Installation and General Operation

This chapter describes how to install and operate the Cisco RPU-10 application.

Contents

How to Install Cisco RPU-10

Prerequisites

- Order the Cisco RPU-10 installation media. The product identifier (PID) for ordering the Cisco RPU-10 application is RFGW-10-RPU. To order, contact your local sales representative or call customer service.
- Microsoft Windows 7 must be installed on the system.
- The Cisco RPU-10 system must be connected to the network so that it can communicate with Cisco RF Gateway 10.
- Microsoft Excel must be installed in the Cisco RPU-10 system.

Installing Cisco RPU-10

Complete these steps to install the Cisco RPU-10 application:

Step 1 Insert the Cisco RPU-10 installation media.

Step 2 Open the Cisco RPU-10 installer file, read the license agreement carefully and click **I agree** radio button and **Next** to proceed with the installation.

Step 3 The Cisco RPU-10 setup wizard appears. Click **Next** to start the installation.

Step 4   Choose the folder where the software must be installed and click **Next**.

Step 5   Click **Next** to confirm the installation.

Step 6   After the Cisco RPU-10 application is successfully installed, click **Close** to exit.

How to Import Provisioning Parameters

Prerequisites

- The Cisco RPU-10 system must be connected to the network so that it can communicate with Cisco RF Gateway 10.

- CPU utilization must be less than 60%.

- The number of Telnet (or vty) connections configured in the Cisco RF Gateway 10 must be equal to or more than number of line cards selected.

Note   Ensure that the vty connections are not being used by other users. If the vty connections are being used by other users, set the numerical value of vty connections using this combination: <the number of users using the connection + the number of line cards selected + 1>.

Restrictions

- Cisco RPU-10 can configure one Cisco RF Gateway 10 at a time.

- Cisco RPU-10 does not clean up the existing configuration.

- Cisco RPU-10 cannot be used to edit the existing configuration.

- If the configuration data is in CSV format, import the CSV data into Microsoft Excel sheet and use it as the input Microsoft Excel sheet.

Configuring Cisco RPU-10 Repository Location (Phase 1 Step 1a)

This step configures the disk file location where the Cisco RPU-10 maintains all the files created and referenced by Cisco RPU-10. All the target files like log file, line card configuration file, suppressed configuration file, the response Microsoft Excel sheet generated in phase 2b and phase 2d, configuration file, and the Microsoft Excel sheet containing the status of the response received are saved in this location.

Note   The name of repository folder created by Cisco RPU-10 is in the format *ip_address_of_RFGW10_HH-MM*.

Complete these steps to configure the repository location:

Step 1   Click **Select Repository**.

Step 2   Click **Select** to specify the path for repository location.

Step 3   Click **OK**.

After the repository location is set, the status of *Configure RPU O/P Repository* is changed from **Not Ready** to **Ready**.

Importing Configuration Microsoft Excel Sheet (Phase 1 Step 1b)

This step imports the configuration from the input Microsoft Excel sheet to the selected line cards in the selected Cisco RF Gateway 10.

Note   The input Microsoft Excel sheet must be named in the format *Config_ip_address_of_RFGW10.xlsx* to ensure that the Cisco RPU-10 application can retrieve the IP address of Cisco RF Gateway 10 from this file name.

RPU10 retrieves this information from the Microsoft Excel sheet:

- IP address of the Cisco RF Gateway 10 unit that requires provisioning.
- RF profile settings for individual Cisco RF Gateway 10 unit. One Microsoft Excel sheet contains configuration data for a single unit.
- Some global parameters, like frequency profile and RF profile.

You can also view the import status and data for line cards after importing the configuration.

Complete these steps to import the configuration Microsoft Excel sheet:

Step 1   Click **1b) Import Configuration Excel File -Not Ready**.

Step 2   Click **Browse** and **Select Path** to specify the path where the configuration Microsoft Excel sheet is stored.

Step 3   Click **OK**.

Step 4   Select the Microsoft Excel sheet from the *List of Input Files* and click **Select Design Spreadsheet**.

