RAPTOR iMX350-Quick Start Guide

RAPTOR™

Intelligent Cyber Secure Platform

iMX350

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1. Introduction

The Quick Start Guide provides instruction for first time users on how to login to the RAPTOR through the *WebUI*, Console or *SSH* interfaces, how to backup and restore configurations, and how to upgrade the device.

This document explains how to use Command Line Interface (*CLI*) interface and Web user interface (*WebUI*) to perform the following tasks:

- Login to the RAPTOR
- Create an *IP* address for *VLAN* #1
- Set password, switch name, banner name, and prompt
- Save configuration
- Restore configuration
- Upgrade the RAPTOR

1.1. Purpose and Scope

This document covers the startup procedures and specifies the basic configuration commands.

For more information or support, email support@is5com.com.

This document has been validated against the following product.

2. Supported Upgrade Paths

This section documents the supported upgrade paths on the RAPTOR

The RAPTOR supports the following upgrade paths. If the release that your device is running is not listed on the table below, it is recommended that the iS5Com support team is contacted for more detailed instructions.

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

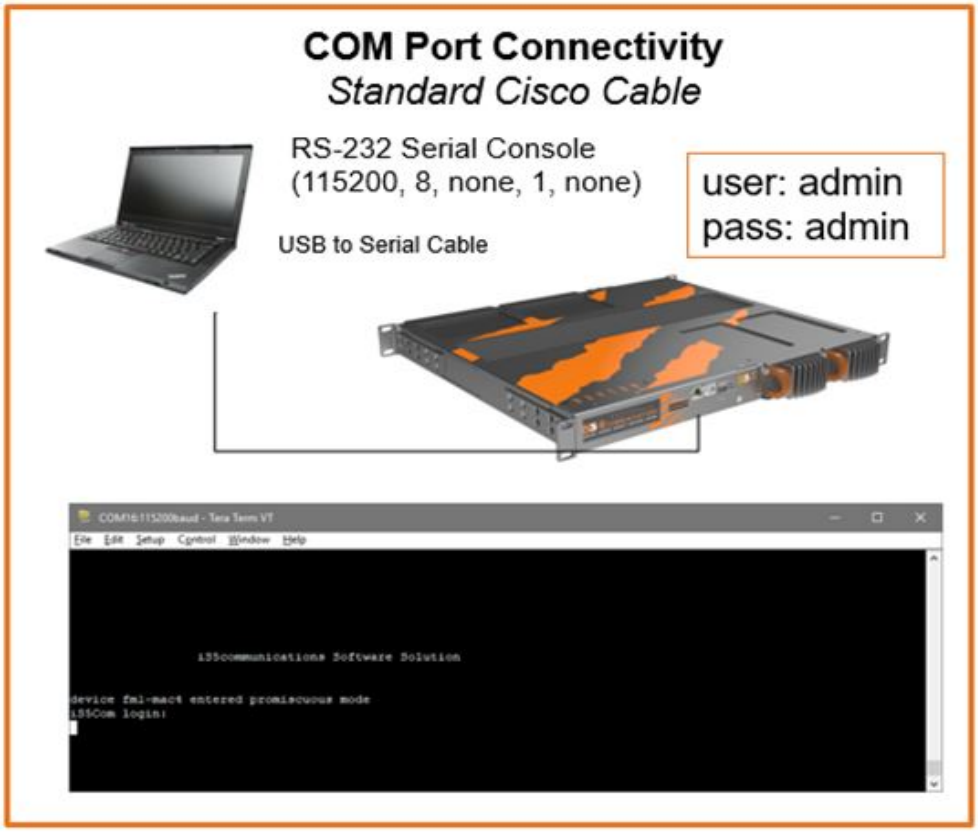
Initial Running Version	Destination Version	Notes
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

3. Console Port: Logging into the RAPTOR

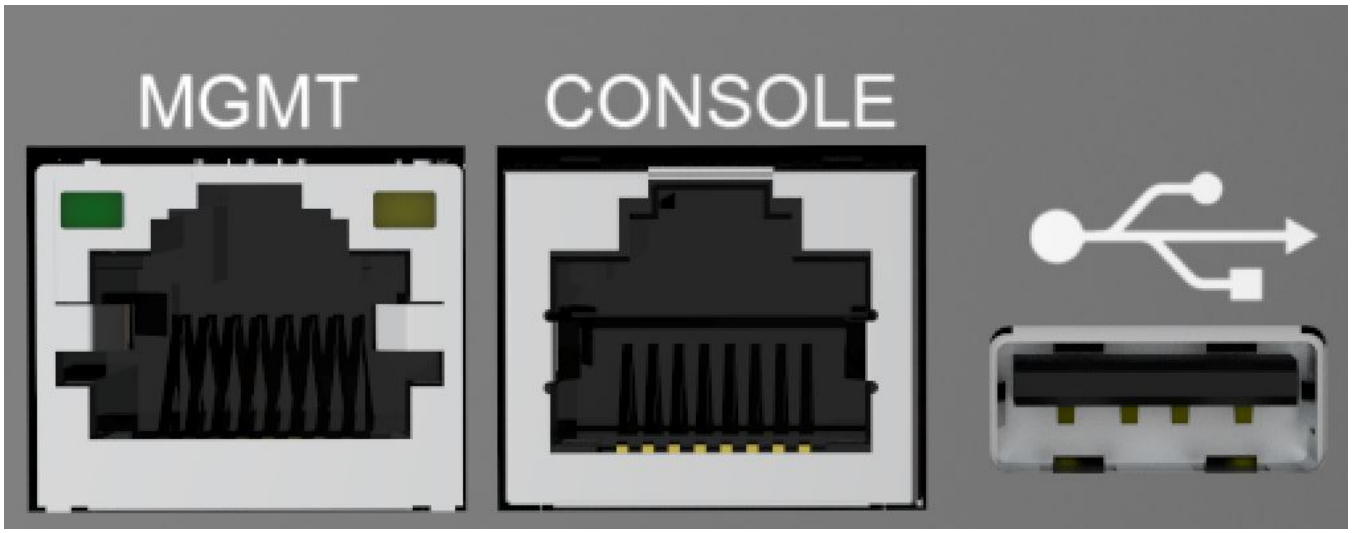
The following sections describe how the serial console interface on the RAPTOR is used to configure an *IP* Address, save a configuration, and upgrade the firmware.

1. On a laptop, install a terminal emulator. A popular option is Putty.
   a. A link to download Putty is: https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

   FOR EXAMPLE: **NOTE:** Use an USB to RJ45 Console Cable to connect between the PC and the RAPTOR

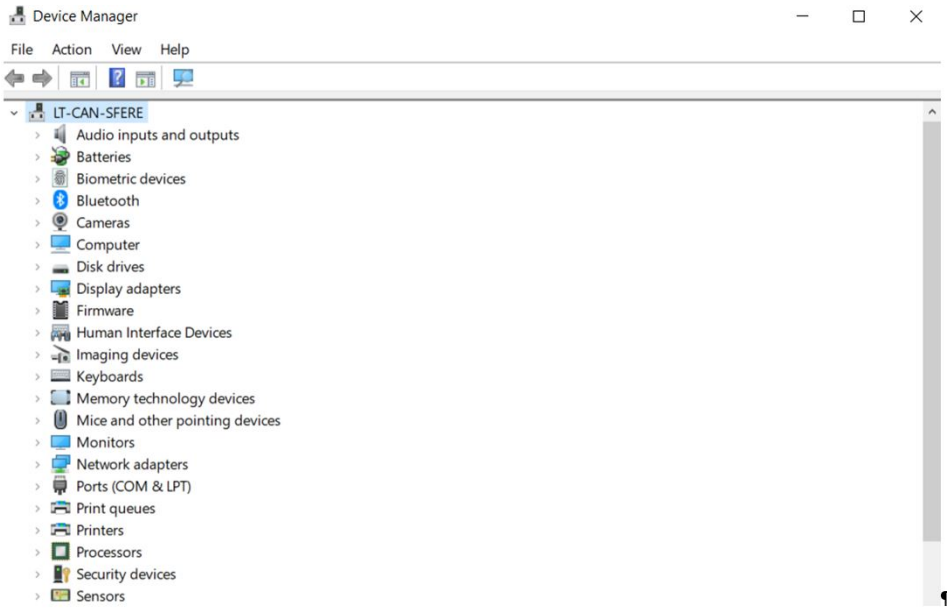


NOTE: Console Ports on RAPTOR



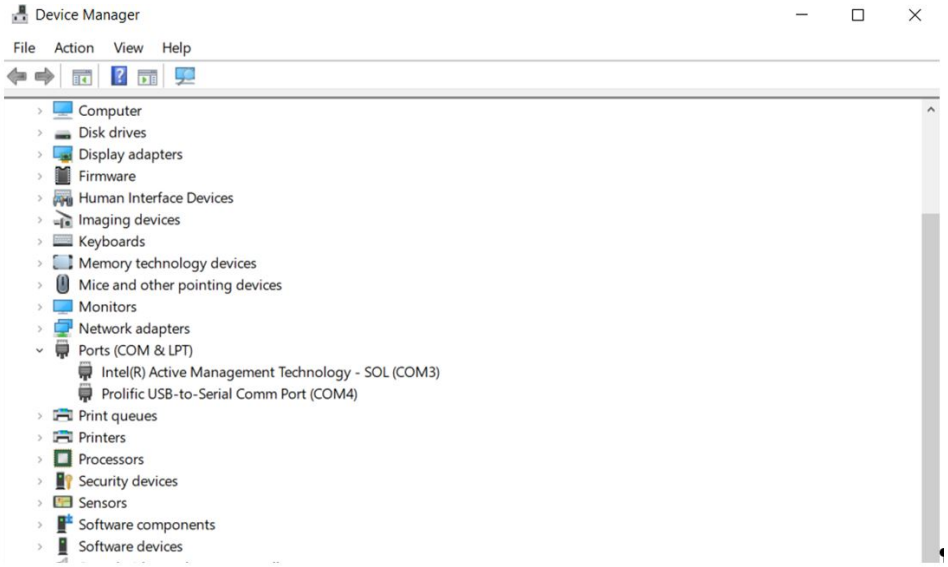
2. Form a serial connection from your computer to the console port of the RAPTOR, by attaching the console port to the USB port of your laptop or PC and the RJ45 termination to the console port on the RAPTOR.
3. To determine the communications port being used on your computer, go to the Control Panel, and open **Device Manager** on your PC or laptop.
    a. Open **Device Manager.**

        RESULT: The Device Manager window appears.



b. Navigate to **Ports** to determine which COM number the serial connection is using. You may have to unplug and reinsert the USB connection on your PC to make a determination of which COM number has been assigned to your serial connection.

RESULT: When the Ports leaf is expanded it will appear similar to the image below.



4. Putty can be configured by selecting the type of connection, entering the port number, and setting the baud rate.

   a. Additional serial parameters can be configured in Putty by selecting the **Serial** category found at the bottom of the **Category** panel.

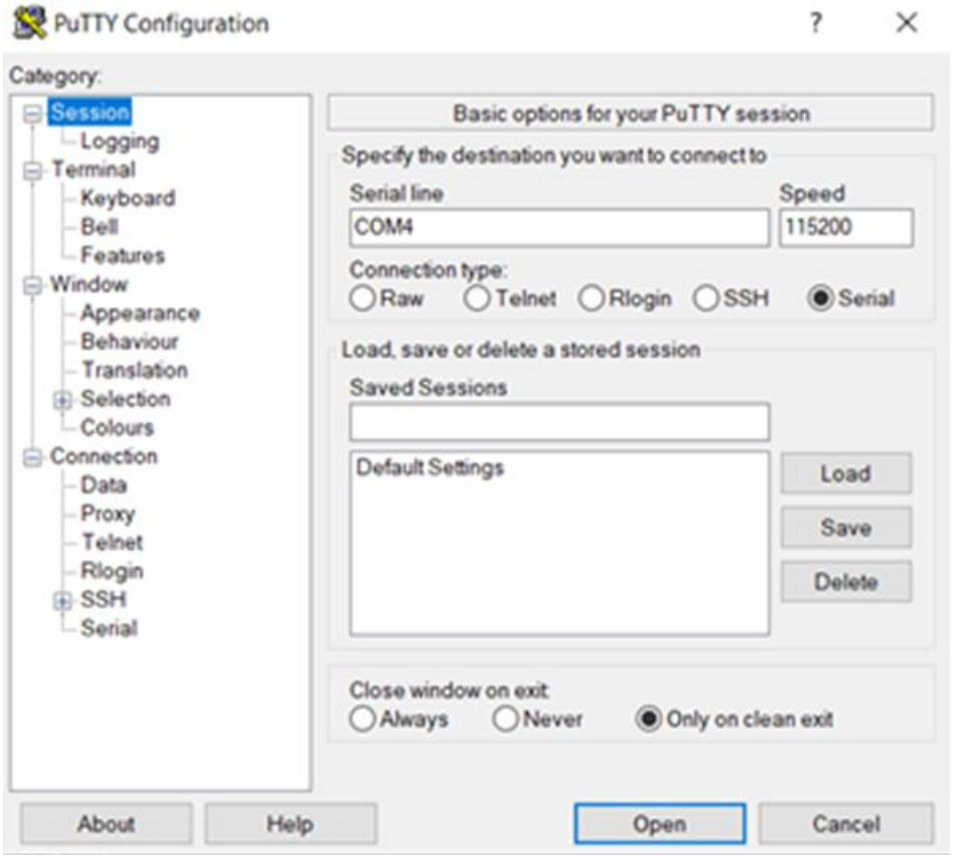
NOTE: *The serial port configuration is as follows:*

- Baud rate: 115200
- Data: 8

- Parity: none
- Stop: 1
- Flow Control: none

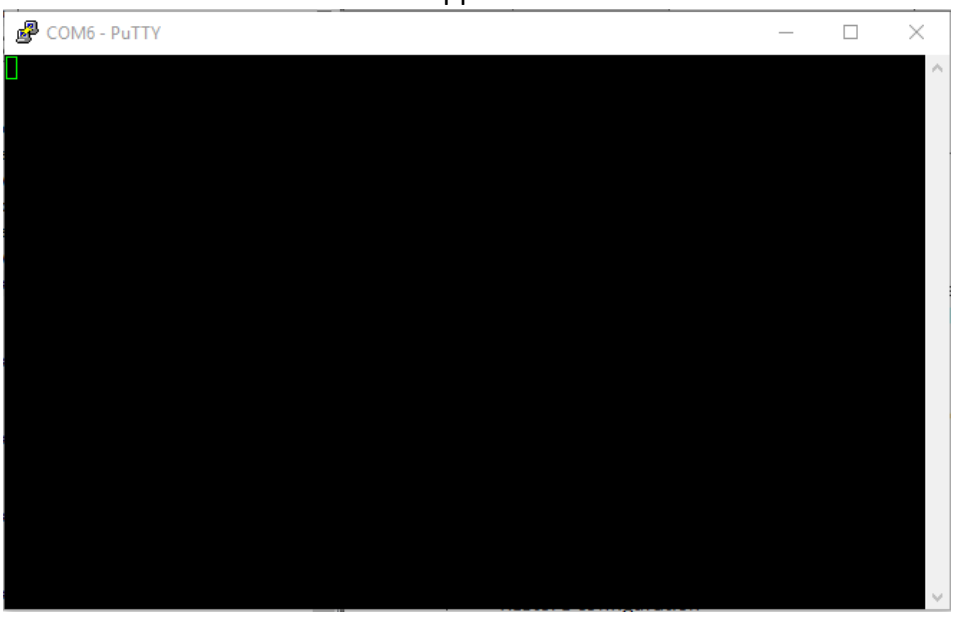
b. You should confirm in Putty's user interface that it has been configured with the appropriate Baud rate, Data, Parity, stop and flow control values.

STEP RESULT: The following image provides an image of the port and baud rate being set.



