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

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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).

Q00 ¥	6.3																
A	B	C D	E F 9	HI	JK	L	M	N	0	P	9	R					
											S	Durham (A)					
Service Grou	ps				GQAMs	GbE Switch/Router											
SG Name/ID	ame/D servicegroup1 1								Name	RLGHN	CAGQM001	RLGHN	CAGQM002	RLGHN	CAGQM003	Device Name	RLGH
GQAM Comb.	1				(P (Mgt)	172.16.4	1.120	172.16.4	1.121	172.16	4.122	Mgt Switch Name	RLOH				
SG DHCTs	305			-	IP (Video)	12.1.1.2		13.1.1.2		14.1.1.2		Port (Mgt)					
Node DHCTs	224	81	and the second time		RF Out Comb. In	1	1	1	2	1	3	IP (Mgt)	10.9				
Node Name	120	134			Freq 1 TSID 1	699	101	723	201	747	301	Vid. Switch Name	RLGH				
DHCT/Node	224	81			Freq 2 TSID 2	705	102	729	202	753	302	Port (Video MC)					
					Freq 3 TSID 3	711	103	735	203	759	303	IP (Video/MC)	10.9				
					Freq 4 TSID 4	717	104	741	204	765	304	S					
SG Name/ID	services	roup2	2		Name	RICHN	CAGQM001	RLOHN	CAGQM002	RLOHN	CAGQM003	Device Name	RLCH				
GQAM Comb	2				P (Mgt)	172.16.4	1 120	172.16.4	121	172.16.4	4.122	Mgt Switch Name	RLGH				
SG DHCTs	300				IP (Video)	12112		13.1.1.2		14112		Port (Mgt)					
Node DHCTs	79	221			RF Out Comb. In	2	1	2	2	2	3	IP (Mgt)	10.9				
Node Name	109	135			Freq 1 TSID 1	699	105	723	205	747	305	Vid. Switch Name	RLGH				
DHCT/Node	79	221			Freq 2 TSID 2	705	108	729	206	753	306	Port (Video MC)					
2					Freq 3 TSID 3	711	107	735	207	759	307	IP (Video/MC)	10.9				
					Freq 4 TSID 4	717	108	741	208	765	308		-				
SG Name/D	services	roup3	3		Name	RLGHN	CAGQM001	RLGHN	CAGQM002	RLGHN	CAGQM003	Device Name	RLGH				
GQAM Comb.	3				P (Mgt)	172 16 4 120		172.16.4.121		172.16	4.122	Mgt Switch Name	RLOH				
SG DHCTs	290			1	IP (Video)	12.1.1.2	12112			14.1.1.2		Port (Mgt)					
Node DHCTs	81	209		- C - C - C	RF Out Comb. In	3	1	3	2	3	3	IP (Mgt)	10.9				
Node Name	127	114A			Freq 1 TSID 1	099	109	723	209	747	309	Vid. Switch Name	RLGH				
OHCTNode	81	209			Freq 2 TSID 2	705	110	729	210	753	310	Port (Video MC)					
		- SSA - 1			Freq 3 TSID 3	711	111	735	211	759	311	IP (Video/MC)	10.9				
					Freq 4 TSID 4	717	112	741	212	765	312						
SG Name/ID	services	roup4	4		Name	RICHN	CAGQM001	RLOHN	CAG/QM002	RLOHN	CAGQM003	Device Name	RLGH				
GQAM Comb.	4			- 1 A	IP (Mgt)	172.16.4	1.120	172.16.4	121	172.16.4	4.122	Mgt Switch Name	RLGH				
SG DHCTs	295	1			IP (Video)	12112		13.1.1.2		14112		Port (Mgt)					
Node DHCTs	201	94	and the second second	and the second second	RF Out Comb. In	4	1	4	2	4	3	IP (Mgt)	10.9				
Node Name	102	103B	2 C C	1	Freq 1 TSID 1	699	113	723	213	747	313	Vid. Switch Name	RLGH				
DHCT/Node	201	94			Freq 2 TSID 2	705	114	729	214	753	314	Port (Video/MC)					
					Freq 3 TSID 3	711	115	735	215	759	315	IP (Video/MC)	10.9				
		Sec. 22	- Looper R		Freq 4 TSID 4	717	116	741	216	785	316						
SG Name/ID	RIGHN	CA-SG101005	101005		Name	RIGHN	CAGQM004	RLGHNCAGQM005		RLGHN	CAGQM006	Device Name	RLGH				
GQAM Comb	5				IP (Mgt)	172.16.4	1.66	76 59 88	1.5	76 59 8	8.6	Mgt Switch Name	RLGH				

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.

	U E		Formulas		Review	W	li			-		1112	in the second	(a	- ma	1775	E Auto	um + Am		
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Hub Name	Hub ID	HUD #	SDV SO	Perst 50	TSID BROCK	TSID Start	TSID End	F1	15	F9	F13	F17	F21	F25	F29	2				
Server Sizing	13000			-	-			-	-	-	-	-	-	-						
Headend	RLGHNC			0.004	-	-	-	+	-	-	-	-	-	-						
Durham (A)		1	94					-		-	-	-	-	-						
Durham (B)	RLGHNCB	2	53		-		-	-	-	-	-	-	-	-						
Cary (J)	RLGHNCJ	10	240					-	-	-		-		-						
Garner (K)	RLGHNCK	11	75	6701		-	-	-	-	-	-	-	-	-						
Fuguay-Varina (M)	RLGHNCM	13	23					-	-	-		-		-						
Benson (TT)	RLGHNCTT	46	20					+	-	-	-	-	-	-						
Selma (L)	RLGHNCL	12	10					-	-	-		-	-	-						
Goldsbore (N)	RLGHNCN	14	39					-	-	-	-	-		-						
Dudley (0)	RLGHNCO	15	13					-	-	-	-	-		-						
Nilson (P)	RLGHNCP	16	33					-	-	-		-		-						
Farmville (EE)	RLGHNCEE	31	5			-		-	-	-	-	_		-						
Raleigh (G)	RLGHNCG	7	124		-			-	-	-		_	-	-						
Middleser (SS)	RLGHNCSS	45	12		-			-		_	-			-						
Zebulon (I)	RLGHNCI	9	35		-			-	_	-		_		_		-				
Fayetteville (R)	FYVLNCR	18	192		-			-	_	-	_	_		_						
Spring Lake (S)	FYVENCS	19			-			-	_	-		_								
Raeford (Z)	FYVLNCZ	26	6				-	-		-				_	_					
Southern Pines (II)		24	- 34					-	_			_								
	RLGHNCBB	28	4	4251	-			-	_	-										
Durham (C)	RLGHNCC	3	70	and the second se	1			-	_			_								
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(XX) brokd	RLGHNCXX	50	· 6	4401																
Louisburg (VV)	RLGHNCW	48	3 4											-						
Bunn (RR)	RLGHNCRR	44	8																	
Henderson (ZZ)	RLGHNCZZ	52	18		1															
Warrenton (WW)	RLGHNCWW	49	2																	
E. Fayetteville (T)	FYVLNCT	20	21		1															
Lumberton (V)	FYVLNCV	22	25	7251																
Lumber Bridge (W)		23	5	7001																
Pembroke (CC)	RIGHNCCC	29	4																	
Dunn (U)	FYNUNCU	21	. 5	7051	1															
Raleigh (H)	RLGHNCH		98																	
Raleigh (O)	RLGHNCQ	17	33		2															
Nake Forest (F)	REGHNCE	6	78																	
Chapel Hill (E)	REGHNCE	5	58	5501							1									
Pittsboro (QQ)	RLGHNCOO	43	8	4551																
Hillsborough (Y)	RIGHNCY	25	8	4451																
Apex (PP)	RLGHNCPP	42	5	4301																
Wade (AA)	RICHNCAA	27	3	4101							-									
Carthage (DD)	RLGHNCOD	30	2						-			-								

