



Performing Tasks on the IR800

The chapter explains how to use the Device Manager to perform tasks on the IR800.

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Connecting to the IR800

You can use Device Manager in the following ways:

- **Operating with IoT-FND**—When you have IoT-FND operating in the network, you can connect to that system with Device Manager to download and update work orders. Work orders allow Device Manager to view status and perform tasks on the IR800. To operate in conjunction with IoT-FND, follow the steps in [Setting Up the IoT-FND Connection](#).
- **Operating without IoT-FND**—When you do not have IoT-FND operating in the network or do not want to connect to that system, use Device Manager to connect directly to a IR800 by either WiFi (with valid SSID and passphrase) or Ethernet to view status and perform tasks on the IR800.

Connecting to the Router with a Work Order

Before connecting to the router with a work order, you should be familiar with the information in [Managing Work Orders](#).

To connect to the router with a work order, select a work order from the list on the Device Manager opening page and click **Connect**.



Note The IR809 must have IPv6 option enabled to connect with work order.

Manually Connecting to the Router

You can connect to an IR809 by Ethernet, and connect to an IR829 by Ethernet or WiFi.

Connect to the Device Manager by employing one of the following methods:

- Auto Discovered IPv6 address (preferred method for the field)
- IPv4 address (such as 128.128.128.128)
- IPv6 address (such as fe80::d81f:6402:2ae4:4ea8)

To connect to the Device Manager manually:

SUMMARY STEPS

1. On the Device Manager opening page, click **Connect Without Work Order**.
2. In the Connect to Device dialog box, select the Device Type: **IR809** or **IR829**.
3. Select the Connection Type: **Over WiFi**, **Over Ethernet**, or **Auto Detect**.
4. Enter the router IP address and port, or select the check box to auto-discover the IP address.
5. (WiFi only) Enter the SSID and pass phrase.
6. Enter the user name and password.
7. Click **Connect**. The Device Manager main page appears.

DETAILED STEPS

Step 1 On the Device Manager opening page, click **Connect Without Work Order**.

Connect To Device

Device Type: IR809

Connection Type: Over WiFi, Over Ethernet, Auto Detect

IP Address: [] Port: 8443

Auto-discover IPv6 Address

WiFi SSID: [] WiFi Pass Phrase: []

Device User Name: [] Device Password: []

Cancel Connect

Step 2 In the Connect to Device dialog box, select the Device Type: **IR809** or **IR829**.

- Step 3** Select the Connection Type: **Over WiFi**, **Over Ethernet**, or **Auto Detect**.
- Step 4** Enter the router IP address and port, or select the check box to auto-discover the IP address.
- Step 5** (WiFi only) Enter the SSID and pass phrase.
- Step 6** Enter the user name and password.
- Step 7** Click **Connect**. The Device Manager main page appears.

Testing Connectivity

You can confirm connectivity to a device from the IR800 through the Connectivity page.

Before you can check a device connection or route to a IR800, you must add the IPv4 or IPv6 address or hostname of the device (connection target) to Device Manager. All work orders have connection targets.

Adding a Device IP Address

To add a device IP address:

SUMMARY STEPS

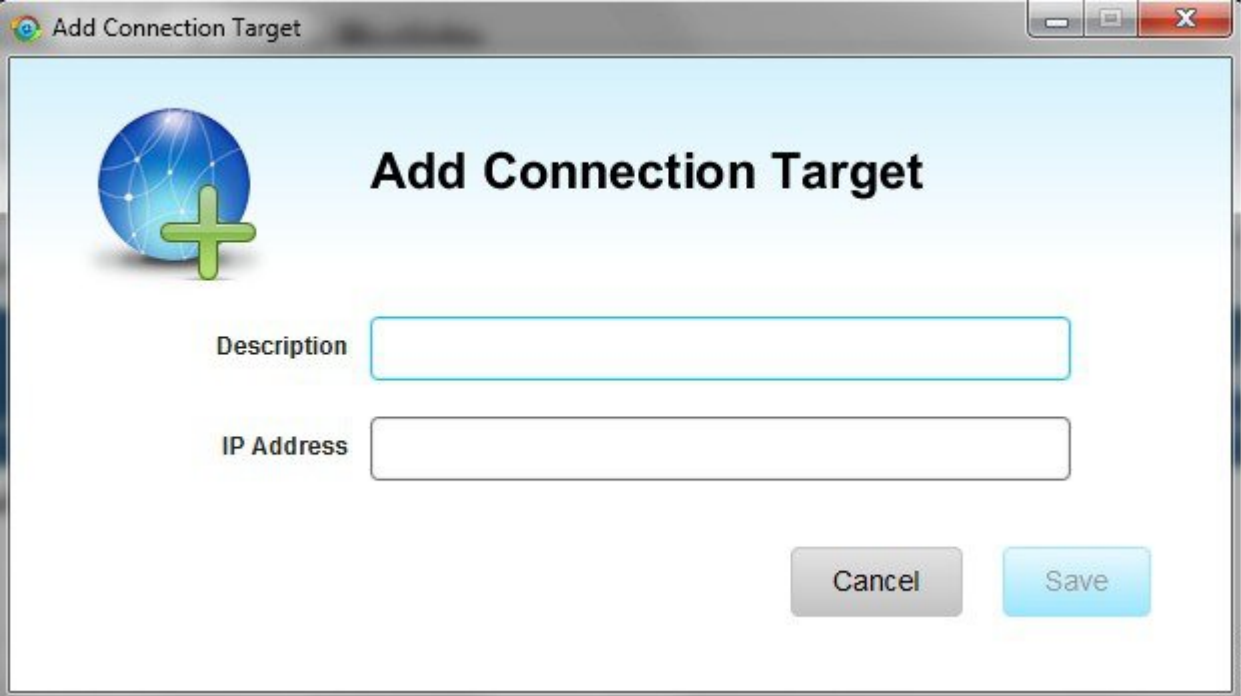
1. On the Device Manager main page, click the **Connectivity** tab.
2. On the Connectivity page, click **Add Target** to create a new target.

