

# Vagrantfile Options Cheat Sheet

## Basic VM Settings

- `config.vm.box = "ubuntu/focal64"` → Base image/box specify karta hai (Ubuntu, CentOS, etc.).
  - `config.vm.define "name" do |machine|` → Ek machine define karta hai (multi-machine setup ke liye).
  - `config.vm.hostname = "my-vm"` → VM ka internal hostname set karta hai.
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## Networking

- `config.vm.network "forwarded_port", guest: 80, host: 8080` → Host pe 8080 → VM ke port 80 forward karega.
  - `config.vm.network "private_network", ip: "192.168.56.10"` → Private static IP assign karega.
  - `config.vm.network "public_network"` → VM ko host ke network pe public IP deta hai (jaise bridge mode).
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## Synced Folders

- `config.vm.synced_folder "./src", "/home/vagrant/app"` → Host ka folder VM ke folder ke sath sync karega.
  - `config.vm.synced_folder ".", "/vagrant"` → Default sync (project folder VM ke andar /vagrant ).
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## Provider Settings (VirtualBox Example)

```
config.vm.provider "virtualbox" do |vb|  
  vb.name = "MyUbuntuVM"      # VirtualBox mein VM ka naam  
  vb.memory = "2048"          # RAM (in MB)  
  vb.cpus = 2                  # Number of CPUs  
end
```

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# Provisioning (Software Install / Setup)

- **Shell Script (inline):**

```
config.vm.provision "shell", inline: <<-SHELL
  sudo apt-get update
  sudo apt-get install -y nginx
SHELL
```

- **Shell Script (external file):**

```
config.vm.provision "shell", path: "setup.sh"
```

- **Other tools supported:** Ansible, Puppet, Chef, SaltStack.
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## Multiple Machines Example

```
Vagrant.configure("2") do |config|
  config.vm.define "web" do |web|
    web.vm.box = "ubuntu/focal64"
    web.vm.hostname = "web-server"
    web.vm.network "private_network", ip: "192.168.56.10"
  end

  config.vm.define "db" do |db|
    db.vm.box = "ubuntu/focal64"
    db.vm.hostname = "db-server"
    db.vm.network "private_network", ip: "192.168.56.11"
  end
end
```

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