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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		Gratuitous ARP State					
		Gratuitous ARP Time (sec)					
				15			
2		SRM IP Address #1					
9		SRM IP Address #2					
2		SRM IP Address #3					
1							
4		Reset Indication Rate (sec)		1			
6		De-jitter Buffer Depth (ms)		1			
7		celline. cone. cellas lugh					
8			Management Port	Gbe Port 1	Gbe Port 2	Gbe Port 3	Gbe Port 4
	ARP & Routes	Static Route Entry1: Destination IP Address	and a second second second	Gee Port 1	OPPEWIX	OUT FOR 2	00071014
0		Static Route Entry1: Gateway IP Address					
1		Static Route Entry1: Subnet Mask					
2		Static Route Entry2: Destination IP Address					
3		Static Route Entry2: Gateway IP Address					
4		Static Route Entry2: Subnet Mask					
5		Static Route Entry3: Destination IP Address					
6		Static Route Entry3: Gateway IP Address Static Route Entry3: Subnet Mask					
8		(add more if necessary)					1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
3		province in mercenary)	Management Port	Gbe Port 1	Gbe Port 2	Gbe Port 3	Gbe Port 4
5		Static ARP Entry1: Destination IP Address		Same P Set 1		Sector Sector	Sare r sell 4
î.		Static ARP Entry1: Ethernet Address					
2		Static ARP Entry1: Flags					
3		Static ARP Entry2: Destination IP Address					
1		Static ARP Entry2: Ethernet Address					
		Static ARP Entry2: Flags					
5		Static ARP Entry3: Destination IP Address					
		Static ARP Entry3: Ethernet Address Static ARP Entry3: Flags					
		(add more if necessary)					
		base more a merenen XI					
	Clock	Synchronize With Server		1			
		O-QAMS R/GW-1-D System Device Info 50 Jr				and the second	

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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2	15 "	ial .	• • • A *			Wap Test	General			1	3 d		a ra	alum - A	(in)	
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3	Headend	144	Equipment Name		Gateway	Math	MAC		Mark	Vatual IP		Mart	Variat P		Math	
1	Headend	Outlath [A]	FLOHACARFOOT	17134.88.90	172.16.381326	255,255,255,182		172.16.00.65	255,255,255,248	172.16.89.66	NIA	NEA	172 N. 89-56	172.96.94.008	255,255,255,248	171.1
	Headend	Outum (A)	PLOHNCAP/GROD	17116-00.01	172.14.04.054	295.295.295.192		17216.09.73	255,255,255,240	172.16.89.74	PARA	NA.	17216.0874		255,255,255,248	
	Headendi	Duhan (A) Duhan (A)	PLOHNCARFORD PLOHNCARFORM	171.16.88.82	172.14.84.554	288,298,298,182 288,298,298,182		172.14.49.81 172.14.99.89	255,255,255,248 255,248	172.16.09.82	NA	NoA.	172.14.09.92	17116-91.65	255,255,255,248	
	Headendi	Outum (A)	PLOPACAN GUS	17136.08.94	172.14.34 554	298,298,298,198,192		172.16.00.87	295,295,295,240	172.16.09.90	NEA	N/A	172.14.09.30	172.96.90.803	255,255,255,240	
	Headend	Durkan (A)	PLG+NCAPFG86	17116-00.95	172.14.80.526	295,295,295,192		172.14.09.105	255,255,255,240	172.16.09.006	NIA	NA	172.14.09.106	172.16.01.079	255,255,255,240	101
	Headend	Outum (A)	PLG-MCAPFORT	17116-08.96	172.16.89.526	255,255,255,162		172.16,09.80	255,255,255,240	172.16.09.04	NA	NRA	172.14.09.54	171.16.91.079	255,255,255,248	
	Headendi	Outum (A) Outum (A)	PLGHNCAPFG000 PLGHNCAPFG000	171.50.08.57	172.NLH126 172.NLH126	265,265,265 Hz 265,265,265 Hz		172.16.09.521 172.16.09.529	255,255,255,240	172.16.09.522	NA	NEA NEA	172.16.09.522 172.16.09.120	17116-0106	255,255,255,248	
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	Headered	Duhan (A)	FLOHNCAPFOIN	171.16.00.000	172.16.88.126	255,255,255,182		172.16.00.145	255,255,255,240	172.16.09.346	NIA	NEA	172.N. 00.ME	17116-0128	255,255,255,248	
	Headend	Duthath [A]	PLOHNCARFORD	17119-08-005	172.16.86.526	255255255152		172.16.89.853	255,255,255,248	172.16.09.054	NIA	NEA	172.16.03.04	171.96.96.209	255,255,255,248	1711
	Headend	Duthan [A]	FLOHNCARFORD	171.94.88.902	172.16.38.526	205.205.205.182		172.16.00.161	255,255,255,248	172.16.09.962	NIA	NUA	172.56.09.562		255,255,255,248	
	Headend	Duhan (A) Duhan (A)	PLOHACAPPOIN PLOHACAPPOIN	171.16.88.303	172.M.86.126 172.M.86.126	255,255,255,152 255,255,255,162		172.16.89.909 172.16.89.977	255.255.255.248	172.16.89.079	NIA	NEA NEA	172.NL89.070 172.NL89.070		255,255,255,240	
	Headend	Dutan (A)	PLOHNCAP/GIR	171 14.08.005	172.16.88.126	295.255.255.82		172,16,00,107	255,255,255,240	17216-00.06	NEA	NEA	172.16.09.006		255,255,255,244	
	Headend	Duhan (A)	PLOHNCAPFORT	171.16.00.106	172.16.86.526	205.205.205.182		172.16.89.890	255,255,255,240	172.16.03.04	NIA	NEA	172.16.03.094	172.16.102.67	255,255,255,248	
	Headend	Duthath [A]	PLOHNCAPFORE	172.1638.307	171.1638.526	255255255.00		171.16.09.201	255,255,255,248	171.14.89.202	NIA	NEA	17216-09202	172.14.30.75	255,255,255,248	
	Headend	Duhan (A)	PLOHNCAPFORM PLOHNCAPFORM	172.NL08.X08 172.NL08.X08	171508328	255,255,255,182		171.16.89.209 171.16.89.207	255,255,255,240	171.N.89.20 171.N.89.20	NIA	NEA	171.16.09.210 171.16.09.210	172.NL92.80 172.NL92.91	255,255,255,248	
	Headend	Duhan [8]	PEOPALAPPORCO	1727638.009	111 948 55	268.268.268.182		111.96.00.207	200,200,200,240	112.1639.20	nen	NUM	172.8.6928	TTE NEW M	20120120120	1121

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.