3. In the Description field, enter a description for the device.
4. In the IP Address field, enter the IP address (IPv4 or IPv6) of the device.
5. Click **Save**. You can now test the connectivity to the device you just added to the Device Manager.

DETAILED STEPS

Step 1 On the Device Manager main page, click the **Connectivity** tab.

Step 2 On the Connectivity page, click **Add Target** to create a new target.



Step 3 In the Description field, enter a description for the device.

Step 4 In the IP Address field, enter the IP address (IPv4 or IPv6) of the device.

Step 5 Click **Save**. You can now test the connectivity to the device you just added to the Device Manager.

Pinging a Device IP Address

The Ping feature allows you to verify connectivity to a device by querying the target IP address.

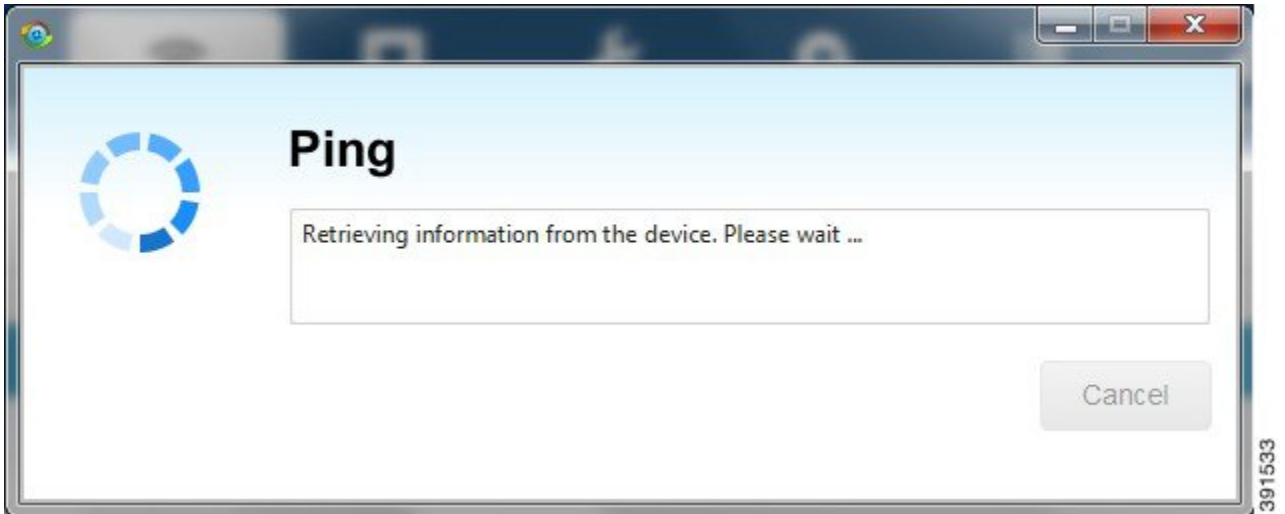
To test connectivity between the router and the device:

SUMMARY STEPS

1. On the Connectivity page, select the connection target and click **Ping**. A dialog box appears indicating that the router is attempting to ping the target IP address.
2. Click **OK** to close the Ping dialog box.

DETAILED STEPS

Step 1 On the Connectivity page, select the connection target and click **Ping**. A dialog box appears indicating that the router is attempting to ping the target IP address.