5. Click **Open** to launch a terminal.

   STEP RESULT: A blank terminal window will appear.



6. Press **Enter.**

   STEP RESULT: The login prompt will appear in the terminal window.

```
% Incorrect Login/Password

iMX350 Login:
```

7. To access the command line interface *CLI* shell, at the RAPTOR login prompt, use the user name **admin** and password **admin**.

   STEP RESULT: If this is the first login to the device, then you will be prompted to change the password.

```
% Password must be reset. Please change the password
Enter old password:
```

8. Enter the old password which is **admin**.

   STEP RESULT: You will now be prompted for a new password.

```
Enter new password:
```

NOTE: The new password must meet the following criteria:

```
Password length should be in the range of 8 - 20 !! characters
Password should contain at least 1 lowercase characters !!
Password should contain at least 1 uppercase characters !!
Password should contain at least 1 numerical characters !!
Password should contain at least 1 special characters !!
New Password must be different from previous password
```

9. Enter the new password.

   STEP RESULT: You will be prompted to confirm the new password.

   ```
   Re-enter new password:
   ```

10. Re-enter the new password.

    STEP RESULT: The console prompt will appear.

    ```
    iS5Comm#
    ```

RESULT:

You have logged into the RAPTOR via the console port.

4. SSH: Logging into the RAPTOR

This section describes how an *SSH* session can be established between a laptop and the RAPTOR.

CONTEXT:

RAPTOR can be configured through an *SSH* Interface from a terminal emulator such as Putty. The command line interface allows the user to control various parameters at the system and protocol level.

NOTE: *The following image illustrates the network connection between a laptop and the switch.*

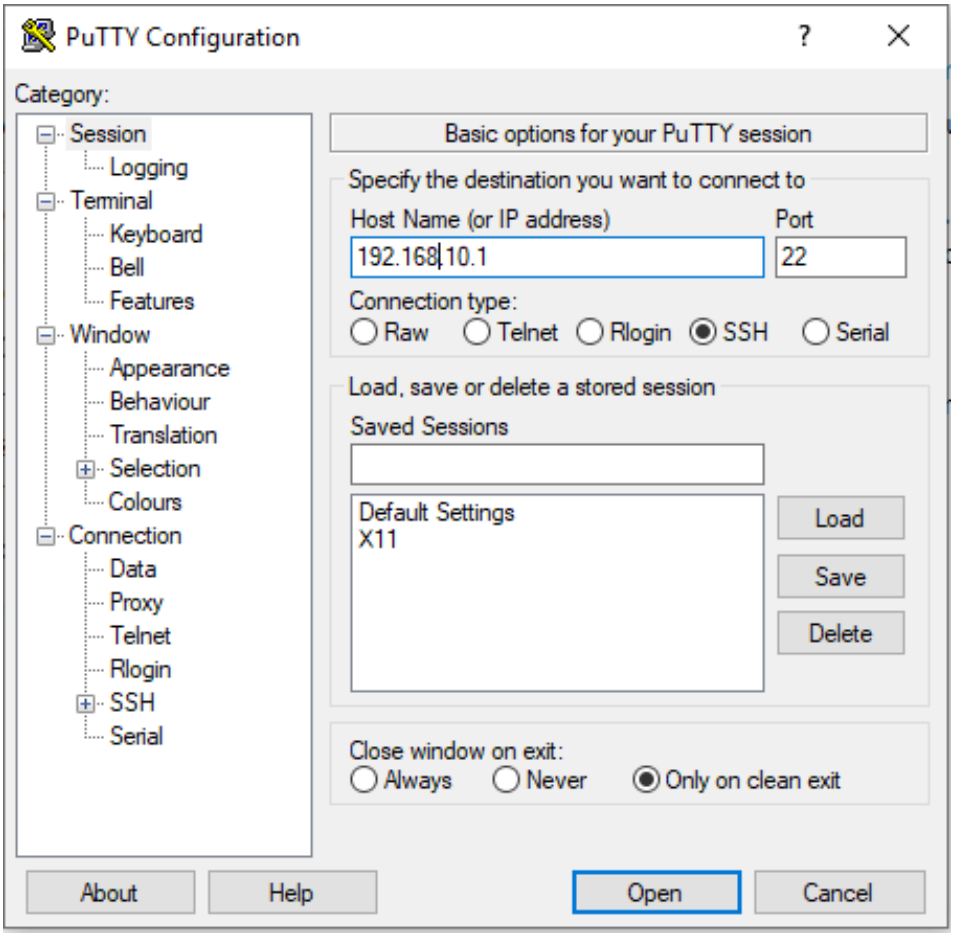
Before configuring the RAPTOR from a PC, confirm accessibility of RAPTOR's firmware by pinging it from the PC.

1. On a laptop, install a terminal emulator. A popular option is Putty.
   a. A link to download Putty is: https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html
2. An Ethernet cable must connect the RAPTOR's switch ports and a computer. The computer interface should be assigned an *IP* address on the 192.168.10.0/24 network.

   FOR EXAMPLE: An address of 192.168.10.100 with a subnet mask of 255.255.255.0 is one such suitable combination of an *IP* address and submask to be assigned for the computer to be used in the connection.

3. Open Putty, select the connection type of *SSH*, and provide the default *IP* address of the RAPTOR of 192.168.10.1. Then, click **Open.**

FOR EXAMPLE: The following image is an example of the Putty configuration screen.



STEP RESULT: A login prompt will appear on a terminal screen after **Open** is pressed.

4. To access the command line interface *CLI* shell, at the iS5Com login prompt, use the user name **admin** and password **admin**.

   STEP RESULT: If this is the first login to the device, you will be prompted to change the password.

   ```
   % Password must be reset. Please change the password
   Enter old password:
   ```

5. Enter the old password which is **admin**.

   STEP RESULT: You will now be prompted for a new password.

   ```
   Enter new password:
   ```

NOTE: The new password must meet the following criteria:

```
Password length should be in the range of 8 - 20 !! characters
Password should contain at least 1 lowercase characters !!
Password should contain at least 1 uppercase characters !!
Password should contain at least 1 numerical characters !!
Password should contain at least 1 special characters !!
New Password must be different from previous password
```

6. Enter the new password.

   STEP RESULT: You will be prompted to confirm the new password.

   ```
   Re-enter new password:
   ```

7. Re-enter the new password.

   STEP RESULT: The console prompt will appear.

   ```
   iS5Comm#
   ```

RESULT:

You have logged into the RAPTOR via a *SSH* connection.

5. Command Line: Switch Name

This section will document how to configure the RAPTOR's name.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the console cable or through *SSH*.

1. Configure the switch name.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# configure terminal
   iS5Comm(config)# set switch-name XYZ
   iS5Comm(config)# exit
   ```

   STEP RESULT: The switch name has been changed to **XYZ**

6. Command Line: Switch Prompt

This section will document how to change the command line prompt.

PREREQUISITE:

In order to perform the tasks in this section you will have already logged into the RAPTOR via the console cable or through *SSH*.

1. Configure the switch prompt.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# configure terminal
   iS5Comm(config)# set prompt-name Prompt-XYZ
   Prompt-XYZ(config)# exit
   ```

   STEP RESULT: The command line prompt has been changed to **Prompt-XYZ**

7. Command Line: IP Address Configuration

This section will document the configuration of an IP Address and a default route.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the console cable or through *SSH*.

Speak with your Network Administrator to determine the values of the following parameters:

- IP Address
- IP Address Mask
- Default Route

These values will be needed to configure the RAPTOR.

1. Configure the IP Address.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# configure terminal
   iS5Comm(config)# interface vlan 1
   iS5Comm(config-if)# ip address <IP Address> <IP Address Mask>
   iS5Comm(config-if)# no shutdown
   iS5Comm(config-if)# exit
   iS5Comm(config)# exit
   ```

   STEP RESULT: The IP Address for the RAPTOR has been set.

2. Configure the default route.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# configure terminal
   iS5Comm(config)# ip route 0.0.0.0 0.0.0.0 192.168.32.254
   iS5Comm(config)# exit
   ```

   STEP RESULT: The default route has been set to **192.168.32.254**.

8. Command Line: Admin Password

This section will document how to set the administrator password.

PREREQUISITE:

In order to perform the tasks in this section you will have already logged into the RAPTOR via the console cable or through *SSH*.

1. Configure the administrator password.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# configure terminal
   iS5Comm(config)# username admin password Abcd123! privilege 15
   confirm-password Abcd123!
   iS5Comm(config)# exit
   ```

   STEP RESULT: The password has been changed to **Abcd123!**

   NOTE: The password by default must consist of a minimum of 8 characters. The characters must consist of a minimum of one lowercase, one uppercase, one number, and one special character !@#$%^&*()_+-:”;’{}[]|\~.

   NOTE: Password complexity rules may be changed by the administrator using the system commands.

9. Command Line: Save and Restore Configuration

This section will document how to save and restore the RAPTOR configuration.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the console cable or through *SSH*.

1. Save the running configuration to flash memory.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# write startup-config
   ```

   STEP RESULT: The following will appear on the terminal when logged in via the console port.

   ```
   Building configuration ...
   [OK]
   ```

   The prompt will reappear and the configuration will now be saved in flash memory.

2. Optionally, you could save the configuration to USB. Insert a USB drive into the RAPTOR and type the following.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# copy startup-config usb
   ```

   STEP RESULT: The following will appear followed by a prompt.

   ```
   Configuration is copied to USB
   ```

3. The configuration can be also saved to TFTP.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# copy startup-config <tftp_url>
   ```

   STEP RESULT: The following will appear followed by a prompt.

   ```
   Configuration is copied to TFTP.
   ```

4. The configuration can be saved to SFTP as well.

   FOR EXAMPLE: At the command prompt type:

   ```
   iS5Comm# copy startup-config <sftp_url>
   ```

   STEP RESULT: The following will appear followed by a prompt.

   ```
   Configuration is copied to SFTP.
   ```

5. A configuration that was saved to a USB can be restored.

   a. Insert the USB thumb drive into the RAPTOR and type the following:

      FOR EXAMPLE: *iS5Comm#* copy usb startup-config

      RESULT: The following text will appear followed by a prompt:

      Configuration is restored from USB

      File Copied Successfully

b. For the configuration to be applied, the RAPTOR needs to be reloaded.

FOR EXAMPLE: *iS5Comm*# reload

RESULT: Are you sure you want to reload the device? (Y/N) [N]?

c. Confirm that you would like to reload the device by typing **Y**.

RESULT: The *RAPTOR* will be reloaded.

STEP RESULT: The RAPTOR will be reloaded with the configuration that was restored from the USB.

6. A configuration that was saved to TFTP can also be restored.

a. Perform the following:

FOR EXAMPLE: *iS5Comm*# copy <tftp_url> startup-config

RESULT: The following text will appear followed by a prompt:

Configuration is restored from TFTP

File Copied Successfully

b. For the configuration to be applied, the RAPTOR needs to be reloaded.

FOR EXAMPLE: *iS5Comm*# reload

RESULT: Are you sure you want to reload the device? (Y/N) [N]?

c. Confirm that you would like to reload the device by typing **Y**.

RESULT: The *RAPTOR* will be reloaded.

STEP RESULT: The RAPTOR will be reloaded with the configuration that was restored from the TFTP.

7. A configuration that was saved to SFTP can also be restored.

a. Perform the following:

FOR EXAMPLE: *iS5Comm*# copy <sftp_url> startup-config

RESULT: The following text will appear followed by a prompt:

Configuration is restored from SFTP

File Copied Successfully

b. For the configuration to be applied, the RAPTOR needs to be reloaded.

FOR EXAMPLE: *iS5Comm*# reload

RESULT: Are you sure you want to reload the device? (Y/N) [N]?

c. Confirm that you would like to reload the device by typing **Y**.

RESULT: The *RAPTOR* will be reloaded.

STEP RESULT: The RAPTOR will be reloaded with the configuration that was restored from the SFTP.

10. Command Line: Upgrading the RAPTOR using a USB

This section will document how to upgrade the firmware on the RAPTOR. This process takes approximately 5 minutes to execute.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via an *SSH* connection or through the console port. For all upgrades it is recommended that user's backup their current running configuration prior to commencing the upgrade process.

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

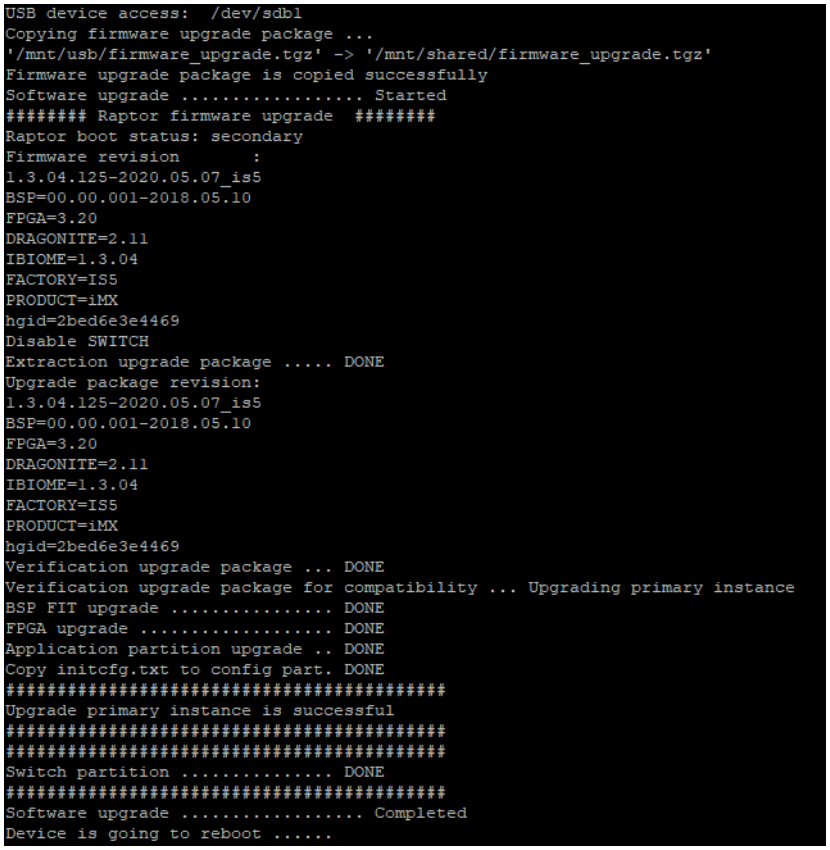
Initial Running Version	Destination Version	Notes
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the Supported Upgrade Paths table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. Optionally, you may choose to upgrade the RAPTOR firmware.
   a. Rename the upgrade software file to “firmware-upgrade.tgz” and copy the file to the USB stick.
   b. Insert USB stick into front panel USB connector.
   c. Type the following:

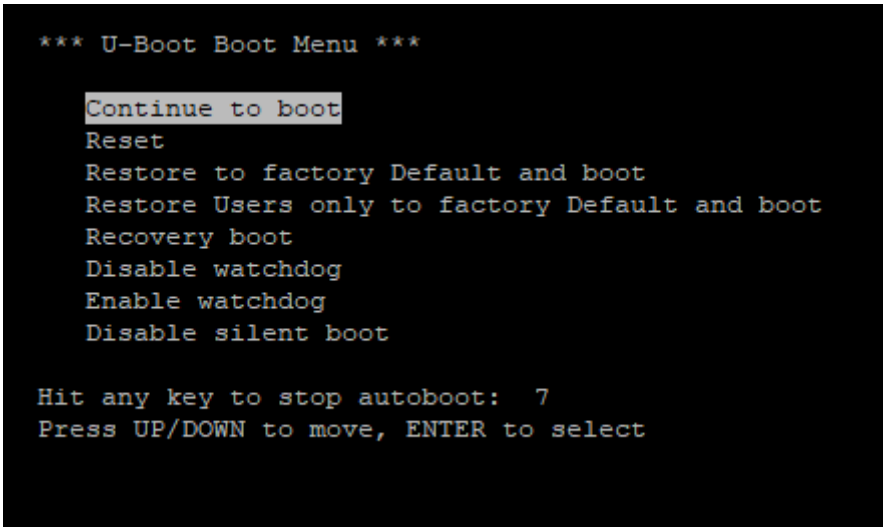
      FOR EXAMPLE: *iS5Comm#* firmware upgrade usb firmware_upgrade.tgz

   STEP RESULT: The upgrade process will begin, text similar the following will begin scrolling on the terminal.



