Updated
for Raspbian
Stretch

Going Headless

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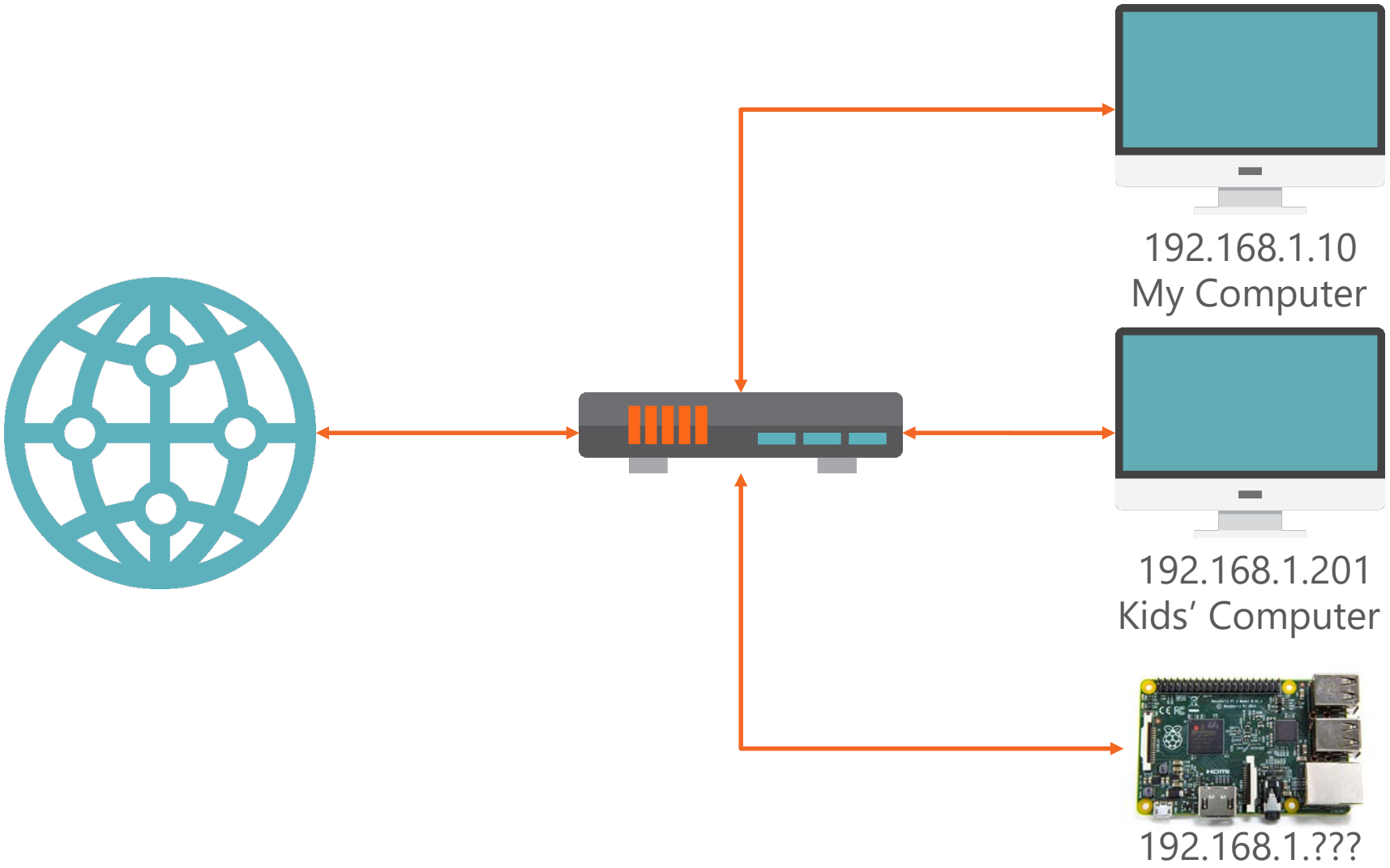
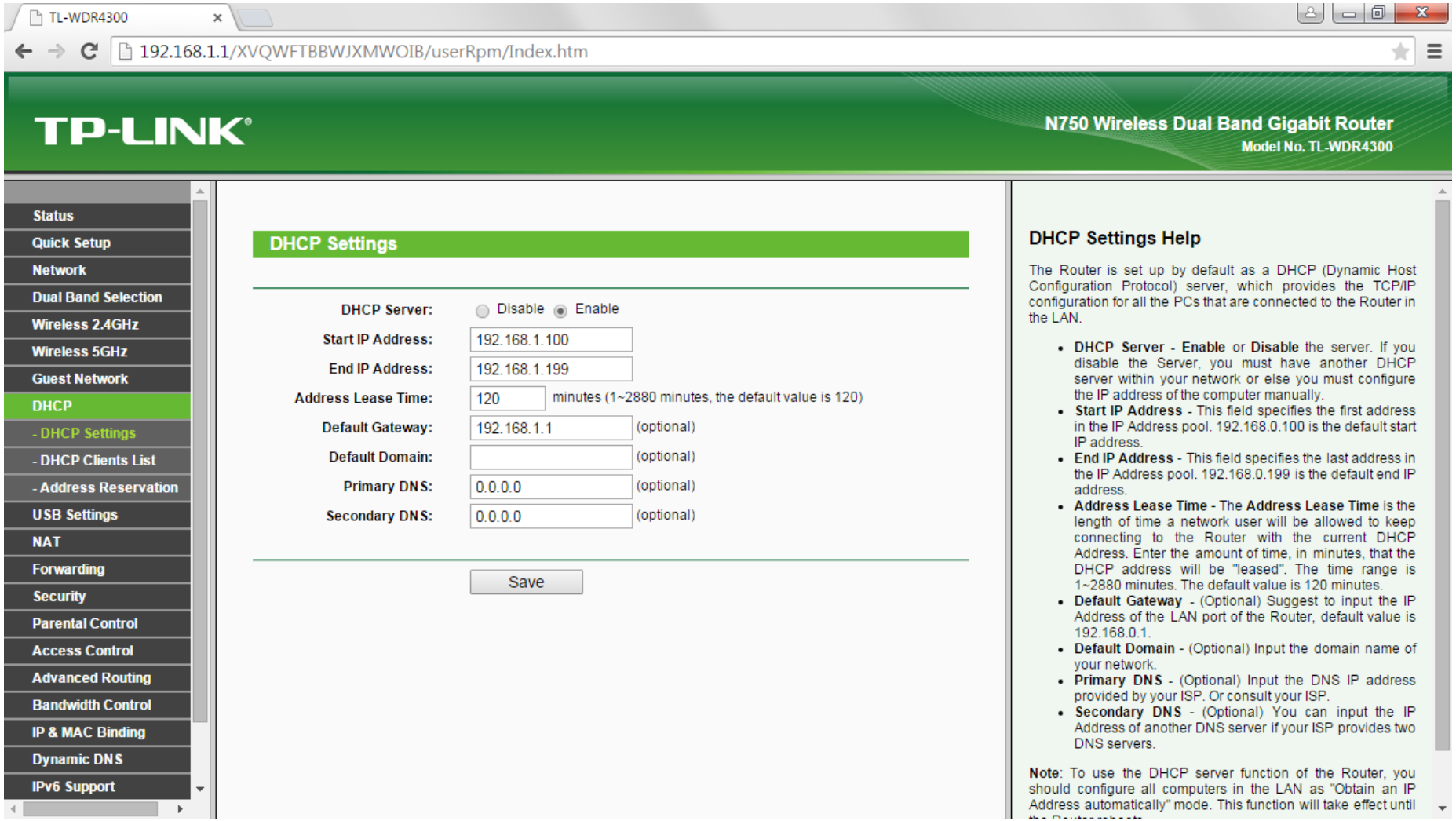
Network Addresses