Step 5   Check the check box for the required line cards and click **Import**.

The import status is displayed. After the data is imported, Cisco RPU-10 displays the *RFGW Data Imported Successfully* message.

Step 6   (Optional) After the configuration data is successfully imported, click **Graphical View** to view the graphical data. Click **Exit** to exit the graphical view. For more information on graphical view, see Graphical View, page 2-7.

After the configuration is imported from Microsoft Excel sheet, the status of *Import Configuration Excel File* is changed from **Not Ready** to **Ready**.

Note   If you update the input Microsoft Excel sheet, save and re-import the data from the updated Microsoft Excel sheet.

Configuring Cisco RF Gateway 10 Credentials (Phase 1 Step 1c)

This step configures the credentials for Cisco RF Gateway 10 to retrieve the existing running configuration, and send the new configurations.

Complete these steps to configure the credentials:

Step 1   Click **1c) Configure RFGW10 Credentials -Not Ready**.

Step 2   Enter the *Telnet User Name*, *Telnet User Pwd*, and *Telnet Enable Pwd* and click **Done**.

> **Note**   If you do not need a username and password, leave the fields blank and click **Done**.

After the credentials are configured, the status of *Configure RFGW10 Credentials* is changed from **Not Ready** to **Ready**.

How to Create Databases and Program Cisco RF Gateway 10

After importing the provisioning data, you can create databases and program the Cisco RF Gateway 10 devices.

Creating Configuration File (Phase 2 Step 2a)

This step generates a configuration file for the imported Microsoft Excel data. This configuration file contains the Cisco IOS commands to program Cisco RF Gateway 10.

> **Note**   The generated configuration file is saved into the repository folder created by Cisco RPU-10.

Complete these steps to create the configuration file:

Step 1   Click **2a) Created Config File**.

Step 2   Click **Create Config**.

After the configuration file is created, Cisco RPU-10 displays the *Config File Created Successfully* message.

Validating Mode Status (Phase 2 Step 2b)

This step contains these four stages:

- Fetching Running Configuration, page 2-5
- Validating Mode Status, page 2-5
- Validating Frequency Clash, page 2-6

Fetching Running Configuration

At this stage, the Cisco RPU-10 checks the redundancy type of all the selected cards. If any mismatch is detected in setting the card redundancy type in Microsoft Excel sheet, Cisco RPU-10 displays a dialog box for the invalid card type set for a card. The invalid card configurations are ignored for further processing.

Restrictions

- Cisco RPU-10 checks the physical existence of the line card and ignores the non-existing line card configurations for further processing.
- Cisco RPU-10 checks the card type for all the selected line cards. If there is a mismatch, it displays the *INVALID CARD TYPE SET IN EXCEL FOR: LC<1-10>* message and that line card configurations are ignored for further processing.
- RPU10 checks the redundancy type of all the selected line cards. If there is a mismatch, it displays the *INVALID REDUNDANCY TYPE SET IN EXCEL FOR: LC<1-10>* message and that line card configurations are ignored for further processing.

Complete these steps to retrieve the running configuration:

Step 1 Click **2b) Mode Status validation**.

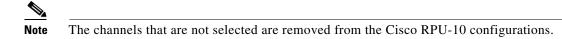**Step 2** Click **Fetch Running Config**.

The running configuration retrieval status is displayed. The retrieved running configurations are saved in a file named *runn_config.txt*. After the running configuration is retrieved successfully, Cisco RPU-10 displays the *Running Configurations fetched successfully* message.

Validating Mode Status

At this stage, the Cisco RPU-10 lists the line card channels with mismatched modes.

Complete these steps to validate mode status:

Step 1 Choose the line card from the drop-down list and click **View**. Cisco RPU-10 displays the mode mismatch information.

Step 2 Check the check box for the required channels and click **Apply Rules**.

> **Note**   The channels that are not selected are removed from the Cisco RPU-10 configurations.

After the rules are applied, Cisco RPU-10 displays the *Rules are applied for LC<1-10> successfully* message.