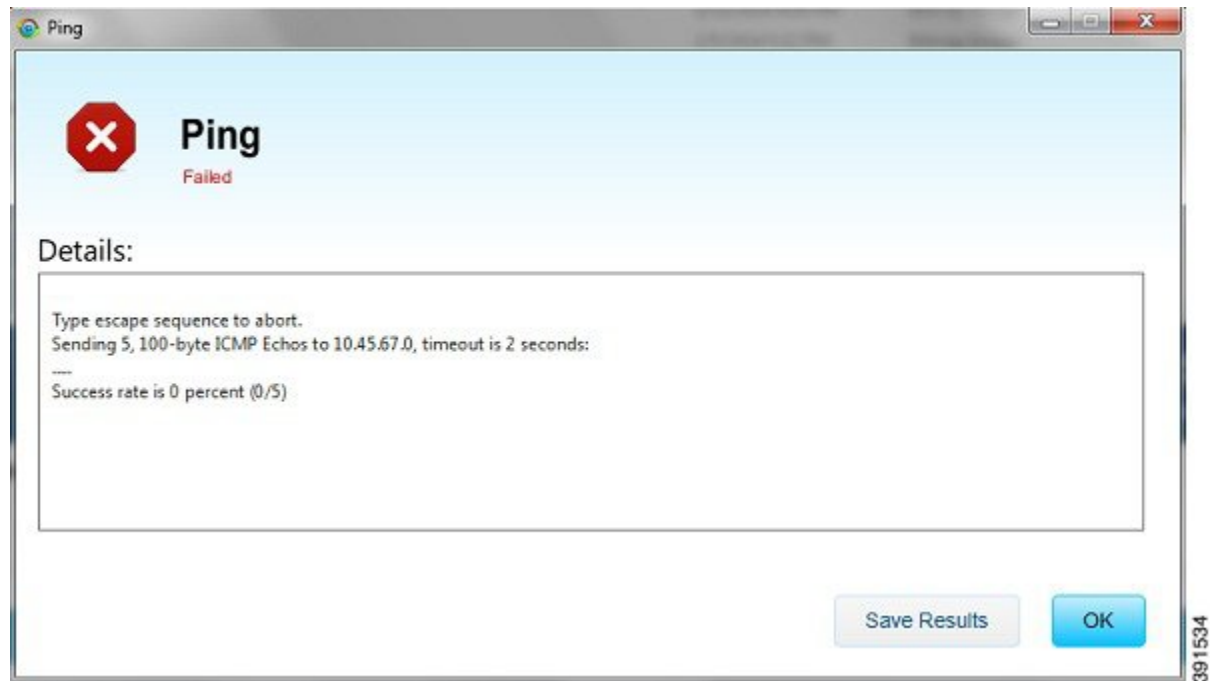
When the system successfully pings the device, a dialog box appears indicating that the ping was successful.

If the system does not successfully ping a device, refer to [Failed Ping](#).

Step 2 Click **OK** to close the Ping dialog box.

Failed Ping

If the system does not successfully ping a device, a message appears showing the details of the failed ping attempt.



SUMMARY STEPS

1. In the Ping error dialog box, review the reason for the error, then click **OK** or **Save Results** to save the output to a file on the laptop.
2. Proceed to [Tracing the Route of a Device IP Address](#).

DETAILED STEPS

-
- Step 1** In the Ping error dialog box, review the reason for the error, then click **OK** or **Save Results** to save the output to a file on the laptop.
- Step 2** Proceed to [Tracing the Route of a Device IP Address](#).
-

Tracing the Route of a Device IP Address

When an IP address cannot be reached using Ping, you can use the Trace Route feature to check the route taken to reach the device IP address.

To trace the route of the IP address:

SUMMARY STEPS

1. On the Connectivity page, click **Trace Route** for the listed connection target.
2. If the trace route is successful, review the details and click **Save Results** or **OK** in the Trace Route dialog box.
3. If the trace route is unsuccessful, proceed to [Deleting or Editing a Device IP Address](#).

DETAILED STEPS

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- Step 1** On the Connectivity page, click **Trace Route** for the listed connection target.
- Step 2** If the trace route is successful, review the details and click **Save Results** or **OK** in the Trace Route dialog box.
- Step 3** If the trace route is unsuccessful, proceed to [Deleting or Editing a Device IP Address](#).
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Deleting or Editing a Device IP Address

After you have tested a target IP address and verified its connectivity, you can delete the device entry from the Device Manager. You can also delete or edit an IP address that the application identifies as incorrect during failed pings and trace route attempts.

To delete or edit a target IP address:

SUMMARY STEPS

1. On the Connectivity page, select the listed connection target, and click **Delete** to remove the device from the list.
2. To edit the device's IP address, click **Modify Target**.
3. In the Modify Connection Target dialog box, edit the IP address and click **Save**.

DETAILED STEPS

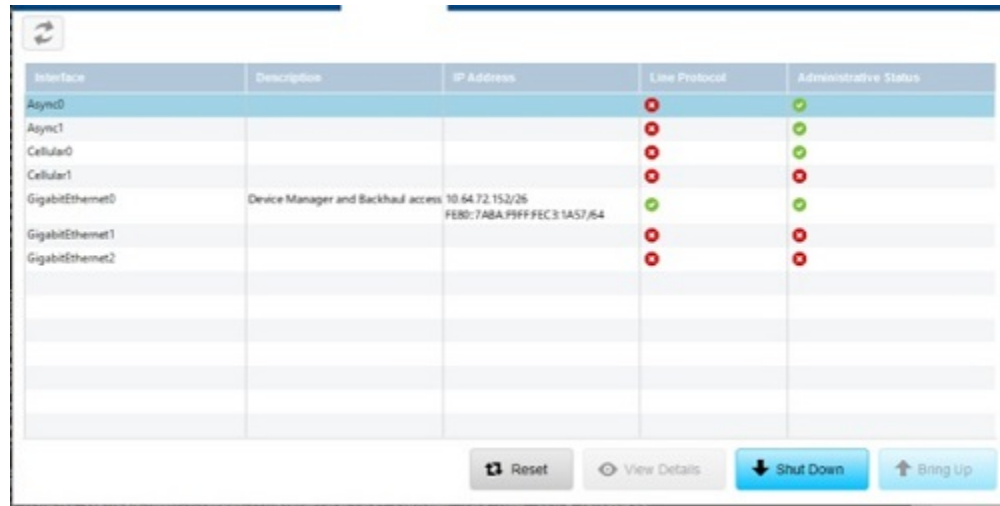
-
- Step 1** On the Connectivity page, select the listed connection target, and click **Delete** to remove the device from the list.
- Step 2** To edit the device's IP address, click **Modify Target**.
- Step 3** In the Modify Connection Target dialog box, edit the IP address and click **Save**.
-

Managing Interfaces

You can bring up or shut down an interface on the Interfaces page. You can also reset an interface and view interface details.