Static IP Address



Static IP Address

Assigning Directly on the Device

192.168.1.1
DHCP Range 100 – 199

RPHS
192.168.1.2

Static IP Address

Prerequisites

- A working network connection
- Methods have changed more than once
- Can be set up through raspi-config, or from the desktop
- Used to require hand-editing of config files

DHCP

Dynamic Host Configuration Protocol

- IP address and netmask
- Router's IP address
- DNS server addresses

Netmask vs CIDR Prefix Length

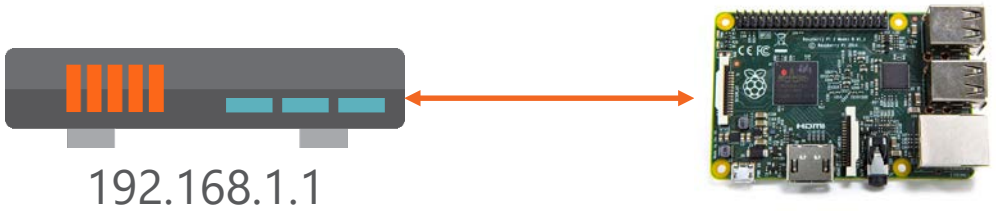
- Two ways of conveying the same information
- “CIDR Conversion Table”
- 24 = 255.255.255.0
- 12 = 255.255.0.0
- 08 = 255.0.0.0

