

Aim:

To install Virtualbox with different flavors of Linux on top of windows.

Procedure:

1) Visit the official website of Virtualbox and navigate to the downloads page.
2) Download the correct installation package for your OS and CPU architecture.

3) Open the Installer.

4) Configure the installation as per the requirements.

5) Finish the installation and open the Virtualbox application.

6) To download a Linux distro, visit downloads page of Ubuntu.

7) Choose a desired version and CPU architecture matching your Virtualbox installation, and click 'Download'.

8) In Virtualbox, click 'New' button on the right pane.

9) Select Ubuntu as variant & appropriate CPU arch type. Type a name in the 'Name' field and click on 'continue'.

10) Choose optimum values for disk and memory allocation for the VM.

11) When prompted, choose VDI (Virtual Disk Image).

12) Click on 'Finish' to create the VM.

13) Mount the downloaded disk image of Ubuntu.

14) Double click on the newly created VM to boot.

15) Choose the mounted Ubuntu image to boot.

16) Once booted into Ubuntu as the user, click on

'Install Now'.

17) Proceed with a minimal installation with

mostly default settings

18) Continue to install the VM, wiping the

virtual disk previously created.

19) Complete the setup and create a new user.

Result:

Thus, a new Linux distribution was installed successfully by creating VM in virtual box.

20/10/2023

Ex.No: 02

INSTALL C COMPILER IN THE VM AND

Date: 26/08/21

EXECUTE SIMPLE PROGRAMS

Aim:

To install a C compiler in the virtual machine created using virtual box and execute simple programs

Procedure:

1) Start the virtual machine creating using the procedure mentioned in last experiment.

2) Login to the machine and open a terminal window.

3) To update the list of available softwares repository, use command 'sudo apt update'.

4) To install the gcc (GNU C/C++ compiler), use the command 'sudo apt install gcc'.

5) Navigate to a desired location using 'cd' and 'mkdir' to create directories.

6) To create a new C source file, use the command 'nano hello.c'.

7) Type the source code for the program.

8) Press Ctrl + S to save, Ctrl + X to exit

the nano editor.

9) To compile the source program, use the command 'gcc hello.c'.

10) To execute the created executable (.out) file, use './a.out' command.

Sample C Program:

hello.c

```
#include <stdio.h>
void main() {
    printf("Hi Hello World\n");
}
```

Result:

Thus, a simple C program was compiled and executed successfully in a virtual machine.

Done
27/09/2024

Ex. No: 05

Date: 18/09/21

SJF using CloudSim

Aim:

To simulate SJF scheduling using CloudSim.

Procedure:

(1) Download and install Java Development Kit (JDK) not already installed.

(2) Download and install Java Extension pack in VS Code.

(3) Download cloudsim and common-math modules.

(4) Create a project folder and a 'lib' folder inside of it.

(5) Copy cloudsim and math-module jars to the 'lib' folder.

(6) Download example source code for SJF from GitHub and copy to the project folder.

(7) Now Run/Debug the Main file from within VS Code.

Result:

Thus, SJF scheduling has been simulated successfully using CloudSim.

24/09/21

Aim:

To transfer files from one VM to another VM using various methods.

Procedure:

* Installing Virtualbox Guest Additions:

- (1) Launch an instance of a created VM.
- (2) Click on 'Devices' menu \rightarrow 'Guest Additions CD Image'.
- (3) Launch the installer file on the mounted medium.
- (4) When prompted, enter password.

* Copy Paste:

- (1) Click on 'Devices' \rightarrow Shared Clipboard \rightarrow Bidirectional -al' to enable clipboard sharing
- (2) Click on 'Devices' \rightarrow Drag and drop \rightarrow Bidirectional' to enable drag-and-drop support.
- (3) Restart the VM once for the changes to take effect.

④ Restart VM for the change to take effect.

* USB Drive;

(1) Visit Virtualbox Downloads page & download the Virtualbox extension pack.

(2) Close Virtualbox as it is running and install the downloaded Extension pack.

(3) Select your VM and click on settings and then USB on the menu.

(4) Enable USB controller and select USB 2.0

(5) Select 'OK' & start the Virtual Machine and attach a USB drive.

(6) Now select 'Devices' and then select 'usb'.

Create a shared drive:

(1) Click on Devices → Shared Folders → Shared Folders settings

(2) In the dialog that opens, click on the plus icon on the right side to create shared folder.

(3) Fill out the suggested details to create a shared folder.

(4) Click on 'OK' to save and close the window.

(5) Make sure to check Auto Mount and make permanent checkboxes.

(6) Now, you can add files to the shared folder and see it sync across VMs and host machine.

(7) Use command 'sudo usermod -s vboxsf \$USER' to give access to the shared folder.

Result:

Thus, file transfer between VMs was successfully carried out using various procedures.

Tracy
22/10/2021