A file being copied is not newer than the file currently on your system. It is recommended that you keep your existing file.	
File name: 'C:\Program Files\Cisco RFGW Remote Provisioning Utility\Support\RPU_SupportPath.xml'	
Description: "	
Your version: "	
Do you want to keep this file?	
Yes No to All	

5 Click Yes.

The following dialog box is displayed.

Cisco RFGW R	emote Provisioning	Utility Setup
	Cisco RFGW Remote Provisioning Utility Setup Cisco RFGW Remote Provisioning Utility Setup was complete OK	ixj kd successfully.

6 Click OK.

The installation is complete.

## **Initial Provisioning Mode**

The RPU can perform initial provisioning for both 48 and 96 channel RFGW-1 models. The RPU uses the **MAX QAM** column of the Device\_Info tab of the SDV Design File to determine whether the RFGW-1 is intended to be provisioned with 48 or 96 channels of data.

#### **Importing Provisioning Parameters**

Before starting the provisioning procedure, you must import the Reference Database and the SDV Design File. Refer to *Importing Reference Database (Phase 1 Step 1c)* (on page 23) and *Importing SDV Design File Spreadsheet (Phase 1 Step 1d)* (on page 24).

#### Configure RPU Repository Location (Phase 1 Step 1a)

This feature configures the disk file location where the RPU maintains all of the files created and referenced by the RPU. You can locate the RPU repository on a shared network drive if desired.

#### **Configuring the Repository Location**

1 Click Set RPU Repository Dir Path and enter the location of the repository path.

e Vex Configure Help		
Import Provisioning Config Data Phase 1	Configure IPU Repository Location	
1b) Create Ref D8 - Ready 1c) Import D8 Ref File - Ready 1d) Import Excel - Ready	RPU Repository in Present.	Test RPU Repository Dir Path
RFGII 08 Configurations Phase 2	User Name Charpt Set User Name	
2x) Vently RFGIU Config Data 2b) Create RFGIV Config D8 2c) Program RFGIV w/Config D8 2d) Vently RFGIV Update	an u. Data una migari Comprini	
RFGII Bulk Provisioning Phase 3		
Sa) Set Port PwriCntri Sb) Set Combined Chan		

2 Click Test RPU Repository Dir Path.

This test indicates whether the RPU repository is present and ready for running the RPU.

**3** Click **Set User Name** and enter desired name in the *User Name* window. This name is logged in the RPU log file.

#### Creating Reference Database (Phase 1 Step 1b)

You must create reference databases to capture all desired provisioning parameters that are not included in the SDV Design File spreadsheet. The RPU maintains separate reference databases for 48 and 96 channel RFGW-1 models. You must identify an appropriate RFGW-1 to be used as the reference for each model.

#### **Creating the Reference Database**

1 Select the **Initial Configuration** Mode option.

view Configure Help				
sport Provisioning Config Data	Create Reference Database On Sele	cted RFGIIV		
use 1	Finite Configuration	instructions for	RPU database file reference selection	
a) RPU Repository - Ready	(Use Reference Database Files )			
Import DB Ref File - Ready	C Records from # to M channel			
6 Import Excel - Ready	(Jee Target R/GW as a Self Refer	( 608		
GW 08 Configurations				
use 2				
Verify RFGW Config Data	48 Channel RFGW1			
C) Program RFGN w/Config 08	48 Channel RFGIV1 Reference	Database will be used		
6) Verity RFGIII Opdate	Reference ip Address:	1.90.149.79	Display Reference RFG/III in Browser	
GW Bulk Provisioning use 3	Reference Database on Selecte	d RFGW is Ready	Ready 2/16/2010 11:17:56 AM	
a) Set Port PeerCetri				
c) Set Chan Mute	96 Channel RFGW1			
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) Check Reference Database				
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easy crecker.				

2 Select the RFGW-1 to be configured during this session.

**Note:** In this example, both models are selected. Either one or both of the RFGW-1 units may be referenced in this step.

**3** Enter the management IP address of the reference unit(s).

Note: The reference unit must be online to complete this step.

**4** For each unit, click **Display Reference RFGW in Browser**.

The RF Gateway Web GUI is displayed.

5 Configure all common and control parameters.

**Note:** Settings such as IP addresses, frequencies, and TSIDs will be overwritten with information contained in the SDV Design File spreadsheet.

- 6 Click **Apply** after all settings.
- 7 Click **Save**. This saves all reference database settings to the RFGW-1 database files.
- 8 Check the **Reference Database on Selected RFGW is Ready** check box. The reference database is ready for collection to the RPU repository.

9 Repeat as needed for all RFGW-1 units.

#### Importing Reference Database (Phase 1 Step 1c)

There are two options to choose from when importing the reference database: Copy Local File or Ftp File From RFGW. We recommend the FTP option.

#### Importing the Reference Database

1 From the Import Method drop-down list, choose Ftp File From RFGW.

The RPU copies the reference database files from the RF Gateway unit to the RPU repository.

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Import Provisioning Canfig Bata Prace 0 (cal FPG Repository - Reedy (to) Create Ref 06 - Reedy (to) Strategic Reed	Import Batabase Reference Partial Configuration (Dae Reference Databas C Upgrade from 48 to 59 (Dae Target RFOW as a) 48 Channel RFOW F 42 Channel RFOW 1	e Files Frees RFGW to Host C e Files ) I channels Belf Reference ) Inference Database will be use	omputer 1.		
2d) Verity RFGIV Update	Reference ip Address	10.90.149.79		DB Ref Configuration File was auccessfully fipid from 10.90.149.79	~
RFGIT Bulk Provisioning Phase 3 Sa) Set Port Pwr/Cntrl	Import Method:	Po Fie From RFGW	++ import Db ++	DB Ref Centiguration File was successfully decompressed DB Ref Centiguration File was successfully fipld from 10.90.148.79 Determine SVI Version of reference success 10.90.148.79: vol. 03.10 Extermine SVI Version of reference success 10.90.148.79: vol. 03.10	
3b) Set Combined Chan 3c) Set Chan Mute	Res	kty: 3/22/2010 3:09:01 PM		Active Version: 01.03.18	
Instructions Import 08 Reference Files	16 Channel RFGW1	leference Database will be use	£		
1) import method Pig-File Fram RFGW RFGW DB files will be collected from RFGW via FTP	Reference (p. Address Import Method	10.90.149.54 Pip File Prom RFGW •	>+ Import Do >>	DB Rat Configuration File was successfully decompressed DB Rat Configuration File was successfully that from 10.30 148.34 Decompression Variancia of reference success 10.50 148.34 v40.31.00 Decompression Inspirated DB File Successfull Inspirated Ref as a valid Star Channel do	4. III 5
2) Import method 2	Rec	kdy: 2122/2010 3:05:03 PM		Active Version. 03.01.00	
Capy Load File. VFOV DB files from host file system. The APON DD w a how file set. Dwold the Open Calling for a directory with the DB files, Set and the UB files, Set names, right_well, db gb and right_stand.	Determine Sill Version of n	rference success 1830.549.	94: v93.91.00		

2 Click Import Db.

The RPU copies the RFGW-1 database files from the RFGW-1 unit and imports them to the RPU file repository. Progress can be seen in the window to the right of the Import Db button.