L106 • (Page Layo	A' A'		Data	Review View	General -		000 /		AutoSur	9 - 1 - Arr. 43
цта у В Г Ц - beand 5 1 L106 • (- (1) - (2) Fant	· <u>A</u> ·		- 4- = (r (General		ann /		E Autofue	- A =
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		F	G	н	13	J	K	L	M	N	0
							SDV De	sign Works	heet Templa	te	
			50	IV Servi	ce Groups						
										DeviceName - Card/Port	
10 House 1			DUNCT	In control	Automation and Automation	Barbar (Bill Conner	Con Minus	10.0.7			QAMI
	SG# Node	e Tumers	DHCTS	Parent	Primary SDV Server		Combiner	Hub Sequence		Physical ID	Admin State
RLGHNCA-SG5901 RLGHNCA-SG5902						RLGHINC-SDVSRV-51 RLGHINC-SDVSRV-51	1	1	232 132 201.1	RLGHNCAGQM001 - 1/1.1 RLGHNCAGQM001 - 1/2.1	
LGHNCA-SG5902						RLGHNC-SDVSRV-51	2		232 132 201 2	RLGHNCAGGM001 - 1/2 1 RLGHNCAGGM001 - 2/1.1	
R.GHNCA-SG5904						RLGHNC-SDVSRV-51		1	232 132 201.4	RLGHNCAGGM001 - 2/2 1	
R.GHNCA-SG5905						RLGHNC-SDVSRV-51	6	1	232 132 201.6	RLGHNCAGQM001 - 3/1 1	
RLGHNCA-SG5906					RLGHNC-SDVSRV-01		6	1	232 132 201.6	RLGHNCAGQM001 - 3/2 1	
RIGHNCA-SG5907						RLGHNC-SDVSRV-51	7	1	232 132 201 7	RLGHNCAGOM001 - 411	
RLCHNCA-SG5908					RLGHNC-SDVSRV-01		8	1	232 132 201 8	RLGHNCAGOM001 - 4/2 1	
RLOHNCA-SQ5909					RLOHNC-SDVSRV-01		9	1	232 132 201 9	RLGHNCAGOM001-5/1.1	
RLGHNCA-SQ5910					RLGHNC-SDVSRV-01		10	1		RLGHNCAGOM001-5/2.1	
RLGHNCA-SG5911						RLGHNC-SDVSRV-51	11	1		RLCHNCAGOM001-6/1.1	
RLGHNCA-SG5912					RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	12	1	232 132 201 12	RLGHNCAGQM001 - 6/2.1	
RLGHNCA-SG5913					RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	13	1	232 132 201 13	Second second second	
RLGHNCA-SG5914					RLGHNC-SDVSRV-01	RLGHINC-SDVSRV-51	14	1	232 132 201.14		
RLGHINCA-SG5915					RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51	15	1	232 132 201.15		
RLGHNCA-SG5916					RLGHINC-SDVSRV-01	RLGHNC-SDVSRV-51	16	1	232 132 201 16		
RLGHINCA-SG5917						RLGHNC-SDVSRV-51	17	1	232 132 201 17		
RLGHNCA-SG5918						RLGHNC-SDVSRV-61	18	1	232 132 201 18		
RLGHNCA-SG5919						RLGHNC-SDVSRV-61	19	1	232 132 201 19		
RLGHNCA-SG5920					RLGHNC-SDVSRV-01		20	1	232 132 201 20		
RLGHNCA-SG5921						RLGHNC-SDVSRV-51	21	1	232 132 201 21		
RLGHNCA-SG5922						RLGHNC-SDVSRV-51	22	1	232 132 201 22		
RLGHNCA-SG5923						RLGHINC-SDVSRV-51	23	1	232 132 201 23		
RLGHNCA-SG5924					RLOHNC-SDVSRV-01		24	1	232 132 201 24		
RLGHNCA-SG5925					RLGHNC-SDVSRV-01		25	1	232 132 201 25		
RLGHNCA-S05926						RLGHNC-SDVSRV-51	26 27	1	232 132 201 26		
RLGHNCA-SG5927 RLGHNCA-SG5928					RLGHNC-SDVSRV-01 RLGHNC-SDVSRV-01	RLGHNC-SDVSRV-51 RLGHNC-SDVSRV-51	27	1	232 132 201 27 232 132 201 28		
RLGHNCA-SG5929						RLGHNC-SDVSRV-51	20		232 132 201 28 232 132 201 29		
RLGHNCA-SG5930						RLGHNC-SDVSRV-51	30	1	232 132 201 29		
RLGHNCA-SG5931						RLGHNC-SDVSRV-51	31	1	232 132 201 30		
RLGHNCA-SG5932						RLGHNC-SDVSRV-51	32	1	232 132 201 32		
RLGHNCA-SG5933						RLGHINC-SDVSRV-51	33	1	232 132 201 33		
RLGHNCA-SG5934						RLGHNC-SDVSRV-51	34	1	232 132 201 34		
RLGHNCA-SG5935						RLGHNC-SDVSRV-51	35	1	232 132 201 35		
RLGHNCA-SG5936						RLGHNC-SDVSRV-51	36	1	232 132 201 36		
RLGHNCA-SG5937						RLGHNC-SDVSRV-51	37	1	232 132 201 37		
PR HID ING RED			10 Syste		DI CSANP, RENURDU, MO	DL CHINC SOM SDV. 61	- 18		232 132 201 38	10.00	

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.

A Colored	e hoto	+ 1			-		Marge 1		Second S = No + 11 Number	un a	enditional constraints	100	omnal Iomai	Ead Sheet		omai 65 xod	110	C Delete Faired		2.1	A feed &
808 A		• (*	4.	1	- 1	0	н		2		6			0	P	0	8	1	T	Ψ.	¥
-	_	_	_	Carlput	CINGAN	64	_	_			_	_	Tooler T	CHARGEN	82	_	_	_		_	_
	Part Control	Spectrap" (MPC) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Montal Control of Cont	Long	Symbol Rate (MSIX)	Combined Chipmete			04.86	Part Control	Epocatory defect	Modelate Grantis Grantis Grantis Grantis Grantis Grantis Grantis Grantis Grantis Grantis	ar (ddarw)	Symbol Rule (MSs)	Constant			- 20146	Part Cantral		CANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING GANCING
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12.3 12.3 12.4 12.5 12.4 12.5 12.6 12.6 12.7					VCD Only Shared Shared Shared	64,0 84,0 76,8 76,8			OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL					VCD Delty Dhared Dhared Shared	84/2 84/2 15,9 15,8			OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL			
					VOD Only Shared Shared Shared	02,4 02,4 1136,0 1136,0			OPERATIONAL OPERATIONAL OPERATIONAL OPERATIONAL					VOC Dely Dhared Shared Shared	02,4 02,4 #39,0 #39,0			олелитона, опелитона, опелитона, опелитона,			

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	
Creating Databases and Programming the RFGW-1	
RFGW-1 Bulk Provisioning	34
RPU Menu Options	

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.

2	Welcome to the Cisco RF program.	GW Remote Provisioning Utility installation
		pdate shared files if they are in use. hat you close any applications you may
berore pro		iac you close any applications you may

2 Click OK.

The following dialog box is displayed.

