

# Setup Virtual Machine

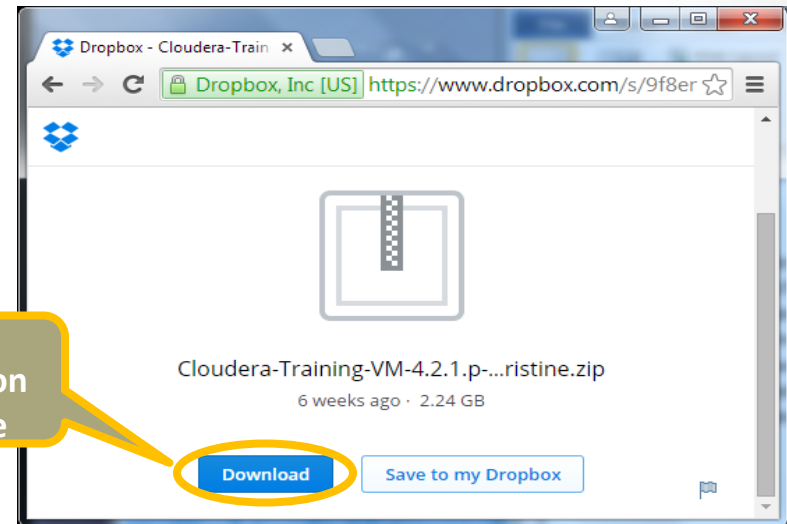
# Setup VM VirtualBox (0)



# Setup VM VirtualBox (1)

- Copy the dropbox URL of the VM from Canvas or get the URL from me.
- That url will lead you to the VM. You should see the file (Cloudera-Training-VM ...) associated with a download button. The download of this 2.4 GB file may take a long time.

0. Click on the Download button and save the file



- Unzip:
  - Cloudera-Training-VM-4.2.1.p-vmware\_prist.zip
- Select your VM player:
  - Virtual Box may be a better alternative for Mac users: Continue only with slides titled “Setup VM VirtualBox”
  - VMWare Player may be the better alternative for Windows users: Continue only with slides titled “Setup VM VMWare”

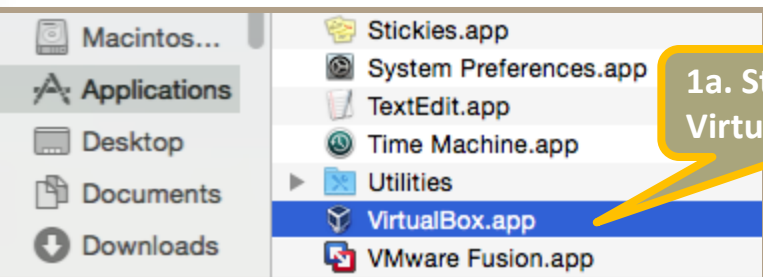


# Setup VM VirtualBox (2)

- VirtualBox:
  - To download and install Virtual Box, follow the instructions in this website: <https://www.virtualbox.org/wiki/Downloads>
  - In particular, for a Mac OS, use the link similar to: **VirtualBox 5.0.16 for OS X hosts amd64.**
  - <http://stackoverflow.com/questions/1505021/virtualbox-and-vmdk-vmx-files>

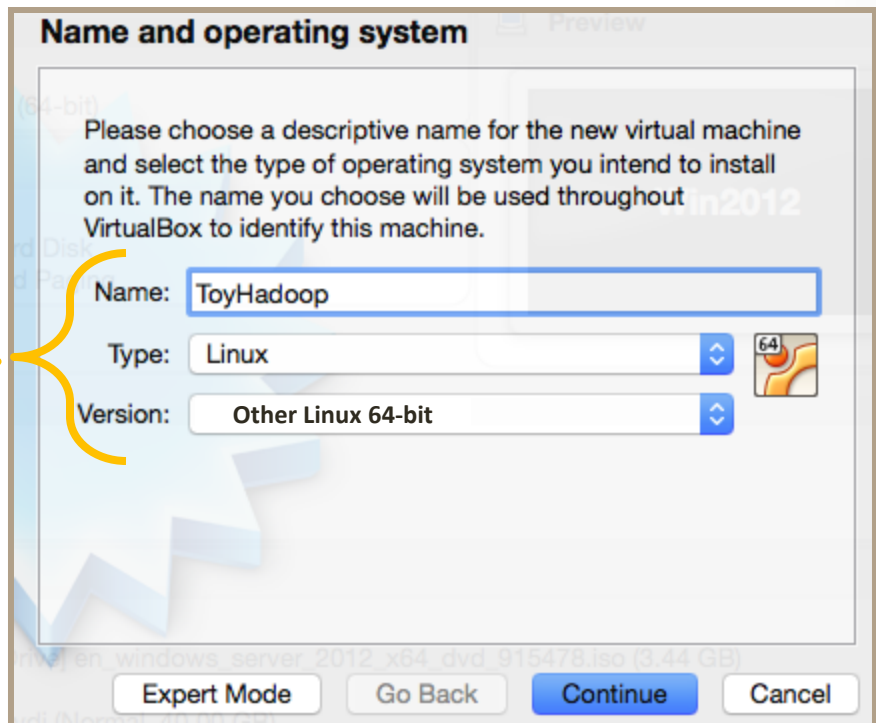
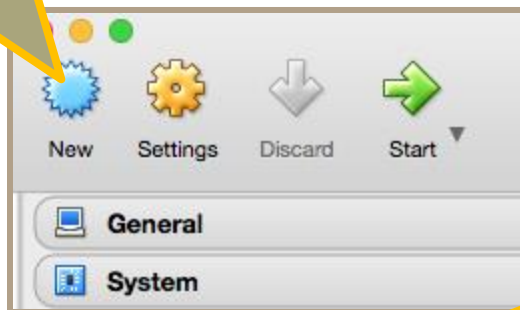