3 Repeat as needed for all RFGW-1 models.

## Importing SDV Design File Spreadsheet (Phase 1 Step 1d)

1 Click Locate Excel Workbook.

port Provisioning Config Data	Import Excel Workbook RFGW Conf	iguration Data		
lase 1	Andread Research Research Too Service			
a) RPU Repository - Ready	Select Cacer Horkbook To Enpor			
b) Create Ref 08 - Ready	Workbook Path: C:Documents	and Settings/mccundc/DesAtop/	Locate Excel Workbook	
d) Import Excel - Ready	Workbook Name: Carolinal samp	ile_041609a.xls		
1	Workbook Date: 2/16/2018 11:36	42 AM	1	
FGW 08 Configurations				
see 2 a) Verify RFGIV Config Data b) Create RFGW Config DB b) Program RFGII w/Config DB d) Verify RFGW Update	Import Excel Workbook Data	BFGW Data Integrity Bules - Optional		
	Hub List - Count = 41	RFGW Data Integrity Rules		
have 3	Duthan (A)	1) Basic data integrity Dev Info - Not Tested	Run Data Rule Tests	
a) Set Port Pwe/Critri	Durhan (3)	2) Beaic data integrity SG into - Not Tested	Test Complete - Unique to Adr - Svr Grp	
b) Set Combined Chan	Garner (E)	al Unique TSDs for USBN - Not Tested	Mode: Europeaks changes in the	
c) Set Chan thute	Faquay-Varina (M)	5) Unique theo per Sur Orp - Not Tested	Ercel workbook, you must save the	
structions	Selma (L)	(i) Unique theig per USRM - Not Tested	workbook then re-import the data.	
	Coldsborn (S)	7) Freq conflict per Sur Grp - Not Tested		
port Excel Horkbook	Dudley (0) Wilson (D)	a) Freq conflict per USAM - toot Tested		
Locate the Excel Workbook to	Farmville (EE)	✓ 10) Unique P addresses - Dev Info - Pass		
nport.	Raleigh (G)	11) Unique IP addresses - Svr Grp - Pass		
Class Second Date to cand	Tabulan (T)	12) Valid subnet masks - Not Tested		
xcel Workbook contents into	FagetSeville (R)	13) Port pair virtual P match - Not Tested.		
PU.	Spring Lake (E)	RFGW Data Rule Messages: (6)		
Lat of HUBs will appear as well as mother of HUBs found i workbook. Optionally run data integrity hecks on imported data. Otc. If you make any changes the cool workbook, you will save the changes then a RUD must ne-port the star wong this step.	Paelosi (2) Bouthers Bines (3) Bouther (0) Creeksige (3) Conford (30) Louisburg (77) Burn (30) Bookerson (22) Marrenton (70) Lobert Bridge (8) Pederoks (02)	1990 - Start Guiges Ipdat Tevicello 1990 - Onique Freq Device Info - De 1990 - Onique Freq Device Info 1990 - End Unique Ipdat DeviceInfo 1997 - Start Duique Apdat DeviceInfo 1997 - Onique Freq Pricip 1997 1997 - Tod Contyun Spädt Device 2020	в 2/12/2010 3:14:59 рн: 2/22/2010 3:14:58 рн: 2/2010 3:14:58 рн: 2/2010 3:14:58 рн: 2/2010 3:14:58 рн:	

A Windows Open dialog menu opens.

- 2 From the Windows menu, browse to the spreadsheet to import.
- 3 In the RPU worksheet, click **Import Data**.

The RPU extracts all the required data from the spreadsheet and displays the Hub names in the Hub List dialog box.

Note: It may take several minutes to import large files.

- 4 To run any or all of the Data Integrity Tests, click the box next to the test.
- 5 Click Run Data Rule Tests.

The results are listed in the RFGW Data Rule Messages list.

**Note:** You can double-click the log report to create a text log file. The RPU automatically displays the created log file in the default text editor.



## **Creating Databases and Programming the RFGW-1**

After the provisioning data has been imported, the user is ready to create databases and program the RFGW-1 devices.

#### Verifying SDV Design File Spreadsheet Configuration Data (Phase 2 Step 2a)

This step allows you to manually verify configuration data imported from the SDV Design File spreadsheet. Make sure to check all imported data for each unit.

#### Verifying the SDV Design File Spreadsheet Configuration Data

1 From the Select Hub list, choose the desired hub.

All RFGW-1s are displayed for this hub.