Segin the installation by clicking the button below	
Click this button to install Cis the specified destination dire	sco RFGW Remote Provisioning Utility software to ectory.
Directory: C:\Program Files\Cisco RFGW Remote Provisionin	ng Utility\ <u>C</u> hange Directory
E <u>x</u> it S	ietup

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:
Cisco RFGW Remote Provisioning Utility
Existing Groups:
Accessories Cisco RFGW Remote Provisioning Utility
FileZilla Server
Google Chrome
iReasoning MergeSection
Startup
WebEx Recorder & Player
Continue 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	g Utility Setup
	Cisco RFGW Remote Provisioning Utility Setup Cisco RFGW Remote Provisioning Utility Setup was complete OK	≥ ed 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.

le Vex Configure Help				
Import Provisioning Config Data Phase 1	Configure RPU Reposit			
fa) RPU Repository - Ready	RPU Repository Path: P	CriProgram Files/Cisco RFGW Remot	e Provisioning Utility/gamUpdater/support/rpul	Set RPU Repository Dr Path
1b) Create Ref D8 - Ready 1c) Import D8 Ref File - Ready 1d) Import Excel - Ready		RPU Repository is Present.		Test RPU Repository Dir Path
RFGII 08 Configurations Phase 2	User Name [INFO: Excel Data Import 0	Cheryl	Set User Rame	
2x) Vently RFGII Config Data 2b) Create RFGII Config D8 2c) Program RFGII wiConfig D8 2d) Vently RFGII Update				
RFGIII Bulk Provisioning Phase 3				
Sa) Set Port PwriCntri Sb) Set Combined Chan Sc) Set Chan Mute				

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 Selected RFGIIV		
use 1	(F Initial Configuration	ructions for RPU database file reference selection	
a) RPU Repository - Ready b) Create Ref DD - Ready	(Use Reference Database Files)		
() Import DB Ref File - Ready	C martine day of the second		
d) Import Excel - Ready	C Bpgrade from 48 to 96 channels (Dee Target RFOW as a Self Reference)		
GW 08 Configurations			
use 2			
a) Verify RFGW Config Data b) Create RFGW Config DB	40 Channel RFGWH		
c) Program RFGM w/Config 08	48 Channel RFGW1 Reference Database will	te used.	
d) Verify RFGIII Update	Reference (p. Address: 10.30.149.79	Display Reference RFG/III in Browser	
FGW Bulk Provisioning hase 3	Reference Detabase on Selected RFGW is R	Ready Ready 2/16/2010 11:17:56 AM	
a) Set Port PercEntri b) Set Combined Chan			
c) Set Chan Mute	96 Channel RFGWH		
1	96 Channel RFGIV1 Reference Database will	be used.	
structions			
Preate Reference DB	Reference ip Address: 10.90 149.04	Display Reference RFG/II in Browser	
) Open a browser to the	F Reference Database on Selected RFOVI is R	nety .	
elected RFGW ip address.			
Configure the RFOW with all	END : Verfly Active against Uploaded 08		
omnand settings.			
Click Saver on the browser			
a save settings to RFG/V atabase			
Check Reference Database			
n Selected RFGW is			
leady' checkbox.			

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.

Cisco REGW Remote Provision	ig Utility - Initial Configu	ration Mode			
le New Configure Help		417-1274-1-120-			1997 P. 1997
Import Provisioning Config Beta Phase 1 (a) EFD Reportery - Ready (b) Create Ref DS - Ready (c) Import Excel - Ready (c)	Avital Configuration (Site Reference Database (Site Reference Database (Site Target RFGW as a 48 Channel RFGW	6 channels			
2d) Verity RFGIV Update	Reference ip Address	10.90.149.79		DB Ref Configuration File was successfully fipid from 10.90 149	79
RFGIII Bulk Provisioning Phase 3 (3a) Set Port Pwr/Cntrl	Import Method	Po File From RFGW	++ import Db ++	DB Ref Configuration File was successfully decompressed DB Ref Configuration File was successfully figld from 10.90.148 Determine S07 Version of reference aucoess 10.90.149 T9: v01 Soccess reporting 48 University 30	
3b) Set Combined Chan 3c) Set Chan Mute	84	ady: 2/2/2010 3:09:01 PM		Active Version: 01.00.18	
Instructions Import 08 Reference Files	16 Channel RFGW1	Reference Database will be un	eed.		
1) Import method Fig File From RFGW RFGW DB Res will be collected from RFGW via FTP	Reference ip Addrese Import Method	10.90.149.84 Ptp File From RFGW	(** inport Do **	DB Ref Configuration File was successfully decompressed DB Ref Configuration File was successfully ford from 10.90.148 Determine SW Version of reference success 10.90.148 (M, v63 Decompressing trapsfield DB File Soccessing trapsfield BF Re	
2) Import method 2	Re	edy: 2122/2010 3:09:03 PM		Active Version: 03.01.00	
Cary Load File. IFOIV DB files from host file system. The BYON DB is a true file set. Direct the Open Damp to a directiny, with the DB files. Stend out the UB files. Stend names: rtps:_ent_dB gp names: rtps:_ent_dB gp and rtps:_st.xet.	Determine SII Version of r	eference success 18.30.14	8.84: v83.81.89		

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.

Ven Configure Help				
Import Provisioning Config Data	Import Excel Workbook RFGW Cont	figuration Data		
1a) RPU Repository - Ready	- Select Excel Borkbook To Impo	et		
tb) Create Ref 08 - Ready	Viscolania Patro Cribonumente	and Settings/mccurdc/Desktop/	Locate Excel Workbook	
5c) Import DB Ref File - Ready		ple 041600a.sta		
td) Import Excel - Ready	and the second se	and a state of the		
RFGW 08 Configurations	Workbook Date: 2/16/2018 11:30	Let2 AM		
Phase 2				
2a) Verify RFGIV Config Data 2b) Create RFGW Config DB	Import Excel Workbook Data			
2c) Program RFGII w/Config DB 2d) Verify RFGW Update	Import Data	- RFGW Data Integrity Bules - Optional		
	Hub List - Count = 41	RFGW Data Integrity Rules		
RFGW Bulk Provisioning	Duthan (A)	1) Basic data integrity Dev Info - Not Tested	Run Data Rule Testa	
Phase 3 3a) Set Port Pwr/Critri	Durhan (B)	2) Basic data integrity SG into - Not Tested	Test Complete - Unique Ip Adr - Svr Grp	
3b) Set Combined Chan	Cary (7) Garner (K)	2) Unique TSICs for All - Not Tested		
Sc) Set Chan Mute	Faguag-Varina (M)	4) Unique TSOs for USRM - Not Texted	Note: If you make changes in the Excel workbook, you must save the	
	Benson (TT)	5) Unique freg per Sur Grp - Not Tested	workbook then re-import the data.	
Instructions	Selma (L) Coldshere (N)	7) Freq conflict per Sur Grp - Not Tested		
Import Excell Workbeak	Dudley (0)	a) Freq conflict per USRM - Not Tested		
	Wilson (P)	9) Unique IP addresses All - Not Tested		
1) Locate the Excel Workbook to import.	Farmville (EE) Raleigh (G)	10) Unique IP addresses - Dev Info - Pass		
Contraction of the second	Middlesex (SS)	11) Unique IP addresses - Svr Grg - Pass 12) Vald subnet masks - Not Tested		
2) Click 'Import Data' to read	Isbulon (I)	12) Vand subnet masks - Not Tested		
Excel Workbook contents into RPJ	Fayetteville (R)	Entertained and an and an and an and an and an and		
	Reeford (2)	RFGW Data Rule Messages: (6)		
2) List of HUBs will appear as	Southern Fines (X) Seven Lakes (SB)	EMPO : Start Unique IpAdr DeviceInf EMPO : Unique Freq Device InFo - Pa		
well as number of HUBs found in workbook	Durhan (C)	INFO : End Unique IpAdr DeviceInfo	2/22/2010 0:14:00 96	
2010/02/2010	Creednore (D)	INFO : Start Unique Iphdr Svrürp 1/		
4) Optionally run data integrity	Caford (XX) Louisburg (VV)	2850 : Unique Freq SvrGrp Info - Pa 2850 : End Unique Ipids SvrGrp 2/22	/2010 0-14-160 200	
checks on imported data.	Bunn (BB)			_
Note: If you make any changes	Benderson (22)			
o the excel workbook, you	Warrenton (WW) Fayetteville (T)			
nust save the changes then the RPU must re-import the	Lunberton (T)			
data using this step.	Lumber Bridge (N)			
	Peskrake (00)			
	Dunn (U) Releigh (H)			
	Carlot and Carlot			

