Part 1: Verify the Default Router Configuration

   Step 1: Establish a console connection to R1.

      a. Choose a **Console** cable from the available connections.

      b. Click **PCA** and select **RS 232**.

      c. Click **R1** and select **Console**.

      d. Click **PCA** > **Desktop** tab > **Terminal**.

      e. Click **OK** and press **ENTER**. You are now able to configure **R1**.

   Step 2: Enter privileged mode and examine the current configuration.

      a. Enter privileged EXEC mode with **enable**.

      b. Enter the **show running-config** command.

```
Router>enable
Router#show running-config
Building configuration...

Current configuration : 712 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
```

      c. Display the current contents of NVRAM with **show startup-config**

```
Router#show startup-config
startup-config is not present
Router#
```

Part 2: Configure and Verify the Initial Router Configuration

Step 1: Configure the initial settings on R1.

a. Configure R1 as the hostname with **hostname R1**.

```
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#
```

b. Configure Message of the day: Unauthorized access is strictly prohibited with **banner motd**

```
R1(config)#banner motd #Unauthorized access is strictly prohibited#
R1(config)#
```

c. Set a Privileged EXEC secret 'itsasecret' with **enable secret**

```
R1(config)#enable secret itsasecret
R1(config)#
```

d. Set console password 'letmein' for User EXEC with **line console 0** then **password** and **login**

```
R1(config)#line console 0
R1(config-line)#password letmein
R1(config-line)#login
R1(config-line)#exit
R1(config)#
```

e. Encrypt all plain text passwords with **service password-encryption**

```
R1(config)#service password-encryption
R1(config)#
```

Step 2: Verify the initial settings on R1.

a. Verify the initial settings by viewing the configuration for R1 with **show running-config**.

```
R1#show running-config
Building configuration...

Current configuration : 847 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$mERr$ILwq/b7kc.7X/ejA4Aosn0
!
!
```

b. Exit the current console session

c. Press ENTER; you should see the following message:

```
Unauthorized access is strictly prohibited

User Access Verification

Password:
```

d. Enter the password we set earlier 'letmein' to enter User EXEC mode

Part 3: Save the Running Configuration File

Step 1: Save the configuration file to NVRAM.

a. In order to save the configurations even after reboot, save the config file to NVRAM with **copy running-config startup-config** or **write**

```
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
```

b. Verify the NVRAM with **show startup-config**

```
R1#show startup-config
startup-config is not present
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#show start
R1#show startup-config
Using 847 bytes
!
version 15.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$mERr$ILwq/b7kc.7X/ejA4Aosn0
!
!
!
```

```
!
line con 0
 password 7 082D495A041C0C19
 login
!
line aux 0
!
line vty 0 4
 login
!
!
```

Step 2: Optional: Save the startup configuration file to flash.

a. Examine the contents of flash using the show flash command:

```
R1#show flash:

System flash directory:
File  Length   Name/status
  3   486899872isr4300-universalk9.03.16.05.S.155-3.S5-ext.SPA.bin
  2   28282    sigdef-category.xml
  1   227537   sigdef-default.xml
[487155691 bytes used, 2761893909 available, 3249049600 total]
3.17338e+06K bytes of processor board System flash (Read/Write)


R1#
```

b. Save the startup configuration file to flash using **copy startup-config flash**

```
R1#copy startup-config flash:
Destination filename [startup-config]?

847 bytes copied in 0.416 secs (2036 bytes/sec)
R1#
```

c. Verify the startup configuration file is now stored in flash with **show flash**.

```
R1#show flash:

System flash directory:
File  Length   Name/status
  3   486899872isr4300-universalk9.03.16.05.S.155-3.S5-ext.SPA.bin
  2   28282    sigdef-category.xml
  1   227537   sigdef-default.xml
  4   847      startup-config
[487156538 bytes used, 2761893062 available, 3249049600 total]
3.17338e+06K bytes of processor board System flash (Read/Write)


R1#
```