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Just some random thoughts about the Meaning of Life, The Universe, and Everything

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How to create a VirtualBox VM from command line

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A very appreciated feature of **VirtualBox** is the possibility to be used in a headless environment, without a **GUI**.

So, today I want to share the workflow I use for creating virtual machines using only the command line.

1. Create the VM

This command uses as base folder the current directory:

```
VBoxManage createvm --name [MACHINE NAME] --ostype [Os Type, ex: "Debian_64"] --register --basefol
```

2. Set memory and network

In this example: 1Gb RAM and 1 network card behind NAT.

```
VBoxManage modifyvm [MACHINE NAME] --ioapic on
VBoxManage modifyvm [MACHINE NAME] --memory 1024 --vram 128
VBoxManage modifyvm [MACHINE NAME] --nic1 nat
```

3. Create the Disk and connect the CD ISO

One 80Gb SATA HD, and one CDROM (with Debian ISO) drive attached to an IDE Controller.

```
VBoxManage createhd --filename `pwd`/[MACHINENAME]/[MACHINE NAME]_DISK.vdi --size 80000 --format \
VBoxManage storagectl [MACHINE NAME] --name "SATA Controller" --add sata --controller IntelAhci
VBoxManage storageattach [MACHINE NAME] --storagectl "SATA Controller" --port 0 --device 0 --type
VBoxManage storagectl [MACHINE NAME] --name "IDE Controller" --add ide --controller PIIX4
VBoxManage storageattach [MACHINE NAME] --storagectl "IDE Controller" --port 1 --device 0 --type
VBoxManage modifyvm [MACHINE NAME] --boot1 dvd --boot2 disk --boot3 none --boot4 none
```
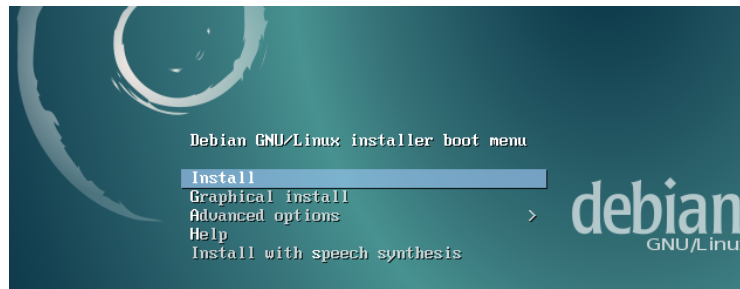
4. Set RDP access and start the VM

Remote Desktop enabled on port 10001 (useful for administration on an headless environment).

```
VBoxManage modifyvm [MACHINE NAME] --vrde on
VBoxManage modifyvm [MACHINE NAME] --vrdemulticon on --vrdeport 10001
```

Script example: automatically create a Debian VM

Here a script that i usually use to deploy a simple **Debian** VM, automatically download the **Debian NetInst ISO**.

It's a really base and readable code that can be simply customized:

```
1   #!/bin/bash
2   MACHINENAME=$1
3
4   # Download debian.iso
5   if [ ! -f ./debian.iso ]; then
6       wget https://cdimage.debian.org/debian-cd/current/amd64/iso-cd/debian-9.9.0-amd64-netinst.iso -O debian.iso
7   fi
8
9   #Create VM
10  VBoxManage createvm --name $MACHINENAME --ostype "Debian_64" --register --basefolder `pwd`
11  #Set memory and network
12  VBoxManage modifyvm $MACHINENAME --ioapic on
13  VBoxManage modifyvm $MACHINENAME --memory 1024 --vram 128
14  VBoxManage modifyvm $MACHINENAME --nic1 nat
15  #Create Disk and connect Debian Iso
16  VBoxManage createhd --filename `pwd`/$MACHINENAME/$MACHINENAME_DISK.vdi --size 80000 --format VDI
17  VBoxManage storagectl $MACHINENAME --name "SATA Controller" --add sata --controller IntelAhci
18  VBoxManage storageattach $MACHINENAME --storagectl "SATA Controller" --port 0 --device 0 --type hdd --medium  `pwd`/$MA
19  VBoxManage storagectl $MACHINENAME --name "IDE Controller" --add ide --controller PIIX4
20  VBoxManage storageattach $MACHINENAME --storagectl "IDE Controller" --port 1 --device 0 --type dvddrive --medium `pwd`/
21  VBoxManage modifyvm $MACHINENAME --boot1 dvd --boot2 disk --boot3 none --boot4 none
22
23  #Enable RDP
24  VBoxManage modifyvm $MACHINENAME --vrde on
25  VBoxManage modifyvm $MACHINENAME --vrdemulticon on --vrdeport 10001
26
27  #Start the VM
28  VBoxHeadless --startvm $MACHINENAME
```

CreateDebianVM.sh hosted with ❤ by **GitHub**   **view raw**

Usage:

```
root@Lucille:VM# ./createdebian.sh TestDebian
 Virtual machine 'TestDebian' is created and registered.
 UUID: 953074b7-0e7e-4d34-82e4-f187cf8fa1f7
 Settings file: '/mnt/data/VM/TestDebian/TestDebian.vbox'
 0%...10%...20%...30%...40%...50%...60%...70%...80%...90%...100%
 Medium created. UUID: dd5d2efd-205d-4d9e-b464-d82cb792698c
 Oracle VM VirtualBox Headless Interface 5.1.38
  (C) 2008-2018 Oracle Corporation
```

References

- **Chapter 8. VBoxManage**

- **Debian — Network install from a minimal CD**

Related posts

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2. How to install WSL on Windows 10 Enterprise LTSC

3. Quick mount of iOS Apps documents on Linux, using iFuse and bash

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