2. Allow the RAPTOR to reboot, the U-Boot menu will appear. Do not interact with it.

   STEP RESULT: Do not interact with this menu and the boot process will proceed automatically.



   The clock will expire and the upgrade will proceed without user intervention.

   The upgrade process will terminate at a user prompt.

```
CSR: Apr 8 06: 24:48 2021 Restoration successfully completed

iMX350 login:
```

RESULT:

The RAPTOR has been upgraded and users may now login to it.

11. Command Line: Upgrading the RAPTOR using SFTP

This section will document how to upgrade the firmware on the RAPTOR. This process takes approximately 5 minutes to execute.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via an *SSH* connection or through the console port. For all upgrades it is recommended that user's backup their current running configuration prior to commencing the upgrade process.

A SFTP server must be installed on a device with network connectivity to the RAPTOR. There are a number of commercial and free SFTP server options available. We have tested the RAPTOR using the Core FTP server: http://www.coreftp.com/server/ and Solar Winds SFTP server: https://www.solarwinds.com/free-tools/free-sftp-server

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

Initial Running Version	Destination Version	Notes
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the Supported Upgrade Paths table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. Install the SFTP server on a machine that has network connectivity to the RAPTOR.
2. Configure the SFTP server such that its base directory contains the firmware file you wish to upload. Depending on the server software you are using there may be more settings that need to be configured.
3. Optionally, you may choose to upgrade the RAPTOR firmware.
   a. Copy the upgrade software file to the base directory on your TFTP server.
   b. Login to the RAPTOR.
   c. Type the following, you will have to change the IP address and filename for your particular needs.:

      FOR EXAMPLE: *iS5Comm#* firmware upgrade sftp://tester:password@192.168.0.7//firmware_upgrade.tgz

   STEP RESULT: The upload process will begin and progress will be shown on the terminal.

```
iS5comm# firmware upgrade sftp://tester:password@192.168.0.7//firmware_upgrade.t
gz
```

   The upgrade will begin once the download is complete.

```
iS5comm# firmware upgrade sftp://tester:password@192.168.0.7//firmware_upgrade.t
gz
######## Firmware Upgrade  ########
Boot status: secondary
Firmware revision       :
1.14.09.815-2022.09.26_is5
BSP=00.00.001-2018.05.10
FPGA=4.10
SC_FPGA=6.07
HSRPRP_FPGA=1.02
DRAGONITE=2.23
RECVERSION=3.18-2022.09.26
IBIOME=1.14.09
FACTORY=IS5
PRODUCT=iMX
DATE=2022.09.26-01:00:12
hgid=eb604168226a+
Disable SWITCH
Extract upgrade package .....
```

4. The RAPTOR will reboot as part of the upgrade process.

   STEP RESULT: The upgrade process will terminate at a user prompt.

```
                RAPTOR iBiome OS
MSR: Jun  3 00:08:54 2020 Restoration successfully completed
iS5com login:
```

5. If you are upgrading the RAPTOR from release 1.13.05 or 1.12.05 then you may have to perform these additional steps.
   a. Login to the RAPTOR and type the following:

      FOR EXAMPLE: *iS5Comm*# configure terminal

      RESULT: The prompt will appear as follows:

      iS5Comm(config)#

   b. If IGMP was configured on your RAPTOR before the upgrade, please type the following:

      FOR EXAMPLE: *iS5Comm*(config)# set ip igmp enable

      RESULT: IGMP will once again be enabled.

   c. If your switch had PIM configured prior to the upgrade please perform the following tasks.

      FOR EXAMPLE: *iS5Comm*(config)# ip pim component 1

      FOR EXAMPLE: iS5Comm(pim-comp)# rp-canadidate rp-address <group address> <group mask> <Ip address> [Priority ,0-255>]

      rp-candidate rp-address 239.1.1.1 255.255.255.255 7.7.7.7 5

      FOR EXAMPLE: *iS5Comm*(pim-comp)# exit

      FOR EXAMPLE: Repeat step ***c*** for other PIM components you have configured on your switch.

   d. Save your configuration

      FOR EXAMPLE: *iS5Comm*(config)# exit

      iS5Comm# write startup-configuration

      RESULT: The configuration changes have now been saved.

12. Command Line: Upgrading the RAPTOR using TFTP

This section will document how to upgrade the firmware on the RAPTOR. This process takes approximately 5 minutes to execute.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via an *SSH* connection or through the console port. For all upgrades it is recommended that user's backup their current running configuration prior to commencing the upgrade process.

A TFTP server must be installed on a device with network connectivity to the RAPTOR. There are a number of commercial and free TFTP server options available. For this example Tftpd64 was used as the server. It may be downloaded from this site: https://pjo2.github.io/tftpd64/. The switch has also be tested using SolarWinds TFTP Server: https://www.solarwinds.com/free-tools/free-tftp-server

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	
1.9.xx	1.10.06	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

Initial Running Version	Destination Version	Notes
1.9.xx	1.11.06	
1.10.xx	1.11.06	
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the Supported Upgrade Paths table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. Install the TFTP server on a machine that has network connectivity to the RAPTOR.
2. Configure the TFTP server such that its base directory contains the firmware file you wish to upload. Depending on the server software in use, there may be more settings that need to be configured.
3. Optionally, you may choose to upgrade the RAPTOR firmware.
   a. Copy the upgrade software file to the base directory on your TFTP server.
   b. Login to the RAPTOR.
   c. Type the following, changing the IP address and filename for your particular needs.

      FOR EXAMPLE: *iS5Comm#* firmware upgrade tftp://192.168.0.7/firmware_upgrade.tgz

   STEP RESULT: The upload process will begin and progress will be shown on the terminal.

```
iS5comm# firmware upgrade tftp://192.168.0.7/firmware_upgrade_service_pack_1.14.
09.815-2022.09.26_is5_IMX950.tgz
 ...Completed: 10 %...
 ...Completed: 20 %...
```

   The upgrade will begin once the download is complete.

```
 ...Completed: 70 %...
 ...Completed: 80 %...
 ...Completed: 90 %...
######## Firmware Upgrade  ########
Boot status: secondary
Firmware revision       :
1.14.09.815-2022.09.26_is5
BSP=00.00.001-2018.05.10
FPGA=4.10
SC_FPGA=6.07
HSRPRP_FPGA=1.02
DRAGONITE=2.23
RECVERSION=3.18-2022.09.26
IBIOME=1.14.09
FACTORY=IS5
PRODUCT=iMX
DATE=2022.09.26-01:00:12
hgid=eb604168226a+
Disable SWITCH
Extract upgrade package .....
```

4. The RAPTOR will reboot as part of the upgrade process.

   STEP RESULT: The upgrade process will terminate at a user prompt.

```
                RAPTOR iBiome OS
MSR: Jun  3 00:08:54 2020 Restoration successfully completed
iS5com login:
```

5. If you are upgrading the RAPTOR from release 1.13.05 or 1.12.05 then you may have to perform these additional steps.
   a. Login to the RAPTOR and type the following:

      FOR EXAMPLE: *iS5Comm*# configure terminal

      RESULT: The prompt will appear as follows:

      iS5Comm(config)#

   b. If IGMP was configured on your RAPTOR before the upgrade, please type the following:

      FOR EXAMPLE: *iS5Comm*(config)# set ip igmp enable

      RESULT: IGMP will once again be enabled.

   c. If your switch had PIM configured prior to the upgrade please perform the following tasks.

      FOR EXAMPLE: *iS5Comm*(config)# ip pim component 1

      FOR EXAMPLE: iS5Comm(pim-comp)# rp-canadidate rp-address <group address> <group mask> <Ip address> [Priority ,0-255>]

      rp-candidate rp-address 239.1.1.1 255.255.255.255 7.7.7.7 5

      FOR EXAMPLE: *iS5Comm*(pim-comp)# exit

      FOR EXAMPLE: Repeat step ***c*** for other PIM components you have configured on your switch.

   d. Save your configuration

      FOR EXAMPLE: *iS5Comm*(config)# exit

      iS5Comm# write startup-configuration

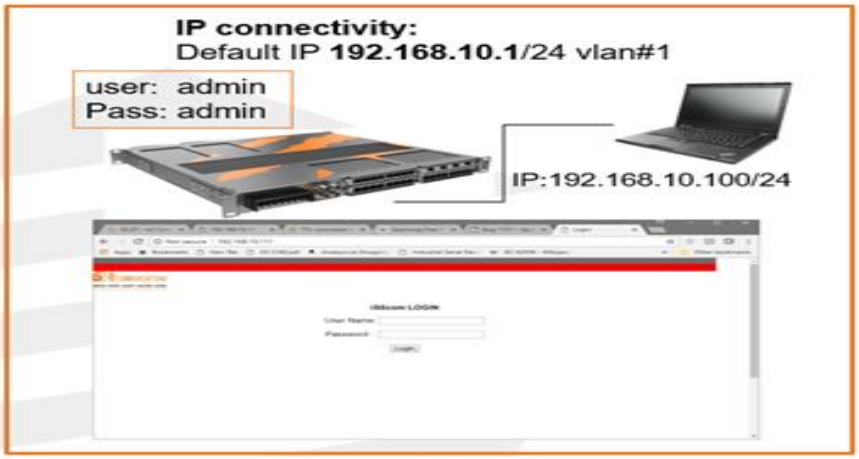
      RESULT: The configuration changes have now been saved.

13. Web Interface: Logging into the RAPTOR

This section describes how to login to the RAPTOR via the *Web UI* (Web User Interface).

PREREQUISITE:

Figure 1: Ethernet / IP Connectivity



CONTEXT:

RAPTOR can be configured through Web User Interface (*Web UI*) from web browsers. The *Web UI* allows the user to control various parameters at the System and Protocol level.

Before configuring the switch from a PC, confirm accessibility of RAPTOR's firmware by pinging it from the PC.

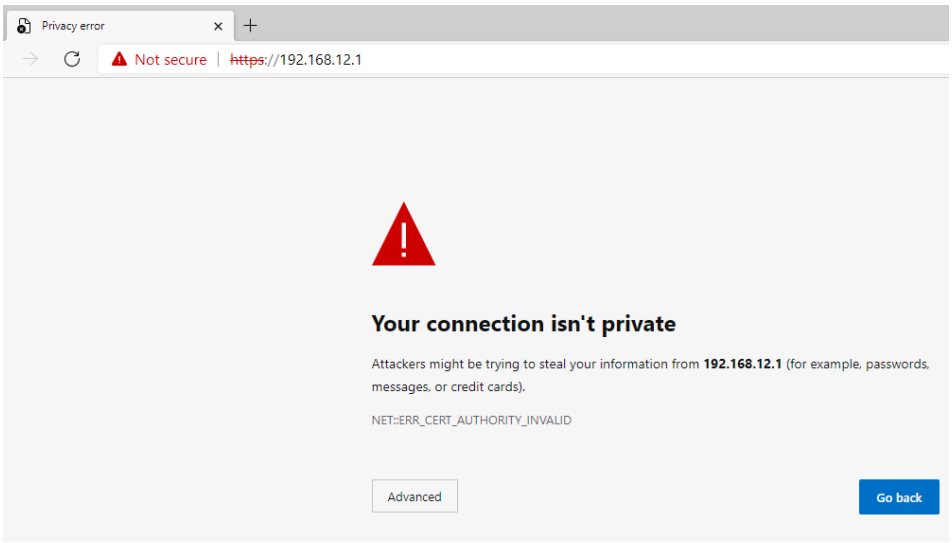
1. An Ethernet cable must connect the switch and a computer. The computer interface should be assigned an IP address on the 192.168.10.0/24 network. This is summarized in *Figure 1*.

   FOR EXAMPLE: An address of 192.168.10.100 with a subnet mask of 255.255.255.0 is one such suitable combination of an IP address and submask to be assigned for the computer to be used in the connection.

2. Launch a web browser to enter the RAPTOR's default IP address. The IP address of the RAPTOR's interface is 192.168.10.1. The https protocol is now the default protocol.

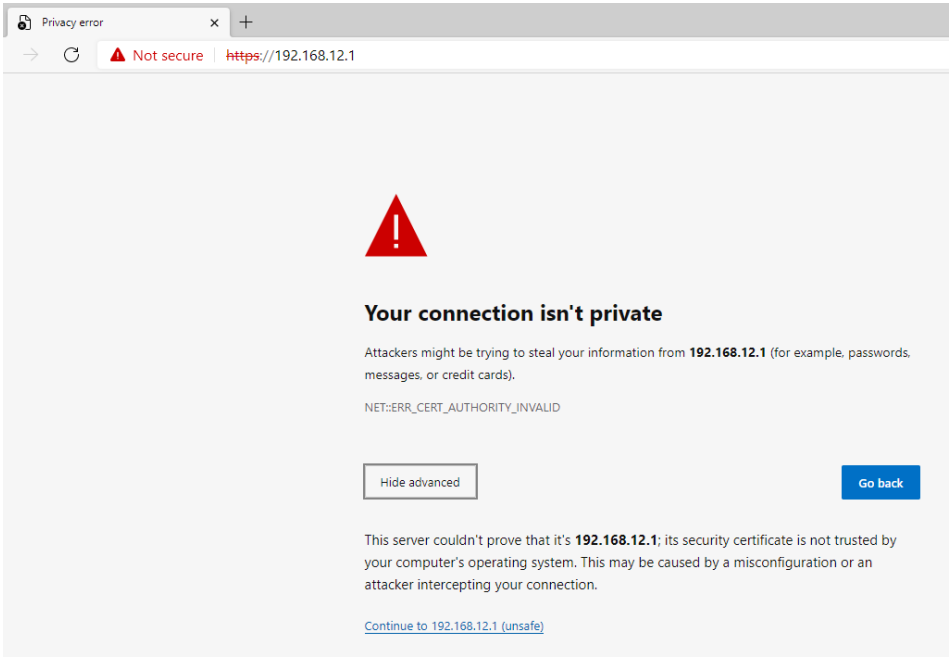
   FOR EXAMPLE: https://192.168.0.1

   STEP RESULT: Warnings from the browser about the web site having an invalid certificate may appear. On the Edge Browser, the following will appear. If the warnings do not appear, skip ahead to Step *4*.