# Setup VM VirtualBox (3)



1a. Start VirtualBox.app

1b. Click New or select New from the Machine menu



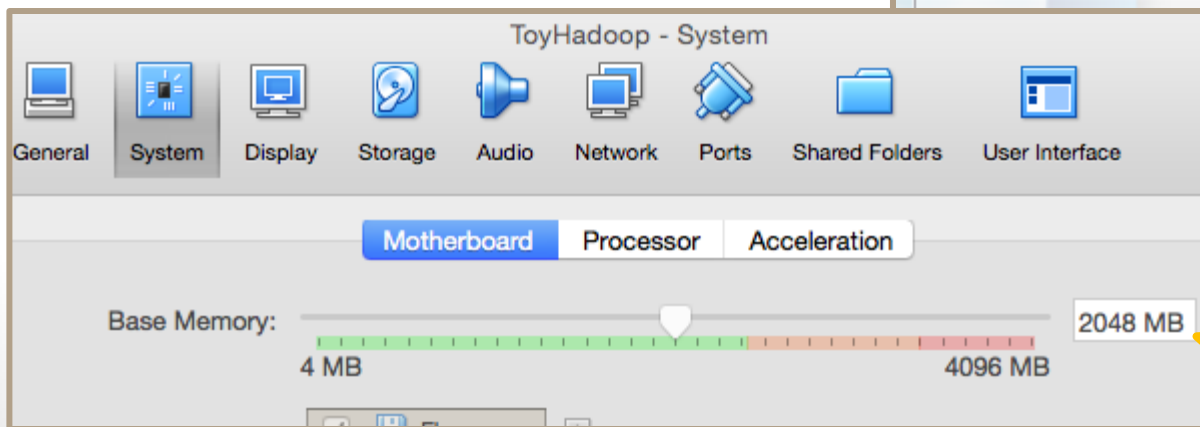
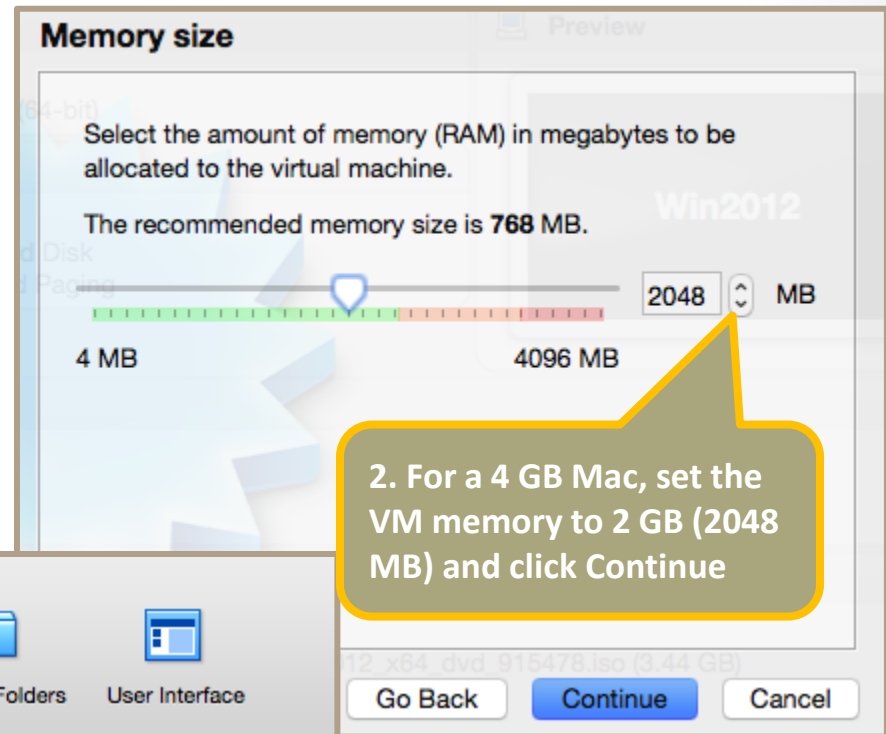
1c. For the "Name and operating system" page: make a "Name" like "ToyHadoop", set "Type" to "Linux", and set the Version to "Other Linux 64-bit"