nport Provisioning Config Data	Verity RFGW Excel Configuration	Data	5575550 <u>978</u>	2							
a) RPG Repository - Ready	Select Hub	Select RFGW	Depley By	· ·	RFGW Port List: Freq/1	sids (40) RFGVIs (1)			1000		
b) Create Ref D8 - Ready	Durham (A)	RLGHNCARFO	5001 - 10.90 M STO	W	Service Group Name - M	GAM Name - Ip		Port	Freq.	110	
) Import DB Ref File - Ready	Duchan (B)	RUGHNCARFO	3002 - 10.90.68 Serv	ice Group	RLGMNCA-505909 - 59	09 RLGHNCARFOO	09-1090.88.96	1/1.1	609	60384	
Brigoort Excel - Ready	Cary (J)	REGHNCARFO	2003 - 10 90 84 50V	Server	RLGHNCA-505909 - 59	09 RLOHNCARFOO	09 - 10 90 88 96	1/1.2	615	60385	
Call Dill Comfortunations	Gaines (X)	RLGHNCARFG	3004 - 10 90 88 93 -	Not Ready	RLOHNCA-SOSSOF - 19	09 RLOHIVCARFOO	09-10.90.88.98	1/1.3	621	60386	
and a comparation	Paguag-varina (N)	R CANCAREO	1000 - 10 80 88 64	Test Ready	RLGMNCA-S05909 - 59	09 RLOHNCARFOO	09 - 10.90.00.90	1/1.4	627	60387	
Marcha MCAR Contin Date	felma (1)	REGENCARFO	2007 - 10 90 88 96 -	Not Ready	RLOHNCA-505941 - 59	41 RLOHNCARFOO	09-10.90.88.98	12.1	609	60368	
Consta BEGN Config DB	Goldsbore (E)	REGHNCARFO	0008 - 10 90 85 97 -	Not Ready	RLOHNCA-505941-59	41 RLOHNCARFOO	09-10.90.88.98	12.2	615	60309	
Program RFGH w/Config 08	Dudley (0)	<b>BLOHNCARPO</b>	2009 - 10 50 85 56 -	Not Ready	RLGHNCA-505941 - 59	41 RLOHNCARFOO	09 - 10.90.88.98	1/2.3	621	60390	
1 Venity RFGW Update	Wilson (F)	REGHNCARFO	0010 - 10.90 149.84	- Not Verifiex	RLOHNCA-505941 - 59	41 RLOHNCARFOR	09 - 10 90 88 98	12.4	627	60381	
	Farmville (EE)	REGENCARFO	9011 - 10 90 149 79	- Update Rev	RLOHNCA.505973 - 59	73 RLOHNCARFOO	09.10.90.88.98	211.1	609	60362	
GW Bulk Provisioning	Releigh (G)	REGENCARFO	3012 - 10 90 149 87	- Not Really	R. GHUCA. 505973 . 59	73 RI GHINCARFOX	00.10.00.00.00	24.2	845	60393	
use 3	Riddlesex (33)	REGENCARPO	2013 - 10 30 149 163	2 - NOT READy	R Canica Science 44	P1 BI CARLY ADDIOL	10.00.00.00	24.4	474	40.164	
6 Set Port Pwr/Critri	Taughterille (2)	RIGHNCARFO	015, 10 90 85 104	- Not Ready	BL CAN/CA. SO 5973 - 59	Ft Di Cantor a Diffor	AD. 10.00 88 68	211.0	417	00004	
a) Set Combined Chan	foring lake (5)	RECHNCARFO	016 - 10.90.88 105	- Not Ready	REGENCE FORMER AN		10.00.00.00	271.4	047	00300	
:) Set Chan Mute	Restord (2)	REGHNCARFO	0017 - 10.90.88.106	- Not Ready	R_0494_A-506005+60	VO REGREEAREGO	109-10.00.00.00	22.1	009	00,790	
	Southern Fines (X)	REGENCARFO	018 - 10.90.88.107	- Not Ready	RLGHNCA-508005 - 60	05 RLGHIVCARPOR	09-10.90.88.96	29.2	615	60397	
structions	Seven Lakes (BB)	REGHNCARFO	019 - 10.90.88.108	- Not Ready	RLOHNCA-SOE005 - 60	05 RLOHIVCARFOO	09-1090.86.96	22.3	621	60396	
	Dushan (C)	REGENCARFO	2020 - 10.90.88.109	- Not Ready	TRI GHUCA.SOMME. AD	OR. BI CHINCARPOO	10.00 - 10.00 - 00	20.4	877	40100	-
enty RPOW Contig Data	Dates of DB States for 18 48.1		-		BEFER LEASE BEAM						
Select HUR	Status of the optime for relation	DE DO - NOT HEAD	ai		NOW VIOLO IN SUC						
and the second s	RubBane	Durham	2		Part 1 P	10 59 09 131					
Select RFOW to verify	Mogent IpAdz:	10.59.8	0.98		Port 1 Mank	255 255 255 248					
	Muget Gatevay:	10.59.0	0.126		Real & Maturel B	10.59.89.130					
Verify the imported data is	Mingard, Maink (	288.288	.265.192		Pert 2.0	19.28.09.129					
orrect.	Equipment Type:	P3.04			Portain	100					
	TAX GAT:	40			Port 2 Mask	NA					
You can optionally use	Concell Destail	ELLW Dec			Port 2 Virtual IP	N/A					
a very state of the sector	Create Set 28-	Bearing 2	/22/2010 10-24	1-45 BM	Port 3 sP	10.59.91.195					
and a the vertication.	Import And DR.	Ready 2	/16/2010 11:17	7:56 AM	Port 3 Mask	255.255.255.248					
Click Data Of to	Import Escal:	Ready 2	/22/2010 10:20	1:07 AM	Port 3 Virtual P	10.59.91.194					
cknowledge data a good.	Data Rules:	Not Rea	dy		Port 4 P	NA					
	Data Vesified By Oper:	Not 2ee	way .		Port 4 Mask	NA					
Dick 'Data not OK' if data	Config DB Created:	Not 244	way .		Port 4 Virtual P	NA.					
us errors.	Program RFGH:	Not Rea	udy .		1000						
	jupdate vesified:	Not Yes	ITLes .								
	Let BECK Verification Dates I	For Selected B	FGIT Confin Data								
	Data OK	De	rfa not OK								
	RFGW Verity 1	for selected lpA	Adr: Not Ready								

**Note:** You can choose how information is displayed by choosing the following options from the drop-down list:

- RFGW
- Service Group
- SDV Server
- 2 From the Select RFGW list, choose one or more units to display and verify.

The RFGW Port List list displays the configuration data for the RF outputs of the unit(s) selected. The RFGW Video IP Info list displays the configuration data for the GbE inputs.