- When the line protocol for an interface is *up* (a green check mark), the line protocol is currently active. When the line protocol for an interface is *down* (a red cross), it means the line protocol is not active.
- When the administrative status for an interface is *up* (a green check mark), the administrator brought up the interface. When the administrative status for an interface is *down* (a red cross), the administrator took down the interface.

All interfaces installed within the IR800 display automatically.



Interface	Description	IP Address	Line Protocol	Administrative Status
Async0			⊘	⊙
Async1			⊘	⊙
Cellular0			⊘	⊙
Cellular1			⊘	⊘
GigabitEthernet0	Device Manager and Backhaul access	10.64.72.152/26 FE80:7ABA:FFFF:FE03:1A57:64	⊙	⊙
GigabitEthernet1			⊘	⊘
GigabitEthernet2			⊘	⊘

Buttons: Reset, View Details, Shut Down, Bring Up

Resetting an Interface

Resetting an interface shuts it down and then brings it up. To reset an interface:

SUMMARY STEPS

1. On the Device Manager main page, click the **Interfaces** tab.
2. On the Interfaces page, select an interface and click **Reset**.
3. In the Reset Interface dialog box, click **Yes** to confirm the reset.

DETAILED STEPS

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- Step 1** On the Device Manager main page, click the **Interfaces** tab.
- Step 2** On the Interfaces page, select an interface and click **Reset**.
- Step 3** In the Reset Interface dialog box, click **Yes** to confirm the reset.
-

Viewing Details for an Interface

Select an interface and click **View Details** to display information including interface status, settings, and dynamic statistics. Information is updated every 5 seconds.

To view details for an interface:

SUMMARY STEPS

1. On the Device Manager main page, click the **Interfaces** tab.
2. On the Interfaces page, select an interface and click **View Details**.

DETAILED STEPS

- Step 1** On the Device Manager main page, click the **Interfaces** tab.
- Step 2** On the Interfaces page, select an interface and click **View Details**.
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Bringing Up an Interface

When an interface is shut down for any reason, you can attempt to bring up the interface.

SUMMARY STEPS

1. On the Device Manager main page, click the **Interfaces** tab.
2. On the Interfaces page, select an interface and click **Bring Up**.
3. In the Bring Up interface dialog box, click **Yes** to confirm bringing up the interface.

DETAILED STEPS

- Step 1** On the Device Manager main page, click the **Interfaces** tab.
- Step 2** On the Interfaces page, select an interface and click **Bring Up**.
- Step 3** In the Bring Up interface dialog box, click **Yes** to confirm bringing up the interface.
-

Shutting Down an Interface



Note You cannot shut down the interface on which the Device Manager communicates with the CGR 1000 because the connection would be lost.

To shut down an interface:

SUMMARY STEPS

1. On the Device Manager main page, click the **Interfaces** tab.
2. On the Interfaces page, select an interface and click **Shut Down**.
3. In the Shut Down interface dialog box, click **Yes** to confirm shutting down the interface.

DETAILED STEPS

- Step 1** On the Device Manager main page, click the **Interfaces** tab.
- Step 2** On the Interfaces page, select an interface and click **Shut Down**.

Step 3 In the Shut Down interface dialog box, click **Yes** to confirm shutting down the interface.

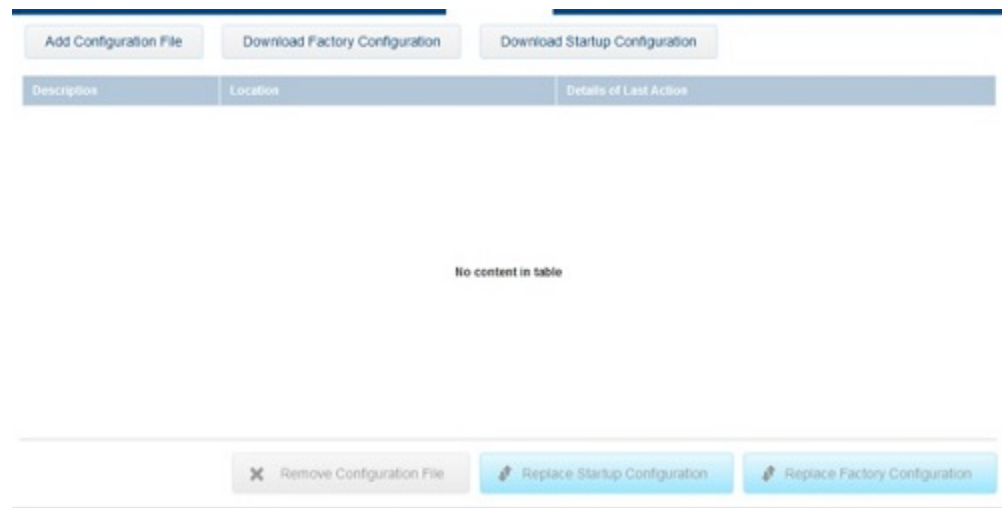
Changing the Configuration

You can upload a router configuration file to the Device Manager and then use that file to replace the startup configuration or the express setup (factory configuration) of the IR800.