1a In Applications start VirtualBox.app

1b Click New or select New from the Machine menu

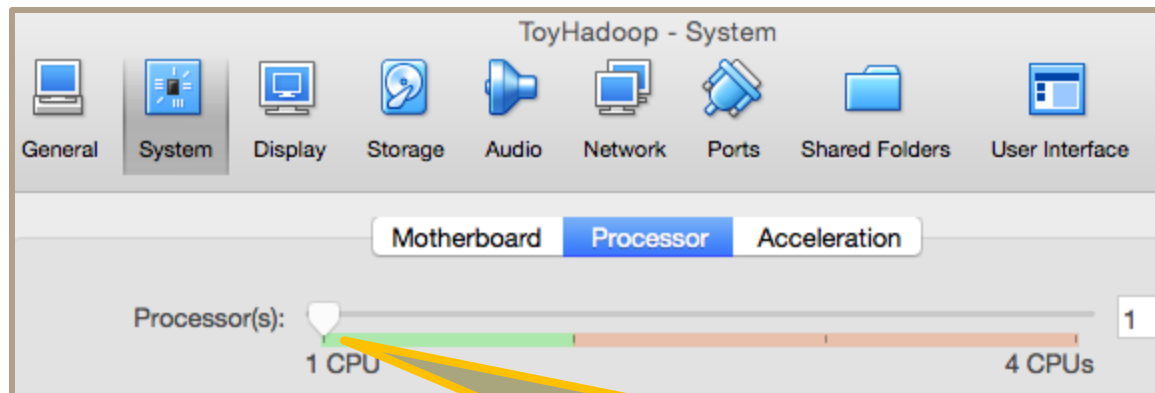
1c For the "Name and operating system" page: make a "Name" like "ToyHadoop", set "Type" to "Linux", and set the Version to "Other Linux 64-bit"

# Setup VM VirtualBox (4)



2. Alternately, You can change this setting through Machine menu > Settings > System > Motherboard

# Setup VM VirtualBox (5)



### 3. Set number of Processors:

For a 4-processor Mac, set the Processor(s) to 2 CPU;

For a 2-processor Mac, set the Processor(s) to 1 CPU;

# Setup VM VirtualBox (6)

**Hard disk**

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select one from the list or from another location using the folder icon.

If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.

The recommended size of the hard disk is **8.00 GB**.

☐ Do not add a virtual hard disk  
☐ Create a virtual hard disk now  
☒ Use an existing virtual hard disk file

Win2012.vdi (Normal, 40.00 GB)

Go Back Create Cancel

**4a. For Hard disk, you must select "Use an existing virtual hard disk file"**

**4b. Click on Browse**

**4c. Browse for the vmdk file and open it.**

**4d. Click Create after the you find and open the vmdk file.**

Oracle VM VirtualBox Manager

Cloudera-Training-VM-4...

Favorites

- All My Files
- iCloud Drive
- Macintosh HD
- Applications
- Desktop

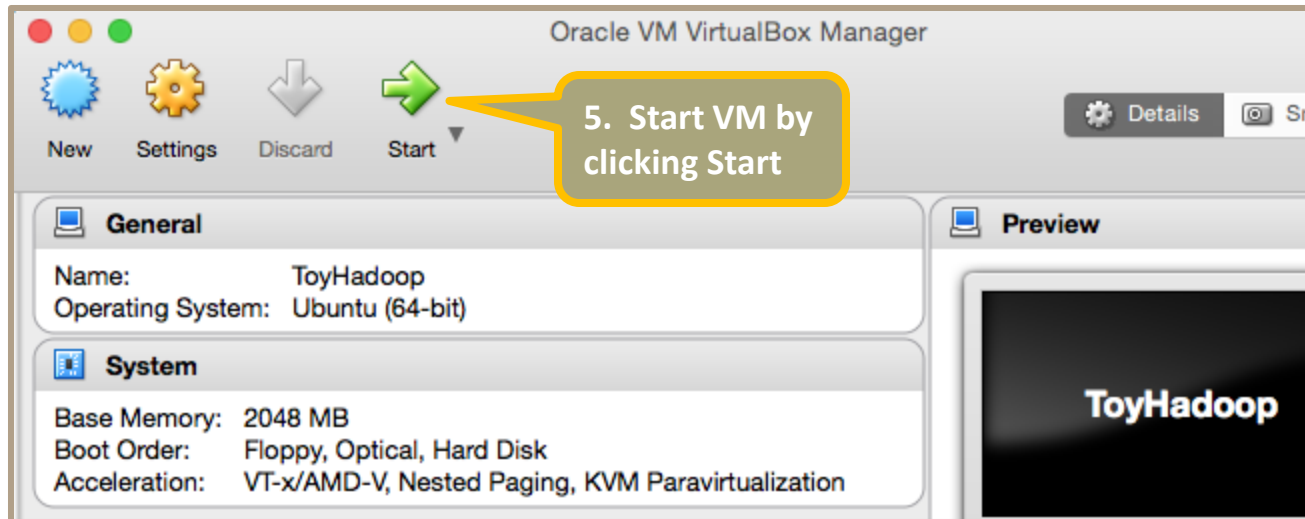
Cloudera-Training-VM-4.2.1.p.vmdk

Cloudera-Training-VM-4.2.1.p.vmx

- 4a. In the Hard disk page select "Use an existing virtual hard disk file"
- 4b. Click on the browse button to the right of the selector window.
- 4c. Browse for the vmdk file.
- 4d. Click Create in the Hard disk page