3 Once the data has been verified as accurate, click Data OK.

### Creating RFGW-1 Configuration Database (Phase 2 Step 2b)

1 From the **Select HUB** list, choose the desired hub to configure.

All units configured for this hub are displayed in the Select RFGW list.

mport Provisioning Config Data	Create RFGW Configuration Datab	use		
Hase 1 (a) RPU Repository - Ready (b) Create Ref 00 - Ready (b) Create Ref 00 - Ready (b) Import D Ref Pie - Ready (b) Import Excel - Ready (b) Import Excel - Ready (b) Import Ref I - R	Letect NUE Durham (A) Durham (B) Carys (J) Garnes (B) Faquayo-Varina (D) Benam (TT) Beins (D) Dulley (C) Valsen (J) Farmille (IE) Balaigh (D) Niddlewes (SE) Termille (E) Balaigh (D) Niddlewes (SE) Termille (E) Balaigh (D) Niddlewes (SE) Termille (S) Termille (S)	Select BFGW III	Create BFGW Configuration DB Create Configuration DB File Ready: 2222019 15245 PM	
() peech POW to Create DB be be and the second of the SOW's by holding down the width an watch key white cloking. () Clock Create Configuration DI Clock Create Configuration DF Fer. () Versh Tata DB files created successfully.	Fulface: Noget Späd: Noget Gataway: Noget Katak: Equipment Type: Nax QM: Isf Do Node: Oversil Facto: Create Ref DB: Deport Excel: Data Sulse: Data Verified By Veri Coeff D Created Program SUD: Optics Verified:	Durbane, A 10.55.00.75 10.55.00.124 215.225.235.135 275.255.255.255 275.255.255 275.255.255 275	teep     Sar (* 10.55.01.56     Sorter and the constraint of	

2 Highlight the unit(s) for which you want to create a configuration database.

The Status of Db Update list displays the configuration data for all unit(s) selected.

**Note:** To create databases for more than one unit, hold down the CTRL key and click an additional list element, or hold down the SHIFT key to select a range of units.

#### 3 Click Create Configuration DB File.

The configuration database files are created for each unit selected.

**Note**: If you select a single RFGW, the RPU displays the current status of each step in the database creation, programming, and verification process.

#### Programming the RFGW-1 with Configuration Database (Phase 2 Step 2c)

**Note:** There are two options for programming a list of RFGW-1s. These options are configured using the Configure menu.

1 Select RFGW Reboot Options and Limits.

Configure	Help
RFGW	FTP Account Info
RFGW	Reboot Options and Limits
Overrie	le SW Ver Match Requirement
Include	Lower 48 Freq/Tsids in Upgrade

The following options are available:

- Asynchronous Programs each RFGW-1 and does not wait for the unit to reboot. The unit will be continuously pinged until it responds. The ping status displays the IP addresses and their response status. This is the default mode.
- Synchronous Programs each RFGW-1 and waits for each unit to reboot.

**Note:** For multiple units, the preferred selection is likely to be Asynchronous mode.

2 From the Hub List list, choose the desired hub.

Clsco RFGW Remote Provisionig	Utility - Initial Configuration	Node		
File Vew Configure Help				
Import Provisioning Config Data Place 1 (5): PRF Impository - Ready (b): Create Set 08 - Ready (c): Import Date Frie - Ready (	Program BFGW with Configuration mub Line Durbane (A) Durbane (B) Carry (2) Garner (B) Faynay-Varian (B) Faynay-Varian (B) Belower (B) Dudies (B) Dudies (B) Hiddiaese (B) Hiddiaese (B) Hiddiaese (B) Hiddiaese (B) Hiddiaese (B) Hiddiaese (B) Hiddiaese (B) Borton Lake (B) Bortham Finase (B) Durham (C)	28  Select RFOW  R.C.mNLAFF0001 - 13 30 55 50 - Uptate Reserve (M.C.mNLAFF0001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF001 - 15 30 55 12 - Not Reselve (M.C.mNLAFF002 - Not Reselve) (M.C.MNLAFF002 - Not Reselve) (M.C.MNLAFF002 - Not Reselve)	Verify Active on Network - Check SV Ver to Beference Stop Ping oc Check SV Version Continuous oc Check SV Version Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Continuous Success-0 Fal-1 Success-0 Fal-1 Succes	N N
2) Selection or more RFDVs to program. Select motion withorks by selecting shows have reducing shows have have been shown withorks by selecting shows have reducing shows have have reducing shows have have been shown as a shown of the shows by the selection RFOWs is an RFOW with shows an RFOW with shows and shows have not response if an RFOW with the motion if an RFOW with the motion is specified RFOW.	Nothenel Mogen TybAr: Dogen Secency: Dogen Secency: Dogen Secency: Dogen Secency: Dogen Sec Overail Sector Content Sector Content Sector Dogens Sector Dogen	Durtham,A 10.90.143.79 10.90.143.79 10.90.143.79 10.90.143.79 10.90.143.79 10.90.143.79 10.90.143.70 10.90.10.10.10.10.10 10.90.10.10.10.10 10.10.10.10 10.	Processing of a reversion set. Processing of provide Set. Processing of the Provide Set. Processing of the Set of Set. Babacting Provide Set. Reversion Set. Provide	

3 In the Select RFGW list, highlight the unit(s) to be programmed.

**Note:** To program more than one unit, hold down the CTRL key and click an additional list element, or hold down the SHIFT key to select a range of units.

4 Click Ping Selected.

The RPU pings each unit selected and displays the results in the status log window.

**Note:** If an RFGW does not respond to the ping, it will not be able to be programmed.

5 Click Check SW Version.

The RPU collects the software version from each selected RFGW-1.

This software version is compared to the version of the RFGW-1 that provided the Reference Database. If the versions do not match, the RFGW-1 will not be programmed. This check is meant to prevent the user from configuring RFGW-1 units with databases that are incompatible with certain software releases. If the versions do not match, please contact your local Cisco account team for assistance.

**Note:** There is an option on the Configure menu to override this default action, but this option is not recommended.

6 If desired, click **Display Selected RFGW in Browser**.

This permits the user to watch the RFGW-1 reboot. If multiple units are selected, only the last unit will be launched in a browser window.

#### 7 Click Start RFGW Programming.

Programming status is displayed in the window.

#### Verifying RFGW Programming Data (Phase 2 Step 2d)

This step verifies that the configuration data has been correctly programmed into the RFGW-1.