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.

Import Provisioning Config Data Phase 1	Verify RFGW Excel Configuration	Daving By Contract	RFGW Port List FreqT					
ta) RP2 Repository - Ready	Select Hub	Select RFGW Depley By	Service Group Name - M			Part I	Freq.	150 +
(b) Create Ref D8 - Ready	Durhan (A)	RLGHNCARFG001 - 15 90 85 FF0W			and the second se	and the second s		
tc) Import DB Ref File - Ready td) Import Excel - Ready	Duchan (8)	RLGHNCARF0002 - 10 90.00 Service Group	RLGHNCA-SOS909 - 59			1/1.1		60384
and and out over a suspect	Cary (J) Garner (X)	RLGHNCARF0003 - 10 90 88 50v Server RLGHNCARF0004 - 10 90 85 93 - Not Ready	RLOHNCA-505909 - 59			1/1.2		60385
FGW DB Configurations	Taguag-Varina (0)	RLGHNCARF0005 - 10 90 85 94 - Not Ready	RLGHNCA-505909 - 59			1/1.3		60306
Tase 2	Benson (TT)	RLOHNCARF0008 - 10 90 88 95 - Not Ready	RLGHNCA-S05909 - 59			1/1.4	-	60387
to Verity RFGBY Contig Data	felma (L)	RLGHNCARF0007 - 10 90 55 96 - Not Ready	RLOHNCA-505941 - 59	41 RLOHNCARF0009 -	10.90.55.98	1/2.1		60368
Thi Create RFGW Config DB	Goldsbore (M)	RLOHNCARFOOD8 - 12 90 85 97 - Not Ready	RLOHNCA-SOSH1 - 59	41 RLOHNCARFOOD9 -	10.90.88.96	12.2	615	60309
(c) Program R/GIV w/Config D8	Dudley (0)	RLOHNCARPOONE - 12 90 85 96 - Not Ready	RLGHNCA-505941 - 59	RLGHNCARFG009 -	10.90.08.96	1/2.3	621	60390
(d) Verity RFGW Update	Wilson (F)	RLGHNCARF0010 - 10.90 149.84 - Not Verifec	RLOHNCA-505941-59	41 RLOHNCARFOOD9 -	10.90.88.98	12.4	627	60391
	Farmville (EE)	RLGHNCARFG011 - 10 90 149 79 - Update Rev	RLGHNCA-505973 - 59	73 RLOHNCARFOODS -	10.90.88.98	2/1.1	609	60392
RFGW Bulk Provisioning	Releigh (G) Middlesex (SS)	RLOHNCARF0012 - 10 90 149 87 - Not Ready RLOHNCARF0013 - 10 90 149 163 - Not Ready	RLGHNCA-505973 - 59	73 RLGHNCARF0009	10.90.88.96	2/1.2	615	60393
Mase 3	Telucion (1)	RLGMNCARF0014 - 10 90 85 103 - Not Ready	RLOHNCA-505973 - 58			21.3	621	60394
3a) Set Port Pwr/Crititi	Tayatteville (2)	RLGHNCARF0015 - 10 90.85 104 - Not Ready	RLOHNCA-505973 - 59			21.4		60395
3b) Set Combined Chan	Spring Lake (S)	RLOHNCARF0016 - 10.90.88 105 - Not Ready	RLGHNCA-SG6005 - 60			201		60296
3c) Set Chan Mute	Raeford (2)	RLGMNCARF0017 - 10.9038.108 - Not Ready	RLGHNCA-508005 - 60			202		60397
	Southern Fines (3)	RLGHNCARFOO18 - 10.90.88.107 - Not Ready						
instructions	Seven Lakes (BB)	RLOHNCARFOOTS - 10.9038.108 - Not Ready	RLGHNCA-SORDS - 60 RIGHNCA-SORDS - 60			223		60396 ···
Verify RFOW Config Data	Dushan (C)	RLGHNCARFG020 - 10 90.88.109 - Not Ready 🗶	The course wood wood of the	in a care and come	10.00.01.00			
1) Select HUB	Status of DB Update for 18.88.3	0.50 - Not Ready	RFGW Video IP Info					
ty seece note.	RubRane	Duthan_A	Port 1 P	10.59.09.131				
2) Select RFOW to verify:	Mogent IpAdz:	10.59.88.98	Port 1 Mask	255 255 255 248				
	Muget Gatevay:	10.59.00.126	Port 1 Virtual P	10 59 89 130				
3) Verify the imported data is	Mingert Maakr	285.255.255.192	Port 2 P	NA				
correct.	Equipment Type: Max GMC:	8.FOV 4.8	Port 2 Mask	NA				
4) You can optionally use	Ref Di Model	file		NA.				
the Vew-Excel thoritopic	Overall Plate:	Fot Ready	Port 2 Virtual P					
to assist in the verification.	Create Ref 20:	Ready 2/22/2010 10:24:45 AM	Port 3 P	10.59.91.195				
	Import Bed DB:	Ready 2/16/2010 11:17:56 AM	Port 3 Mask	255 255 255 248				
to Click 'Data Ok' to	Import Excel:	Ready 2/22/2010 10:26:07 AM	Pert 3 Virtual P	10.59.91.194				
acknowledge data is good.	Date Rules:	Not Ready	Port 4 P	NA				
	Data Verified By User:	Not Beady	Port 4 Mask	NA				
Click Data not OK' if data	Conflg DB Created: Program RFGW:	Not Ready Not Ready	Port 4 Virtual P	10.4				
has errors.	Opdate Verified:	Not Verified						
	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.							
	Set RFGW Verification Status	for Selected RFGIII Config Data						
	Data OK	Defa not OK						
	Data OK	Deta not GM						
	BECW Verity 1	or selected lpAdr: Not Ready						
	in our renty i	and a second distance and a second						

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.