3. Click the **Advanced** button.

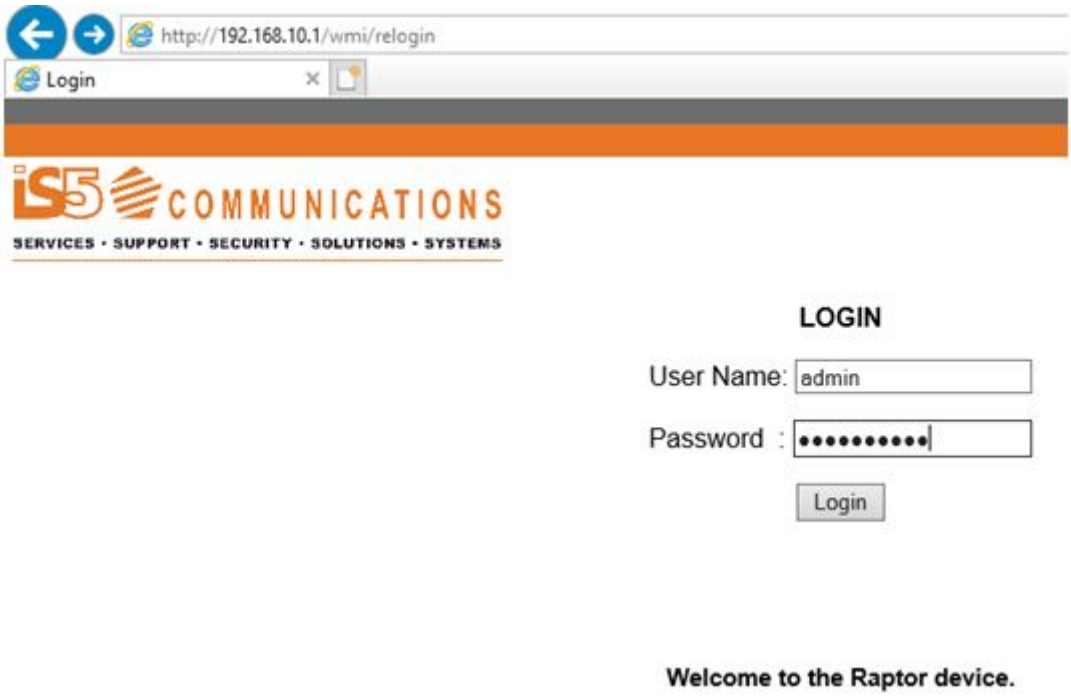
   STEP RESULT: The following screen will appear.



4. Launch a web browser to enter the RAPTOR's default IP address. The IP address of the RAPTOR's interface is 192.168.10.1. Enter **https**://192.168.10.1 into the browser's address bar.

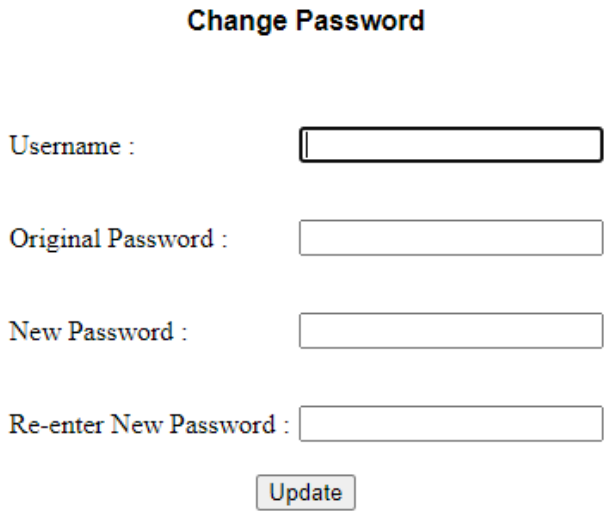
   STEP RESULT: The **Login** page appears.

Figure 2: Login Page



5. Enter the **User Name** "admin" and **Password** "admin" and click **Login.**

   STEP RESULT: If this is the first login to the device the user will be prompted to change the password.



NOTE: The new password must meet the following criteria:

```
Password length should be in the range of 8 - 20 !! characters
Password should contain at least 1 lowercase characters !!
Password should contain at least 1 uppercase characters !!
```

```
Password should contain at least 1 numerical characters !!
Password should contain at least 1 special characters !!
New Password must be different from previous password
```

6. Enter the **User Name** “admin” and **Password** “admin” and then a new password in the **New Password** and **Re-enter New Password** fields. Then click **Update.**

   STEP RESULT: The home page will appear.

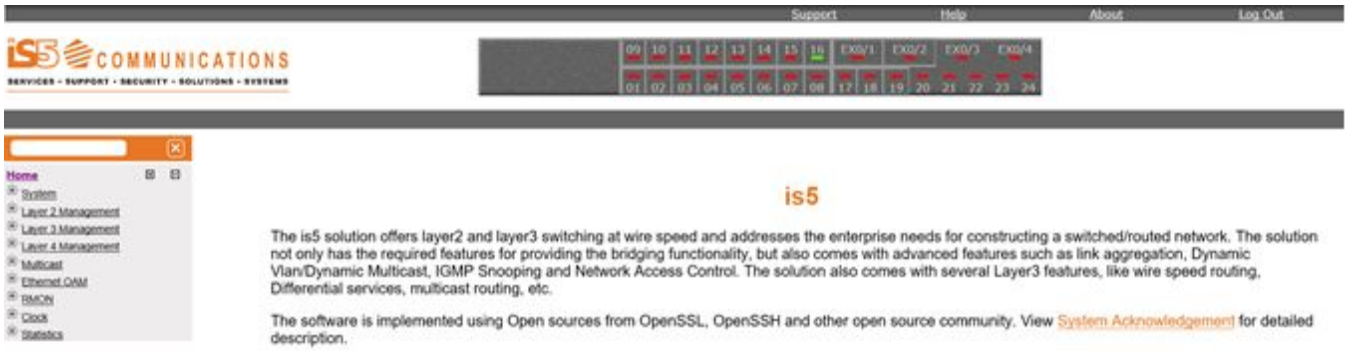


Figure 3: Home Page

RESULT:

You have logged into the RAPTOR via the *Web UI*.

14. Web Interface: System Settings

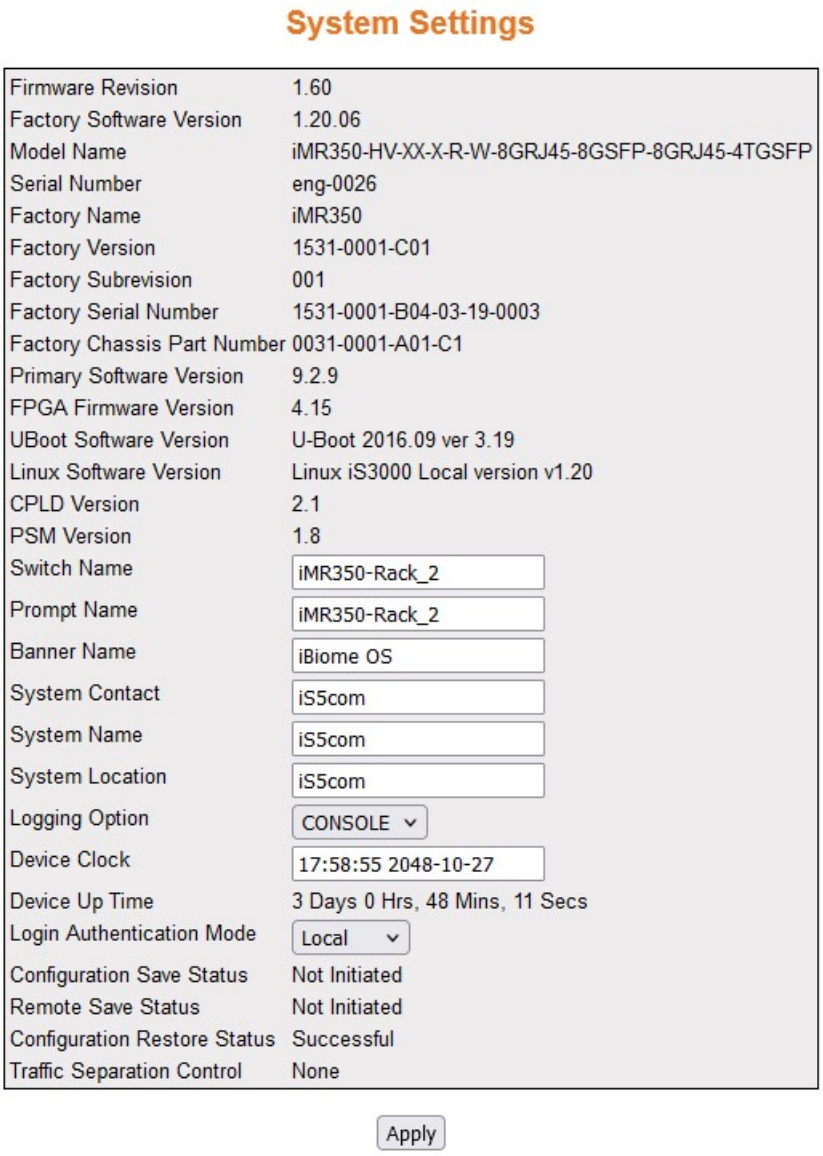
This section will document how to configure common RAPTOR system settings.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

1. Navigate to the **System Settings** page.
   FOR EXAMPLE: In the Home page, go to **System > System Information > System Settings**
   STEP RESULT: The following screen will appear.

Figure 1: System Settings



2. At this point you may change the values of any of the following fields.
   - Switch Name—enter the name for identifying the device. The default value is RAPTORThis value range is a string of size 15.
   - **Prompt Name**—enter the prompt name to be used. The default value is iS5Comm.
   - **Banner Name**—enter the banner name to be used. The default value is RAPTOR iBiome OS.
   - **System Contact**—enter the system contact details for this managed node. This value range is a string of size 50.
   - **System Name**—enter the system name.

- **System Location**—enter the physical location of this node. This value range is a string of size 50.

3. Click **Apply** to make your changes effective. As a result, the system settings have been changed.

15. Web Interface: IP Address and Default Routes

This section will explain how to set the IP Address on the RAPTOR and create a default route.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

Speak with your Network Administrator to determine the values of the following parameters:

- IP Address
- IP Address Mask
- Default Route

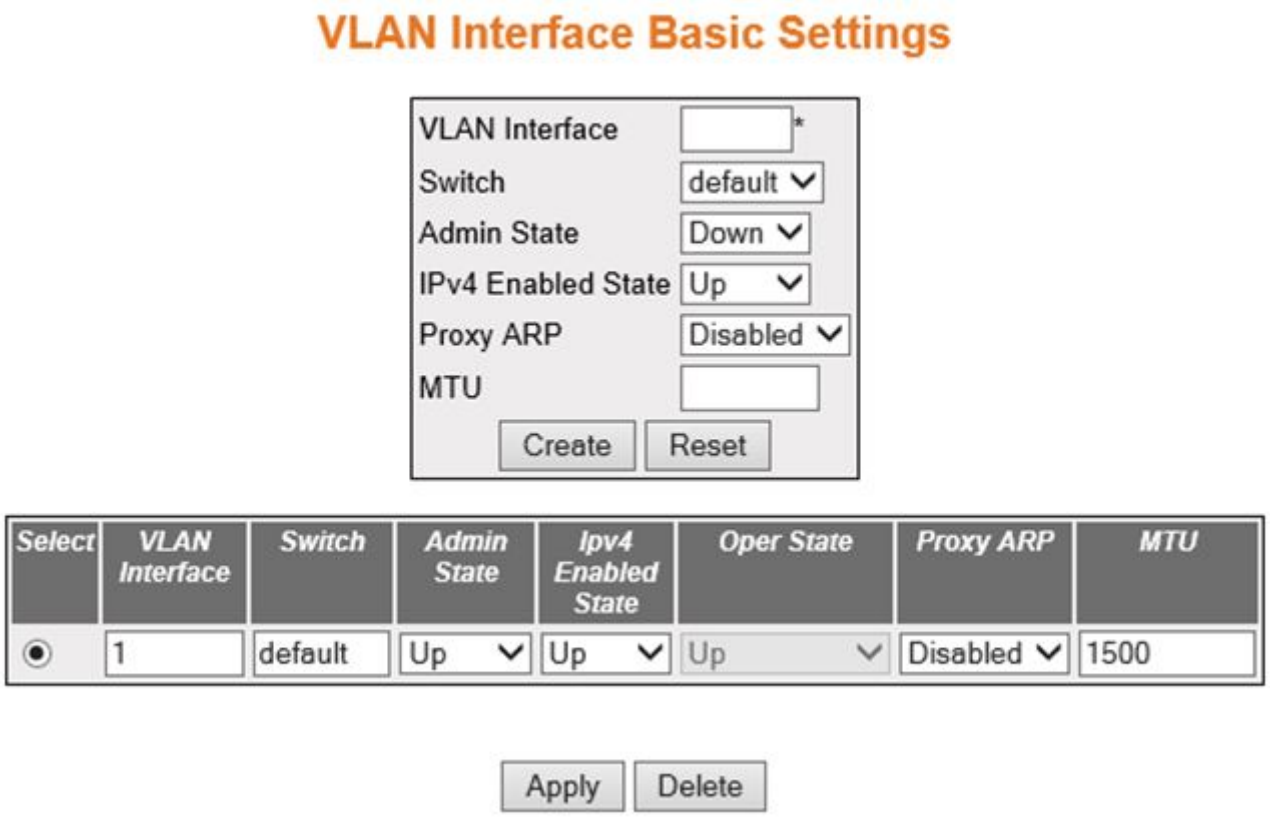
These values will be needed to configure the RAPTOR.

1. Configure the *VLAN* settings by first navigating to the *VLAN* settings screen.

   FOR EXAMPLE: Go to **Layer 3 Management > IP > VLAN Interface.**

   STEP RESULT: The following screen will appear.

Figure 1: VLAN Interface Basic Settings



2. Configure the values as follows:

- **Select**—select the VLAN interface for which configuration needs to be modified or deleted. In this case it will be VLAN interface #1.
- **VLAN Interface**—enter “1”.
- **Switch**—default.
- **Admin State**—select “UP” from the drop down list.
- **Operating State**—choose UP.
- **Proxy ARP**—select the Proxy *ARP* admin status for the interface. The default option is **Disabled**. Select **Disabled.**
- **MTU**—enter 1500.

3. Click **Apply**.

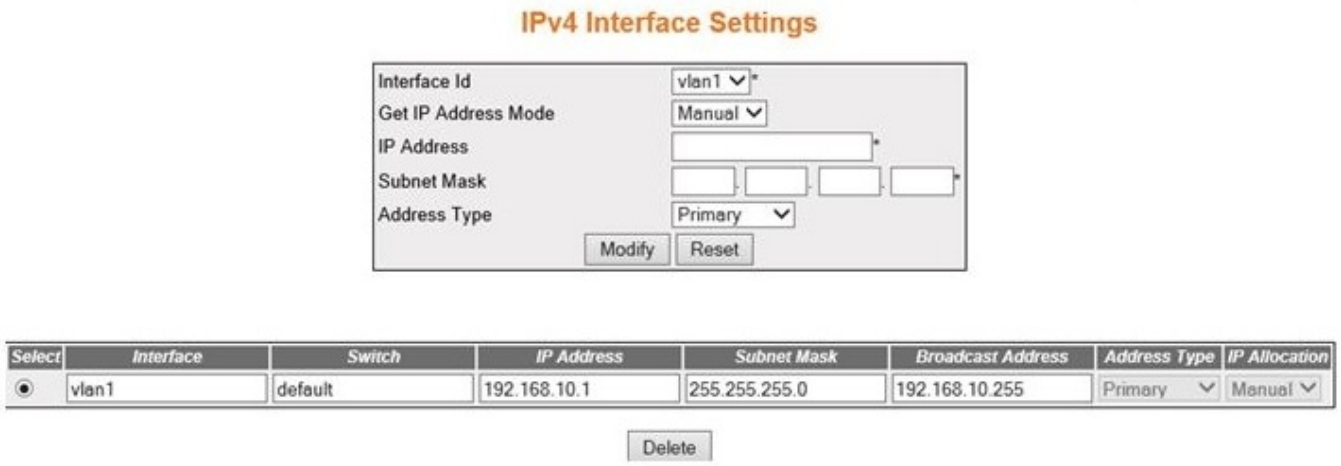
   STEP RESULT: The *VLAN* is now configured.

