

R-Pi

Team Emertxe



Setup + Installation

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AIM

AIM:

1. To configure and boot R-Pi
2. Connect using SSH and VNC

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Requirements

1. R-Pi3 (Model B)
2. SD Card (Minimum 16GB)
3. SD Card Adapter
4. USB Mouse
5. USB Keyboard
6. Monitor / TV / Projector (With VGA or HDMI Input)
7. HDMI to VGA Converter (For VGA Input Monitor)
8. Power Cable

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Step-1:

1. DOWNLOAD FOLLOWING SOFTWARES:

a) OS for RPi3: Raspbian Stretch with desktop

<https://www.raspberrypi.org/downloads/raspbian/>

b) Etcher

<https://etcher.io/>

c) VNC Viewer: (For viewing RPi3 monitor screen on your laptop / Desktop)

<https://www.realvnc.com/en/connect/download/viewer/>

d) Angry IP Scanner

<https://angryip.org/download/>

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Step-2:

1. BURN RASPBIAN in SD Card:

- a) Format the SD Card using FAT32 file system
- b) Burn UNZIPPED Raspbian OS into SD Card using the **Etcher**
- c) SD Card is ready to Boot

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Step-3:

1. BOOT RASPBIAN OS:

- a) Connect Mouse and Keyboard to USB port of RPi3
- b) Insert SD card to SD card slot in RPi3
- c) Connect Monitor / TV / Projector to RPi3 using HDMI port
- d) Connect Power cable (micro USB cable) to Rpi3
- e) Watch the OS booting... on the Monitor

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Step-4: To See RPi3 Screen on Laptop

1. CHANGING SETTINGS in RPi3 OS:

a) Enable SSH and VNC:

- i. Click on Raspberry Button > Preferences > Raspberry Pi Configuration
- ii. Select Interfaces Tab and Enable SSH and VNC

b) Enable Internet:

- i. Click on Internet / WiFi Symbol on Task bar and Connect to Available WiFi

c) Check IP address:

- i. Open Terminal and Type: *ifconfig*

Make Sure Laptop / Desktop and RPi3 are connected to same WiFi Network

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Step-5: To confirm the IP assigned to RPi3

1. PING RPi3

- a) Open the terminal
- b) Type: *ping <ip_address>*
- c) Confirm the connection

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Step-6:

1. CONNECT USING SSH:

a) Open terminal and run following command

```
i. ssh pi@<ip_address>
```

Default Values:

User-ID : pi

Password: raspberry

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Step-7: To see RPi3 Screen on Laptop / Desktop

1. CONNECT USING VNC:

- a) Install and open VNC
- b) Enter <ip_address> and hit "Enter"
 - i. login id: *pi*
 - ii.password: *raspberrry*

Default Values:

User-ID : pi
Password: raspberrry

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Step-8:

1. TO CHECK IP ADDRESS assigned to RPi3

a) Install and Open AngryIP Scanner

Note: Install Java SDK

b) Put IP Range: to and Click on "Start"

- Here you will see the list and check Which IP address is assigned to your Rpi3
- Use this IP to connect to RPi3 using SSH and VNC

Make Sure Laptop / Desktop and RPi3 are connected to same WiFi Network

THANK YOU