Import Provisioning Config Data - Phase 1	Create RFGW Configuration Data	base		
143 BPU BROOMDY - Ready 154 DPU BROOMDY - Ready 151 Create Ard Di - Ready 151 Insport DB Ber File - Ready 151 Insport DB Ber File - Ready 152 Program RFC 150 Config Data 152 Configurations 152 Configurations 153 Configurations 153 Sector without Config Data 153 Sector Without Without Config 153 Sector Market 15 Sector Hout 15 Sector Hout 15 Sector Hout 15 Sector Hout 15 Sector Hout 15 Sector RFC IN Is Create DB Incommunity RFC IN Socies Configurations 15 Sector RFC IN Is Create DB Incommunity RFC IN Is Create DB Is Sector RFC IN IS Sector RFC IN IS CREATE DB IS Sector RFC IN IS Sector RFC IN	Select HOB District (1) Carry (2) Carry (2) Carry (2) Densen (3) Frequey-Warlan (0) Benaen (17) Belae (1) Goldsborg (0) Ridsleven (2) Ridsleven (2) Ridsleven (2) Ridsleven (2) Ridsleven (2) Boucher (1) Reford (2) Boucher (2) Reford (2) Refo	Sector 1997 R., Charles, A.M. (2017) - 15 (0.000, 10) - 1100, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 100	Create BFOW Configuration D8 Create Configuration D8 File Ready: 222/0110 153-16 PM Sart P 10 39 85 86 10 Open Ref D8 20 Opener M10 39 86 96 20 Opener M10 39 File to 1000 20 Opener M10 39 File to 1000 20 Opener M10 39 File 20 Opener M10 39 Fi	

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 F	TP Account Info
	eboot Options and Limits
Override	SW Ver Match Requirement
Include I	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.

Import Provisioning Config Data	Program RFGW with Configuratio	n DB	
Prese 1 (a) BYD Inspontory - Breaty (b) BYD Inspontory - Breaty (c) BYD BD Configurations FIGU DB Configurations FIGU AD Configurations F	Nub List Distance (8) Carry (7) Carry (7) Carry (7) Balaa (2) Culdary (0) Rillion (8) Parent (1) Culdary (0) Rillion (8) Parent (1) Culdary (0) Rillion (8) Parent (1) Culdary (0) Rillion (8) Parent (1) Culdary (1) Restrict (1) Parent (1)	51.01 A R., Christ-Alfridder, 1-11 90, 81, 94 Undere Rear et al. 1(3) R., Christ-Alfridder, 1-11 90, 81, 94 Undere Rear et al. 1(2) R., Christ-Alfridder, 1-11 90, 85, 94 Undere Rear et al. 1(2) R., Christ-Alfridder, 1-11 90, 85, 94 Undere Rear et al. 1(2) R., Christ-Alfridder, 1-11 90, 85, 94 Undere Rear et al. 1(2) R., Christ-Alfridder, 1-11 90, 85, 94 Undere Rear et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Reary et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Reary et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Reary et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Reary et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Verlage et al. 1(1) R., Christ-Alfridder, 1-11 90, 85, 94 Under Verlage et al. 1(2) R., Christ-Alfridder, 1-11 90, 44, 140, 4-1 500. Verlage et al. 1(2) R., Christ-Alfridder, 1-11 90, 44, 140, 4-1 500. Verlage et al. 1(2) R., Christ-Alfridder, 1-11 90, 44, 140, 4-1 500. Verlage et al. 1(2) R., Christ-Alfridder, 1-11 90, 44, 140, 4-1 500. Verlage et al. 1(2) R., Chrint-Chrighoret, 1-150, 40, 150, - 160, 1864. Verlage et al.	Stop Program Centinuous Sec Check SW Version Centinuous D/20/2018 2-06 11 PM: 10:30 145 79 11010 Request Timed Out 327700es Centinuous Seccess-O Fabi Centinuous Centinuous Program Selected SPGW with New Config Centinuous Centinuous MCCW 00 Update Seccess Centinuous Centinuous MCCW 00 Updat
	Waddhame: Magam Dahdr: Magam Dahdr: Magam Dahdr: Bag Mar: Baf Dh Mode: Dag Mar: Dag	Durbane, A 10.95.148.75 10.95.148.1 145.248.1 145.248.158.0 BFJDH 46 file Beady 1/22/2010 10.24:48 AH Beady 1/22/2010 10.24:48 AH Beady 1/22/2010 10.25.07 AH More Beady 10.27.67200 11.47.46 AH Beady 2/22/2010 10.25.07 AH More Beady How Section 1.22.27.0010 2:00:50 1 How Yestied	
5) Optionally click Capiley Selected RFGV In Browser'. This will spawn your default browser to inspect and monitor the RFGW.	MPO: RFGW update SUCCESSFUL		

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.

