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| **DOCUMENT RULES:** | |
| **Task Number / Name:** | **Task 9 / Docker** |
| **Task name & column name should be written:** | **Bold (CTRL+B)** |
| **Commands should be written in the after # sign:** | *Italic (CTRL+I) #hostname* |
| **Output photo should be cropped or compressed:**  **Photo could be more than one:**  **If you need extra lines, add the line next after it:** | ***Description photo should be with title bar (CTRL + I + B)*** |
| **All other text should be written:** | Standard |
| **Font name and text size:** | Calibri and 9 |
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| **#** | **Task names** | **Command steps and outputs** | |
| **1** | 1. **Lab requirements:**   **-We need 1 Ubuntu VM on Desktop Hypervisor with Snapshoot**  **- MobaXterm terminal Client software should access to guest VM** | Ubuntu 18.04 Bionic Beaver mini.iso | |
| **2** | 1. **Check status of firewall and take screenshot of the CLI output.** 2. **If firewall is not installed left it as have.** 3. **Give permanent SSH access from.** 4. **SSH virtual port is 22. If SSH server is not installed, please install it.** 5. **To be check connectivity use commands.** 6. **Update the system and application.** | **For instance: start**, **stop**, **enable**, **disable, status**  *# firewall-cmd –state*    #*ping x.x.x.x*    *#telnet x.x.x.x 22*  *#sudo apt-get update* | |
|  | Download docker and build image |  | |
|  | 1. Uninstall old version docker | # sudo apt-get remove docker-engine doker.io containerd runc | |
|  | 1. **Install packages to allow apt to use a repository over HTTPS** | *# sudo apt-get install \*  *ca-certificates \*  *curl \*  *gnupg \*  *lsb-release* | |
|  | 1. **Add Docker’s official GPG key:** | *# sudo mkdir -p /etc/apt/keyrings*  *# curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg* | |
|  | 1. Set up repository | # echo \  "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg] https://download.docker.com/linux/ubuntu \  $(lsb\_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null | |
|  | 1. Install Docker Engine | # sudo apt-get update  # sudo apt-get install docker-ce docker-ce-cli containerd.io docker-compose-plugin | |
|  | 1. Verify that Docker Engine is installed correctly by running the hello-world image. | # sudo docker run hello-world  it works (Hello From Docker!) | |
|  | 1. To create the docker group and add your user: | Create the docker group.  # sudo groupadd docker  Add your user to the docker group.  # sudo usermod -aG docker $USER    >>>Log out and log back in so that your group membership is re-evaluated. <<<  # newgrp docker  Verify that you can run docker commands without sudo.  #docker run hello-world | |
|  | 1. Install a docker image | # docker pull nginxdemos/hello:0.3    # docker image ls (we can see our images) | |
|  | 1. Run a docker container | # docker run --name test -d -P nginx  Container is running.  To see working containers:  # docker ps  here we have container id, container name and its port | |
|  |  | You can run your container on a web browser  #ip addr  My ip is 192.168.5.132  # docker ps  Mine in 49153  Take your VM’s ip and container port then, open a web browser, writ wm ip and docker port like this (192.168.5.132:49153)    Here it is | |
| ss | Some additional docker commands | |  |
|  | 1. Start container | # docker start test | |
|  | 1. Stop container | # docker stop test | |
|  | 1. How much cpu, network docker using | # docker stats | |
|  | 1. Delete container | # docker rm test  # docker rm test -f | |
|  | 1. Delete image | # docker rmi nginx | |