Note In NMS mode, you can replace only the factory configuration. In non-NMS mode, you can replace both the startup and factory configuration.

You can also download the factory or startup configuration file from the router to your laptop.



Adding a Configuration File

To add a configuration file to Device Manager:

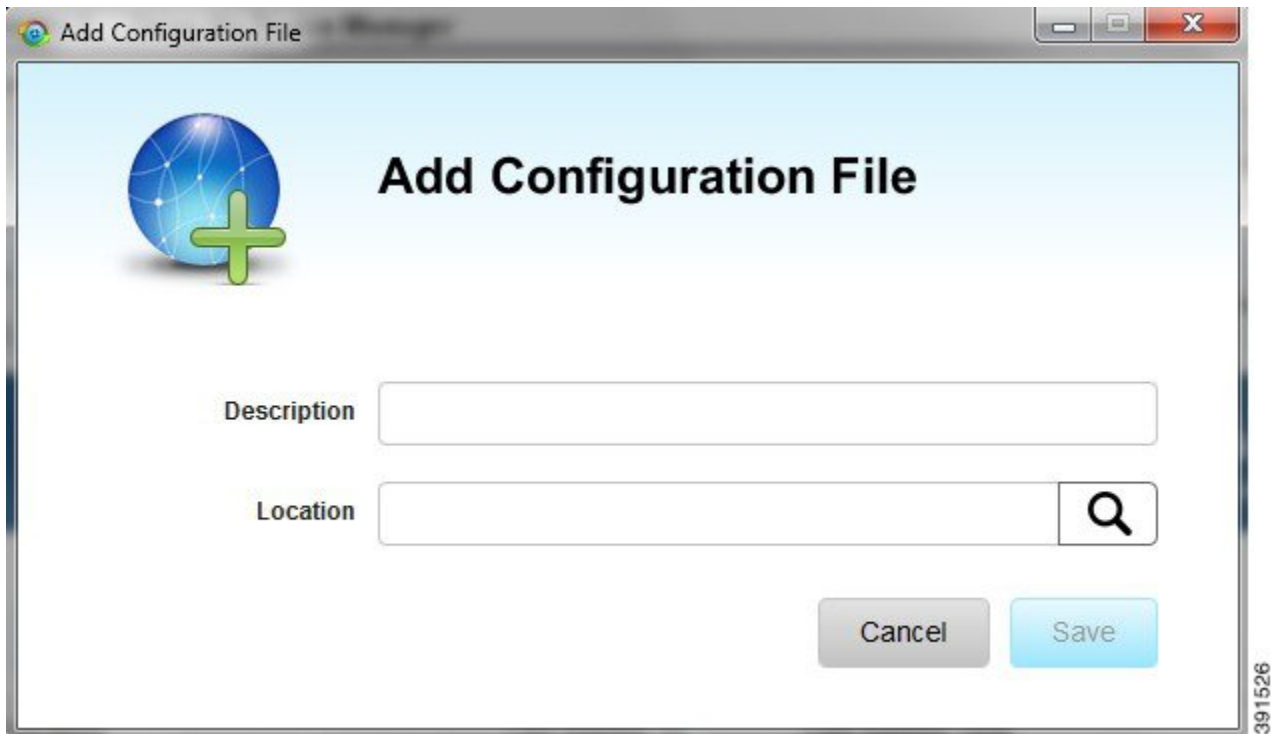
SUMMARY STEPS

1. On the Device Manager main page, click the **Config** tab.
2. Click **Add Configuration File**.
3. In the Add Configuration File dialog box:

DETAILED STEPS

Step 1 On the Device Manager main page, click the **Config** tab.

Step 2 Click **Add Configuration File**.



Step 3 In the Add Configuration File dialog box:

- a) Enter a description for the configuration file that you are going to upload.
- b) Click **Search** to navigate to the configuration file location and select the file.
- c) Click **Save**.

The file you selected is listed on the Config page.

Downloading a Configuration File

To download the factory configuration file or the startup configuration file to the Device Manager laptop:

SUMMARY STEPS

1. On the Device Manager main page, click the **Config** tab.
2. Click **Download Factory Configuration** or **Download Startup Configuration**.
3. In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.

DETAILED STEPS

Step 1 On the Device Manager main page, click the **Config** tab.

Step 2 Click **Download Factory Configuration** or **Download Startup Configuration**.

- Step 3** In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.
-

Replacing a Configuration File

After you add a configuration file to Device Manager (see [Adding a Configuration File](#)), you can find the file name listed on the Config page. You can use the file to update the startup configuration or the express setup (factory configuration).



Caution Replacing the configuration file causes the router to reboot. All connections to the router are lost during the update. After this task starts, there is no way to cancel the event. Be careful when using this feature.

To replace the configuration file on the router:

SUMMARY STEPS

1. On the Config page, select the configuration file that you want to install and click **Replace Startup Configuration** or **Replace Factory Configuration**.
2. In the confirmation dialog box, click **Yes** to begin installing the router configuration file.

DETAILED STEPS

Step 1 On the Config page, select the configuration file that you want to install and click **Replace Startup Configuration** or **Replace Factory Configuration**.

