

Quick Start Guide for configuring a non-virtualized Power Systems server that is preinstalled with Ubuntu

This guide helps you configure Ubuntu that is preinstalled on a Linux on Power Systems server.

Overview

Use this information to configure a non-virtualized (also known as bare metal) Power Systems™ server that is preinstalled with Ubuntu 14.10 or 15.04. For information about which systems support Ubuntu, see Supported Linux distributions for POWER8 Linux on Power systems at <https://ibm.biz/BdEH5t>.

1 Step 1: Completing the prerequisites



Before you power on your server, ensure that you have the following items:

- Ethernet cable
- Notebook or PC
- Power cords and outlet for your system. Depending on your configuration, your system might require 220 V.

2 Step 2: Prepare to power on



Before you power on the system, follow these steps:

- If your system belongs in a rack, install your system into that rack. For instructions, see IBM® Power Systems information at <https://ibm.biz/BdFBGg>. Look for instructions specific to your system.
- Remove the shipping brackets from the power supplies. Ensure that the power supplies are fully seated in the system.
- Access the server control panel. For information about accessing and using the control panel, see the Control panel topic at <https://ibm.biz/BdFBaC>.
- Connect the power cords to the system and plug them into the outlets.

At this point, your firmware is booting. Wait for the green power LED on the control panel to start flashing, indicating that it is ready to use, and for the prompt 01 N OPAL T to appear on the display.

3 Step 3: Option 1: Connecting to ASMI with DHCP

Use this type of connection if you are using DHCP. Use these steps to find the IP address of the service processor and then connect with the ASMI web interface. If you know what IP address that your server is using, complete step 1 and then skip to Step 5: Enabling Ubuntu.

1. Connect an Ethernet cable to the HMC1 or HMC2 port on the back of your Power system to your DHCP network.
2. Access the control panel for your server.
3. Scroll to function 02 using Increment (↑) or Decrement (↓) buttons (up and down arrows) and then press Enter.
4. Move the cursor to the N by pressing Enter. The display looks like this example: 02 A N< T
5. Change N to M to start manual mode using the Increment (↑) or Decrement (↓) buttons. The display looks like this example: 02 A M< T
6. Press Enter two times to exit the mode menu.
7. Scroll to function 30 using Increment or Decrement buttons.
8. Press Enter to enter subfunction. The display looks like this example: 30**
9. Use the Increment (↑) or Decrement (↓) buttons to select a network device.
 - 3000 displays the IP address assigned to ETH0 (HMC1)
 - 3001 displays the IP address assigned to ETH1 (HMC2)
10. Press Enter to display the selected IP address. Be sure to record this IP address.
11. Use the Increment (↑) or Decrement (↓) buttons to select subfunction exit (30**).
12. Press Enter to exit subfunction mode.
13. Scroll to 02 using Increment (↑) or Decrement (↓) buttons and press Enter.
14. Change the mode to N. The display looks like this example: 02 A N< T

4 Step 4: Option 2: Connecting to ASMI with static IP address

Use this type of connection if you are using a static IP address. This connection configures a console interface to the ASMI.

1. Connect an Ethernet cable from the PC or notebook to the Ethernet port labeled HMC1 on the back of the managed system.
2. Set your IP address on your PC or notebook to match the default values on your Power system.
IP address on PC or notebook: 169.254.2.140
Subnet mask: 255.255.255.0
The default IP address of HMC1: 169.254.2.147

Note: The default values of HMC1 are already set and you do not need to change them. If you want to verify the IP address, follow the steps in Step 3 Option 1 to find the IP addresses with the control panel.

When running Linux on your PC or notebook, set your IP address by following these steps:

- a. Log in as root.
- b. Start a terminal session
- c. Run the follow command: `ifconfig -a`. Record these values so that you can reset your network connection later.
- d. Type `ifconfig ethx 169.254.2.140 netmask 255.255.255.0`. Replace `ethx` with either **eth0** or **eth1**, depending on what your PC or notepad is using.

When running Windows 7 on your PC or notebook, set your IP address by following these steps:

- a. Click **Start > Control Panel**.
- b. Select **Network and Sharing Center**.
- c. Click the network that is displayed in **Connections**.
- d. Click **Properties**.
- e. If the security dialog box is displayed, click **Continue**.
- f. Select **Internet Protocol Version 4**.
- g. Click **Properties**.
- h. Select **Use the following IP address**.
- i. Use **169.254.2.140** for **IP address** and **255.255.255.0** for **Subnet mask**.
- j. Click **OK > Close > Close**

Note: If HMC1 is occupied, use HMC2. Use IP address 169.254.3.140 and Subnet mask: 255.255.255.0 on your PC or notebook. The default IP address of the HMC2 is 169.254.3.147.