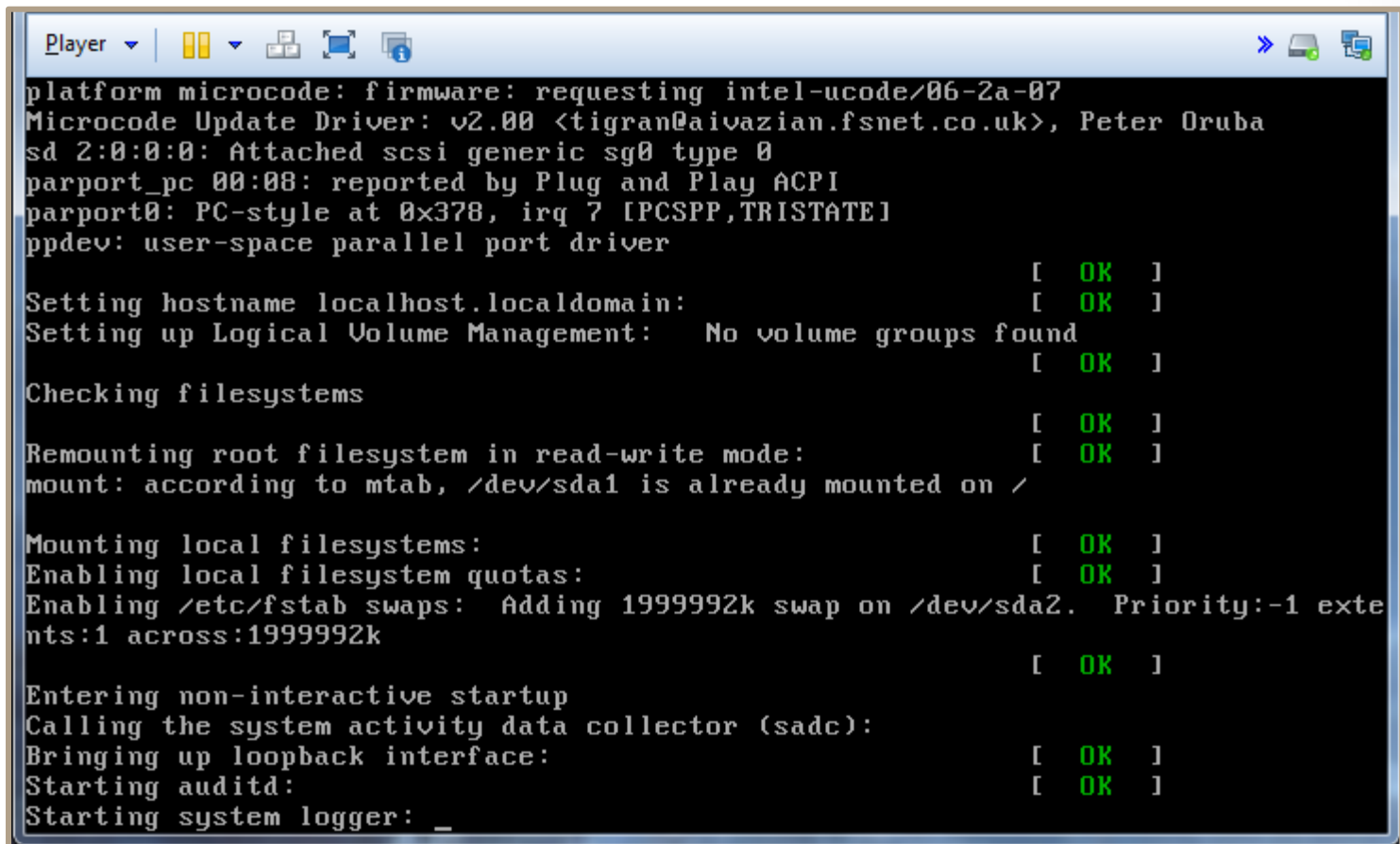


# Setup VM VirtualBox (7)



# Setup VM VirtualBox (8)

- Note: The VM starts up



The screenshot shows a VirtualBox VM console window with a title bar that includes a 'Player' dropdown and standard window controls. The console output displays the following boot sequence:

```
platform microcode: firmware: requesting intel-ucode/06-2a-07
Microcode Update Driver: v2.00 <tigran@aivazian.fsnet.co.uk>, Peter Oruba
sd 2:0:0:0: Attached scsi generic sg0 type 0
parport_pc 00:08: reported by Plug and Play ACPI
parport0: PC-style at 0x378, irq 7 [PCSP,TRISTATE]
ppdev: user-space parallel port driver

Setting hostname localhost.localdomain: [ OK ]
