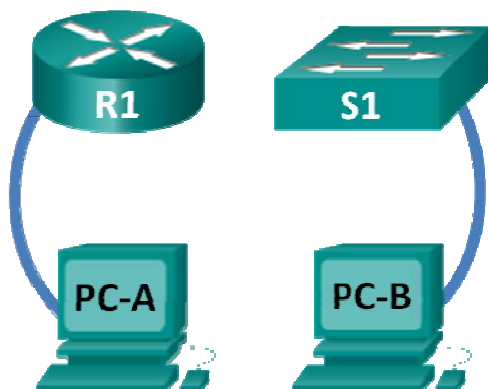


## Lab - Initializing and Reloading a Router and Switch (Instructor Version)

**Instructor Note:** Red font color or Gray highlights indicate text that appears in the instructor copy only.

### Topology



### Objectives

**Part 1: Set Up Devices in the Network as Shown in the Topology**

**Part 2: Initialize the Router and Reload**

**Part 3: Initialize the Switch and Reload**

### Background / Scenario

Before starting a CCNA hands-on lab that makes use of either a Cisco router or switch, ensure that the devices in use have been erased and have no startup configurations present. Otherwise, the results of your lab may be unpredictable. This lab provides a detail procedure for initializing and reloading a Cisco router and a Cisco switch.

**Note:** The routers used with CCNA hands-on labs are Cisco 1941 Integrated Services Routers (ISRs) with Cisco IOS Release 15.2(4)M3 (universalk9 image). The switches used are Cisco Catalyst 2960s with Cisco IOS Release 15.0(2) (lanbasek9 image). Other routers, switches, and Cisco IOS versions can be used. Depending on the model and Cisco IOS version, the commands available and output produced might vary from what is shown in the labs.

### Required Resources

- 1 Router (Cisco 1941 with Cisco IOS software, Release 15.2(4)M3 universal image or comparable)
- 1 Switch (Cisco 2960 with Cisco IOS Release 15.0(2) lanbasek9 image or comparable)
- 2 PCs (Windows 7, Vista, or XP with terminal emulation program, such as Tera Term)
- Console cables to configure the Cisco IOS devices via the console ports

### Part 1: Set Up Devices in the Network as Shown in the Topology

#### Step 1: Cable the network as shown in the topology.

Attach console cables to the devices shown in the topology diagram.

### Step 2: Power on all the devices in the topology.

Wait for all devices to finish the software load process before moving to Part 2.

## Part 2: Initialize the Router and Reload

### Step 1: Connect to the router.

Console into the router and enter privileged EXEC mode using the **enable** command.

```
Router> enable
Router#
```

### Step 2: Erase the startup configuration file from NVRAM.

Type the **erase startup-config** command to remove the startup configuration from nonvolatile random-access memory (NVRAM).

```
Router# erase startup-config
Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]
[OK]
Erase of nvram: complete
Router#
```

### Step 3: Reload the router.

Issue the **reload** command to remove an old configuration from memory. When prompted to Proceed with reload, press Enter to confirm the reload. Pressing any other key will abort the reload.

```
Router# reload
Proceed with reload? [confirm]
```

```
*Nov 29 18:28:09.923: %SYS-5-RELOAD: Reload requested by console. Reload Reason:
Reload Command.
```

**Note:** You may receive a prompt to save the running configuration prior to reloading the router. Respond by typing **no** and press Enter.

```
System configuration has been modified. Save? [yes/no]: no
```

### Step 4: Bypass the initial configuration dialog.

After the router reloads, you are prompted to enter the initial configuration dialog. Enter **no** and press Enter.

```
Would you like to enter the initial configuration dialog? [yes/no]: no
```

### Step 5: Terminate the autoinstall program.

You will be prompted to terminate the autoinstall program. Respond **yes** and then press Enter.

```
Would you like to terminate autoinstall? [yes]: yes
Router>
```

## Part 3: Initialize the Switch and Reload

### Step 1: Connect to the switch.

Console into the switch and enter privileged EXEC mode.

```
Switch> enable
Switch#
```

### Step 2: Determine if there have been any virtual local-area networks (VLANs) created.

Use the **show flash** command to determine if any VLANs have been created on the switch.

```
Switch# show flash

Directory of flash:/

   2  -rwx           1919   Mar 1 1993 00:06:33 +00:00  private-config.text
   3  -rwx           1632   Mar 1 1993 00:06:33 +00:00  config.text
   4  -rwx          13336   Mar 1 1993 00:06:33 +00:00  multiple-fs
   5  -rwx        11607161   Mar 1 1993 02:37:06 +00:00  c2960-lanbasek9-mz.150-2.SE.bin
   6  -rwx           616    Mar 1 1993 00:07:13 +00:00  vlan.dat

32514048 bytes total (20886528 bytes free)
Switch#
```

### Step 3: Delete the VLAN file.

- a. If the **vlan.dat** file was found in flash, then delete this file.

```
Switch# delete vlan.dat
Delete filename [vlan.dat]?
```

You will be prompted to verify the file name. At this point, you can change the file name or just press Enter if you have entered the name correctly.

- b. When you are prompted to delete this file, press Enter to confirm the deletion. (Pressing any other key will abort the deletion.)

```
Delete flash:/vlan.dat? [confirm]
Switch#
```

### Step 4: Erase the startup configuration file.

Use the **erase startup-config** command to erase the startup configuration file from NVRAM. When you are prompted to remove the configuration file, press Enter to confirm the erase. (Pressing any other key will abort the operation.)

```
Switch# erase startup-config
Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]
[OK]
Erase of nvram: complete
Switch#
```

### Step 5: Reload the switch.

Reload the switch to remove any old configuration information from memory. When you are prompted to reload the switch, press Enter to proceed with the reload. (Pressing any other key will abort the reload.)

```
Switch# reload
Proceed with reload? [confirm]
```

**Note:** You may receive a prompt to save the running configuration prior to reloading the switch. Type **no** and press Enter.

## Initializing and Reloading a Router and Switch

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```
System configuration has been modified. Save? [yes/no]: no
```

### Step 6: Bypass the initial configuration dialog.

After the switch reloads, you should see a prompt to enter the initial configuration dialog. Type **no** at the prompt and press Enter.

```
Would you like to enter the initial configuration dialog? [yes/no]: no  
Switch>
```

### Reflection

1. Why is it necessary to erase the startup configuration before reloading the router?

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The startup configuration file is loaded into memory and becomes the running-config after the router reloads. Erasing this file allows the router to return to its basic configuration after a reload.

2. You find a couple configurations issues after saving the running configuration to the startup configuration, so you make the necessary changes to fix those issues. If you were to reload the device now, what configuration would be restored to the device after the reload?

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The configuration at the time of the last save is restored to the device after a reload. Any changes made to the running configuration after the last save would be lost.