4. Configure the *IPv4* settings of the *VLAN* by first navigating to the *IPv4* Settings Page.

   FOR EXAMPLE: Go to **Layer 3 Management > IP > IPv4 AddrConf. IPv4 Interface Settings**

   STEP RESULT: The following page will appear:

Figure 2: IPv4 Interface Settings



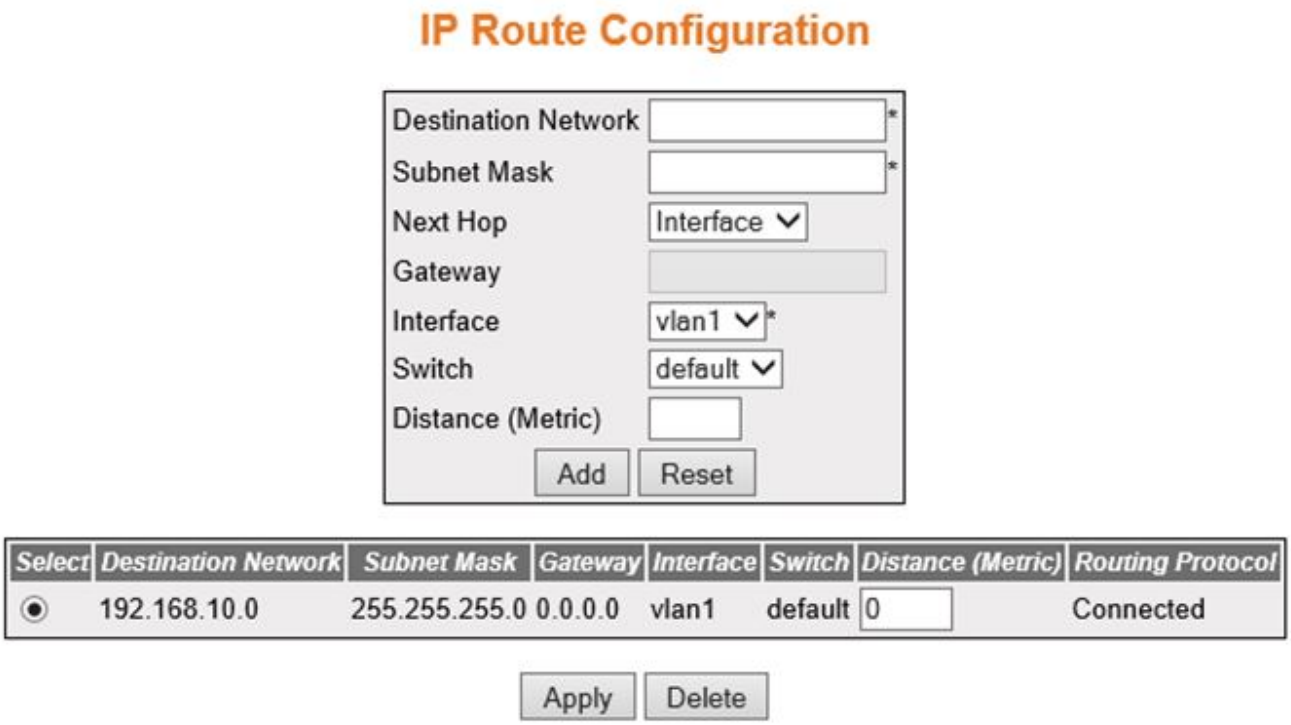
5. If you wish to change the *IP* address and subnet, enter new values in those fields and then click **Modify.**

   STEP RESULT: The *IP* address of *VLAN* 1 will have changed.

6. Configure the *IP* routes.

   FOR EXAMPLE: For IP Route Configuration, go to **Layer 3 Management > IP > IP Route. IP Route Configuration** appears.

Figure 3: IP Route Configuration



7. You will need two routes: one route to your network and a default route to your control center. Once these routes are established, a remote user can configure the switch for proper configuration.
   a. You will need to configure *VLAN* 1 to use the default gateway. This route may already be in your list. The destination network should be the network for the *IP* Address configured in section 0, the subnet mask, the interface should be "vlan1", the switch option should be "default", and the distance should be "0". Click **Add.**
   b. Configure the default gateway. The destination network should be 0.0.0.0, the subnet mask should be 0.0.0.0, and the gateway should be the gateway router IP address. Consult with your administrator if you do not know this value. Leave the interface blank. The switch should be "default" and the distance should be "1". Click **Add.**
   c. Click **Apply**.

   STEP RESULT: You should see a screen similar to the following.

RESULT:

The *IP* address and default routes have been configured on RAPTOR.

16. Web Interface: User Password

This section will explain how to change a users password.

PREREQUISITE:

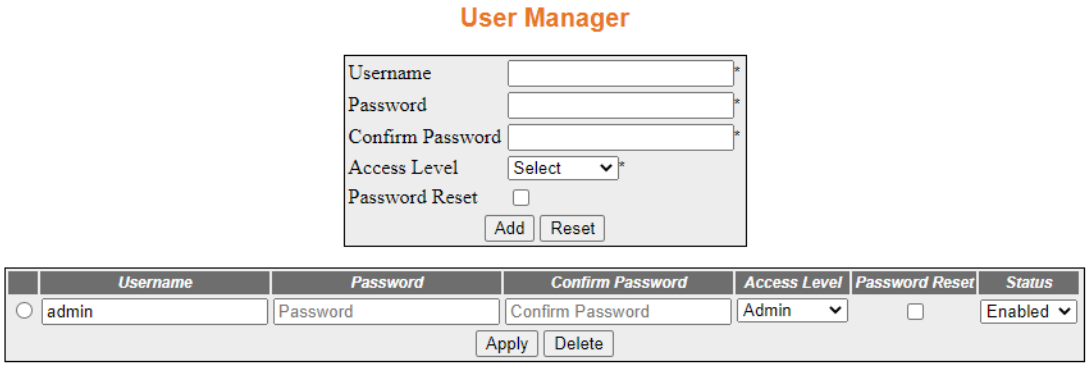
To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

1. Navigate to the **Users** page.

   FOR EXAMPLE: In the Home Page, go to **System > Users**

   STEP RESULT: The following screen will appear.

Figure 1: User Manager



2. Click the **admin** radial button.

   STEP RESULT: The username and password fields, starred out, will be populated on the panel above the radial selection.

3. Change the password in the **Password** and **Password Verification** fields.

4. Click **Apply** button.

RESULT:

The admin password has been changed.

17. Web Interface: Save and Restore Configurations

This section will describe how to save and restore the RAPTOR's configuration.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

17.1. Save Configuration

1. To save the configuration to flash memory, perform the following.
   a. Navigate to the **Save Configuration** screen.

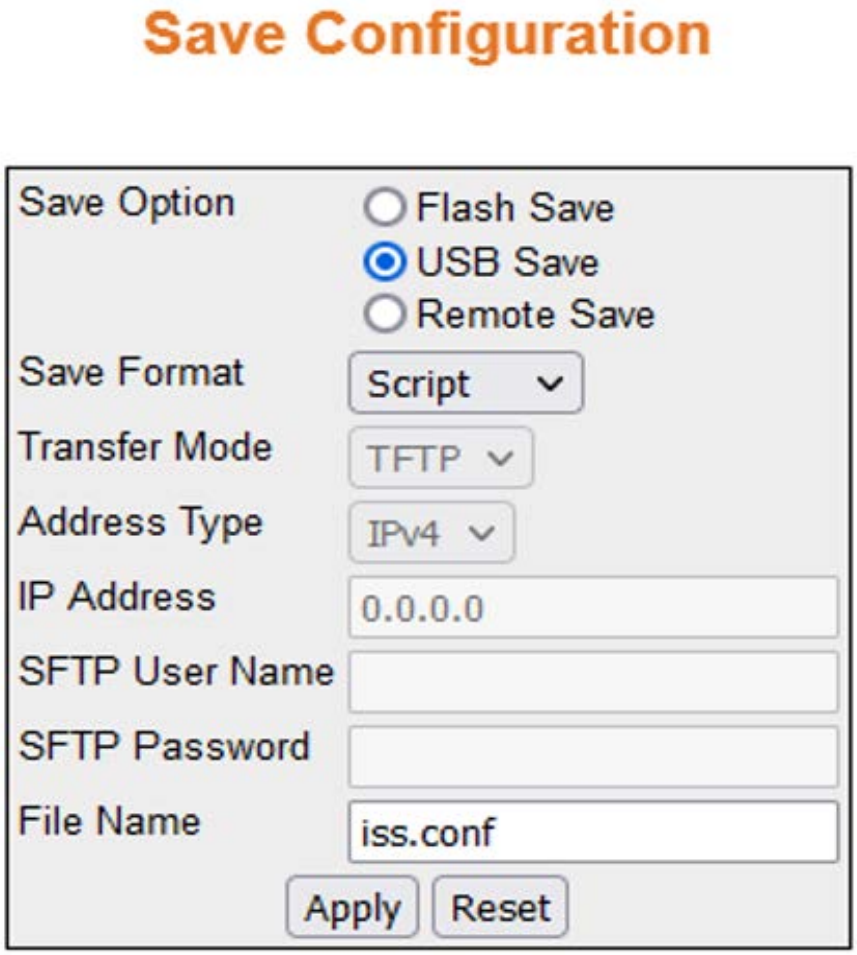
      FOR EXAMPLE: In the Home page, go to ***System > Save and Restore > Save***

      RESULT: The following web page will appear.
   b. Set the fields as follows:
      - **Save option**—select Flash Save.
      - **Save Format**—select either *MIB OID* or Script. Script format is human- readable and is the default option.
      - **File Name**—default file name where the switch configurations are saved is iss.conf. Use the default file name.
   c. Click **Apply** to save the changes.

   STEP RESULT: The running configuration will now be saved to flash memory. Without saving to flash, the configuration will be lost in the event of a power cycle or device reset. The following screen will appear when the save configuration process is complete:

Figure 1: Save Configuration to Flash Memory

Figure 2: Save Configuration to USB



2. To save the configuration to USB (see above), perform the following.
   a. Navigate to the Save Configuration screen.

      FOR EXAMPLE: In the Home page, go to ***System > Save and Restore > Save***

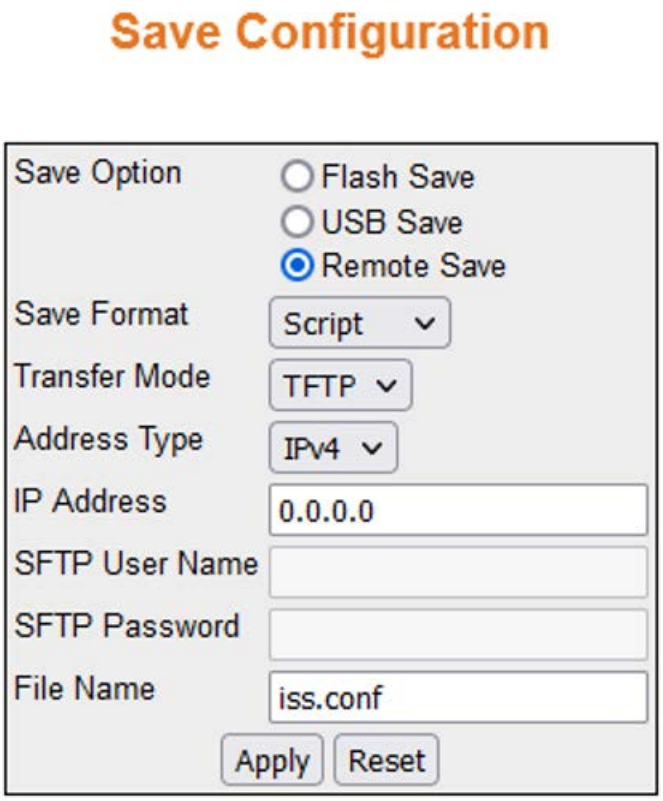
   b. Set the fields as follows:
      - **Save option**—select USB Save.
      - **Save Format**—select either *MIB OID* or Script. Script format is human- readable.
      - **File Name**—default file name where the switch configurations are saved is iss.conf. Use the default file name.

   c. Insert the USB thumb drive into the USB port on the front of the RAPTOR.
   d. Click **Apply** to save the changes.

   STEP RESULT: The current configuration will be saved to USB.

3. To save the configuration to TFTP, perform the following.
   a. Navigate to the Save Configuration screen.
      FOR EXAMPLE: In the Home page, go to ***System > Save and Restore > Save***
   b. Set the fields as follows:
      FOR EXAMPLE:

Figure 3: Save Configuration to TFTP

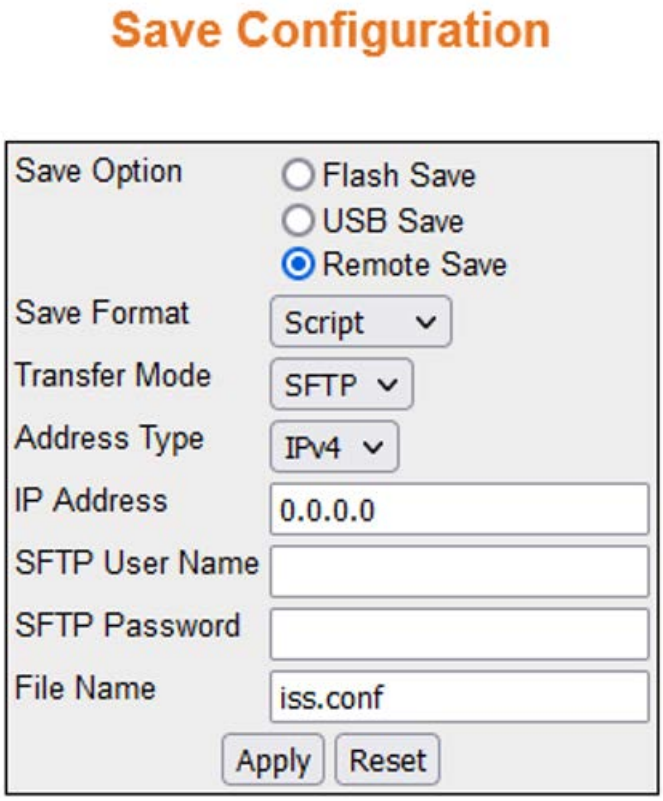


   - **Save option**—select **Remote Save**.
   - **Save Format**—select either *MIB OID* or Script. Script format is human- readable.
   - **Transfer Mode**—select **TFTP.**
   - **File Name**—default file name where the switch configurations are saved is iss.conf. Use the default file name.

   c. Click **Apply** to save the changes.

4. To save the configuration to SFTP, perform the following.
   a. Navigate to the Save Configuration screen.
      FOR EXAMPLE: In the Home page, go to ***System > Save and Restore > Save***
   b. Set the fields as follows.
      FOR EXAMPLE:

Figure 4: Save Configuration to SFTP



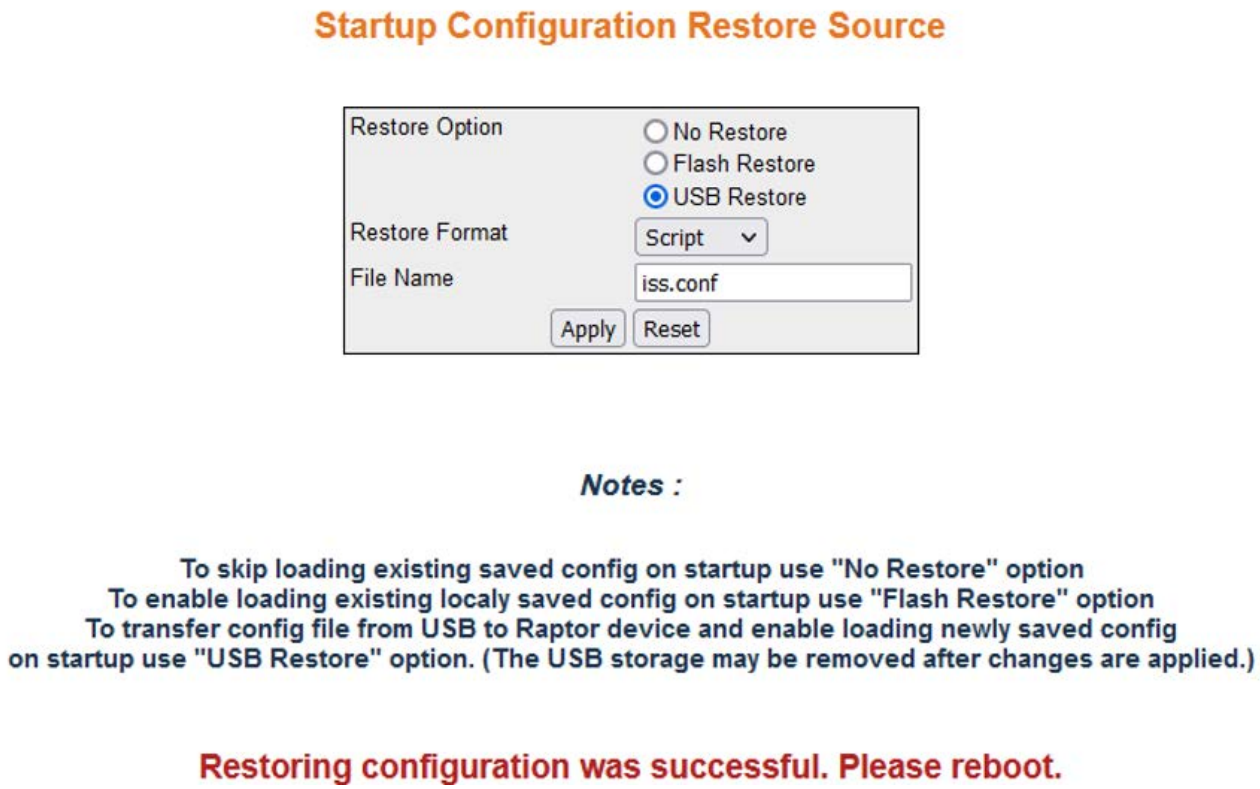
- **Save option**—select **Remote Save**.
- **Save Format**—select either *MIB OID* or Script. Script format is human- readable.
- **Transfer Mode**—select **SFTP.**
- **SFTP User Name**—enter **SFTP User Name .**
- **SFTP Password**—enter SFTP Password.
- **File Name**—default file name where the switch configurations are saved is iss.conf. Use the default file name.

c. Click **Apply** to save the changes.

