Managing Devices

This chapter contains the following sections:

Overview

Each hub site or branch site may have one or more associated devices. The IWAN app provides methods for managing the devices individually, including the Custom Configuration feature, which enables executing batch CLI commands on devices in the network.

Custom Configuration of Devices

Custom Configuration is a mechanism for executing CLI configuration commands on devices within the IWAN network. The feature works similarly to executing a batch file of commands, but operates remotely from the IWAN app. Enter a set of commands (and optionally save them for later use), and select the devices on which to execute the configuration commands. The IWAN app sends the commands to each selected device and then indicates whether execution was successful or not. If the execution is not successful, the feature provides a mechanism for rollback—executing a set of commands to reverse any failed configuration operations.

Note In this release, Custom Configuration is provided as a "beta" feature.

Enabling Custom Configuration

Use the following procedure to enable execution of CLI configuration commands using the Custom Configuration feature.

Procedure

Step 1 On the site list page, display the Custom Config Status column by clicking the gear icon above the table and selecting **Custom Config Status**. The column is displayed and the **Custom Config** button appears above the table.

Creating and Executing a Custom Configuration

Use the following procedure to open the Custom Configuration window to create a Custom Configuration CLI batch file, or to execute an existing Custom Configuration, called a template.

Procedure

Step 1 On the site list page, click the **Custom Config** button above the table. If the button is not displayed, see Enabling Custom Configuration, page 6-2. The Custom Config page appears.

Step 2 Select an existing custom configuration or click the plus-sign icon (+) to create a new one.

Step 3 In the Actual pane, enter the CLI commands to execute, similarly to a batch CLI command file. The commands will be executed in configuration mode on the device.

> **Note** The IWAN app does not perform any validation of the entered commands.

Step 4 (Optional) The full set of commands will be executed on all selected devices. To individually enter parameters specific to each device on which the configuration commands are being executed, use a "parameter" value in the CLI command: a dollar sign ($) followed by a parameter name.
Example: $interface.

When you execute the custom configuration, you will be prompted to enter values for this "parameter" one-by-one for each selected target device. A maximum of 10 parameters may be used.

Step 5 In the Rollback pane, enter the commands to execute in case one or more of the configuration commands in the Actual pane fail to execute correctly. For information about handling failed executions of custom configuration commands, see Handling Failed Custom Configuration Executions, page 6-3.

Step 6 In the Devices pane, select the devices on which to execute the CLI configuration commands.

Step 7 Click **Save** to save the configuration without executing. Click **Deploy** to execute the configuration on the specified devices. The site list page opens automatically, enabling you to view the **Success** or **Failure** status of execution of the configuration commands.

Viewing Status of Custom Configuration Execution

On the site list page, the Custom Config Status column shows the Success or Failure status of execution of the configuration commands per site.

If execution fails for any device within a site, the Custom Config Status column for the site displays **Failure**. If a failure occurs, click the **Failure** link in the Custom Config Status column to display the status of each device within the site. For information about handling failed executions of custom configurations, see Handling Failed Custom Configuration Executions, page 6-3.

Handling Failed Custom Configuration Executions

Use the following procedure to handle failed Custom Configuration CLI command execution.

Procedure

Step 1   On the site list page, the Custom Config Status column shows the **Success** or **Failure** status of execution of the configuration commands per site. If execution fails for any device within a site, the Custom Config Status column for the site displays **Failure**. If a failure occurs, click the **Failure** link in the Custom Config Status column to open a Site Details pop-up.

Step 2   The Site Details pop-up displays the status of each device within the site. For each site with **Failure** status, the Rollback option is displayed by default. Do one of the following to resolve the failure status for each device:

- To execute the rollback command(s), click **Deploy**.

- To change the rollback commands, edit the rollback commands displayed in the window and click **Deploy**. This does not affect the saved version of the custom configuration.

- To change the custom configuration commands and attempt to execute them again, click **Actual** to display the commands that failed to execute, edit the commands, and click **Deploy** to execute the edited commands. This does not affect the saved version of the custom configuration.

- To skip any further command execution and remove the **Failure** status for the device, click **Ignore/Reset**.

Limitations of Custom Configuration

The Custom Configuration feature has the following limitations:

- Only IWAN provisioned devices are supported.

- Maximum number of characters for a saved Custom Configuration template name: 20

- The commands stored in a single Custom Configuration template ("Actual" commands and "Rollback" commands) must not exceed 10000 characters.

- Maximum number of per-device specified "parameters" (syntax: **$<parameter-name>**): 10

- Maximum number of devices on which to execute a Custom Configuration at once: 20

- Pushing a new set of configuration commands to a device does not automatically synchronize the new configuration back to the database. Consequently, any configuration that conflicts with the configuration that is pushed by the prescriptive IWAN app will be overwritten upon execution of the day N operation from the app.