Assignment 2: Advanced VM Configuration and Guest Integration

Asst. Prof. Tuul Triyason, Ph.D.

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Objective

This assignment aims to deepen your understanding of advanced VM configuration in VirtualBox by enabling and testing guest integration features such as shared clipboard, drag and drop, and shared folders. You will also install VirtualBox Guest Additions to enhance the performance and usability of the guest OS.

Instructions

Please complete the following tasks on your existing **Xubuntu 22.04 LTS** virtual machine created in Assignment 1.

Part 1: VM Configuration

1. Power off the VM and modify its settings as follows:

   - Set Video Memory to **128 MB**
   - Enable **3D Acceleration**
   - Set **Shared Clipboard** to **Bidirectional**
   - Set **Drag and Drop** to **Bidirectional**

2. Take a screenshot of your VM settings screen showing these configurations.

Part 2: Guest Additions Installation

1. Start the VM and open a terminal inside Xubuntu.

2. Install the required packages:

```
sudo apt update
sudo apt install build-essential dkms linux-headers-$(uname -r)
```

3. From the VirtualBox menu, choose `Devices > Insert Guest Additions CD Image...`

4. Mount the CD (if not mounted automatically), then run:

   `sudo /media/$USER/VBox*/VBoxLinuxAdditions.run`

5. Reboot the VM after installation.

6. Verify that:

   - Screen auto-resizes with the VM window
   - Shared Clipboard and Drag and Drop work properly

7. Take screenshots showing:

   - Guest Additions installation process
   - Dragging a file from host to guest (or vice versa)
   - Copy-pasting text between host and guest

Part 3: Shared Folder Setup

1. On your host OS, create a folder named `VBoxShare`.

2. In VM settings, add a shared folder:

   - Folder Path: your local `VBoxShare`
   - Folder Name: `VBoxShare`
   - Enable **Auto-mount** and **Make Permanent**

3. Inside Xubuntu, add your user to the `vboxsf` group:

   `sudo usermod -aG vboxsf $USER`

4. Reboot the VM and verify that you can access the folder (usually under `/media/sf_VBoxShare`).

5. Inside the guest, create a text file inside the shared folder.

6. Take a screenshot showing the shared folder and the text file you created.

Submission

- Combine all screenshots into a single PDF file.

- Add short explanations for each part (you may write in English).

- Name your file as: `INT693_A2_YourStudentID.pdf`

- Submit via the MS Team assignment.

Note: This assignment is a continuation of Assignment 1. Make sure your original VM is intact before making changes.