# Introduction

Using Vagrant, you can create VMs.

Vagrant has been built in Ruby.

# Running Multiple VM

V is able to define and control multiple guest machines per V file. This is known as “multi-machine” environment. Multiple machines are defined in the same V file using config.vm.define method call. This configuration directive is little funny because it creates V configuration within a configuration.

When you refer to the “config” variable you are actually referring to the default VM.

config.vm.define “vm1\_name”, primary: true do |http|

# Networking in Vagrant

Three types of networking approaches:

## Port Forwarding

You use host machines IP address and you use port from that to go directly to a port in the VM. This is the default setup. When you run “vagrant up” command you will see the following lines:

==> default: Preparing network interfaces based on configuration...

default: Adapter 1: nat

default: Adapter 2: hostonly

==> default: Forwarding ports...

default: 22 (guest) => 2201 (host) (adapter 1)

Port 2201 of host will be redirected to Port 22 (ssh port) of the guest.

Custom Configuration is done with a line similar to the following one (This will enable public access to the opened port):

config.vm.network "**forwarded\_port**", guest: 80, host: 8080

It says the guest OS (i.e. VM) will use port 80 to listen to the traffic. The traffic which will come on host’s port 8080 will be forwarded to guest’s port 80

When you run “vagrant up” command you will see the following lines:

==> default: Preparing network interfaces based on configuration...

default: Adapter 1: nat

==> default: Forwarding ports...

default: 80 (guest) => 8080 (host) (adapter 1)

default: 22 (guest) => 2222 (host) (adapter 1)

If you want to disable public access, and only allow traffic from host machine:

config.vm.network "forwarded\_port", guest: 80, host: 8080, host\_ip: "127.0.0.1"

## Dynamic IP Address

When the DHCP server will allocate a free IP address to the VM automatically

## Static IP Address

You allocate an IP address to the VM. There should not be any device on the network using the same IP address.