Static IP Demo

Assigning an IP address directly

Static IP Address

Assigning via DHCP Lease



192.168.1.1

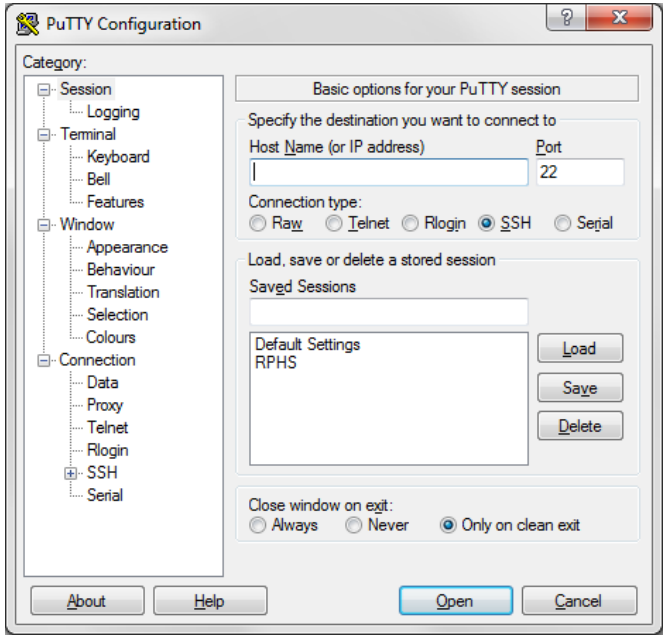
DHCP Table
RPHS:192.169.1.2
XBOX:192.168.1.3

RPHS
192.168.1.2

Static IP Demo

Assigning an IP address via DHCP lease

Static IP Demo



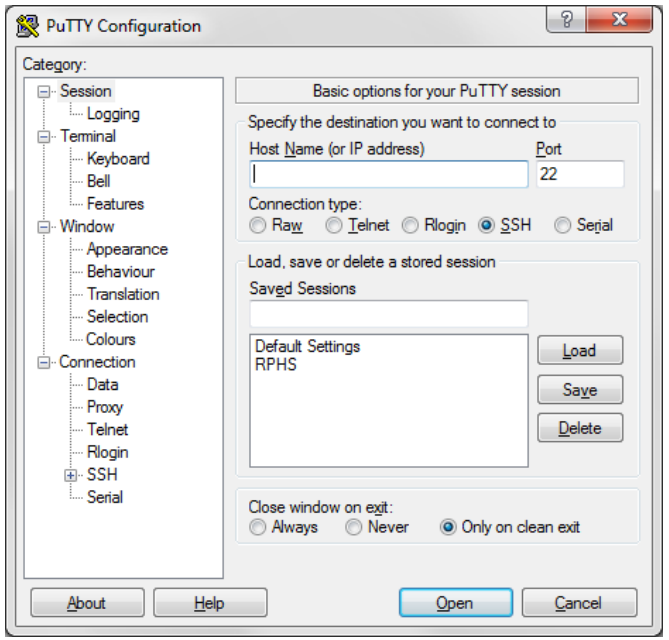
Download PuTTY from www.putty.org

Free and Open-Source

Connecting Remotely

Secure Shell (SSH)

For Windows Users



Download PuTTY from www.putty.org

Free and Open-Source

For Mac/Linux Users

Just use “ssh -l <username> <address>”

SSH Demo

Connecting via PuTTY

Connecting via “ssh”

Connecting Remotely

Webmin

Installing Software With APT

apt

- APT updates installed packages
- APT installs new packages
- APT takes care of dependencies

Installing Webmin

Update APT's list of sources

Update APT's list of packages

Install Webmin

Demo: Installing Webmin

Updating apt sources

Updating apt packages

Installing Webmin

A Quick Tour of Webmin

Update software packages

Check server statistics

Perform administrative tasks

Issue commands

Updates

Remote Desktop

- Originally used x11vnc
- Tricky to set up and run
- Pixel desktop includes RealVNC Connect
- Simplifies connecting, even outside the house
- Can’t live without it

