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Prerequisite:

Install Docker or VM Player.
Refer the appropriate section.

Docker:

- Install docker
- Download and Image

VM

- Install VM player
- Download VM
- Import the VM

Download the software.

Internet connection.

Infrastructure installation

You can choose Docker or VM.

Docker

Ref: <https://runnable.com/docker/install-docker-on-windows-10>
<https://docs.docker.com/docker-for-windows/install-windows-home/>

Install Docker on Windows 10

Have you previously installed Docker Toolbox, Docker Machine, or VirtualBox?

Docker for Windows now requires Microsoft's Hyper-V. Once enabled, VirtualBox will no longer be able to run virtual machines (your VM images will still remain). You can still use `docker-machine` to manage remote hosts.

You have the option to import the `default` VM after installing Docker for Windows from the Settings menu in the System Tray.

Docker for Windows enables Hyper-V if necessary; this requires a reboot.

Requirements

Docker for Windows runs on 64-bit Windows 10 Pro, Enterprise, and Education; 1511 November update, Build 10586 or later.

Docker plans to support more versions of Windows 10 in the future.

Installation

1. [Download Docker](#).
2. Double-click `InstallDocker.msi` to run the installer.
3. Follow the Install Wizard: accept the license, authorize the installer, and proceed with the install.
4. Click Finish to launch Docker.
5. Docker starts automatically.
6. Docker loads a “Welcome” window giving you tips and access to the Docker documentation.

That’s it!

Verification

The whale in the status bar indicates a running (and accessible via terminal) Docker instance.

Open PowerShell or your favorite Windows terminal (e.g., Command prompt) and enter `docker run hello-world`.

Windows prompts you for access every time Docker starts, allowing Docker to manage the Hyper-V VM’s. The *first time* Docker starts, you may need to provide the token from the Beta invitation email. When initialization completes, select **About Docker** from the notification area and verify you have the latest version.

From PowerShell (or your favorite Windows terminal), check the versions of `docker`, `docker-compose`, and verify your installation:

```
PS C:\Users\username> docker --version
```

```
PS C:\Users\username> docker-compose --version
```

```
PS C:\Users\username> docker-machine --version
```

Before you stop, let's test a Dockerized webserver; from PowerShell or `cmd.exe`, run:

```
docker run -d -p 80:80 --name webserver nginx
```

If your host does not already have it, Docker downloads `nginx` from Docker Hub and starts it. As soon as the download completes, point your web browser to <http://docker> to view the start page. You should see:

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org. Commercial support is available at nginx.com.

Thank you for using nginx.

Common Pitfalls

CPU

If your CPU does not support virtualization, or if you do not have a 64-bit CPU, you cannot run Docker locally.

Operating System

If you do not run a 64-bit version of Windows Windows 10 Pro, Enterprise, or Education; 1511 November update, Build 10586 or later, you cannot run Docker for Windows.

You can install Docker Toolbox if you have a 64-bit version of Windows 7 or later. Alternately, you do have the option to [upgrade](#).

Docker - Install On Linux.

<https://runnable.com/docker/install-docker-on-linux>

VM

Steps

- Install VM Player – Any latest version.
- Download VM – Centos 7 or 8 (Any Version)
- Unzip and import the VM

- Testing – Start the VM and you should be able to access the VM from your host machine using putty.

Refer the steps mention below for each section.

1. Install VM Player.

<https://kb.vmware.com/s/article/2053973>

2. Download the VM

Use Version - CentOS 8.2.2004

<https://www.osboxes.org/centos/#centos-822004-vmware>
<https://www.linuxvmimages.com/images/centos-7/#how-to-use>

3. Attach the VM

<https://www.osboxes.org/guide/>
<https://www.linuxvmimages.com/how-to-use/>

Software to be download:

Download all the software and store in a folder /Software.

Apache Spark – Version 3.0.1 – Prebuilt for Apache Hadoop 3.2 and later.

File : [spark-3.0.1-bin-hadoop3.2.tgz](#)

Url : <https://spark.apache.org/downloads.html>

JDK installation☺) (jdk-8u45-linux-x64.tar.gz)

<https://www.oracle.com/in/java/technologies/javase/javase8-archive-downloads.html>

<http://zeppelin.apache.org/download.html>

zeppelin-0.9.0-bin-all.tgz

Any version of Hadoop later thanhadoop-2.6.0.tar.gz

Kafka

<https://kafka.apache.org>