#### Verifying RFGW Programming Data

1 From the Hub List list, choose the desired hub.

new compre nep								
port Provisioning Config Data	Verify RFGIV Program Update							
use 1			<b>RFGW Ports Verify Up</b>	date				
() RPU Repository - Ready	Rub List	Select RFGII	Service from Name -	In DAM Name		Red 1	Inter Two	0.1.
I Import DB Ref Elle - Ready	Darbase (A)	RLGHIVCARFG001 - 10 90 88 90 - Update Reac A	DI CHINC & SOSDIT 50	044 DI CHINC 4 DE	1011 - 10 00 140 70	418.4	410 41	480
Import Excel - Ready	Durban (B)	RUCHINCARPODO2 - 10 NO 80 81 - Not Ready	BLOHNCA SOMMER	ATT BLOWDOWN	ALL	44.5		
	Garner (E)	RLCHNCARFG004 - 10 90 85 93 - Not Ready	BLORING & 606011 - 51	Bet Britand ADE	1011 - 10 00 100 TO	4/4 3	474 44	100
W b6 Configurations	Tapisy-Tarina 00	RLOHNCARFOODS - 10 90 85.94 - Net Ready	DI CHEICA SOSSAL SI	Std Di Const 4 Dit	1044 40.00 440 70	112.4	477 44	1400
se 2	Beneon (TT)	RLOHNCARFG008 - 10 90 88.95 - Not Ready	RUGPINCA-SUS911-SI	PTT REGREEAMENT	1011-10.00.149.79	111.4	627 66	402
Verity RFGW Config Data	delma (L)	RLGHNCARFG007 - 10.90 85.90 - Not Ready	RLUPINCA-SU0943 - 51	943 RLOPPLARY	2011 - 10.90.149.79	10.1	009 00	AD4
Create RFGW Config DB	Geldsberg (N)	RLGHNCARFG008 - 10 90 88.97 - Not Ready	REGRICA-SOSH3 - 1	H3 RLCHNCARH	2011 - 10.90 149 79	19.2	815 65	1400
Program RFGW w/Config 06	Dudley (D)	RUCHWURST DOVE - 10 90 80 PC - Update Heat	RLGPINCA-SUSIN3 - SI	HJ RLOPPYCARPI	211 - 10.90 149.79	12.5	821 85	1400
Verify Id Gill Spdate	Farmyille (EE)	ELGENE ARTORIA - 15 SE 149 78 - Not Versler	RL0HNCA-505943 - 50	H3 RLOHNCARP	2011 - 10.90.149.79	1/2.4	627 60	1487
With the Provintionian	Paleich (9)	RLOHNCARF0012 - 10 90 149 87 - Not Ready	RLOHNCA-505975 - 50	BTS RLOPINCARPO	0011-10.90 149.79	2/1.1	809 60	1400
an 3	Middleses (SS)	RLOHNCARF0013 - 10 90 149 163 - Not Ready	RLGHNCA-SQ5975 - SI	875 RLOHNCARF	011-10.90 149.79	2/1.2	615 60	1409
Ket Bart Dury Catel	Zebulon (I)	RLGHNCARFG014 - 10 90 85 103 - Not Ready	RL0HNCA-S05975 - 50	875 RLOHIVCARFI	2011 - 10.90 149 79	2/1.3	621 60	1490
Set Combined Chan	Tapetteville (R)	RLOHNCARFOOTS - 10 90.88 104 - Not Ready	RLOHNCA-SOS975 - 51	BTS RLOHNCARFI	1011 - 10.90 149.79	2/1.4	627 60	1491
Set Chan Mute	Spring Lake (S)	RLOHIVCARPOOL6 - 10 90 88 105 - Not Ready	RLGHNCA-SG6087 - 60	007 RLGHNCARF	011-10.90 149.79	22.1	609 60	1492
	Sastharn Bilter (E)	PLOPINGARP G017 - 10 90 00 100 - Not Ready	RLOHNCA-506007 - 60	007 RLOHNCARFI	2011-10.90.149.79	222	815 60	3493
and to be	Seven Lakes (88)	BLOHNCARFOITS - 10 50 85 107 - Not Ready	RLOHNCA-506007 - 60	007 RLOHNCARF	011-10.90 149.79	22.3	621 60	1494
TOCOOTS.	Dustan (C)	RLGHNCARFG020 - 10 90.88 109 - Not Ready	DI CHINC & SCALDER . 40	107 DI CHINCARFI	1011.10.00 140 70	20.4	877 65	hant
nty RFOIII Update								
Table of Million	Status of D8 Update for 10.90.	143.79 - Not Verified	RFGW Video IP Info		IPGW Auto Verify DB Updates			
	RubBane	Duchan A	Port 1 P	10.90.89.147	INFO : One Time File FTS		A FIP G	9 Get A
lelect RFQ/II to verify.	Mngmt IpAdr:	10.90.149.79	Port 1 Mask	255 255 255 248	DEFO I Decor	tion and a	10 DB F1	2.4
	Moget Gateway:	10.90.149.1	Part 1 Virtual IP	10 50 89 148	SUCCESS: De	ompress	aing DB	21
enty the current state of	Muget Nask	255,255,255.0	Foxt 2 P	10.0	START: Acui	re 28 au	painet C	ize.
NPGW configuration is	Equipment Type:	17.04	Port 2 March	10.0	STCCESS: Ac	11/18 28	againet	<ul> <li>C</li> </ul>
40.	Ref Do Model	file	Ford Thickney B	100	FOCCESS: Ac	Live One	/ Time D	
	Overall Ptete:	Not Verified	Fight 2 Strings P	10.00.04.044	END : Yert	LY ACTIV	w again	at.
	Create Ref 10:	Ready 2/22/2010 10:24:48-3M	Part J P	10.00.01.211	LATO   Auto	VEELEY	COMPLEX.	
	Import Sef 18:	Beady 3/16/2010 11:17:56 AM	Port 2 Malex	250,200,200,240	C.L. C.		And and a state of the other	
	Isport Escal:	Ready 2/22/2010 10:26:07 AM	Pert 2 Vetual P	10.90.91.210	Active DB eg	anat Creat	HC 06	
	Data Rules:	Not Ready	Port 4 P	Non.	Active DB ap	einet Excel	DB	_
	Config 18 Constant	Ready 3/14/2010 11:41:40 M	Port 4 Mask	NA	Created DB a	painat Exce	ei 08	
	Program RPGW:	Buccessful 2/22/2010 2:00:50 1	Port 4 Virtual P	NA	Created DB a	painat in-lit	emory DB	
	Update Verified:	Not Verified			E A	Anto Verit	-	-
	Set BFGW Verification Status	For Selected BFGW			-		_	_
					SUCCESS: Add	re DB agai	hat Creater	108
	Display RFGW in Browser	Verify OK Verify Not OK			Not	selected to	nun	
					Not	selected to	run .	
					Not	unincland to	TUR .	

All RFGW-1s configured for this hub are displayed.

**2** Select a single unit to verify.

The selected RFGW-1 configuration is displayed.

- 3 Choose from the following five optional verification techniques.
  - Manual Verify. Displays the RFGW-1 in a browser and uses the GUI interface to compare configuration data displayed for the selected RFGW-1.