Step 2 In the confirmation dialog box, click **Yes** to begin installing the router configuration file.

If an error message appears, the file did not upload to the router. Proceed to [Removing a Configuration File](#).

Removing a Configuration File

After you update the router with the new configuration file, you can remove the file from Device Manager. You can also use this function to remove unwanted or duplicate configuration files.

To remove a configuration file:

SUMMARY STEPS

1. On the Config page, select the configuration file you want to remove from the list.
2. Click **Remove Configuration File**.
3. In the dialog box that appears, click **Yes** to remove the file.

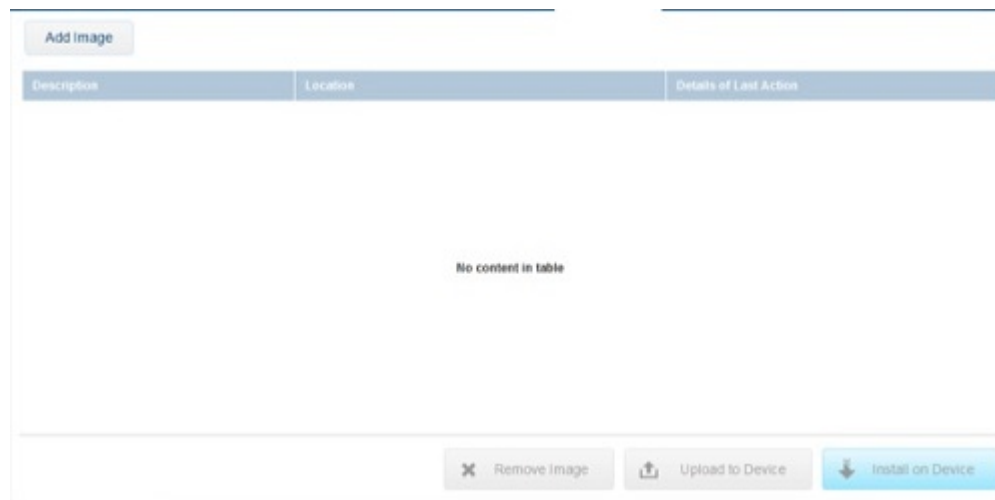
DETAILED STEPS

-
- Step 1** On the Config page, select the configuration file you want to remove from the list.
- Step 2** Click **Remove Configuration File**.
- Step 3** In the dialog box that appears, click **Yes** to remove the file.
-

Updating the Firmware Image

The IR800 image bundle contains information that the router uses when starting up and operating. The only acceptable file format for the Cisco IR800 image file is a zip bundle, which contains a manifest file with information on versioning and files. Any missing files in the zip bundle cancels the update. You can find the official Cisco IR800 zip bundle on Cisco.com:

<https://www.cisco.com/c/en/us/support/routers/800-series-industrial-routers/tsd-products-support-series-home.html>



Adding an Image

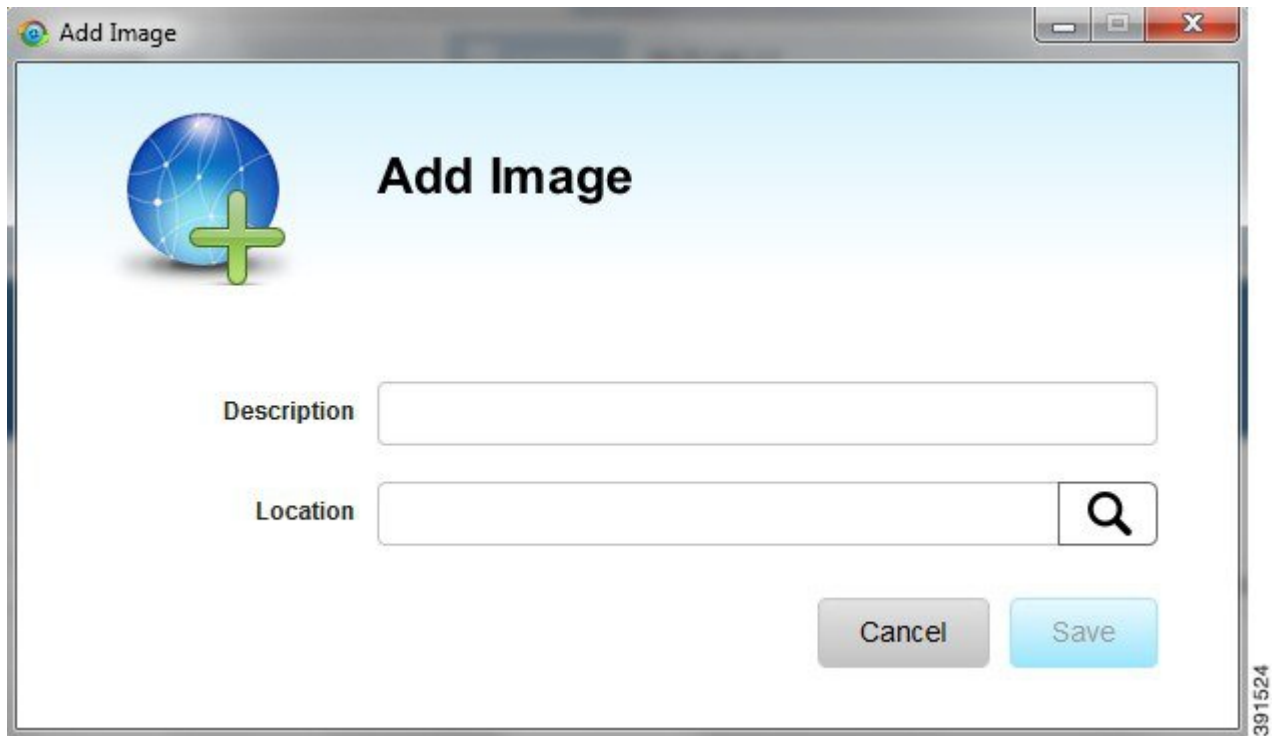
To add an image file to Device Manager:

SUMMARY STEPS

1. On the Device Manager main page, click the **Firmware** tab.
2. Click **Add Image**.
3. In the Add Image dialog box:

DETAILED STEPS

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- Step 1** On the Device Manager main page, click the **Firmware** tab.
- Step 2** Click **Add Image**.

**Step 3**

In the Add Image dialog box:

- a) Enter a description for the image that you are going to upload.
- b) Click **Search** to navigate to the image file location and select the file.
- c) Click **Save**.

The file you select appears on the Firmware page.

Uploading an Image to the Router

The **Upload to Device** option allows you to upload and store a copy of a firmware image on the router without initiating an immediate image install. This capability allows operations personnel to use IoT-FND or a utility management tool to install and reboot the router when network conditions allow.

To upload an image to the router:

SUMMARY STEPS

1. On the Device Manager main page, click the **Firmware** tab.
2. If the firmware image that you want to install on the router is not listed on the Firmware page, add the image (see [Adding an Image](#)).
3. On the Firmware page, select the router firmware image that you want to upload and click **Upload to Device**. The new image is stored on the router until you are ready to install the image on the router. (See [Installing an Image](#).)

DETAILED STEPS

-
- Step 1** On the Device Manager main page, click the **Firmware** tab.
- Step 2** If the firmware image that you want to install on the router is not listed on the Firmware page, add the image (see [Adding an Image](#)).
- Step 3** On the Firmware page, select the router firmware image that you want to upload and click **Upload to Device**. The new image is stored on the router until you are ready to install the image on the router. (See [Installing an Image](#).)
-

Installing an Image



Caution

Be careful when using this feature. After this task starts, there is no way to cancel the event. Updating the router firmware image might take a while to complete and requires a reboot. All connections to the router are unavailable during the image update.

To install an image:

SUMMARY STEPS

1. On the Firmware page, select the image file to install and click **Install on Device**.
2. In the dialog box that appears, click **Yes** to exclude Guest OS from the installation.
3. If you click Yes, Guest OS will not be upgraded.
4. If the firmware image already exists in the router, you are prompted to confirm reinstalling the same image.
5. In the confirmation dialog box, click **Yes** to begin the install process. After the router firmware update completes, the router reboots.

DETAILED STEPS

-
- Step 1** On the Firmware page, select the image file to install and click **Install on Device**.
- Step 2** In the dialog box that appears, click **Yes** to exclude Guest OS from the installation.
- Step 3** If you click Yes, Guest OS will not be upgraded.
- Step 4** If the firmware image already exists in the router, you are prompted to confirm reinstalling the same image.
- Step 5** In the confirmation dialog box, click **Yes** to begin the install process. After the router firmware update completes, the router reboots.
-

Removing an Image

After you install an image, you can remove the image file from the Device Manager. You can also use the Remove image option to remove an image file.

To remove an image file:

SUMMARY STEPS

1. On the Update Image page, select a image.
2. Click **Remove Image**.
3. In the dialog box that appears, click **Yes** to remove the image. A message warns you if the image has not yet been installed on the router.

DETAILED STEPS

Step 1 On the Update Image page, select a image.

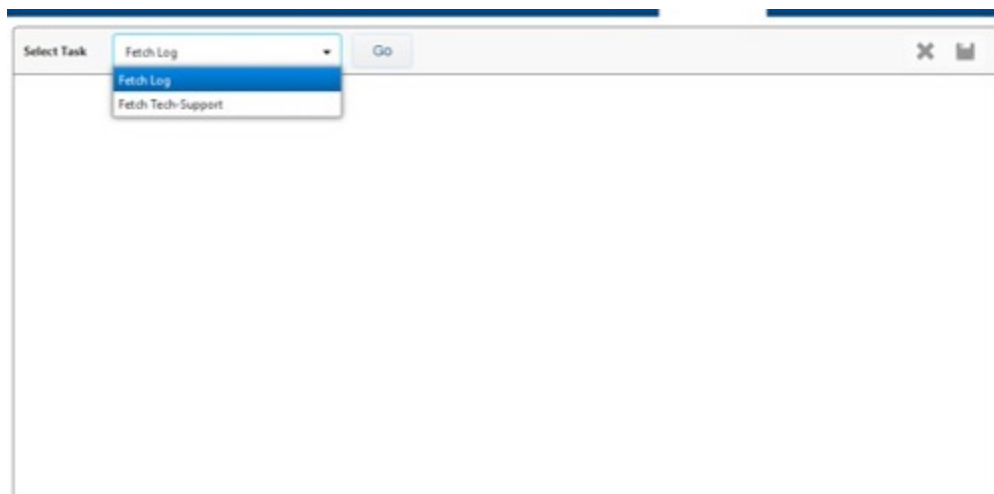
Step 2 Click **Remove Image**.