Setting up Logical Volume Management: No volume groups found [ OK ]

Checking filesystems [ OK ]

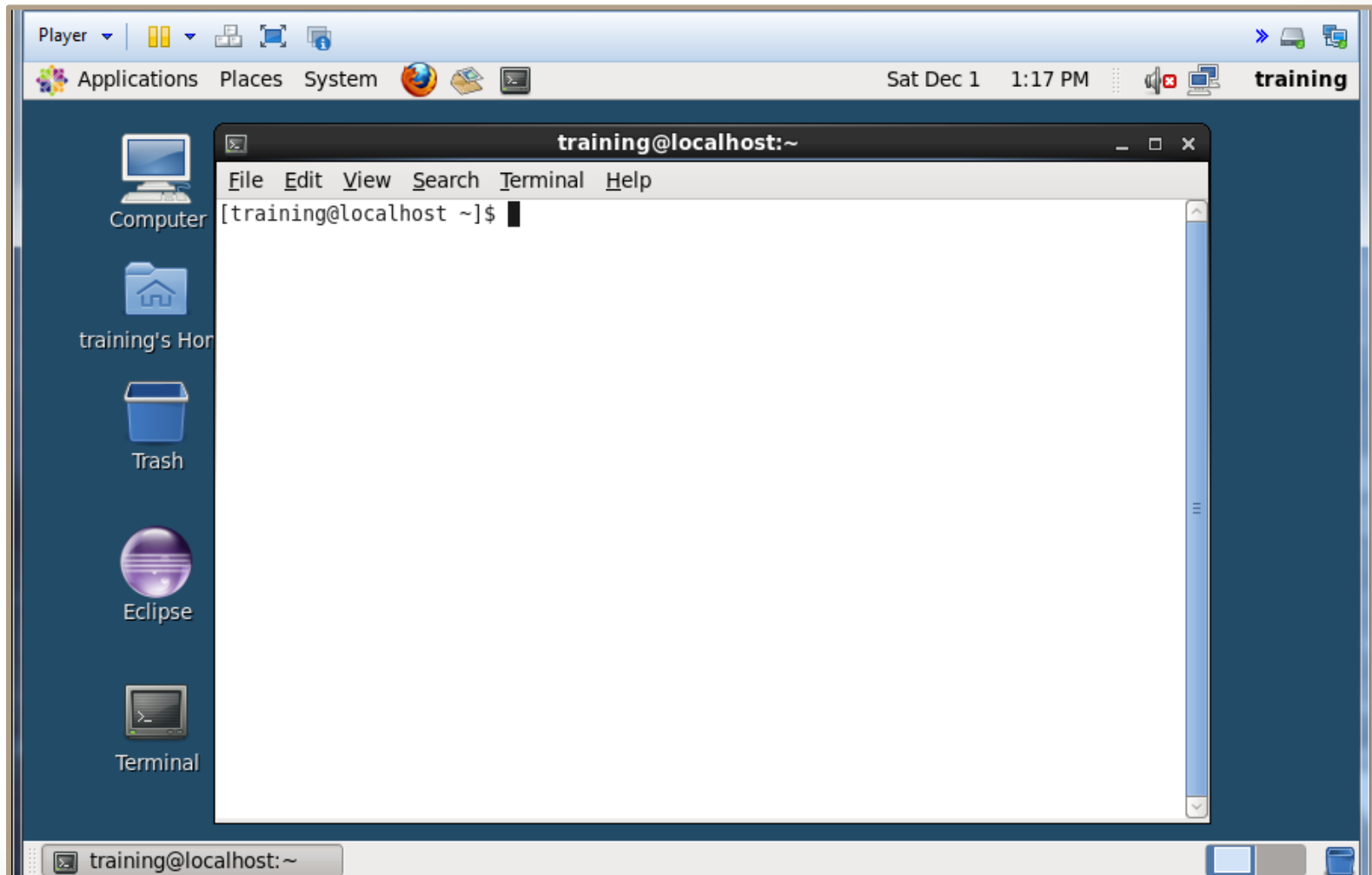
Remounting root filesystem in read-write mode: [ OK ]
mount: according to mtab, /dev/sda1 is already mounted on /

Mounting local filesystems: [ OK ]
Enabling local filesystem quotas: [ OK ]
Enabling /etc/fstab swaps: Adding 1999992k swap on /dev/sda2. Priority:-1 exte
nts:1 across:1999992k [ OK ]

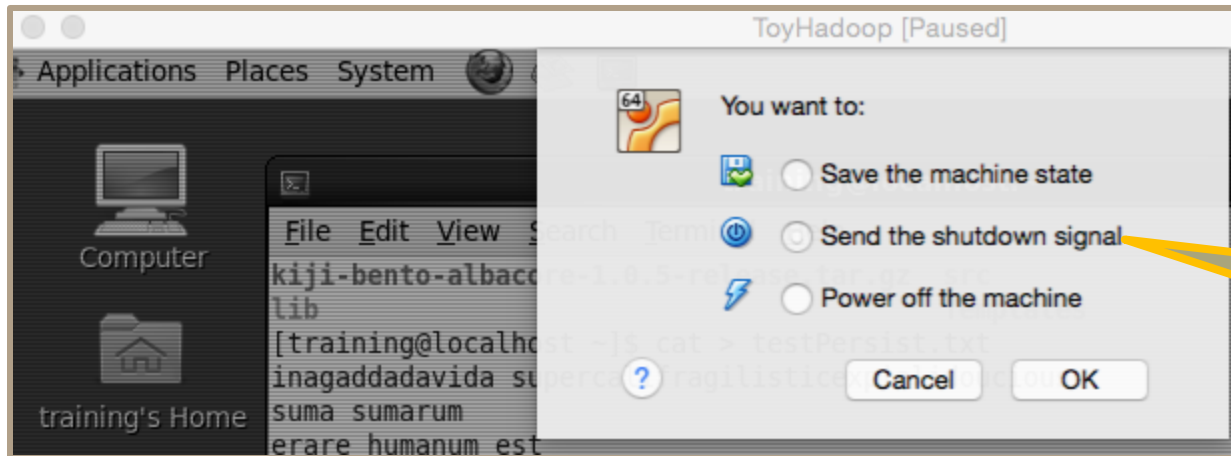
Entering non-interactive startup
Calling the system activity data collector (sadc):
Bringing up loopback interface: [ OK ]
Starting auditd: [ OK ]
Starting system logger: _
```