**Note:** You can choose View=>Selected RFGW in Browser from the dropdown menu to display the currently selected RFGW-1.

- Auto Verify. Active DB against Created DB. This option collects active database files from the RFGW-1 and compares the contents to the database files created by the RPU. This process determines if the RFGW-1 has been modified since the RPU programmed the unit.
- Auto Verify. Active DB against SDV Design File. This option collects the active database files from the RFGW-1 and compares the contents to the SDV Design File spreadsheet at the time it was last imported into the RPU. This process determines if the RFGW-1 configuration has been modified and does not match the SDV Design File spreadsheet, or if the SDV Design File spreadsheet has been modified and imported without updating the RFGW-1.
- Auto Verify. Created DB against SDV Design File. This process determines if the SDV Design File spreadsheet has been modified and imported since the creation of the RFGW-1 database.
- Auto Verify. Created DB against in-Memory DB. This process determines if the in memory RFGW-1 settings have been modified since the RPU created the RFGW-1 database.

4 Click Auto Verify.

The status is displayed in a window.

5 If all verification tests passed, click **Verify OK**.

The RFGW status display shows the RFGW-1 as verified.

#### Generating the JSON File (Phase 2 Step 2e)

This step generates the configurations in JSON format and exports the configuration file to a server using the HTTP POST method.

**Note:** If the server to which the JSON file is exported does not successfully receive and handle the file, the tool with generate a timeout error.

#### Generating the JSON File

1 Import the Excel sheet as described in *Importing SDV Design File Spreadsheet* (*Phase 1 Step 1d*) (on page 24).

**Note:** If a 2nd generation design file is imported, all controls will be disabled as shown below.

mport Provisioning Config Data	Generate JSON File			
1a) 891 Repository - Ready 1a) Create Ref 08 - Ready 1c) Import 08 Ref File - Ready 1d) Import Escel - Ready	Hub List Chermai Jampie	Select IIF GW		
BGW 06 Configurations These 2				
2x) Verify RFGW Config Bata 3b) Create RFGW Config B8 2x) Program RFGW ve Config B8 2d) Verify RFGW Update			SON FRE	
Top Generate JSON File			Generate JSON File	
Phase 3 3a) Set Part Paer Celtri			Opens JSON File	
3b) Set Combined Chan 3c) Set Chan Mate			POST JS08 to Ramuden	
instructions				
1) Select HUB 1) Select RF04Vh for which the Configuration has to be exported in the JSON Furnet, Multiple Selections are allowed J 1) Cick the "Spen JSON File Multiple Spensted JSON'Re 5) Cick the "Spen JSON File Multiple Spensted JSON'Re 5) Cick the Topen JSON for Buttors to Spen the spensted JSON'Re 5) Cick the Topen JSON 10 Randorf Manon to send the spensted JSON to HTTP FOOT JEONS to HTP FOOT JEONS	NFO: Excel Dela Import Co	na popular en se Sociele atracés jusques ergalete		

#### Chapter 3 Installation and General Operation

2 Click **2e**) Generate JSON File. The Generate JSON File screen opens as shown below.

Import Provisioning Config Data Pase 1 14: BRU Reconstory - Reads	Generate JSON File	Select BFCW	
1b) Create Ref DB - Ready 1c) Import DB Ref File - Ready 1d) Import Excel - Ready	Chennas Tasple		
BOW DB Configurations hase 2			
24) Verity III GW Config Bata 25) Create III GW Config BB 20) Program III GW w/Config BB 26) Verity III GW lipolate 26) Centerate 2004 File			JON File
CW Bulk Provisioning			Generate JSON File
Tase 3 Jai Set Port Per Colol			Open JSOB File
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) Select N2 UVV one ) Select N2 UVVs for which the configuration has to be exponent in the 2504 Forme (Magae Selections are allowed ) ) Cisk the Common Action Origination of the Common Origination of the Common Part Bullon to Common Part Bullon to Common Disk the Common Action to the Selection to Common to Select Texture to the Selection to Common the Selection to Common Selection to	MPG: Excel Data Import C	orginte	

- 3 Choose a hub from the Hub List list.
- 4 Choose one or more RFGW-1s from the Select RFGW list.
- 5 Click Generate JSON File.

The tool generates a JSON file containing the QAM configurations of the selected RFGWs. Progress is reported in the status area of the window, as shown below.

Hub List	Select RFGW	
nai	CHNQAM_01 - 10.78.206.209	
le	CHNQAM_02 - 10.78.206.211	
	CHNQAM_04 - 10.78.206.205	
		JSON File
		0
		Generate JSON File
		Open JSON File
		POST JSON to Ramsden
us of Generation	of the JSON Formatted File	
): 1) Generating JS(	ON File for the REGW-1: CHNQAM 01 - 10.78.206.20	9
): 2) JSON File for th	ne RFGW-1: CHNQAM_01 - 10.78.206.209 generated	I successfully.
): 3) Generating JS(	ON File for the RFGW-1: CHNQAM_04 - 10.78.206.20	5
): 4) JSON File for ti	he RFGW-1: CHNQAM_04 - 10.78.206.205 generated	l successfully.

#### Creating Databases and Programming the RFGW-1

6 Click **Open JSON File** to open the generated JSON file and confirm that the file was generated successfully. The file opens in a simple notepad application, as shown below.



- 7 Click **POST JSON to <servername>** to send the content of file to the server.
- 8 When prompted by the pop-up window, enter the IP address of the server. **Note:** 
  - Before sending the file, RPU1 displays the content of the POST request to be sent.
  - Progress of the export is reported in the status area of the window.
- **9** Monitor the status area of the window and confirm that the export completes successfully.

## **RFGW-1 Bulk Provisioning**

The RPU provides a bulk provisioning feature to configure specific settings on one or more RFGW-1s. This provisioning is accomplished via SNMP and does not require the system to reboot.

#### Set Port Power/Port Control Levels (Step 3a)

This feature provides a mechanism to bulk provision one or more RFGW-1 RF port power or port control levels.

#### **Setting Port Power or Port Control Levels**

1 From the Hub List list, choose the desired hub.

All units configured for this hub are displayed.

2 From the Select RFGW list, choose the unit for which you would like to set power/port control levels.

**Note:** To display data for more than one unit, hold down the CTRL key and click an additional list element, or hold down the SHIFT key to select a range of units.