5 Step 5: Enabling Ubuntu



1. Open a web browser and enter `https://ipaddress` where *ipaddress* is the address you recorded in Step 3 (Option 1) or the default IP address (169.254.2.147 for HMC1 or 169.254.3.147 for HMC2). The ASMI web interface opens.
2. The first time that you connect to the service processor, enter the admin ID `admin` and password `admin`. After you log in, you will be forced to change the password. Be sure to record this password!
3. Follow these steps to set a password for your IPMI session:
 - a. From the main menu, select **Login Profile -> Change Passwords**.
 - b. Select IPMI from the list of user IDs.
 - c. Enter the current password for the administrator (set in step 2) and then enter and confirm a password for IPMI.
 - d. Click **Continue**.
4. If you want to specify a different IP address for your service processor, you need to configure Network access. From the main menu, select **Network Services > Network Configuration**.

To configure network access, follow these steps:

- a. From the Network Configuration display, select **IPv4** and **Continue**.
- b. Select **Configure this interface?**
- c. Verify that IPv4 is enabled.
- d. Select **Static** for the type of IP address.
- e. Enter a name for the host system.
- f. Enter a new IP address for the system.
- g. Enter a subnet mask.
- h. At the bottom of the page, enter a default gateway, Domain name, and IP address for the DNS server.
- i. After you set the values for the Network configuration, click **Continue**.
- j. Click **Save Settings**.
- k. If you connected with a PC or notebook, you can remove the Ethernet cable from your PC or notebook and connect it to the network switch. To continue with a console connection, change the default IP address to the IP address that you assigned to the service processor.

6 Step 6: Powering on your server with IPMI

Intelligent Platform Management Interface (IPMI) is the default console to use when you configure Ubuntu.

As the system powers up, you might notice the following actions:

- System reference codes appear on the control panel display while the system is being started.
- The system cooling fans are activated after approximately 30 seconds and begin to accelerate to operating speed.
- The power LED on the control panel stops flashing and remains on, indicating that system power is on.

Note: After your system powers on, the Petitboot interface loads. If you do not interrupt the boot process by pressing any key within 10 seconds, Petitboot automatically boots the default option. After you power on your server, immediately activate your IPMI console.

To power on your server, follow these steps:

1. Open a terminal program.
2. To power on your server, run the following command:

```
ipmitool -I lanplus -H fsp_ip_address -P ipmi_password power on
```

where *ipaddress* is the IP address of the Power system and *ipmi_password* is the password set up for IPMI.

3. Immediately activate your IPMI console by running this command:

```
ipmitool -I lanplus -H fsp_ip_address -P ipmi_password sol activate
```

Tip: Use your keyboard up arrow to display the previous ipmitool command. You can edit previous commands to avoid typing the entire command again.

4. To boot Ubuntu, verify that **Ubuntu 14.10** is selected in Petitboot. Ubuntu will boot automatically after 10 seconds.

On a Power System preinstalled with Ubuntu, use these default values:

- Default user: `ibm`
- Default password: `passw0rd`

Change this password as soon as possible.

Note: If you need to reboot your system, follow these steps:

1. Deactivate the console by running this command:

```
ipmitool -I lanplus -H fsp_ip_address -P ipmi_password sol deactivate
```

2. Power your system off with this command:

```
ipmitool -I lanplus -H fsp_ip_address -P ipmi_password power off
```

3. Power your system on with this command:

```
ipmitool -I lanplus -H fsp_ip_address -P ipmi_password power on
```

For more information about using IPMI with a Power system, see Intelligent Platform Management Interface (IPMI) on PowerKVM at <https://ibm.biz/BdFBa5>.

7 Step 7: Updating your firmware



You can update your firmware while the system is power on or off. These instructions assume that the system is powered on. For additional instructions, see

- Download the image file for the firmware update. Fixes are available from Fix Central at <http://www-933.ibm.com/support/fixcentral/>. Follow the steps available from the site to find and download your image file. For example, select Power from the Product Group, your machine type or model from the Product list and then select the fix that you want to download and press Continue. The on-screen prompts assist you to download the file. The image file must be loaded onto the Power server or else made available through a network connection.
- Copy the image file to the system.
- Verify the image by running this command: `update_flash -v -f file_name.img`.
- Update your firmware using the **update_flash** command. For example: `update_flash -f 01SV810_076_076.img`.

Note: Do not interact with your system while the update is running. Your system will reboot when the update is complete.

- Verify the update by running the command **lsmcode** or through the ASMI interface. If successful, your system displays the new firmware level. You may want to use the new level of firmware for a period of time to verify that it works correctly. When you are sure that the new level of firmware works correctly, you can permanently install the firmware fix.

To reject the update, run the following command: `update_flash -r`.

Note: This command only rejects the temporary side.

- To permanently install the firmware fix, run the following command: `update_flash -c`.

Note:

- Moving your firmware to the permanent side does not cause the system to reboot.
- Be aware that if you install the firmware fix permanently, you cannot return to the level that was previously on the permanent side.

More information



For more information, see the following resources:

- Ask Ubuntu website at <http://askubuntu.com/>
- Linux information for IBM systems at <https://ibm.biz/BdFBGG>
- The Linux on Power® Community at <http://ibm.co/VLilfS>.
- POWER8 systems information at <https://ibm.biz/BdFBGg>.