



## Lab 6.5.3.2 Manage Bridge Configuration and Image Files

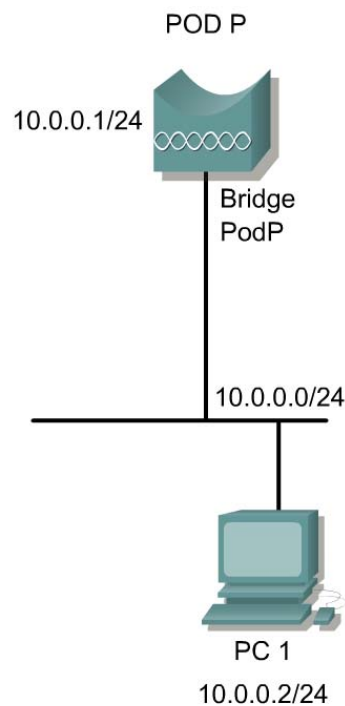
Estimated Time: 20 minutes

Number of Team Members: Students will work in teams of two.

### Objective

In this lab, the student will learn the features of the wireless bridge configuration file backup and image load processes.

### Topology



### Preparation

The students will read and familiarize themselves with the concepts in Chapter 6 prior to attempting this lab.

### Tools and Resources

Each team will require the following:

- One BR350
- One PC on the wired LAN for bridge configuration

## Step 1 Backup the current configuration file

In order to backup the current configuration files, complete the following steps:

- a. Test connectivity from PC1 to the bridge.
- b. Launch TFTP software on PC1.
- c. On PC1, open a Telnet or console connection to the bridge. If prompted for a username and password, enter the default values:

1. Username: *Cisco*

2. Password: *Cisco*

- d. Enter enabled mode. When prompted for the password, enter *Cisco*.

```
bridge>enable
```

```
Password:*****
```

- e. Test connectivity from the bridge to PC1.

```
bridge#ping 10.0.0.2
```

- f. Copy the running-configuration from the bridge to the TFTP server on PC1.

```
bridge#copy running-config tftp
```

```
Address or name of remote host []? 10.0.0.2
```

```
Destination filename [bridge-config]?
```

```
!!
```

```
1152 bytes copied in 0.081 secs (14222 bytes/sec)
```

- g. On PC1 browse to the folder containing the uploaded file to ensure that it was copied correctly.

## Step 2 Load a configuration file

If the configuration is ever lost or corrupted, it can be restored by using the backup configuration file. In order to load a configuration file, complete the following steps:

- a. Test connectivity from PC1 to the bridge.
- b. Launch TFTP software on PC1.
- c. On PC1, open a Telnet or console connection to the bridge. If prompted for a username and password, enter the default values:

1. Username: *Cisco*

2. Password: *Cisco*

- d. Enter enabled mode. When prompted for the password, enter *Cisco*.

```
bridge>enable
```

```
Password:*****
```

```
bridge#
```

- e. Test connectivity from the bridge to PC1.

```
bridge#ping 10.0.0.2
```

- h. Copy the saved backup configuration file from the TFTP server to the bridge. You should browse to the TFTP folder on PC1 to view the filename of the backup configuration file.

```
bridge#copy tftp running-config
```

```
Address or name of remote host []? 10.0.0.2
```

```
Source filename []? bridge-config
```

```

Destination filename [running-config]?
Accessing tftp://10.0.0.2/bpod1-config...
Loading bridge-config from 10.0.0.2 (via BVI1): !

```

### Step 3 Backup bridge image file

The CLI provides commands to archive a copy of the bridge image file to a TFTP server. This archived file is stored in .tar format on the TFTP server and can be downloaded to the bridge if needed.

- Ensure that the TFTP server is running on PC1 and that the bridge can ping the IP address of PC1.

- From CLI privileged mode, enter the following command:

```
bridge#archive upload-sw tftp://10.0.0.2/c1310-k9w7.tar
```

- The bridge will build the image file and create the .tar file on the TFTP server. Confirm that the file was uploaded by browsing to the TFTP directory on PC1.

