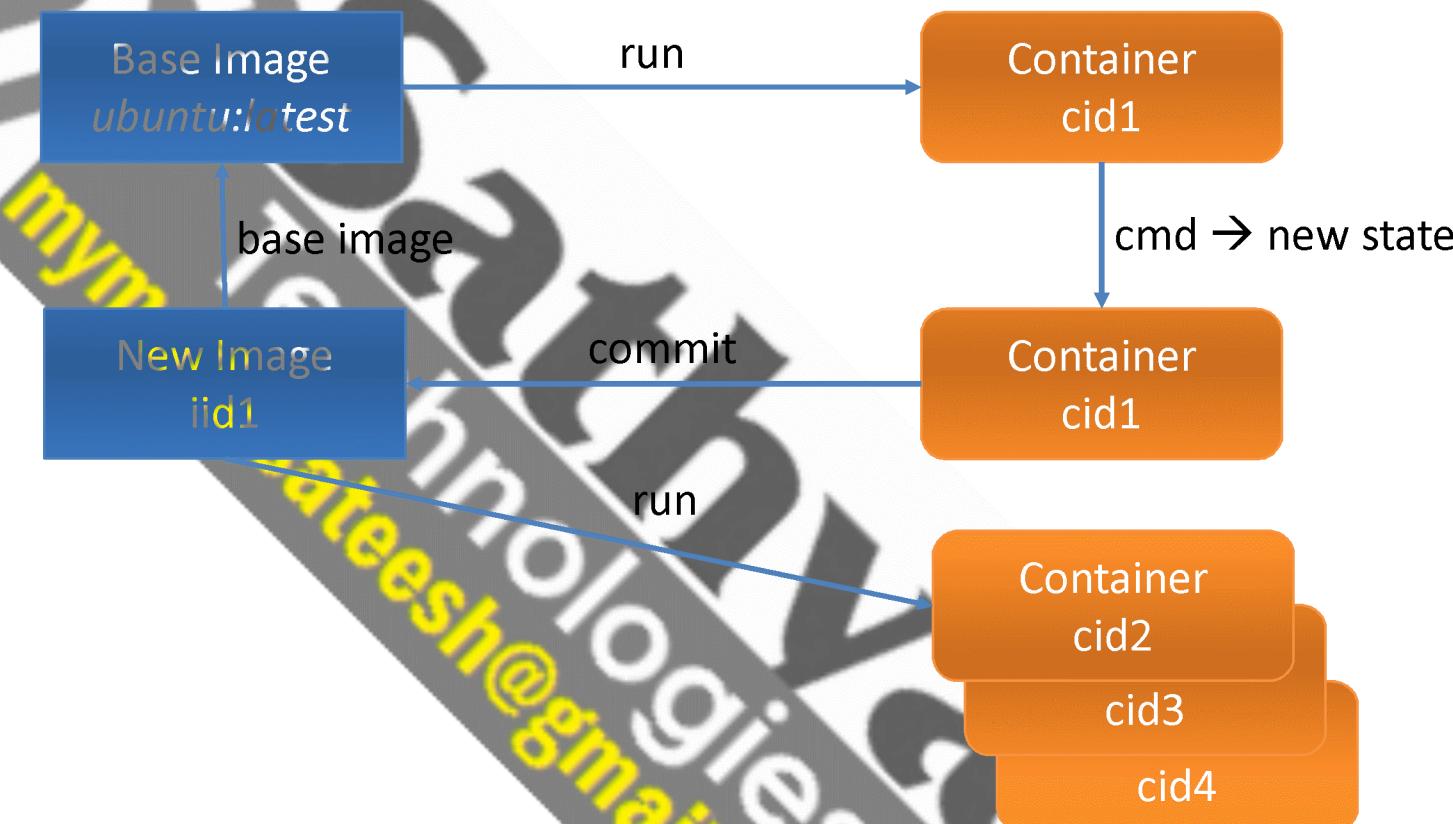




# Install Docker Engine

- Recommended Installation:
- `# curl -fsfl https://test.docker.com | sh`
- <https://docs.docker.com/engine/installation/>
- Installing Docker on Windows 10:
  - <https://docs.docker.com/docker-for-windows/>

# Image vs. Container



# Hello World

## Simple Command - Ad-Hoc Container

- docker run ubuntu echo Hello  
World
  - docker images [-a]
  - docker ps -a

to pull the tomcat image from Docker Hub

---

```
#docker pull tomcat:8.0  
#docker pull tomcat
```

to create a Container from Image

---

```
# docker run -d -p 9090:8080 tomcat:8.0
```

(-d : detached mode)  
(-p : port Mapping)

```
#find / -name webapps  
# docker run -it tomcat bash  
(it --> interactive Terminal)
```

**to create an Image from Container :**

---

```
#docker ps -a  
#docker commit <container id>  
#docker images
```

**to List all the Container IDs**

---

```
#docker ps -aq
```

**to Remove all the containers**

---

```
# docker rm $(docker ps -aq)
```

**to Remove a specific container:**

---

```
# docker rm 47e1bce974ef
```

**to Remove an Image:**

---

```
# docker rmi <image id>
```

**to Remove all the Images:**

---

```
# docker rmi $(docker images -aq)
```

# Dockerfile Example

```
#vi Dockerfile
FROM ubuntu
MAINTAINER satish
RUN apt-get update
RUN echo "sathya tech"
CMD ["echo","Hello world"]
# docker build -t hello:latest .
# docker run hello
```

## Example:

- FROM tomcat
  - MAINTAINER satisht
  - RUN wget "url"
  - RUN cp jenkins.war /var/lib/tomcat7/webapps
  - EXPOSE 8080
  - CMD ["service","tomcat7","restart"]
- 

- FROM ubuntu:15.10
- RUN apt-get update
- RUN apt-get install -y openjdk-8-jdk
- CMD ["echo","Java Installed"]
- ENV NAME=JAVA\_MACHINE

## Example:

- FROM tomcat
- MAINTAINER satisht
- COPY jenkins.war /var/lib/tomcat7/webapps
- RUN service tomcat7 restart
- EXPOSE 8080
- CMD ["service","tomcat7","restart"]

## Example:

- FROM ubuntu
- MAINTAINER satisht
- RUN apt-get update && apt-get install -y nginx
- RUN echo 'Our first Docker image for Nginx' > /usr/share/nginx/html/index.html
- CMD ['/etc/init.d/nginx','start']
- EXPOSE 80

## Example:

```
FROM ubuntu
MAINTAINER authors_name
RUN apt-get update
ADD /my_app_folder /my_app_folder
CMD "echo" "Hello docker!"
CMD "Hello docker!"
ENTRYPOINT echo
ENV SERVER_WORKS 4
EXPOSE 8080
VOLUME ["/my_files"]
WORKDIR ~/
USER <uid>
```

```
# docker inspect <con id> / <image id>
# docker network ls
# docker network inspect bridge
# docker start <container id>
# docker attach <container id>
# docker stop <container id>
# docker run -itd centos /bin/bash
    yum install httpd -d
# docker commit <cont id> centos_httpd
# docker run -itd -p 80:80 centos_httpd
    /usr/sbin/bash -D FOREGROUND
```