17.2. Restore Configuration

1. To restore a configuration from USB, perform the following:
   a. Navigate to the **Restore** page.
      FOR EXAMPLE: Go to ***System > Save and Restore > Restore.***
      RESULT: The ***Startup Configuration Restore Source*** page appears.
   b. Set the fields as follows:
      FOR EXAMPLE: Perform the following.

Figure 5: Startup Configuration USB Restore Source



   - **Restore option**—select USB Restore.
   - **Restore Format**—select either *MIB OID* or Script. Script format is human- readable.
   - **File Name**—default file name where the switch's configurations are saved is iss.conf. Use the default file name.

2. For flash restore, perform the following:
   a. Navigate to the **Restore** page.
      FOR EXAMPLE: Go to ***System > Save and Restore > Restore.***
      RESULT: The ***Startup Configuration Restore Source*** page appears.
   b. Set the fields as follows:

- **Restore option**—select Flash Restore.
- **Restore Format**—select either *MIB OID* or Script. Script format is human- readable.
- **File Name**—default file name where the switch's configurations are saved is iss.conf. Use the default file name.

18. Web Interface: Upgrade the RAPTOR using TFTP

This section will explain how to upgrade the RAPTOR firmware. This process takes approximately 20 minutes to execute when there is a fast network connection between the TFTP server and the RAPTOR.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

For all upgrades, it is recommended that user's backup their current running configuration prior to commencing the upgrade process.

A TFTP server must be installed on a device with network connectivity to the RAPTOR. There are a number of commercial and free TFTP server options available. For this example Tftpd64 was used as the server. It may be downloaded from this site: https://pjo2.github.io/tftpd64/. The switch has also be tested using SolarWinds TFTP Server: https://www.solarwinds.com/free-tools/free-tftp-server

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	

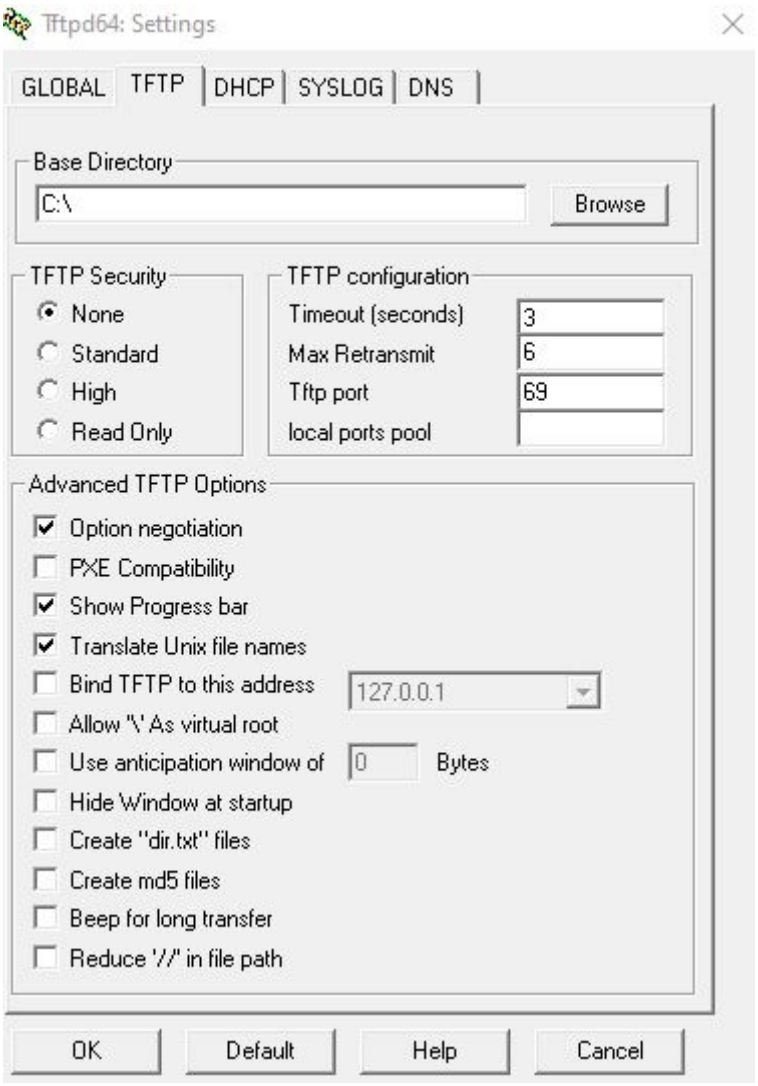
Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

Initial Running Version	Destination Version	Notes
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the Supported Upgrade Paths table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. Install the TFTP server on a machine that has network connectivity to the RAPTOR.
2. Configure the TFTP server such that its base directory contains the firmware file you wish to upload. Depending on the server software you are using there may be more settings that need to be configured.

   FOR EXAMPLE: This is a screen shot of theTftpd64 settings screen.



3. To Upgrade a Configuration from TFTP navigate to the Upgrade page.

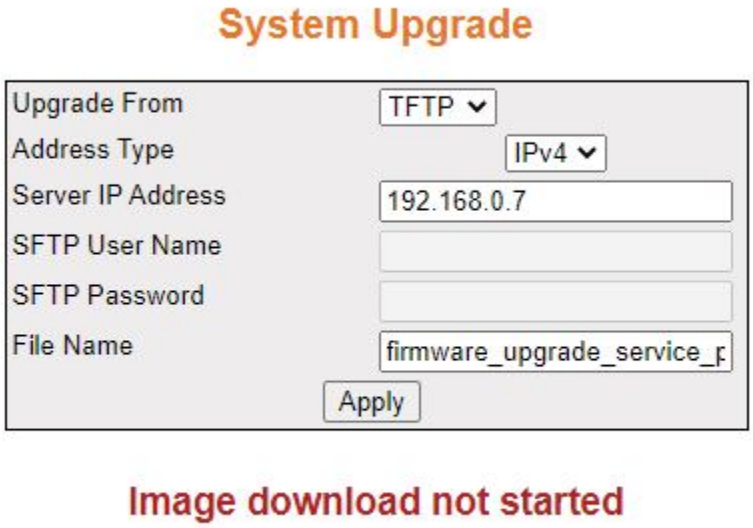
   FOR EXAMPLE: Go to **System > System Upgrade**

   STEP RESULT: The upgrade page appears:

Figure 1: System Upgrade

4. Set the fields as follows:
   - **Upgrade From** field—select TFTP.
   - **File Name**—enter the file name to be downloaded from the TFTP Server.
   - **Server IP Address**—enter the IP address of the TFTP server.

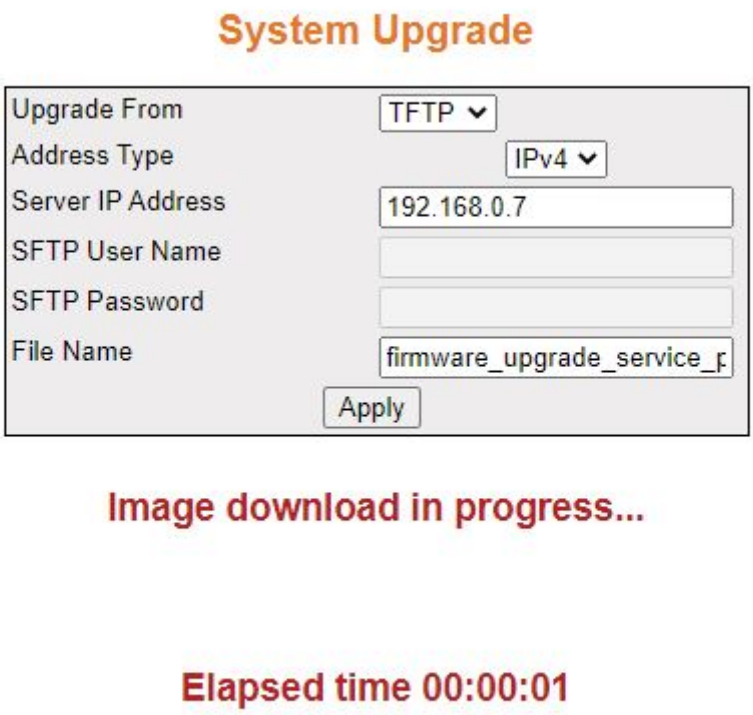
   STEP RESULT:



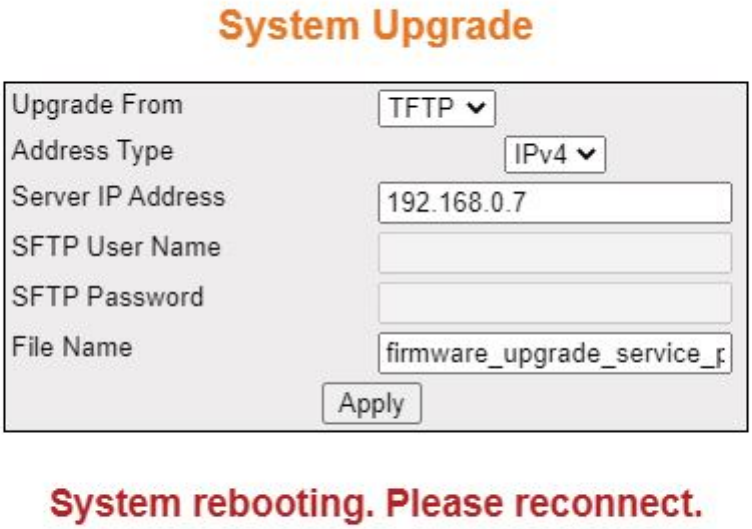
The RAPTOR will be upgraded and reloaded automatically. After about 5 minutes the device will be ready for users to login to it.

5. Click **Apply** to upgrade the RAPTOR.

   STEP RESULT: A timer will appear providing the elapsed time since the upgrade started. The screen will appear similar to the following:



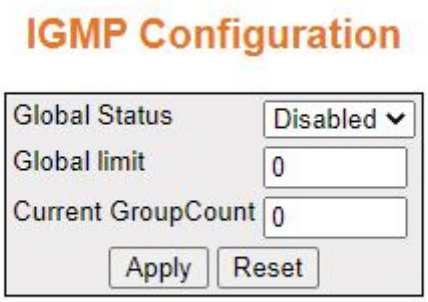
The screen will eventually change to the following:


System Upgrade
Upgrade From
TFTP
Address Type
IPv4
Server IP Address
192.168.0.7
SFTP User Name
SFTP Password
File Name
firmware_upgrade_service_p
Apply
System rebooting. Please reconnect.

6. If you are upgrading the RAPTOR from release 1.13.05 or 1.12.05 then you may have to perform these additional steps.
   a. Login to the RAPTOR using your browser.
   b. If IGMP was configured on your RAPTOR before the upgrade, navigate to the IGMP configuration.

      FOR EXAMPLE: On the left hand menu: **Multicast > IGMP > Basic Settings**

      RESULT: The IGMP Configuration screen will be shown.

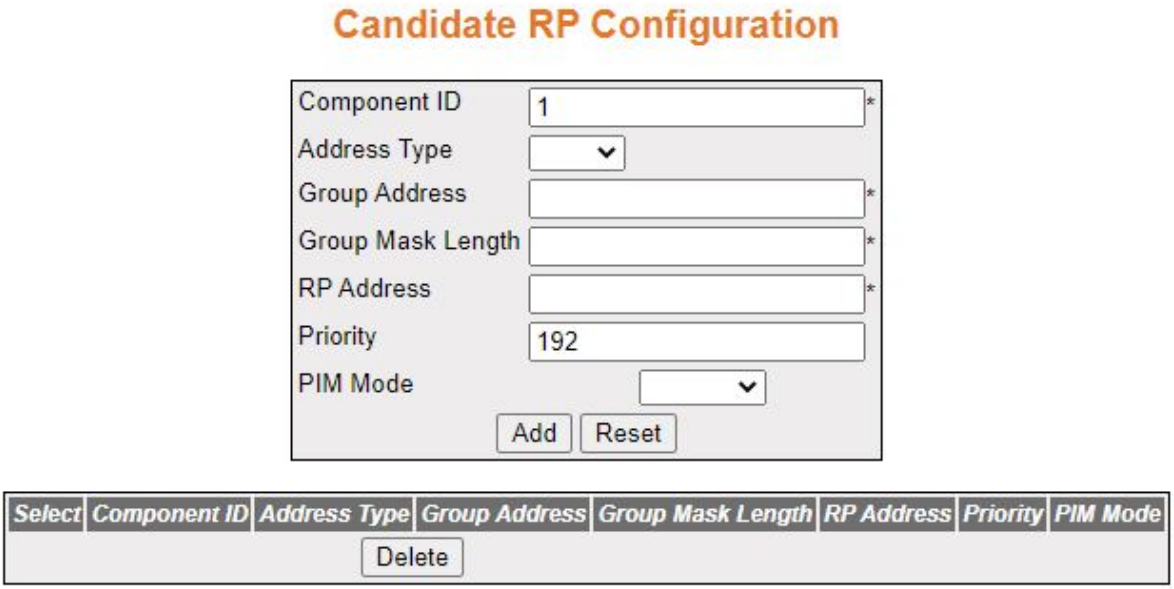


   c. Change **Global Status** to Enabled and click **Apply**

      RESULT: IGMP will be enabled.

   d. If your switch had PIM configured prior to the upgrade please perform the following tasks.