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Note   The drop-down list provides a list of the existing line cards. Apply the rules for all the line cards individually to proceed further.

Validating Frequency Clash

At this stage, the Cisco RPU-10 handles the frequency clashes in these ways:

- When you assign the same frequency to multiple channels within a port, and click **Apply Rules**, Cisco RPU-10 checks for clashes and retains only one channel configuration. The remaining clashing channel configurations are removed from the Cisco RPU-10 configurations. The clashing frequency status is also displayed on the second grid view.

- Cisco RPU-10 checks all channels, which have a clash within the existing configuration, and issues the **no cable downstream frequency** command to the clashing interface.

Validating Global Profile

At this stage, if the existing configuration has global parameters like RF-profile and frequency-profile with identical IDs, the Cisco RPU-10 removes these parameters from the configuration.

Verifying Configuration Data (Phase 2 Step 2c)

This step displays the configuration created by Cisco RPU-10 and allows manual checking of the configurations.

Complete these steps to verify the configuration data:

Step 1   Click **2c) Verify Config Data**.

Step 2   Choose the required configuration from the drop-down list to display the commands for the data imported from Microsoft Excel sheet.

Step 3   Verify the configuration. If the configurations are correct, click **Confirm Configurations** to confirm the configurations.

After the configurations are confirmed, the Cisco RPU-10 displays the *Configurations confirmed by the user* message.

Programming Cisco RF Gateway 10 with the Configuration Data (Phase 2 Step 2d)

This step sends the configuration data to the Cisco RF Gateway 10 using Telnet.

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Note   Take a backup of the current running configuration before programming Cisco RF Gateway 10 with configuration data.

Complete these steps to program the Cisco RF Gateway 10:

Step 1   Click **Program RFGW10 with Config data**.

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> **Note**   Ensure that the number of Telnet connections configured in the Cisco RF Gateway 10 are more than or equal to the number of line cards selected for programming.

Step 2   Click **Yes** to proceed.

Step 3   Click **Program RFGW10** to start the programming.

During programming, the status of commands on one line card is displayed.

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> **Note**   At a time, you can view the status of a single line card. Choose the line card using the drop-down list and click **View** to view the status of a particular line card.

Step 4   (Optional) To stop the programming when it is in progress, click **Stop**.

Step 5   After programming, click **Compare Configurations** to download the running configurations and compare it with the Cisco RPU-10 configuration.

This step creates the response status Microsoft Excel sheet and stores the status of the command configurations.

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> **Note**   **Compare Configurations** is enabled only after all the selected line cards are programmed successfully.

Step 6   Click **View Response Status** to open the Microsoft Excel sheet which contains the status of each command.

Graphical View

Graphical view is a graphical representation of the Cisco RF Gateway 10. The Cisco RF Gateway 10 has 10 line cards with 12 ports in each line card. This color convention is used for the line cards:

- White—Indicates that the ports are not selected.
- Yellow—Indicates that the ports are available.
- Green—Indicates that the data export is successful.
- Red—Indicates that the data export failed.
- Grey—Indicates that the line card is not available.

If the imported card type is Cisco DS-384, it is indicated in the graphical view using the appropriate colors for only 8 ports. If the imported card type is Cisco DS-48, it is indicated in the graphical view using the appropriate colors for 12 ports.

The **Graphical View** option is available in the following phases during the provisioning:

- After importing the configurations in phase **1b) Import Configuration Excel File**
- In phase **2d) Program RFGW10 with Config data**

After importing the data from the Microsoft Excel sheet, the color of the selected line cards is yellow until the running configurations are retrieved in phase 2b. If the selected line card is physically non-existent, the color of the line cards change to grey.

After comparing the configurations in phase 2d, if all the configurations are programmed successfully for port, the port color changes to green. If any configuration fails, the port color changes to red.

Click each port to display a grid view containing the data imported from the Microsoft Excel sheet for that port in the line card.

Viewing Logs

To view the log files, click **View Log**. The text file containing the logs opens.