Connecting Remotely

Remote Desktop (VNC)

Virtual Network Computing (VNC)

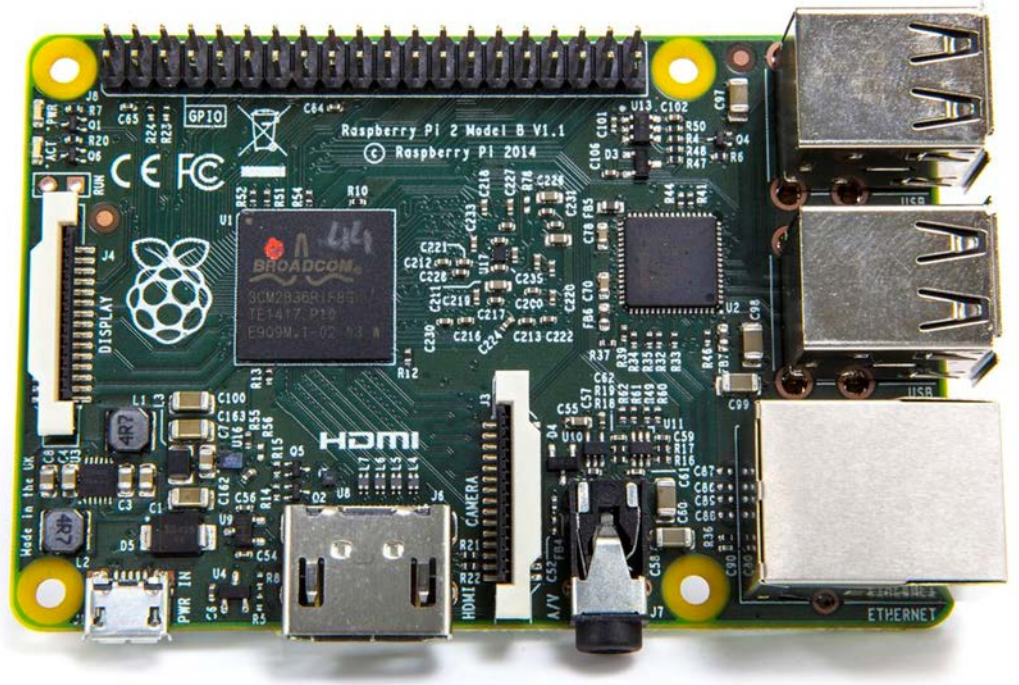
Demo: Installing x11vnc

Install x11vnc through apt-get

Configure x11vnc

Connect via VNC client

The Headless Raspberry Pi



Demo: Remote Desktop

Connecting

Make A Backup

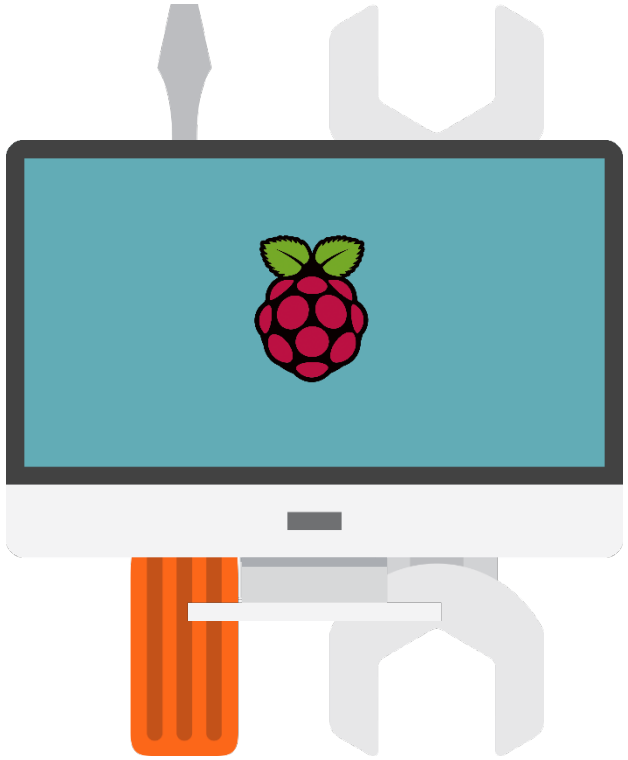
Windows

Win32DiskImager

Mac / Linux

sudo dd if=/dev/diskn of=~/pi.img bs=1m

Summary



- Assigned a static IP address
- Connected via SSH
- Connected via Webmin
- Connected via VNC