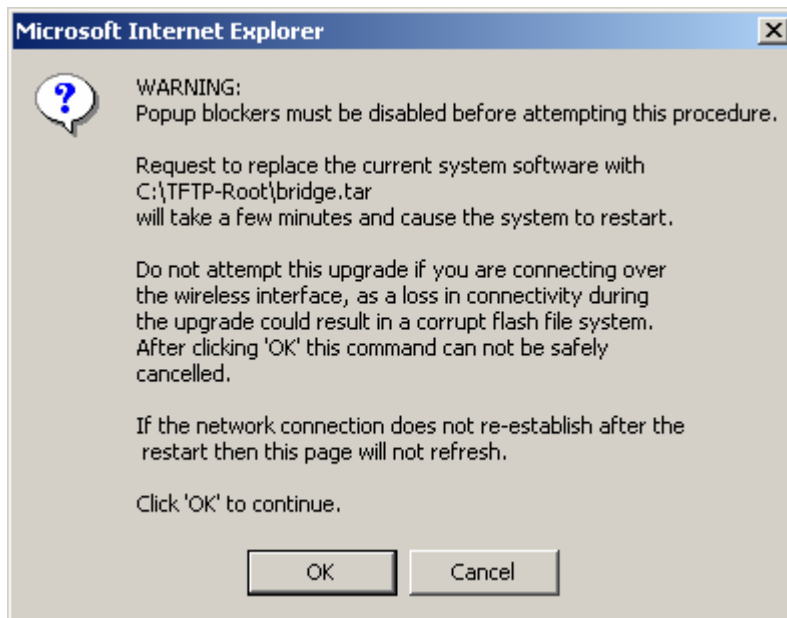
### Step 4 Load a bridge image file using the web interface

If the bridge has a firmware failure, an image file must be reloaded via the Web-browser interface or by using the console serial port. The browser interface can be used if the bridge is operational.

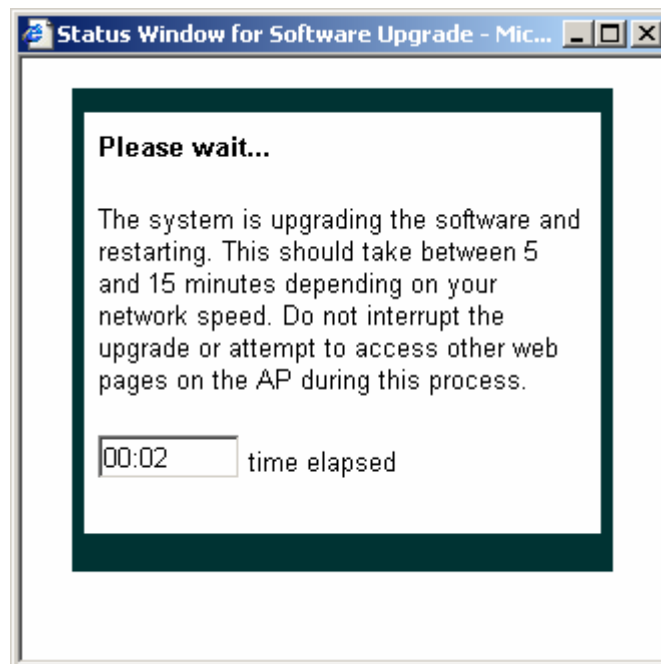
- Prior to loading an image file from the PC to the bridge, the image file must be saved to a local directory on the PC and connectivity between the PC and the bridge must be established.
- Access the bridge web interface from the PC. Enter a valid username and password when prompted to do so.
- From the left navigation bar, click the link for **System Software** and then **Software Upgrade**. From the **HTTP Upgrade** tab, click the *Browse* button to locate the image file on the PC. Click the *Upgrade* button.

	HTTP UPGRADE	TFTP UPGRADE
HOME	Hostname bridge <span style="float: right;">bridge uptime is 2 minutes</span>	
EXPRESS SET-UP		
EXPRESS SECURITY		
NETWORK MAP +		
ASSOCIATION +		
NETWORK INTERFACES +		
SECURITY +		
SERVICES +		
WIRELESS SERVICES +		
<b>SYSTEM SOFTWARE</b>		
<b>Software Upgrade</b>		
System Configuration		
EVENT LOG +		
	<b>System Software: Upgrade- HTTP Upgrade</b>	
	<b>System Software Filename:</b> c1310-k9w7-tar.122-15.JA <b>System Software Version:</b> 12.2(15)JA <b>Bootloader Version:</b> 12.2(15)JA	
	<b>Upgrade System Software Tar File:</b> <input type="button" value="Upgrade"/> <input type="text"/> <input type="button" value="Browse..."/>	

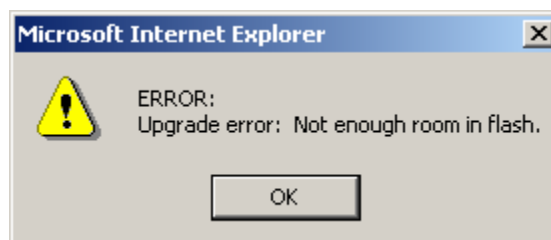
- A warning window will display. Read the information in this window carefully before continuing with the HTTP upgrade. Click OK to continue.



