DAS/Mango OS Installation Procedure in Ubuntu VM

Version Number	Modification Description	Modified Date	Modified By
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Prerequisites:

1. Windows 10 Enterprise installed in your machine.
   a. Install FileZilla in Windows host machine.
2. Install Oracle VM Box.
3. Install Extension Pack for VM Box.
4. Open Oracle VM Box.
   a. Create a new Virtual Machine for Ubuntu 64Bit.
   b. Install the OS (Ubuntu 18.04.6 LTS) in your Virtual Machine.
   c. There will already be Network Adapter (Adapter 1: NAT) installed in the VM.
   d. Add a new network adaptor(TO share files between Host (Windows) and VM(Ubuntu))
      i. Select your VM
      ii. Settings -> Adpter2 Tab -> Check "Enable Network Adapter"
      iii. Settings -> Adpter2 Tab -> Attached To -> Select "Bridge Adapter"
      iv. Settings -> Adpter2 Tab -> Name -> Select "<Your Network Adapter>"
      v. Click "Ok"

5. Run the VM. Log into Ubuntu VM.

Increase Font size in High Resolution Monitors in Ubuntu VM (This step is not necessary for Mango OS installation)

Settings -> Universal Access -> Large Test -> Switch to "ON"

Detailed Procedure:

Text marked in this colour are Linux commands.

Text marked in this colour are windows commands.

Transfer files installation between Host Windows Machine and VM Ubuntu Machine

    1. Ubuntu VM: Open "terminal" (Alt+Ctrl+T)

        a. sudo apt install net-tools

            - It will ask for user password. Input your password and hit enter.

            - This command installs networking tools like ifconfig, netstat, etc...

        b. ifconfig

            - This command will list the network adapters installed in the VM and their IP address and other details.

            - Note the IP address of the second adapter that you added manually. (192.168.1.9 in my case, this may be different for you.)

            - IP will be similar to your host windows machine adapter IP.

        c. netstat -plnt

            - This command will list the ports which are be used.

            - You should be able to see something like ":::21" or ":::22" in the list.

            - If you could not see the Port 21 or 22, use the below commands.

        d. apt-get install vsftpd

            - This command will install the FTP service.

            - At this point you will be able to connect from Windows Host Machine FileZilla to Ubuntu VM via FTP with Port 21.

            - We need connect via SFTP. So we have to use the next command to start the SFTP service.

        e. sudo apt install openssh-server

            - This command will install openssh-server in the Ubuntu VM.

            - Now run the "netstat – plnt" command again to verify if Port 22 is is being listened.

        f.   sudo service vsftpd start
            -    Use this command only if the vsftpd service is stopped.
            -    This command is not necessary if vsftpd service is already running
        g.   Go to Ubuntu VM desktop
            -    Use GUI to create a folder named "Fluence" in the Desktop of Ubuntu VM

a. Open command prompt "cmd".

- ping 192.168.1.9 (Change the IP address to your IP that you obtained in step 1.b)

- Verify that you are able to get a response from the Ubuntu VM.

b. Open FileZilla

- Use the below parameters

Host: sftp://192.168.1.9 (Change the IP address to your IP that you obtained in step 1.b)

Username: <Your Ubuntu VM username>

Password: Password for the above username

Port: 22 <or Leave it blank>

- Click on "Quickconnect"

You will be able to see all the files in the Ubuntu VM in right side of directory listing.

c. Copy the required file from file Windows to Ubuntu

- Left side directory listing - Browse for folder in which you have kept the "das_utilities.tar" file in Windows Host.

- Right side directory listing - Browse for folder("Desktop/Fluence") in which you want the files to be moved in Ubuntu VM.

- Drag and drop all the necessary files from left directory listing to right directory listing.

Installing DAS in Ubuntu VM

1. Ubuntu VM: Open "terminal" (Alt+Ctrl+T)

a. ls

- This command will list the files and folders in the current folder.

- By default, it should display the "Desktop" folder along with other files and folders.

b. cd Desktop/Fluence

- This command will change the current working folder to "Fluence" folder inside "Desktop" folder.

c. pwd

    - This command will print the current working directory path, starting from the root (/)

d. sudo -i

    - Use this command to login as root.

e. cd /usr/local/src

    - Change the working directory

f. cp /home/kamillas/Desktop/Fluence/das_utilities.tar .

    - This command will copy files from one directory to another.

    - Note the "." at the end of the command. It signifies that the file to be copied to the current folder.

g. tar xvf das_utilities.tar

    - This command will create a folder named "das_utilities" in the current folder and extract the contents of the "das_utilities.tar" file.

h. cd das_utilities/src/mango/install

i. ./server_install_packages

    - This command will install the Python, Ruby, MariaDB, and JDK

j. mysql -u root

    - Use this command to log into MariaDB

    - Use the following commands one by one

k. cat server_install_packages

    - This command reads the contents of the file and displays it.

l. Run the below commands one by one.

    - apt-key adv --fetch-keys 'https://mariadb.org/mariadb_release_signing_key.asc'

    - add-apt-repository 'deb [arch=amd64,arm64,ppc64el] http://mirror.its.dal.ca/mariadb/repo/10.2/ubuntu bionic main'

    - apt-get update

    - apt-get install --yes python3 ruby2.5 ruby-dev mariadb-client mariadb-server jq unzip tree git zlib1g-dev sysstat build-essential

    - apt-get install mariadb-server

    - apt-get install mariadb-client

    - mysql -u root

- exit

- apt-get update

- groupadd -g 15676 fosdas

- This command adds a user group to the Ubuntu VM. "15676" is the group ID and "fosdas" is the group name.

- useradd -g 15676 -m -s/bin/bash -u 15676 fosdas

- This command creates a new user and adds the user to a group.

- ls -l

- ./mango_install_01_v413

- systemctl enable fosdas

- systemctl start fosdas

- ps -ef |grep java

- This command is to check the status of a process.

Installation of the DAS in Ubuntu VM is done.

Follow the below steps to verify the installation, also to access MangoOS.

1. Open any browser either in Ubuntu VM or in Windows Host.

   Enter this address in the address bar. http://192.168.1.9:9080/ (Change the IP address to your IP that you obtained in step 1.b of the Transfer files section)

2. User the default credentials and then click login
   a. Username: admin
   b. Password: admin
3. If you are logging in for the first time, accept the terms and conditions.
4. You will be taken to the "Admin home page"

Note:

Ubuntu VM may stop the service after few minutes of inactivity. In that case you will not able to access the MongoOS web page. In this case follow the below procedure to start the service again.

1. sudo -i

    - to login as root

2. systemctl start fosdas
3. If there is no error check the MangoOS webpage again. You should be able to see the website.

Other Useful Linux/Ubuntu Commands

1. clear – To clear the screen
2. ls – To display the list of files and folders in the current working directory.
3. sudo -i
   a. To login as root
4. exit – Multiple uses
   a. To close the terminal
   b. exit the current process
   c. logout of sudo/root