nport Provisioning Config Data	Verify RFGW Program Update			22			
a) RPU Repository - Ready	Rub List	Select RFGW	RFGW Ports Verify Up	the state of the s			
b) Create Ref DB - Ready	Darbase (A)	RLGHNCARFG001 - 10 90 88.90 - Update Reac	Service Group Name -				reg TSD +
() Import DB Ref File - Ready () Import Excel - Ready	Dichan (8)	RLOHNCARF0002 - 10 90 88 91 - Not Ready	RLGHNCA-S05911 - 5		3011 - 10.90 149.79	1/1.1	609 60480
o subour care - seany	Cary (J) Garner (E)	RLCHNCARFG003 - 10 90 88 92 - Not Ready RLCHNCARFG004 - 10 90 88 93 - Not Ready	RLOHNCA-505911 - 5		2011-10.90.149.79	1/1.2	815 60481
GW DB Configurations	Tapiny-Tarina (0)	RLOHNCARFGODS - 10 90 85 94 - Not Ready	RLOHNCA-505911 - 5		3011 - 10.90 149 79	1/1.3	621 60482
me 2	Benson (TT)	RLOHNCARFOOD8 - 10 90 88 95 - Not Ready	RLGHNCA-SG5911-5		3011 - 10.90 149.79	1/1.4	627 60483
Verify RFGW Config Data	delma (L)	RLOHNCARFG007 - 10.90.85.96 - Not Ready	RLOHNCA-505943 - 5		3011 - 10.90.149.79	10.1	609 60404
Create RFGW Config DB	Goldsborn (M)	RLOHNCARF0008 - 10 90 88.97 - Not Ready	RLOHNCA-SOSH3 - 5		3011-10.30 149.79	12.2	615 60485
Program RFGW w/Config 06	Dudley (0) Nilson (P)	RLOHNCARF0009 - 10.90 88.96 - Update Reat RLOHNCARF0010 - 10.90 149.84 - Not Verifie:	RLOHNCA-S05943 - S		3011 - 10.90.149.79	12.3	621 60486
) Venity Itl'Gill Spotete	Farmville (EE)	RECEIPTING AND CETTE - TO BE THE DR - HET VERTING	RL0HNCA-505943 - 5		2011-10.90.149.79	12.4	627 60487
OW Bulk Provisioning	Daleigh (S)	RLOHNCARF0012 - 10 90 149 87 - Not Ready	RLOHNCA-505975 - 5		3011-10.90.149.79	2/1.1	809 60408
ase 3	Middleses (SS)	RLCHNCARF0013 - 10 90 149 163 - Not Ready	RLGHNCA-SQ5975 - 5		2011 - 10.90 149.79	2/1.2	615 60409
Set Port PartiCetri	Zebulon (I)	RLOHNCARFG014 - 10 90 85 103 - Not Ready	RL0HNCA-S05075 - 5		3011 - 10.90 149.79	2/1.3	621 60490
a Set Combined Chan	Tapetteville (3)	RLOHIVCARFOOTS - 10 90.88 104 - Not Reedy	RLOHNCA-SOS975 - 5		3011-10.90.149.79	2/1.4	627 60491
Set Chan Mute	Spring Lake (S) Basford (2)	RLOHVCARF0016 - 10 90 88 105 - Not Ready RLOHVCARF0017 - 10 90 88 108 - Not Ready	RLGHNCA-SG6007 - 6	1007 RLGHNCARFI	3011-10.90 149.79	2/2.1	609 60492
	Southern Pines (K)	RLOHNCARFG018 - 10 90 85 107 - Not Ready	RLOHNCA-506007 - 6		2011-10.30.149.79	222	815 60493
Inactions	Seven Lakes (88)	RLOHNCARFOOT9 - 10 90 85 108 - Not Ready	RLOHNCA-506007 - 8	1007 RLOHNCARFI	3011-10.90.149.79	2/2.3	621 60494
	Dushan (D)	RLGHNCARFG020 - 10 90.80.109 - Not Ready 🚿	TRI CHNCA-SCHOOT - R	007 BI CHINCARPI	1011-10-00-140-70	707.4	#77 #0484 ···
Verity RFOIIV Update	Status of D8 Update for 10.90.149.79 - Not Verified		RFGW Video IP Info		IFGW Auto Ver	ty DB Upd	ates
	Rubline	Durhan A	Fort 1 P	10.90.09.147	INFO : One 1		
Select RFOW to verify.	Magen IpAdr:	10,90,149,79	Port 1 Mark	255 255 255 248	SUCCESS: One		
Search in the second	Mages Gateway:	10.90.149.1	Port 1 Virtual P	10 90.89 148	SUCCESS: Dec		
3) Verify the current state of the RFGW configuration is correct.	Muget Mask	265,286.255.0	Port 2 P	10 10.89 146	START: Acuiv		
	Equipment Type:	2.FGN	and a state of the		STCCESS Art		
	Nax QRM: Ref Db Mode:	40 Eile	Port 2 Mask	N/A.	SUCCESS: Act		
	Overall Ptate:	Not Verified	Port 2 Virtual P	N/A	END : Verfi		
	Create Sef DB:	Ready 2/22/2010 10:24:45 AM	Port 3 P	10.90.91.211	DEFO Auto	Verilly	completer
	Import Ref DB:	Ready 2/16/2010 11:17:56 AM	Port 3 Mask	255.255.255.248	CAPO - AUNO	AND RAY	STOCKAGE M
	Import Escal:	Ready 2/22/2010 10:25:07 AM	Port 3 Virtual P	10.90.91.210	Active DB ege	mat Create	0.016
	Data Rules:	Not Ready	Port 4 P	NA	Active DB age		
	Config DB Created	Not Ready Ready 2/16/2010 11:41:40 AM	Port 4 Mask	NA	Created DB ap		
	Program SPGW:	Buccessful 2/22/2010 2:00:60 1	Port 4 Virtual P	NA	Created DB against in-Memory DB		mory DB
	Update Verified:	Not Verified			A	utio Verity	
	Set RFGW Verification Status	for Selected RFGW			SUCCESS Activ	e D8 again	at Created DB
	Display RFGW in Browser	Verify OK Verify Not OK				elected to	
					Not a	elected to	nun .
		r selected loAdr: Not Ready			Note	alected to	Cut.

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 - hase 1	Generate JSON File			
1a) RPU Repository - Ready 1b) Create Ref 08 - Ready 1c) Import DB Ref File - Ready 1d) Import Escel - Ready	Hub Lief Chermai Jampie	Select IFGW		
8 GW 88 Configurations These 2				
2x) Verify RFGW Config Data 2b) Create RFGW Config D8 2c) Program RFGW w.Config D8 2d) Verify RFGW Update			SOUTH	
Te) Generate JSON File			Generate JSON File	
Phase 3 Jaj Set Port Pwe Cetrt			Opens JSON File	
3b) Set Combined Chan 3c) Set Chan Mate			POST JSOB to Ramuden	
netructions				
Goot in JSON Formal () Select FKID (2) Select FKID				

Chapter 3 Installation and General Operation

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

mport Provisioning Config Data base 1 Iai RPU Repository - Ready	Cenerate JSON File	Select IFGW	
la) RPU Repository - Ready Ib) Create Ref DB - Ready Ic) Import DB Ref File - Ready Id) Import Eacel - Ready	Chemnas Saaple	366601 89 049	
FGW DB Configurations hase 2			
hai Verity BFGW Config Bata (b) Create BFGW Config BB (c) Program RFGW w/Config BB (d) Verity BFGW ligidate (c) Centerate JSCH Lie			JON File
FGW Bulk Provisioning			Generate JOON File
hase 3 lai Set Port Pwr Catrl			Open JSOB File
Ito Set Combined Chan Ico Set Chan Mute			POST 250H to Ramadon
structions			
popular JSON Formal Select H&B. Selectors are allowed Selectors are allowed Selectors are allowed Sole Her Sole S	Bill Or Eacel Bata Import C	of the JSON Formation File	

- 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	CHNQ.AM_02 - 10.78.206.211	
	CHNQAM_04 - 10.78.206.205	
		JSON File
		Generate JSON File
		Open JSON File
		POST JSON to Ramsden
	of the JSON Formatted File	
	ON File for the RFG/V-1: CHNQ.AM_01 - 10.78.206.209	
	he RFGW-1: CHNQAM_01 - 10.78.206.209 generated : 20 File for the RFGW-1: CHNQAM_04 - 10.78.206.205	
	he RFGW-1: CHNQAM_04 - 10.78.206.205 generated	

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.

ts) Insport 08 Mer File. Ready (d) Newort 18 Mer File. Ready FOV 006 Cenfigurations hase 2 In Venty 8FGW Cenfig 046 Bis New (T) (d) Venty 8FGW Cenfig 046 Bis
This Create Ref 08 - Ready This Name 11 to 1000 and 11 to 00
Another of Contribute Channels. Output Prover in OEM/. A Chain Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Status Stat

