*DevOps*

**DevOps**

(Tutorial – Channel Name: Technical Guftgu)

**First Published On: 24th Jun 2021**

**Last Updated On: 24th Jun 2021**

**DevOps**

|  |
| --- |
| **CheatSheet**  **C:\Users\akshayp\Desktop\Docker-commands-cheat-sheet-by-PhoenixNAP-scaled.jpg** |

|  |  |
| --- | --- |
| **Installing Docker**  **Installing Docker on EC2 AMI (Amazon Machine Image)**   1. sudo yum update –y (optional) 2. sudo yum install docker –y 3. sudo service docker start 4. sudo usermod –a –G docker ec2-user (optional) 5. docker version (optional)   **Installing Docker on Ubuntu/ (any distro)**    **Extra (YouTube -** [**https://www.youtube.com/watch?v=M7\_mZXh8h8A**](https://www.youtube.com/watch?v=M7_mZXh8h8A)**)**       1. **docker run --name <<container name>> -it ubuntu bash** 2. **docker commit <<old container name>> <<new container name>>**      1. **docker run –it --name <<new container name>> <<existing container name>> bash**        * **Creating image using Dockerfile**     **Commands**            **Docker Volume**      **Creating and sharing Docker Volume**    **Lab – Creating Docker Volume**            **Creating Volume Directly from command line**      **Sharing Host volume with container volume** | **Docker**  C:\Users\akshayp\Desktop\docker_facebook_share.png  This logo has meaning – A Whale is carrying containers and is shipping from one place to another  Just like in IT scenario, containers are created and can be migrated from one place to another   * Last point is important * If Development team is using Ubuntu OS then Testing team should also use Ubuntu OS only, other Linux Distro like CentOS, RedHat, etc will not work * First a Docker file is created, that will have all the softwares to be installed and the required dependencies * This Docker file is run in docker engine, an Image is created and container is started using this image * This Image can be reused by anyone, i.e. the image can be uploaded to Docker Hub/ Docker Repository so that any other using having internet can pull this image and the container will be created. * Docker Daemon – Docker Engine which creates images and containers * Docker Client – E.g. CLI (cmd prompt) where you execute the docker commands * Docker Host – the Underlying host hardware where Docker is installed * Image become container when they run on docker engine   **Installing Docker**  Thereare 3 ways to install docker, let’s check atleast 2 ways out of them  **Installing Docker on EC2 AMI (Amazon Machine Image)**   1. First update your machine 2. Install docker engine 3. Start the docker engine 4. Change the user settings so that non root users can also invoke docker commands 5. Get the version of docker   **Installing Docker on Ubuntu/ (any distro)**  Goto docker documentation - <https://docs.docker.com/engine/install/ubuntu/>  ***curl -fsSL https://get.docker.com -o get-docker.sh*** : This command is used to get a shell script from the internet to our local instance.  ***sudo sh get-docker.sh:*** This command will execute the script on the local instance.  To get a lab environment ready for docker for trial and error you can goto  *labs.play-with-docker.com*   1. Run ubuntu container  * --name – this will give a name we specify to the container * -it – Interactive mode * Bash – go inside the container and wait, normally if bash is not given, it will exit out of container and stop the container.   Let’s modify this container and create another image of modified container.   * Update somethings in container like add new txt file, etc.  1. Commit the changes done to the old container 2. Create new container from previous modified container  * Create another new image from the previous modified image and observe that the changes done to previous one (new text file, etc. ) will appear in this container as well. * **Dockerfile terminology** * **Creating image using Dockerfile**   **Commands**  Create a new docker file  ***Vi Dockerfile***  **FROM ubuntu**  **RUN echo “xyz” > tmp/testfile**  Build the docker image  ***Docker build –t test .***  Run the container using the new image  ***Docker run –it --name <<any name>> <<image name>> bash***  Another example of Dockerfile |
|  |  |