- e. An additional browser window will open to provide information about the upgrade process. Do not close this window or otherwise interrupt the upgrade process.



- f. If the bridge does not have room in flash for the new image, an error message will display. If this error is displayed, the image must be installed using the CLI.



## Step 5 Load a bridge image file using the CLI

If the bridge has a firmware failure, an image file must be reloaded via the Web-browser interface or by using the console serial port. The browser interface can be used if the bridge is operational.

- a. Prior to loading an image file from the PC to the bridge, the image file must be saved to a local PC in the correct directory for the TFTP server. This PC must be running TFTP software.
- b. Open the CLI using a connection to the bridge's console port.
- c. Reboot the bridge by removing power and reapplying power.
- d. Let the bridge boot until the command prompt appears and the bridge begins to inflate the image. When you see the # symbols on the CLI, press **Esc**:

```
Loading "flash:/c1310-k9kw-7mx.v122_15_ja.200040314-k9w7-  
mx.v122_15_ja.20040314"...##### [Esc]
```

---

**Note:** Depending on the terminal emulation software you are using, you may have to press **Esc** twice to access the boot loader.

---

- e. At the **bridge:** prompt, enter the following commands to set an IP address on the bridge. Note: You must use upper-case characters when you enter the IP-ADDR, NETMASK, and DEFAULT\_ROUTER options with the set command.

```
bridge: set IP_ADDR 10.0.0.1  
bridge: set NETMASK 255.255.255.0  
bridge: set DEFAULT_ROUTER 10.0.0.2
```

- f. Prepare the bridge for TFTP transfer:

```
bridge: tftp_init
```

- g. The `tar` command is used to load and inflate the new image from the TFTP server. The command should include each of the options listed:

- i. The `-xtract` option, which inflates the image when it is loaded.
- ii. The IP address of the TFTP server.
- iii. The directory on the TFTP server that contains the image. (Optional)
- iv. The name of the image as it appears on the TFTP server.
- v. The destination for the image (the bridge Flash)

- h. To load an image file from the default TFTP directory to flash on the bridge, enter this command:

```
bridge: tar -xtract tftp://10.0.0.2/c1310-k9w7.tar flash:
```

- i. The image will be downloaded and inflated. The CLI will display the progress as each file is written to the bridge flash directory. When the display becomes full the CLI pauses and displays `--MORE--`. **You must press the spacebar to continue.** If you do not press the spacebar to continue, the process eventually times out and the bridge stops inflating the image

```
extracting info (229 bytes)  
c1310-k9w7-mx.122-15.JA/ (directory) 0 (bytes)  
c1310-k9w7-mx.122-15.JA/html/ (directory) 0 (bytes)  
c1310-k9w7-mx.122-15.JA/html/level1/ (directory) 0 (bytes)  
extracting c1310-k9w7-mx.122-15.JA/html/level1/appsu.js (558 bytes)  
extracting c1310-k9w7-mx.122-15.JA/html/level1/back.htm (205 bytes)  
-- MORE --
```

- j. Enter the `set BOOT` command to designate the new image as the image that the bridge uses when it reboots. The bridge creates a directory for the image that has the same name as the

image, and you must include the directory in the command. Your entry might look like this example:

```
bridge: set BOOT flash:/c1310-k9w7-mx.122-15.JA/c1310-k9w7-mx.122-15.JA
```

- k. Enter the `set` command to check the bootloader entries.

```
bridge: set
```

```
BOOT=flash:/c1310-k9w7-mx.122-15.JA/c1310-k9w7-mx.122-15.JA
```

```
DEFAULT_ROUTER=10.0.0.2
```

```
IP_ADDR=10.0.0.1
```

```
NETMASK=255.255.255.0
```

- l. Enter the `boot` command to reboot the access point. When the access point reboots, it loads the new image. Any previous configurations will be retained.

```
bridge: boot
```