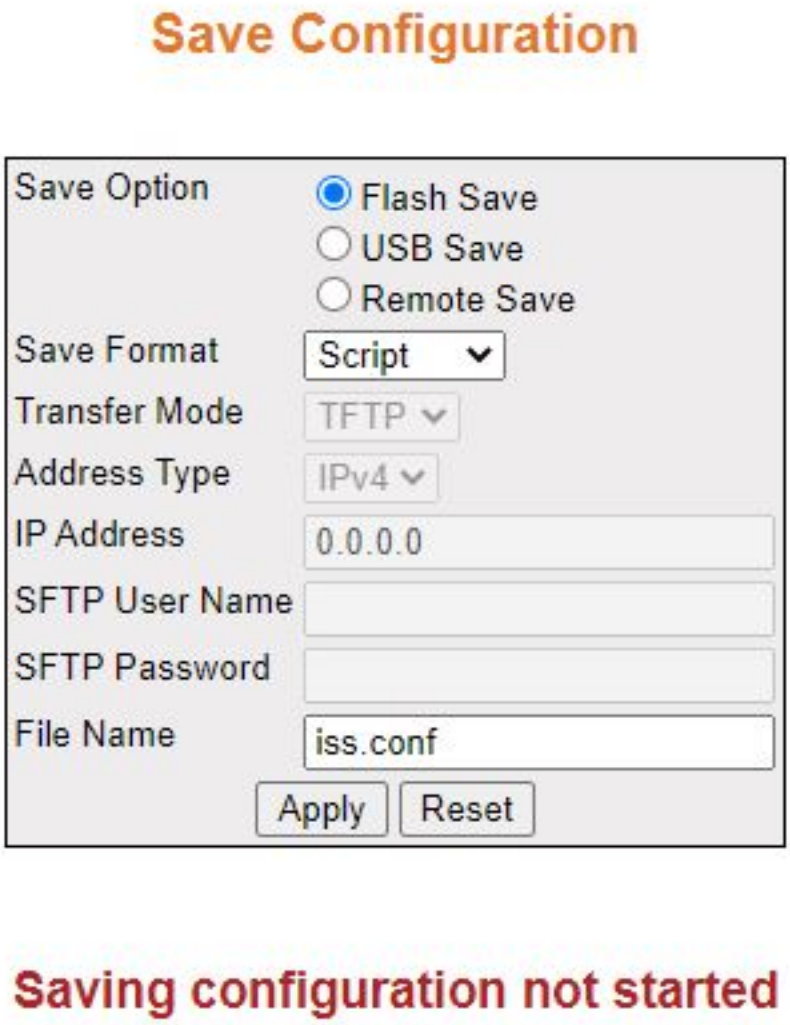
      FOR EXAMPLE: On the left menu navigate to the Candidate RP Configuration page: **Multicast > PIM > Candidate RP Configuration**



      FOR EXAMPLE: Configure the Candidate RP Configuration for all Component IDs

   e. Save your configuration changes.

FOR EXAMPLE: Navigate on the left hand menu to the Save screen: ***System > Save & Restore > Save***



Select "Flash Save" as the save option. Then click the Apply button.

RESULT: The configuration changes have now been saved.

19. Web Interface: Upgrade the RAPTOR using USB

This section will explain how to upgrade the RAPTOR firmware. This process takes approximately 5 minutes to execute.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

For all upgrades, it is recommended that users back up their current running configuration prior to commencing the upgrade process.

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

Initial Running Version	Destination Version	Notes
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the supported **Valid Upgrade Paths** table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. To upgrade a Configuration from USB, navigate to the **System Upgrade** page.

   FOR EXAMPLE: Go to **System > System Upgrade**

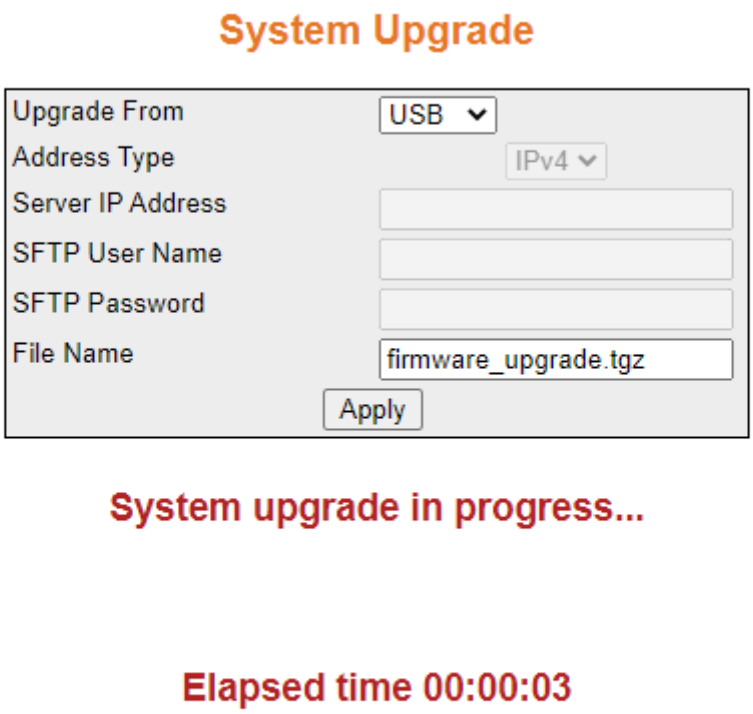
   STEP RESULT: The **System Upgrade** page appears.

Figure 1: System Upgrade

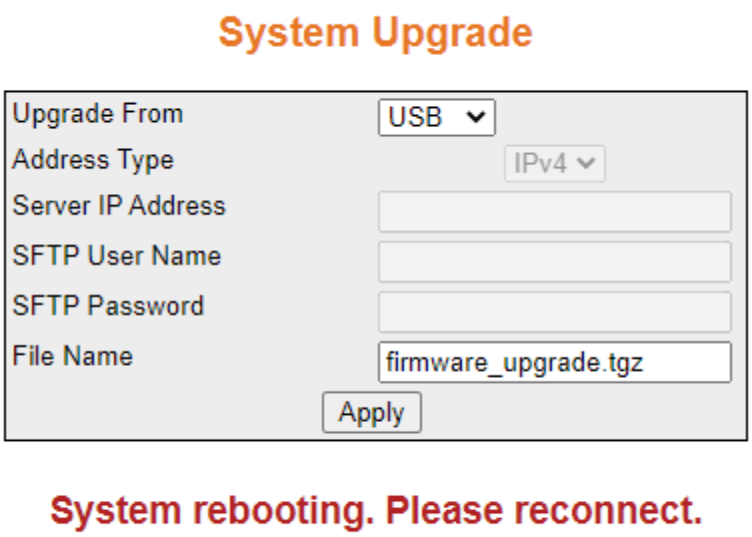
2. Set the fields as follows:
   - **Upgrade From** field—select USB.
   - **File Name**—enter the file name to be loaded from the USB.

3. Click **Apply** to upgrade the RAPTOR.

   STEP RESULT: A timer will appear providing the elapsed time since the upgrade started. The screen will appear similar to the following.



The screen will eventually change to the following.

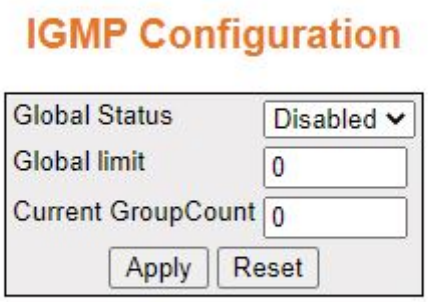


The RAPTOR firmware will be upgraded and reloaded automatically. After about 5 minutes, the device will be ready for users to login.

4. If you are upgrading the RAPTOR from release 1.13.05 or 1.12.05 then you may have to perform these additional steps.
   a. Login to the RAPTOR using your browser.
   b. If IGMP was configured on your RAPTOR before the upgrade, navigate to the IGMP configuration.

      FOR EXAMPLE: On the left hand menu: **Multicast > IGMP > Basic Settings**

      RESULT: The IGMP Configuration screen will be shown.

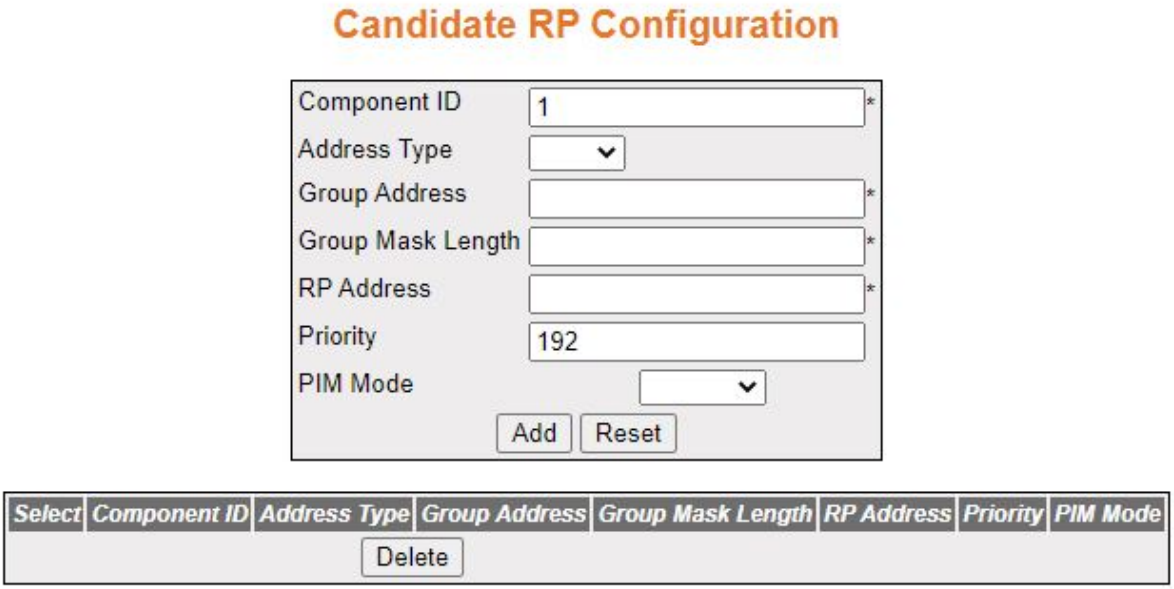


   c. Change **Global Status** to Enabled and click **Apply**

      RESULT: IGMP will be enabled.

   d. If your switch had PIM configured prior to the upgrade please perform the following tasks.

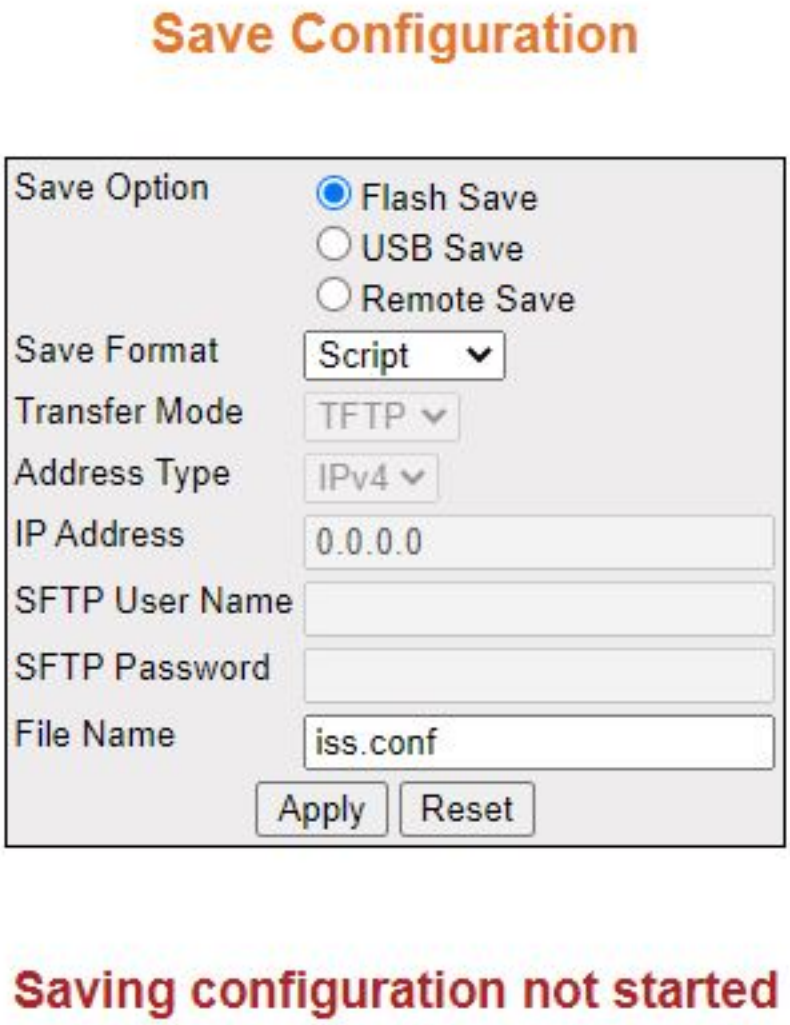
      FOR EXAMPLE: On the left menu navigate to the Candidate RP Configuration page: **Multicast > PIM > Candidate RP Configuration**



      FOR EXAMPLE: Configure the Candidate RP Configuration for all Component IDs

   e. Save your configuration changes.

FOR EXAMPLE: Navigate on the left hand menu to the Save screen: ***System > Save & Restore > Save***



Select "Flash Save" as the save option. Then click the Apply button.

RESULT: The configuration changes have now been saved.

20. Web Interface: Upgrade the RAPTOR using SFTP

This section will explain how to upgrade the RAPTOR firmware. This process takes approximately 20 minutes to execute when there is a fast network connection between the TFTP server and the RAPTOR.

PREREQUISITE:

To perform the tasks in this section, you will have already logged into the RAPTOR via the *Web UI*.

For all upgrades, it is recommended that user's backup their current running configuration prior to commencing the upgrade process.

A SFTP server must be installed on a device with network connectivity to the RAPTOR. There are a number of commercial and free SFTP server options available. We have tested the RAPTOR using the Core FTP server: http://www.coreftp.com/server/ and Solar Winds SFTP server: https://www.solar-winds.com/free-tools/free-sftp-server

Valid Upgrade Paths

Table 1: Upgrade Paths (Sheet 1 of 2)

Initial Running Version	Destination Version	Notes
1.2.23B4	1.3.25	
1.2.23B3	1.3.25	
1.3.04	1.3.25	
1.3.06	1.3.25	
1.3.xx	1.5.13	
1.3.xx	1.6.03	
1.5.xx	1.6.03	
1.5.xx	1.7.08	
1.6.xx	1.7.08	
1.6.xx	1.8.07	
1.7.xx	1.8.07	
1.7.xx	1.9.07	
1.8.xx	1.9.07	
1.8.xx	1.10.06	

Table 1: Upgrade Paths (Continued) (Sheet 2 of 2)

Initial Running Version	Destination Version	Notes
1.9.xx	1.10.06	
1.9.xx	1.11.06	
1.10.xx	1.11.06	
1.10.xx	1.12.05	
1.11.xx	1.12.05	
1.11.06	1.13.05	
1.12.05	1.13.05	
1.12.05	1.14.10	
1.13.05	1.14.10	
1.13.05	1.15.13	
1.14.10	1.15.13	
1.14.10	1.16.09	
1.15.13	1.16.09	
1.15.13	1.17.09	
1.16.09	1.17.09	
1.15.13	1.17.13	
1.16.09	1.17.13	
1.17.09	1.17.13	
1.16.09	1.41 / 1.18.05	
1.17.09	1.41 / 1.18.05	
1.17.13	1.41 / 1.18.05	
1.17.09	1.50 / 1.19.14	
1.17.13	1.50 / 1.19.14	
1.18.05	1.50 / 1.19.14	
1.18.05	1.60 / 1.20.11	
1.19.14	1.60 / 1.20.11	

If the release that your device is running is not listed in the Supported Upgrade Paths table, it is recommended that the iS5Com support team is contacted for more detailed instructions.

1. Install the SFTP server on a machine that has network connectivity to the RAPTOR.
2. Configure the SFTP server such that its base directory contains the firmware file you wish to upload. Depending on the server software you are using there may be more settings that need to be configured. The Rebex SFTP server uses a configuration file, RebexTinySftpServer.exe.config, which the user must modify. Please note that the free Rebex is not full featured and the professional option may be more suitable for a commercial deployment.
3. To Upgrade a Configuration from TFTP navigate to the Upgrade page.

