ubuntu-3

Docker:

https://www.tutorialspoint.com/docker/index.htm

Docker swarm:

https://blog.octo.com/en/how-does-it-work-docker-part-1-swarm-general-architecture/

Docker compose:

https://www.tutorialspoint.com/docker/docker\_compose.htm

CentOS:

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| --- | --- | --- |
| Steps | Command | Online help |
| Check for updates | **yum check-update** |  |
| Install docker engine | sudo yum install docker-engine  **[Note: this command needs root user access]** | https://www.youtube.com/watch?v=pm55BUwQ0iE |
| Start docker service | sudo systemctl start docker.service | Following |
| Check docker status | sudo systemctl status docker.service | Following |
| Enable docker | sudo systemctl enable docker.service | Following |
| To download maven, system need ‘wget’. So we need to install ‘wget’ before installing maven | | |
| Wget installation | yum install wget | http://webplay.pro/linux/centos/how-to-install-wget-command-centos.html |
| To check if java is installed already | java –version | https://tecadmin.net/install-apache-maven-on-centos/ |
| If Java has not been installed, it needs to be installed. | | |
| Download latest java arch | 1. Cd /opt/ 2. wget --no-cookies --no-check-certificate --header "Cookie: gpw\_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" <http://download.oracle.com/otn-pub/java/jdk/8u161-b12/2f38c3b165be4555a1fa6e98c45e0808/jdk-8u161-linux-x64.tar.gz> 3. tar xzf jdk-8u161-linux-x64.tar.gz | https://tecadmin.net/install-apache-maven-on-centos/ |
| **Option to choose from different arch. types has been given on the link provided.** | | |
| Set environment variables | 1. export JAVA\_HOME=/opt/jdk1.8.0\_161 2. export JRE\_HOME=/opt/jdk1.8.0\_161/jre 3. export PATH=$PATH:/opt/jdk1.8.0\_161/bin:/opt/jdk1.8.0\_161/jre/bin | Following |
| To work with Git, we must install git in our system | | |
| Git installation | sudo yum install git | https://www.digitalocean.com/community/tutorials/how-to-install-git-on-centos-7 |
| To check Git version | git –version | Following |
| Project cloning | 1. To clone onto a specific directory   Command: git clone https://github.com/path/to/project path/to/directory   1. To clone onto root directory   Command: git clone <https://github.com/path/to/project> |  |
| Image creation.  Note: In case of java project, there’s two ways of defining project dependencies. By pom.xml file or a separate file that must be named as ‘Dockerfile’. | | |
| Go to project directory | cd projectname | https://www.youtube.com/watch?v=0nHSgo4YShU |
| Clean Maven | mvn clean | Following |
| Make package | mvn package | Following |
| Build docker image | mvn docker:build | Following |
| To get list of all images | docker images | Following |
| To run image | docker run –p 8080:8080 –t dockerexample | Following |
| To get Url and port | docker-machine ls | Following |

**Ubuntu:**

Commands:

* $ sudo apt-get update
* $ sudo apt-get install curl \ linux-image-extra-$(uname -r) \ linux-image-extra-virtual
* $ sudo apt-get install apt-transport-https \ ca-certificates $ curl -fsSL [https://yum.dockerproject.org/gpg](https://www.youtube.com/redirect?q=https%3A%2F%2Fyum.dockerproject.org%2Fgpg&event=video_description&redir_token=fraKVJbxnd2D6-xm_pQ0DvXS62l8MTUyMjkwOTMwMkAxNTIyODIyOTAy&v=EDaN2293rQI) | sudo apt-key add –

verify the key :

* $ apt-key fingerprint 58118E89F3A912897C070ADBF76221572C52609D
* $ sudo add-apt-repository \ "deb [https://apt.dockerproject.org/repo/](https://www.youtube.com/redirect?q=https%3A%2F%2Fapt.dockerproject.org%2Frepo%2F&event=video_description&redir_token=fraKVJbxnd2D6-xm_pQ0DvXS62l8MTUyMjkwOTMwMkAxNTIyODIyOTAy&v=EDaN2293rQI) \ ubuntu-$(lsb\_release -cs) \ main"
* $ sudo apt-get update
* $ sudo apt-get -y install docker-engine

Verify that docker is installed correctly by running the hello-world image

* $ sudo docker run hello-world

**Additional:**

* sudo apt install wget
* sudo apt install yum
* sudo apt-get install default-jre

[**https://www.digitalocean.com/community/tutorials/how-to-install-java-with-apt-get-on-ubuntu-16-04**](https://www.digitalocean.com/community/tutorials/how-to-install-java-with-apt-get-on-ubuntu-16-04)

* sudo apt-get install git
* sudo apt-get install maven

docker run -it ubuntu