# Setup VM VirtualBox (9)

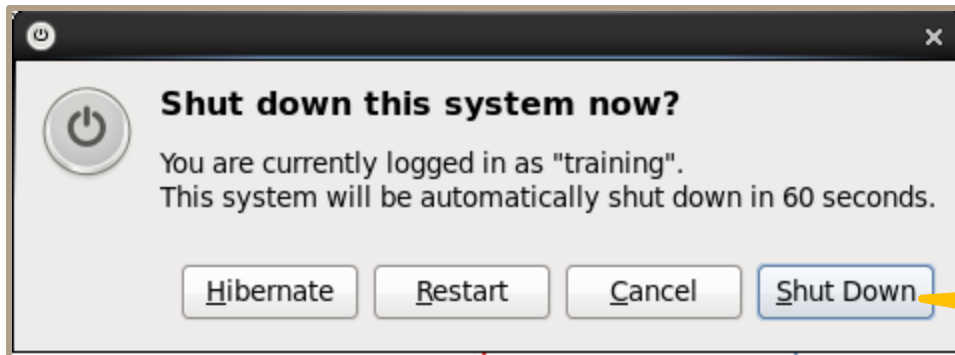
- Note: The VM is running



# Setup VM VirtualBox (10)



Select "Send the shutdown signal".



Click on "Shut Down" button.

# Setup VM VMWare (0)



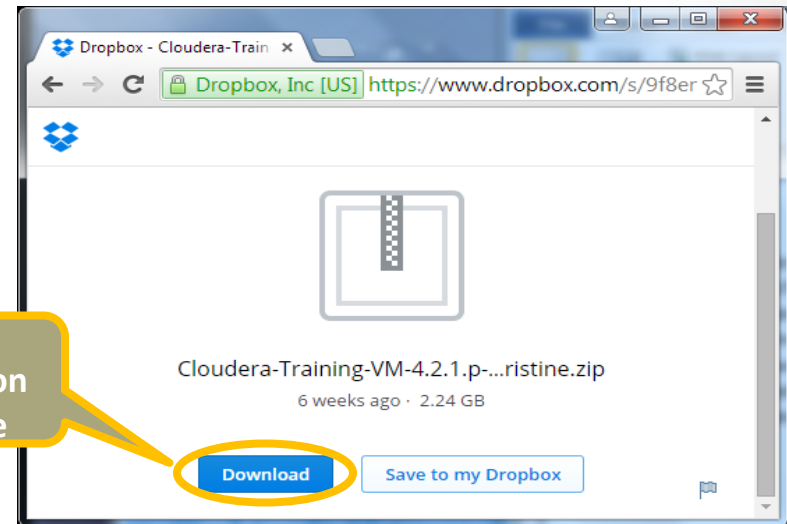
VMware Fusion



# Setup VM VMWare (1)

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- Select your VM player:
  - Virtual Box may be a better alternative for Mac users: Continue only with slides titled “Setup VM VirtualBox”
  - VMWare Player may be the better alternative for Windows users: Continue only with slides titled “Setup VM VMWare”



# Setup VM VMWare (2)

- Download VMWare Player (Windows) or VMWare Fusion (Mac)
- In March 2016, the following link(s) provided a download button for VMware on Mac (you may be required to register):

- [https://my.vmware.com/en/web/vmware/info/slug/desktop\\_end\\_user\\_computing/vmware\\_fusion/8\\_0](https://my.vmware.com/en/web/vmware/info/slug/desktop_end_user_computing/vmware_fusion/8_0)
- <https://my.vmware.com/web/vmware/details?downloadGroup=FUS-810&productId=527&rPId=9750>



- In March 2016, the following link provided download buttons for VMware on Windows and Linux:
- [https://my.vmware.com/en/web/vmware/free#desktop\\_end\\_user\\_computing/vmware\\_workstation\\_player/12\\_0](https://my.vmware.com/en/web/vmware/free#desktop_end_user_computing/vmware_workstation_player/12_0)