3 From the Select Ports list, choose the port to configure.

- 4 Do one of the following as appropriate:
  - To set the port power level, enter the port power setting (in dB) in the field, and then check the **Set Power is Active** check box.
  - To set the port control setting, choose on or off from the drop-down list, and then check the Set Port Control is Active check box.
- 5 Click Send Update.

The status log displays the results of all SNMP set commands.

#### Set Combined Channels (Phase 3 Step 3b)

This feature allows the user to bulk provision one or more RFGW-1 RF port combined channels.

#### **Setting Combined Channels**

1 From the Hub List list, choose the desired hub.

All units configured for this hub are displayed.

ort Provisioning Config Data	Bulk Update - Combined Channe	els		
port Provisioning Config Data - et al. IRPU Reporting - Seady Irreport Data - files - Ready Irreport Eacol - Ready Irreport Eacol - Ready Irreport Eacol - Ready Irreport Read - Ready Irreport	Bulk Spidle - Combined Channe Wab List Darkana (8) Cary (3) Garner (8) Faquay-Waina (8) Beneten (27) Garner (8) Faquay-Waina (8) Beneten (27) Dublay (9) Nisilen (9) Facesille (12) Dublay (9) Nisilen (9) Facesille (12) Facesille (12) Face	Sect. BI CW     ELEPHOLAPPORT 1 0 10 10 10 10 10 10 10 10 10 10 10 10	Combined Channels - Select Ports Select Ports Part 10 Consol 1 Part 10 Consol 1 Part 20 Consol 1	-
Chan 10 42 - One 10 50 - Two 10 50 - Two 10 54 - Two 10 54 - Two 10 54 - Two 10 53 - Five 10 53 - Five 10 53 - Six			Baccess: Part Part N/2 Group 1 Hen to Hingle Hoccess: Part Nort (1 Group 1 Hen to Hingle Hocmess: Part Nort (1 Group 1 Hen to Hingle TRFC: BND Session Colosed on 10.10.149.19 INFC: SND SuccessOns = 12 INFC: SND SuccessOns = 0 INFC: SND SuccessOns = 0 INFC: SND SuccessOns = 0 INFC: SND SuccessOns = 0	

**2** From the Select RFGW list, choose the unit for which you would like to set combined channels.

**Note:** To display data for more than one unit, hold down the CTRL key and click an additional list element, or hold down the SHIFT key to select a range of units.

From the Select Ports list, choose the desired port to configure, or to choose multiple ports, click one of the following options located under the Select Ports list:

- All
- Group 1
- Group2
- 1 Click Send Update.

The status log displays the results of all SNMP set commands.

#### **Set Channel Mute**

This feature allows the user to bulk provision one or more of the RF Gateways port channel mute setting.

#### **Setting Channel Mute**

1 From the Hub List list, choose the desired hub.

All units configured for this Hub are displayed.

sport Provisioning Config Dela	Bulk Update - Channel Mute			
use 1		Select BFGIV	Chargest Mute . Sale	ect Ports and Channels
aan 1 1910 Repository - Rendy 0) Create Ref DB - Rendy 1) Oracle Ref DB - Rendy (1) Import OB Ref Tike - Rendy 1) Import DB Ref Tike - Rendy Carlo BB Configurations aasa 2 1) Verhight Graz Config DB 1) Verhight Graz Config DB 2) Oracle Ref2 1) Verhight Graz Config DB 2) Verhight Graz Config DB 2) Verhight Graz Config DB 2) Verhight Graz Config DB 2) Set Port Parent Confi 2) Set Control Motor 2) Set Control Motor	Nub List Darbas (b) Darbas (c) Da	Delect #FGW           Rc, Omic ARP (2011 - 19.00.05.00 - Lipitate Rest, A), Rc, Omic ARP (2012 - 19.00.05.01 - Lipitate Rest, A), Rc, Omic ARP (2012 - 19.00.05.01 - Line Rest), Rc, Omic ARP (2015 - Line Rest), Line Rest), Rc, Omic ARP (2015 - Line Rest), Lin	Charnel Mate - Seld Select Ports Part 11 Pert 12 Pert 22 Pert 22 Pert 22 Pert 22 Pert 22 Pert 20 Pert 60 Pert	est Ports and Channels  Setect Channel Chan 1 Chan 2 Chan 2 Chan 3 Chan 4  Set Channel Mute Set App Mode Vols  Vols  Set App Mode Vols  Set App Mode
ner mayn asae o'i told henr o' conference Channels, stout Proven n dênriv sake is wat of nange, INTOUT i neget De setting. C Dan Tou Eri - One 19 55 - The 19 56 - The 19 56 - The 19 56 - The			Status 20070 Sharts of 20070 Sharts (2009 exc 20070 Sharts S200 A 20070 Sharts (2009 Fer 20070 Sharts (2009 Fer 20070 Sharts (2009 Fer 2009 Fer (2009	Send Update Polik Opdate 2/22/2010 2:63/09 BH reion open on 10.90.149.79 46 chan. Port Fort N/J Chan 5 Not Areilable sion closed on 10.90.148.79 DeserCos = 0 1070 = 0 mult operate 2/22/2010 2:650.00 det

**2** From the Select RFGW list, choose the unit for which you would like to set channel mute.

**Note:** To display data for more than one unit, hold down the CTRL key and click an additional list element, or hold down the SHIFT key to select a range of units.

- 3 From the Select Ports list, choose the desired port to configure.
- 4 From the Select Chans list, choose the port channels to configure.

- 5 Choose the channel mute state from the Set Channel Mute drop-down list.
- 6 Check the **Set Channel Mute is Active** check box.
- 7 From the channel application mode from the **Set App Mode** drop-down list.
- 8 Check the **Set App Mode is Active** check box.
- 9 Click Send Update.

The status log displays the results of all SNMP set commands.

## **RPU Menu Options**

#### **File Menu**

The File Menu allows the user to import and export database files.

- File > Import > Import Copy DB files
- File > Export > Export Copy DB Files
- File > Exit

#### **View Menu**

The View menu allows the user to perform the following tasks.

