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# GDL Deployment Guide

Prepare for Operating System

10/2/2024

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## Contents

- [1 Recommended OS](#)
- [2 Install Virtual Box](#)
- [3 Install Vagrant](#)
- [4 Configure Vagrant](#)
- [5 CentOS 7 Specifications](#)
- [6 Logging on to CentOS using Vagrant](#)

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## Detailed Instructions to set up CentOS/7 in Windows 10 Environment

### Recommended OS

- Linux CentOS 7 is recommended and tested version.
- Windows 10 is not recommended due to Hyper-V issues existing in Windows 10 environment.
- Mac OS is possible, but not tested with these procedures.

### Install Virtual Box

Download the VirtualBox setup file for Windows hosts and execute the setup file with admin privileges.

Link:<https://www.virtualbox.org/wiki/Downloads>

### Install Vagrant

Download Vagrant 2.1.2 version (recommended tested version) to build and manage virtual machine environment. The general downloads for all versions can be obtained here, and the archived versions are available here.

Run the vagrant 2.1.2 x86\_64.msi setup file, and install in C:\ drive.

### Configure Vagrant

1. Create a folder of any name (say GDL) in C:\HashiCorp\Vagrant\
2. Launch Command Prompt as Administrator (Run as Administrator)
3. Change the directory of Command Prompt as C:\HashiCorp\Vagrant\GDL
4. Type the command **vagrant init centos/7** and click **Enter**.

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```
C:\>cd Hashicorp
C:\HashiCorp>cd Vagrant
C:\HashiCorp\Vagrant>cd GDL
C:\HashiCorp\Vagrant\GDL>vagrant init centos/7
```

Vagrant creates a configuration file named Vagrantfile in GDL folder.

## CentOS 7 Specifications

1. Open the Vagrantfile (under C:/Hashicorp/Vagrant/GDL) using a text editor(run text editor as Administrator) and change the following properties of the file.

1. `config.vm.box="centos/7"` (in line 15)

```
13 # Every Vagrant development environment
14 # boxes at https://vagrantcloud.com/sea
15 config.vm.box = "centos/7"
16
```

2. `config.vm.network "private network", ip: "192.168.33.10"` (in line 35)

```
33 # Create a private network, which allows host-only access to the
34 # using a specific IP.
35 config.vm.network "private_network", ip: "192.168.33.10"
36
```

3. `config.vm.provider "virtualbox" do|vb|(in line 52)`

```
50 # Example for VirtualBox:
51 #
52 config.vm.provider "virtualbox" do |vb|
53 # # Display the VirtualBox GUI when booting the machine
```

4. `vb.memory= "4096"` (in line 57)

5. `end` (in line 58)

```
56 # # Customize the amount of memory on the VM:
57 vb.memory = "4096"
58 end
```

6. `config.vm.synced_folder "C:/dockerlinux/", "/Shared", nfs: true(in line 70)`

```
69 # SHELL
70 config.vm.synced_folder "C:/dockerlinux", "/Shared", nfs: true
71 end
```

Ensure the path specified in #6 (line 70) contains the unzipped content of IP file **IP\_GDL\_900\_ENU\_DockerLinux.zip**. It contains four files as given below.

1. `docker-compose-cluster-full.yml`

- 
2. docker-compose-single.yml
  3. docker-compose-cluster-half.yml
  4. IP\_GDL\_900\_ENU\_DockerLinux.tar

In Docker environment, these files are accessed from the host machine(Windows 10) through guest machine (CentOS/7).

## Logging on to CentOS using Vagrant

1. Type the command **vagrant up** to boot up the newly created CentOS/7 Virtual Machine VM.
  1. If you encounter error while booting up CentOS/7 due to hyper-V, follow the steps given here to remove the hyper-V issue.
  2. If you encounter error regarding shared folders (mounting issues), type the command **vagrant plugin install vagrant-vbguest** to use the folders of host machine (Windows 10) in guest machine (CentOS/7).
2. Type the command **vagrant reload** to reflect the changes made in vagrant box.
3. Type the command **vagrant ssh** to login the CentOS/7 VM as Vagrant user.

The VM setup with CentOS/7 is ready for the installation of Docker software.