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 Channel	rts		
me 1		Select RFGW	Combined Channels - Select Ports	
RPU Repository - Ready	Hub List			
Create Ref DB - Ready	Duchan (k)	RLCHNCARF0001 - 10 90 55 90 - Update Reac A	Select Ports Set Combined Channels	
Import DB Ref File - Ready	Duchan (8)	RLCHNCARFG002 - 10.90 58.91 - Not Ready	Part UI Group 1 Eingle .	
Import Excel - Ready	Cary (J)	RLOHNCARF0003 - 10.90.80.92 - Not Ready	Port 1/1 Group 2	
	Gagner (E)	RLOHNCARF0004 - 10.90.88.80 - Net Ready	And all and the second a	
GW DB Configurations	Taguay-Vacina (20)	RLCHNCARF0005 - 10.90.55.94 - Not Ready	Port 1/2 Oroug 2 Send Update	
use 2	Benach (TT)	RLGHIVCARFG006 - 10.90.55.95 - Not Ready	Port 2/1 Group 1	
Verify RFGW Config Data	Selma (L)	RLOHNCARF0007 - 10.90.88.96 - Nat Ready	Part 2rt Group 2	
Create RFGW Config DB	Goldebozo (W)	RLCHIVCARFG008 - 10.90.85.97 - Not Ready	Pert 2/2 Group 1	
Program RFGW w/Config 08	Dudley (0)	RLGHIVCARFG009 - 10.90.88.98 - Not Ready	Part 2/2 Group 2	
) Verify RFGII Update	Wilson (P)	RLCHNCARFG010 - 10:90 149.84 - Not Verifier	Port 3/1 Group 1	
	Farmville (EE)	RLCHIVCARFGE11 - 10.90 149 79 - Update Res	Pert 3/1 Group 2	
Gill Bulk Provisioning	Raleigh (D)	RLOHNCARFG012 - 10.90 149.87 - Not Ready	Pert 3/2 Group 1	
Lase 3	Middlesen (SS)	RLOHNCARF0013 - 10 90 149 163 - Not Ready	Part 3/2 Onsup 2	
I Set Port PwriCetri	Zebulon (I)	RLOHNCARF0014 - 10 90 85 103 - Not Ready	Part 4/1 Group 1	
b) Set Combined Chan	Fayetteville (R)	RLOHNCARPG015 - 10.90 88 104 - Not Ready	Part 4/1 Group 2	
1 Set Chan Mate	Spring Lake (3)	RLOHNCARFG018 - 10.90.88.105 - Not Ready	Port 4/2 Group 1	
	Reeford (Z)	RLCHIVCARFG017 - 10 90.88.106 - Not Ready	Port 4/2 Onlog 2	
2010 B	Southern Fines (X) Seven Lakes (33)	RLGHNCARFG018 - 10.90.88.107 - Not Ready RLGHNCARFG019 - 10.90.88.105 - Not Ready	Part 5/1 Group 1	
tructions	Duthan (C)	RLOHNCARF0020 - 10 90.88 109 - Net Ready	Port 5/1 Group 2	
wer range is base on total	Increase (c) (2)	Letterative Ante - Lette de Mais residends (2)	Part 5/2 Oneue 1 Pert 5/2 Oneue 2	
unber of combined channels.			Part 52 Group 2 Part 6/1 Group 1	
and a consider some of			Part 6/1 Group 2	
ubut Power in dBmV.			Pert 6/2 Group 1	
			Port 6/2 Group 2	
value is out of range, RFOW1				
Freiect the setting.			LANCE LANCE	
			Status	
Chan			Success: Port Port 2/1 Group 1 Set to Single	
			Success: Fort Fort 2/2 Group 1 Set to Single	
to 61 - One			Success: Fort Fort 3/1 Group 1 Set to Single	
to 57 - Two			Success: Dort Dort 3/2 Group 1 Set to Single	
to 55 - Three			Success: Fort Fort 4/1 Group 1 Set to Single	
to 54 - Four			Success: Fort Fort 4/2 Group 1 Set to Single	
			Success: Port Fort 5/1 Group 1 Set to Single	
Chat			Buccess: Port Port 5/2 Group 1 Set to Bingle	
			Success: Fort Fort 6/1 Group 1 Set to Single	
to 62 - One			Success) Fort Fort 6/2 Group 1 Set to Single	
te 58 - Two			INTO: SHOEP session closed on 10.90.149.79	
to 58 - Three			IMPO: SHOP SuccessCot = 12	
to 54 - Four			INFO: SHEP FailCos = 0	
to 53 - Five			THEFO: Book of Bull Systems 2/22/2010 2 48:12 200	
10 52 - 5ix to 52 - Seven				
to 52 - Seven to 52 - EgN				

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.

	k Update - Channel Mute			
450 1		Select BFGIV	Channel Made . Sel	lect Ports and Channels
RPU Repository - Ready	Hub List		222200000000000000000000000000000000000	VANAGE CONTRACTOR
	without 1A1	RLGHNCARFG001 - 10.90.85.90 - Update Reac A	Select Ports	Select Chans
	uzhan (B)	RLOHNCARFOOD2 - 10 90.88 91 - Not Ready	Port 1/1	Chan 1
	azy (3)	RLGHNCARF0003 - 10.90.85.92 - Not Ready	Port 1/2	Chan 2
	anner (X)	RLGHNCARFG004 - 10.90.88.93 - Not Ready	Port 2/1	Chan 3
	equer-Vectore (H)	RLOHNCARFOOD5 - 10 90 55 94 - Not Ready	Pert 22	Chan 4
	enson (TT) elma (L)	RLOHNCARF0006 - 10.90.88.95 - Not Ready RLOHNCARF0007 - 10.90.88.96 - Not Ready	Port 31	Chan 5
	eldshere (E)	RLOHNCARFOOD - 10.90.00.97 - Not Ready	Port 3/2 Port 4/1	Chan 6 Chan 7
	udley (0)	BLOHNCARFOOD - 10 90 55 95 - Not Ready	Pert 4/2	Chan 7 Chan 8
	11eon (P)	RLGHNCARPOOLS - 10.90.149.54 - Not Verifier	Port 5/1	
	armville (TE)	RCORNCAR/COT1 - 10 90 149 79 - Update Red	Port 5/2	
	eleigh (G)	RLOHNCARF0012 - 10.90.145.87 - Net Reedy	Port 6/1	
	iddleses (22)	RLGHNCARFG013 - 10.90.149.103 - Not Ready	Port 6/2	
454.3	ebulos (I)	RLGHNCARFG014 - 10.90.88.103 - Not Ready	AL	
Set Port PwriCntr1	evetteville (R)	RLOHNCARF0015 - 10.90.88.104 - Not Ready		Set Channel Mute
	pring Lake (E)	RLOHNCARF0018 - 10.90.88.105 - Not Ready		Normal
	asford (2)	RLGHNCARFG017 - 10 90.88.106 - Not Ready		and the second
	outhern Pines (X)	RLOHNCARF0018 - 10 90.88.107 - Not Ready		Set App Mode
	even Lakes (88)	RLOHNCARF0019 - 10.90.88.108 - Not Ready		Video Video Set App Mode is Active
	ushan (C) 💌	RLGHNCARFG020 - 10.90.88.109 - Not Ready M		
wer range is base on total				and the second se
mber of combined channels.				Send Update
dout Power in dBriV.				Consecution and Consecution an
/put Power in domy.				
value is out of range, RFO/011				
Freidt the setting			Status	
a capita and second			INFO: Start o	f Bulk Opdate 2/22/2010 2:63:09 EM
Chan				secon open on 10,90,149,79
			WARN: RFOR 1.	48 chan. Fort Fort 3/1 Chan 5 Not Available
to 61 - One				esion closed on 10.90.149.79
to 57 - Two			INFO: SHOP BU	
to 55 - Three			INFO: 58057 Fa	
to 54 - Four			INTO: End of	Bull Opdate 2/22/2000 2:53:10 BM
			and the second second second second	
Chan				
to 62 - One				
36 58 - Two				
to 56 - Three				
to 54 - Four				
to 52 - Five				
10 52 - Six				
to 52 - Seven				
to 52 - Eight				

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 In		
Configure RFGW Ftp Int	fo	
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 Overri	de	<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.	
	D	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.

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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