- View > Excel Workbook. Opens the workbook configured in the "Import Excel Workbook" path in Step 1.c in Microsoft Excel.
- View > Selected RFGW in Browser. Displays the current RFGW-1 Web GUI in the default browser. If more than one unit is selected, the last one in the list is displayed.
- View > Database Files Database Files XML Viewer. The RPU has a built-in XML viewer dialog. The XML information can be navigated via a tree view. If the XML is badly formed, the viewer presents a warning and will not display the XML data.
- Ref 48 Chan DB. Displays the RFGW-1 reference database file configured for the 48 channel RFGW-1 models.
- Ref 48 Chan One Time DB. Displays the RFGW-1 one-time database file configured for the 48 channel RFGW-1 models.
- Ref 96 Chan DB. Displays the RFGW-1 one-time database file configured for the 96 channel RFGW-1 models.
- Ref 96 Chan One Time DB. Displays the RFGW-1 one-time database file configured for the 96 channel RFGW-1 models.
- Selected RFGW DB. Displays the RFGW-1 reference database file configured for the currently selected RFGW-1.
- Selected RFGW One Time DB. Displays the RFGW-1 one-time database file configured for the currently selected RFGW-1 models.
- View > Database Files Database Files Text Viewer. Same choices as with the XML Viewer.

#### **Configure Menu**

The Configure Menu allows you to configure the following.

RFGW FTP Account Information - The RPU must have the FTP account information to log onto the RFGW-1.

, RFGW FTP Account Information		
Configure RFGW Ftp Inf	o	
QAM FTP User Name	target	
QAM FTP User Pwd	password	_

- RFGW Reboot Options and Limits The RPU must reboot the RFGW-1 to get the new database files created by the RPU to become the active database files. The following parameters configure the actions and timeouts for reboot.
  - Wait for reboot after uploading DB Checking this box configures the RPU to wait for an RFGW-1 to completely reboot after the programming action before continuing on to any other RFGW-1s selected to be programmed.
  - Wait Reboot Start Limit (sec). Number of seconds to wait for the RFGW-1 to start the reboot process. If the RFGW-1 has not started the reboot process after the amount of seconds displayed, this is considered a failure.
  - Wait Reboot Done Limit (sec). Number of seconds to wait for the RFGW-1 to complete the reboot process. If the RFGW-1 has not completed the reboot process after the amount of seconds displayed, this is considered a failure.

#### Chapter 3 Installation and General Operation

 Wait After Reboot Done (sec). Number of seconds to wait after the RFGW-1 reboots before continuing with processing. The RPU uses a ping command to determine if the RFGW-1 rebooted. This extra wait time after the ping has responded allows other RFGW-1 services to become operational.

🖷. Reboot Options and Limits	
Reboot Options and Limits	
Wait for reboot after uploading DB     Image: Second	
	Done

Reference SW Version Match Override - The RPU compares the software versions of the RFGW-1 being programmed and the reference RFGW-1. If the versions do not match, the RPU will not program the RFGW-1 unless the Override Reference SW Match option is selected.

Reference SW Version Match Override		<u>_     ×</u>
Reference SW Version Match Overrid	e Control	
Override Reference SW Match:  Note: The RFGW1 being programmed must have the same SW version as the reference RFGW1. This control permits this requirment to be overridden.		
	0	one

Lower 48 Frequencies and TSIDs in Upgrade to 96 Channels - The default action when in upgrade mode is to only update the upper 48 channels with the Frequency and TSID information configured into the SDV Design File spreadsheet. This option permits the upgrade of the RFGW-1 database files to include the lower 48 Frequency and TSID information as well. This can be useful on a network where a new frequency and/or TSID plan is part of the network upgrade process.

ſ	, Include Lower 48 Frequcies and TSIDs in Upgrade to 96 Channels		
•	Include Lower 48 Freq and TSIDs in Upgrade to 96 channels	Note: The Frequencies and TSIDs will be extracted from the spreadsheet	]
		Done	

### Help Menu

The Help Menu allows the user to view the following tasks.

- Help > Manual. Displays the RPU manual document.
- Help > About. Displays the About dialog that contains the RPU version information.

# 4

## **Customer Support Information**

### Introduction

This chapter contains information on obtaining product support.

## **Obtaining Product Support**

IF	THEN
You have general questions about this product	Contact your distributor or sales agent for product information or refer to product data sheets on www.cisco.com.
You have technical questions about this product	Contact the nearest Technical Support center.
You have customer service questions about this product	Contact the nearest Customer Service center.

## Glossary

ECM	Entitlement Control Messages.
ECMG	Entitlement Control Message Generator.
EIS	Event Information Scheduler.
EMM	Entitlement Management Messages.
ES	Elementary Stream.
FTP	File Transfer Protocol. Allows users to transfer text and binary files to and from a personal computer, list directories on the foreign host, delete and rename files on the foreign host, and perform wildcard transfers between hosts.
GUI	graphical user interface. A program interface that takes advantage of a computer graphics capabilities to make the program visually easier to use.
HTML	Hypertext Markup Language.
HTTP	Hypertext Transfer Protocol.

#### Glossary

#### IP

Internet Protocol. A standard that was originally developed by the United States Department of Defense to support the internetworking of dissimilar computers across a network. IP is perhaps the most important of the protocols on which the Internet is based. It is the standard that describes software that keeps track of the internetwork addresses for different nodes, routes, and outgoing/incoming messages on a network. Some examples of IP applications include email, chat, and Web browsers.

#### IP address

Internet protocol address. A 32-bit sequence of numbers used for routing IP data. Each IP address identifies a specific component on a specific network. The address contains a network address identifier and a host identifier.

#### ISO

International Organization for Standardization. An international body that defines global standards for electronic and other industries.

#### JSON

JavaScript Object Notation. A data interchange format based on a subset of the JavaScript programming language and designed for ease of composition and parsing. JSON is a text format that is language-independent but uses conventions resembling those of C-family languages.

#### PC

personal computer.

#### QAM

quadrature amplitude modulation. An amplitude and phase modulation technique for representing digital information and transmitting that data with minimal bandwidth. Both phase and amplitude of carrier waves are altered to represent the binary code. By manipulating two factors, more discrete digital states are possible and therefore larger binary schemes can be represented.

#### RADIUS

Remote Authentication Dial-In User Service. A networking protocol that provides centralized Authentication, Authorization and Accounting (AAA) management for computers to connect and use a network service.

#### RF

radio frequency. The frequency in the portion of the electromagnetic spectrum that is above the audio frequencies and below the infrared frequencies, used in radio transmission systems.

RMA	return material authorization. A form used to return products.
RPU	Remote Provisioning Utility.
RU	
	rack unit. RU is the measuring unit of vertical space in a standard equipment rack. One RU equals 1.75" (44.5 mm).
SCG	Scrambling Control Group.
SCS	
	Simulcrypt Synchronizer.

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