Step 3 In the dialog box that appears, click **Yes** to remove the image. A message warns you if the image has not yet been installed on the router.

Retrieving Logs

You can retrieve real-time log events from the IR800 and view them on the Log page or save the information to a file.

You can specify either the system log or the tech support log for retrieval.



Retrieving and Saving Logs

To retrieve real-time log events from the router:

SUMMARY STEPS

1. On the Device Manager main page, click the **Log tab**.
2. On the Log page, select the report retrieval task from the Select Task drop-down menu:
3. To save a copy of the retrieved log events displayed on the page, click Save.

4. In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.
5. To clear the output, click the black cross.

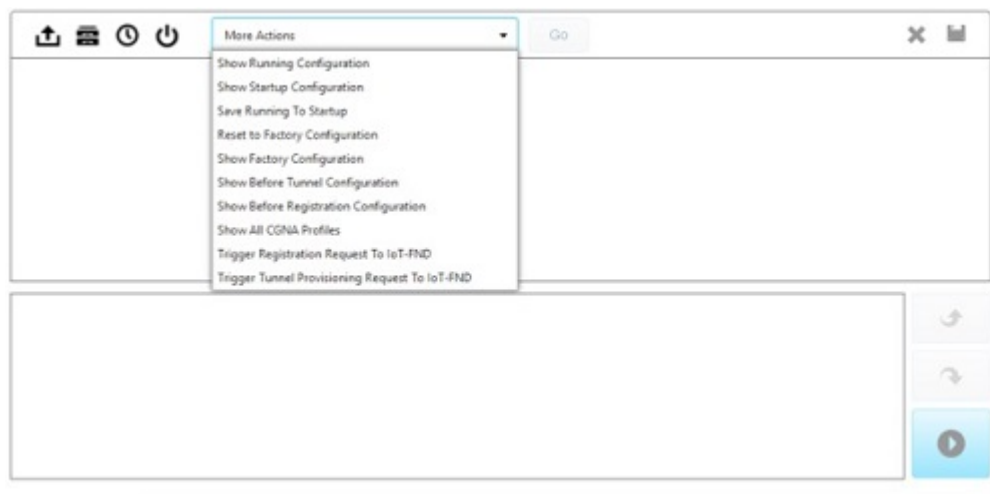
DETAILED STEPS

-
- Step 1** On the Device Manager main page, click the **Log** tab.
- Step 2** On the Log page, select the report retrieval task from the Select Task drop-down menu:
- Fetch Log—Retrieves the output from the **show logging** command.
 - Fetch Tech-Support—Retrieves the output from the **show tech-support** command.
- Step 3** To save a copy of the retrieved log events displayed on the page, click Save.
- Step 4** In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.
- Step 5** To clear the output, click the black cross.
-

Executing Commands

The Advanced page provides access to the IR800 CLI to fine-tune or troubleshoot the router. You must have admin privilege and be familiar with Cisco IOS commands. For details on supported commands, refer to the IR800 software configuration guides

at: https://www.cisco.com/c/en/us/td/docs/routers/access/800/829/software/configuration/guide/b_IR800config.html.



SUMMARY STEPS

1. On the Device Manager main page, click the **Advanced** tab.
2. Enter Cisco IOS commands in the text input area at the bottom of the page as follows:
3. Use the buttons above the output area for the following common commands:

4. To save a copy of the output, click Save.
5. In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.
6. To clear the output, click the black cross.

DETAILED STEPS

Step 1 On the Device Manager main page, click the **Advanced** tab.

Step 2 Enter Cisco IOS commands in the text input area at the bottom of the page as follows:

- To execute an exec command (for example, **show Running Configuration**), type the command and click the execute button.
- To execute multiple exec commands, type one command per line and click the execute button.
- Use the up arrow to display the previous command.
- Use the down arrow to display the next command.
- To execute config commands, enclose all of the config commands between **configure terminal** and **end** commands, and click the execute button.

Command output appears in the output area above the text input area.

Step 3 Use the buttons above the output area for the following common commands:

- **Upload File**
 - Upload a new image file to the router.
- **File Directory**—Display the router file directory.
- **System Time**—Display the current setting of the system clock for the router.
- **Reboot**—Reboot the router.

You can also select a command from the **More Actions** drop-down menu, then click **Go**. The following commands are available:

- Show Running Configuration
- Show Startup Configuration
- Save Running to Startup
- Reset to Factory Configuration
- Show Factory Configuration
- Show Before Tunnel Configuration
- Show Before Registration Configuration
- Show All CGNA Profiles
- Trigger Registration Request to IoT-FND
- Trigger Tunnel Provisioning Request to IoT-FND

- Step 4** To save a copy of the output, click **Save**.
- Step 5** In the Save As dialog box, enter a file name and click **Save**. A message appears indicating that the output was saved successfully.
- Step 6** To clear the output, click the black cross.
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Disconnecting from the IR800

After finishing your work on the IR800, click the left arrow on the left side of the menu tabs area on the main page to disconnect Device Manager from the router. Click **Yes** to confirm that you want to disconnect from the device. Device Manager disconnects and displays the Device Manager opening page.