   FOR EXAMPLE: Go to **System > System Upgrade**

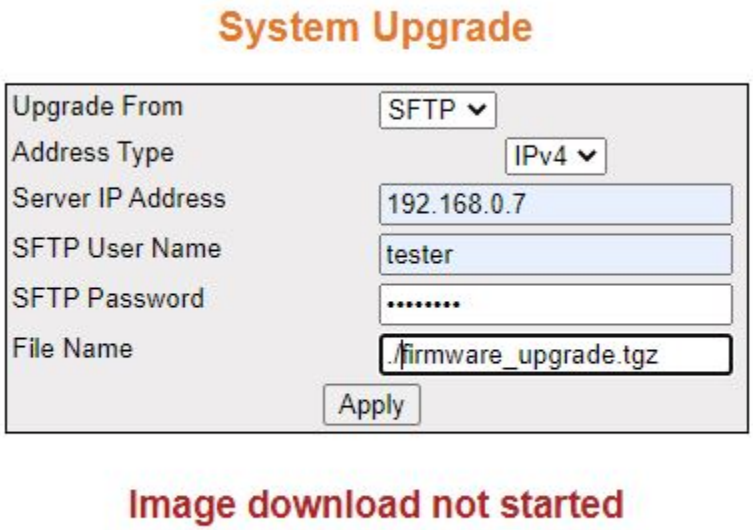
   STEP RESULT: The upgrade page appears:

Figure 1: System Upgrade

4. Set the fields as follows:
   - **Upgrade From** field—select SFTP.
   - **File Name**—enter the file name to be downloaded from the SFTP Server.
   - **Server IP Address**—enter the IP address of the SFTP server.
   - **SFTP User Name**—enter the User Name of the SFTP server.

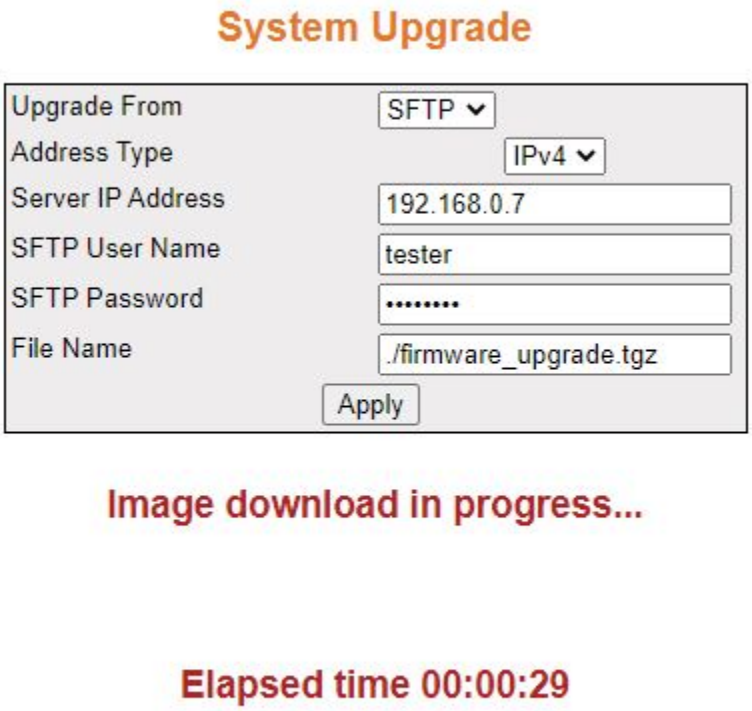
– **SFTP Password**—enter the Password of the SFTP server.

STEP RESULT:

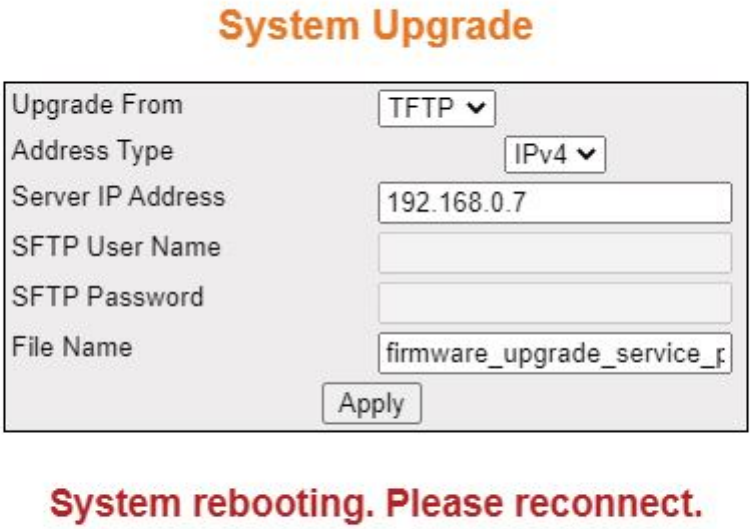


5. Click **Apply** to upgrade the RAPTOR.

   STEP RESULT: A timer will appear providing the elapsed time since the upgrade started. The screen will appear similar to the following:



   The screen will eventually change to the following:

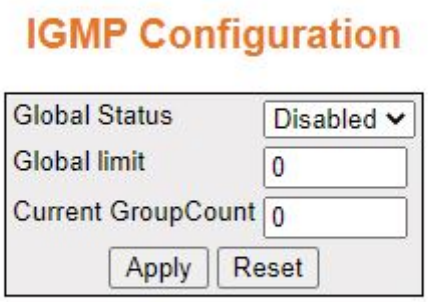


The RAPTOR will be upgraded and reloaded automatically. After about 5 minutes the device will be ready for users to login to it.

6. If you are upgrading the RAPTOR from release 1.13.05 or 1.12.05 then you may have to perform these additional steps.
   a. Login to the RAPTOR using your browser.
   b. If IGMP was configured on your RAPTOR before the upgrade, navigate to the IGMP configuration.

      FOR EXAMPLE: On the left hand menu: **Multicast > IGMP > Basic Settings**

      RESULT: The IGMP Configuration screen will be shown.

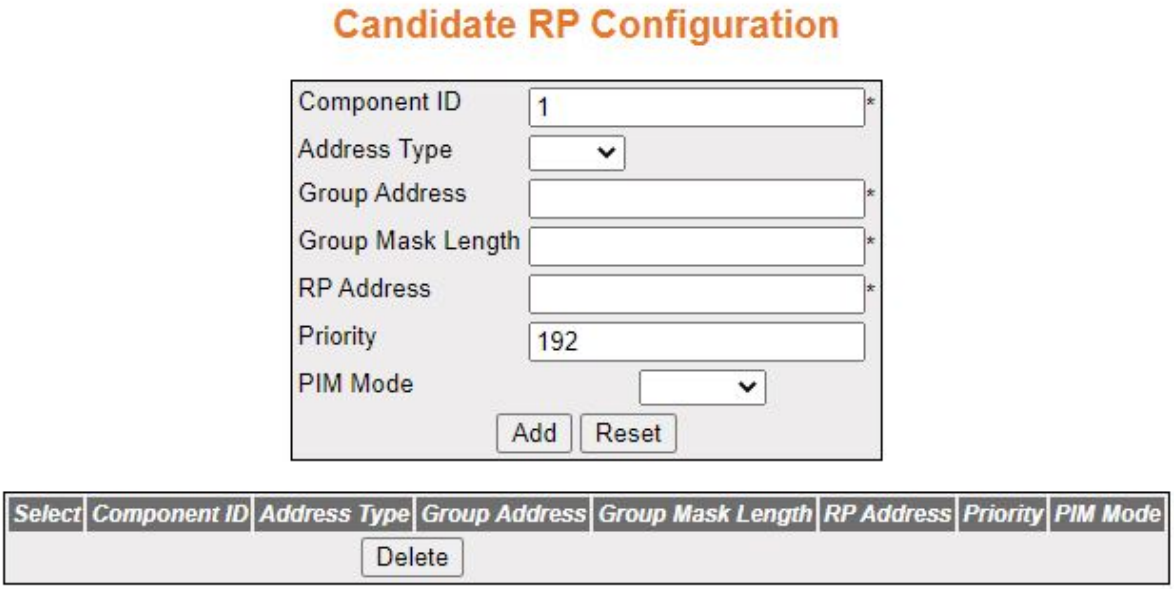


   c. Change **Global Status** to Enabled and click **Apply**

      RESULT: IGMP will be enabled.

   d. If your switch had PIM configured prior to the upgrade please perform the following tasks.

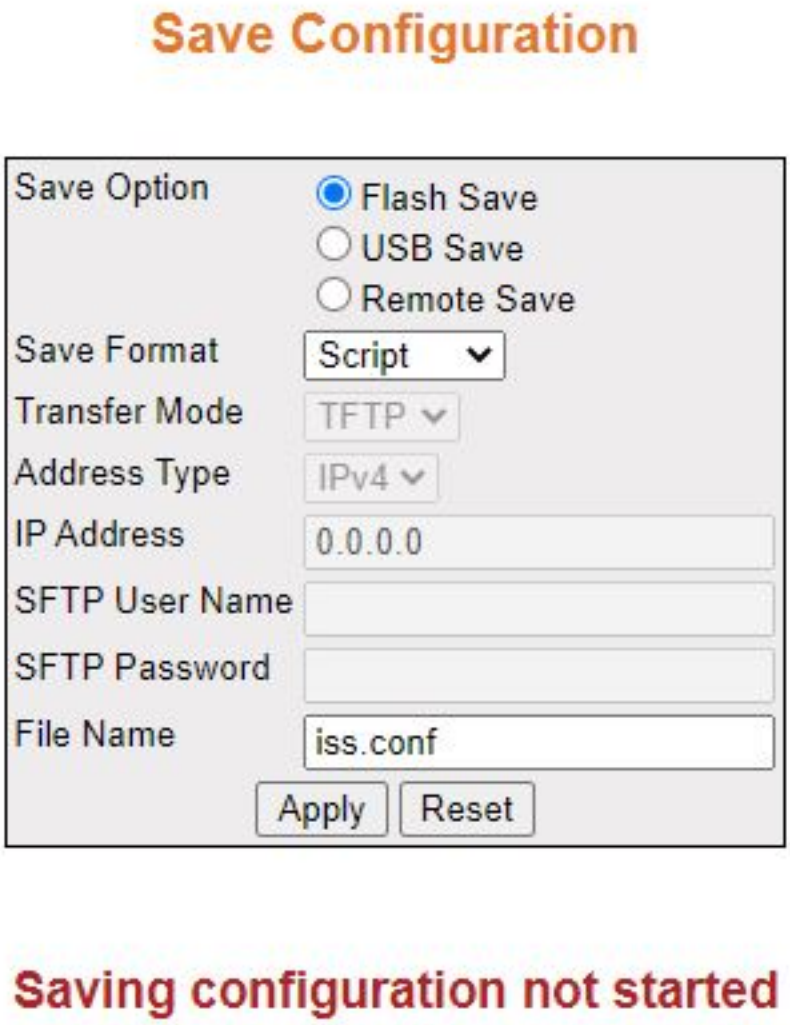
      FOR EXAMPLE: On the left menu navigate to the Candidate RP Configuration page: **Multicast > PIM > Candidate RP Configuration**



      FOR EXAMPLE: Configure the Candidate RP Configuration for all Component IDs

   e. Save your configuration changes.

FOR EXAMPLE: Navigate on the left hand menu to the Save screen: ***System > Save & Restore > Save***



Select "Flash Save" as the save option. Then click the Apply button.

RESULT: The configuration changes have now been saved.

21. Installation of W11 Product Key

This section will explain how to install the W11 Product Key.

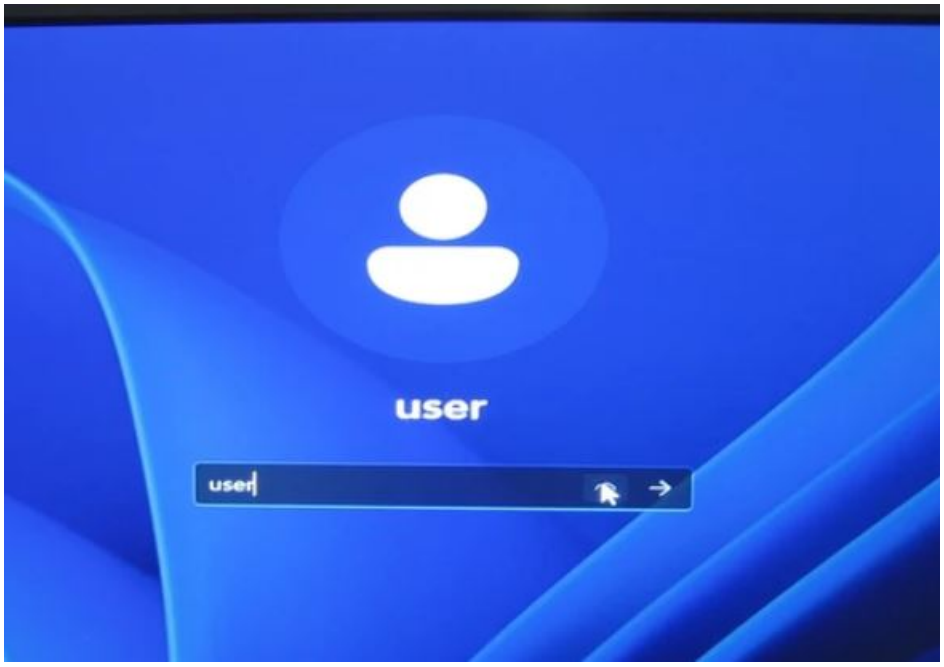
PREREQUISITE:

Once the iROC is connected to the Internet, the license will be activated automatically.

1. Connect to Internet. Login to Windows. The login and password are user/user (see below).

   STEP RESULT: The **Login to Windows** page appears as shown below.

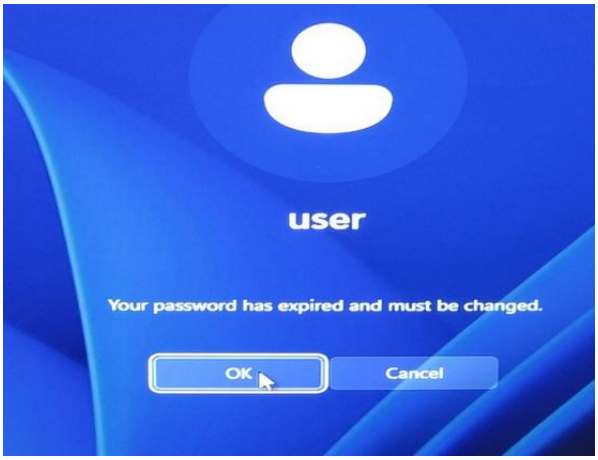
Figure 1: Login to Windows



2. Once the iROC is connected to the Internet, the license will be activated automatically.
3. Windows activation can be checked in the **System Activation Settings**. Windows will download and install updates.
4. After the license is installed, the user will be prompted to create a new password at the next login. Set a new password.

   STEP RESULT: The **Update password** page appears as shown below.

Figure 2: **Update password** screen.



GLOSSARY ENTRIES

CLI

Command line interface (CLI) is a text-based interface that is used to operate software and operating systems while allowing the user to respond to visual prompts by typing single commands into the interface and receiving a reply in the same way

IP

Internet Protocol (IP).

SSH

(Secure SHell) is a security protocol for logging into a remote server. SSH provides an encrypted session for transferring files and executing server programs on all platforms. Also serving as a secure client/server connection for applications such as database access and email, SSH supports a variety of authentication methods.

VLAN

Virtual Local Area Network (VLAN) is a logical subgroup within a local area network that is created via software rather than manually moving cables in the wiring closet.

Web UI

Web User Interface (Web UI) is a control panel in a device presented to the user via the Web browser. Network devices such as gateways, routers, and switches typically have such control panel that is accessed by entering the IP address of the device into a Web browser in a computer on the same local network.

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