**Installation of Docker:**

Today we will learn : How to install Docker on Linux

Agenda:

Prerequisites

Connect to Linux Install Docker

Start Docker

Stop Docker

Uninstall Docker

Prerequisite of OS:

OS should be 64 bit

Linux kernel ver 3.10 or greater command to check : uname -r

STEP 1 - Connect to Linux system

STEP 2 - Install DOCKER sudo yum -y update

sudo yum install -y docker

docker docker --version

STEP 3 - start DOCKER sudo service docker start

sudo usermod -a -G docker "user" docker info docker

run hello-world : to run hello-world image

docker images : to get list of images present locally

docker ps : to get list of running containers

docker ps -a . : to get list of all containers

STEP 4 - stop DOCKER sudo service docker stop

uninstall DOCKER - sudo yum remove docker

HELPFUL TIPS

You can visit - [https://get.docker.com/](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Fget.docker.com%2F&v=KCckWweNSrM&event=video_description) for more installation related help

To install docker from binaries [https://docs.docker.com/engine/instal...](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Fdocs.docker.com%2Fengine%2Finstallation%2Fbinaries%2F&v=KCckWweNSrM&event=video_description)

Installation steps for amazon ec2 [http://docs.aws.amazon.com/AmazonECS/...](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=http%3A%2F%2Fdocs.aws.amazon.com%2FAmazonECS%2Flatest%2Fdeveloperguide%2Fdocker-basics.html&v=KCckWweNSrM&event=video_description)

References:

Linux free instance - [https://aws.amazon.com/free/](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Faws.amazon.com%2Ffree%2F&v=KCckWweNSrM&event=video_description)

Docker Manuals - [https://docs.docker.com/manuals/](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Fdocs.docker.com%2Fmanuals%2F&v=KCckWweNSrM&event=video_description)

[https://get.docker.com/](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Fget.docker.com%2F&v=KCckWweNSrM&event=video_description)

[https://docs.docker.com/engine/instal...](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=https%3A%2F%2Fdocs.docker.com%2Fengine%2Finstallation%2Fbinaries%2F&v=KCckWweNSrM&event=video_description)

[http://docs.aws.amazon.com/AmazonECS/...](https://www.youtube.com/redirect?redir_token=Y9mZIARGsVd2ApnZ6Yis_6mPQCd8MTUyMTI1NjY2NEAxNTIxMTcwMjY0&q=http%3A%2F%2Fdocs.aws.amazon.com%2FAmazonECS%2Flatest%2Fdeveloperguide%2Fdocker-basics.html&v=KCckWweNSrM&event=video_description) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**DOCKER**

Docker is the centralized platform to execute your application. It wraps the software component to run the software into a complete standerdazed unit which contains everything required to run (including code, liberies, runtime env, tools, variables etc.) the piece of code or task.

# 

# Agenda

### Introduction to Docker

### Docker Images

### Docker Container

### Demo time

### Q & A

### 

### Development of  DevOps solutions

### - openstack, AWS, python, node.js, Jenkins, Docker

### Docker containerization of application

### - docker file, docker run, benchmarking with Apache bench

### Runs Docker into Production

### - Integrate docker with Jenkins

# What is Docker for me ?

### A light weight Virtual Appliance

### Easy to build, run, destroy, move

### Don’t need big infrastructure ( ~ runs 100-1000 in a typical server  )

### A big ecosystem ( Docker hub, Orchestration tools, cloud support etc.  )

### Fastest growing open source technology

# Details about Docker

### Started by dotcloud , a PaaS company

### Written in Go langauge

### March 2013:  Docker 0.1 released

### Current version: Docker 1.7.0 ( June 22 , 2015)

### possible by linux cgroups and namespace.

### Based on LXC container

### On windows & Mac - Boot2Docker

# Docker Images ?

# Docker File

## ( sample python based web app )

### FROM ubuntu

### MAINTAINER Prashant Tyagi

### RUN sudo apt-get update && sudo apt-get -y install python && sudo apt-get -y install python-pip && sudo pip install flask

### COPY webapp /root/webapp

### EXPOSE 5000

### WORKDIR /root/webapp/

### CMD python app.py

# Containers ?

### inside my container:

### - my code

### -  my libraries

### -  my package manager

### -  my app, my data

### outside my container:

### - logging, remote access,

### -  network configurations

### -  monitoring

# References

* [https://docs.docker.com](https://docs.docker.com/)
* <https://wiki.jenkins-ci.org/display/JENKINS/Use+Jenkins>
* [https://en.wikipedia.org/wiki/Docker\_%28software%29](https://en.wikipedia.org/wiki/Docker_(software))

**Docker Installation on ubuntu:**

**Step by Step-**

* 1. Prerequisite:
* 64 – bit ubuntu 16.04 server
* Set proxy – as per requirement (Search for proxy and set – here proxy will be proxy1.wipro.com)
* Set Authentication on CLI –

sudo -H gedit /etc/apt/apt.conf

* Add to file

Aquire::http::proxy <http://username:password@procy:port/;>

* 1. First, add the GPG key for the official Docker repository to the system:  
     $curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
  2. Add the Docker repository to APT sources:

$sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable"

* 1. Update the package database with Docker packages

$sudo apt-get update

* 1. Make sure you are about to Install Docker repo instead of the default Ubuntu

$ apt-cache policy docker-ce 🡪 opitional

* 1. Finally install docker

$ sudo apt-get install -y docker-ce

* 1. Now docker is installed on your system, Daemon started, and process enable to start on boot. Check that its running by

$ sudo systemctl status docker