# Setup VM VMWare (3)

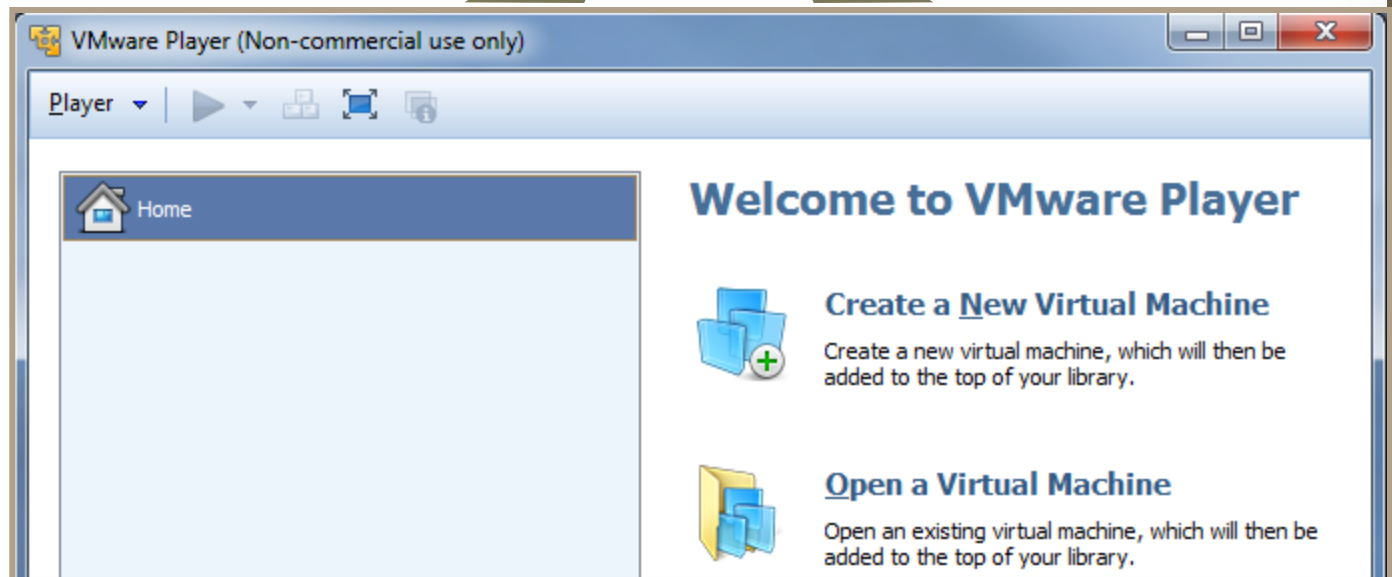
- Start VMWare



VMware Fusion



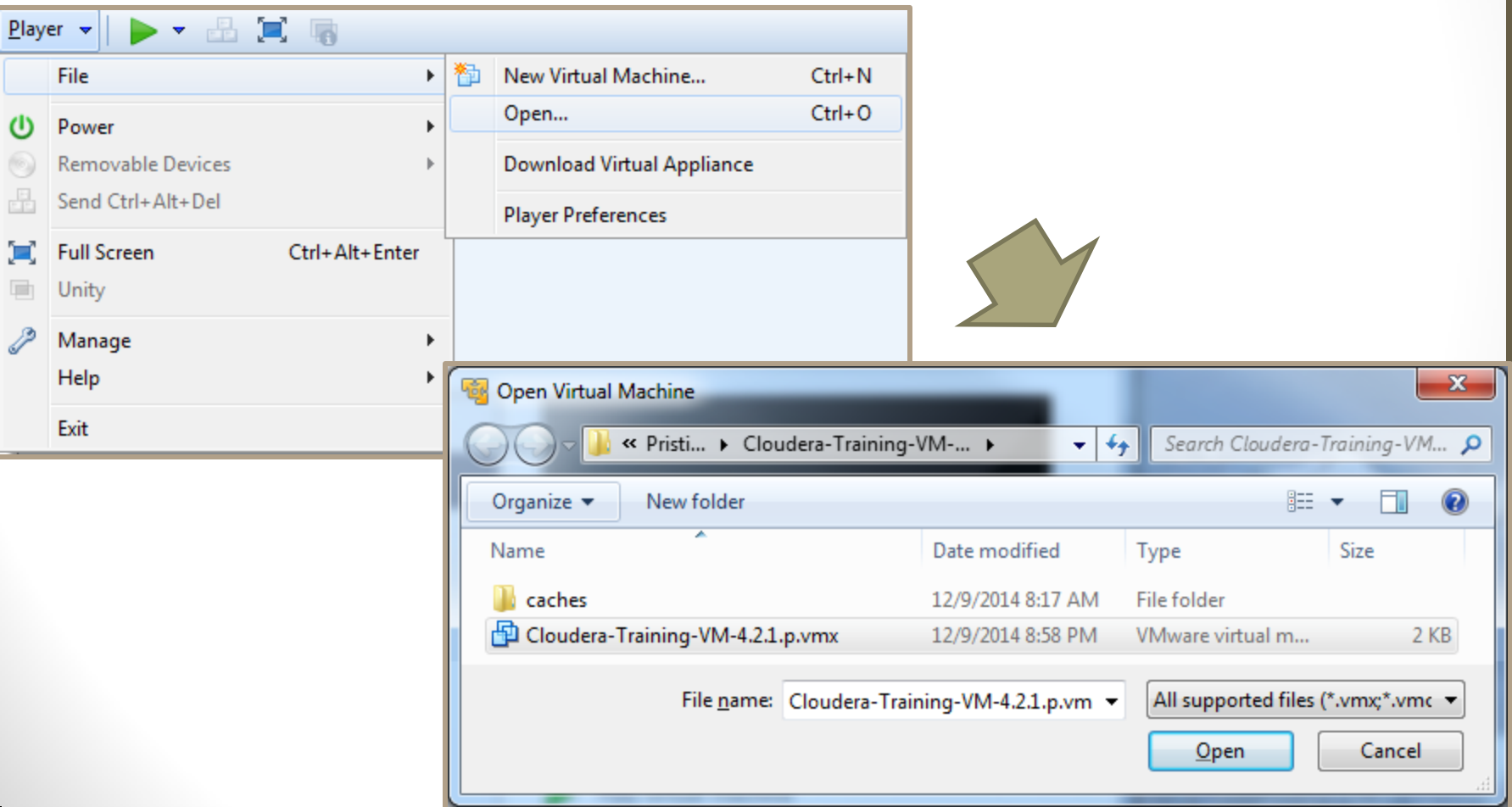
VMware Player





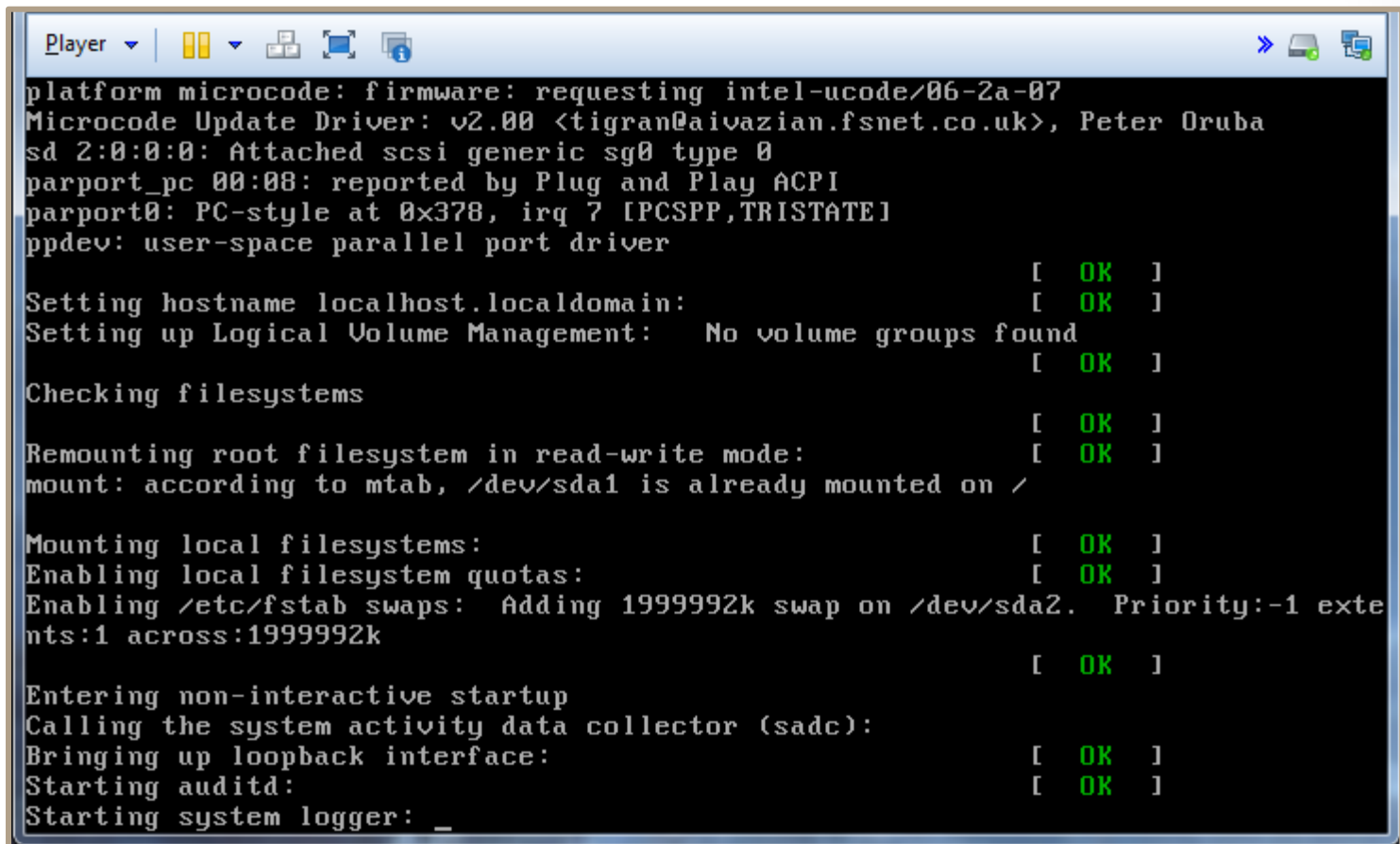
# Setup VM VMWare (4)

- Open the VM: Select Cloudera-Training-VM-4.2.1.p.vmx



# Setup VM VMWare (5)

- Note: The VM starts up



The screenshot shows a VMware Player window with a black terminal background. The terminal displays the boot sequence of a Linux system. The text is as follows:

```
platform microcode: firmware: requesting intel-ucode/06-2a-07
Microcode Update Driver: v2.00 <tigran@aivazian.fsnet.co.uk>, Peter Oruba
sd 2:0:0:0: Attached scsi generic sg0 type 0
parport_pc 00:08: reported by Plug and Play ACPI
parport0: PC-style at 0x378, irq 7 [PCSP,TRISTATE]
ppdev: user-space parallel port driver

Setting hostname localhost.localdomain: [ OK ]
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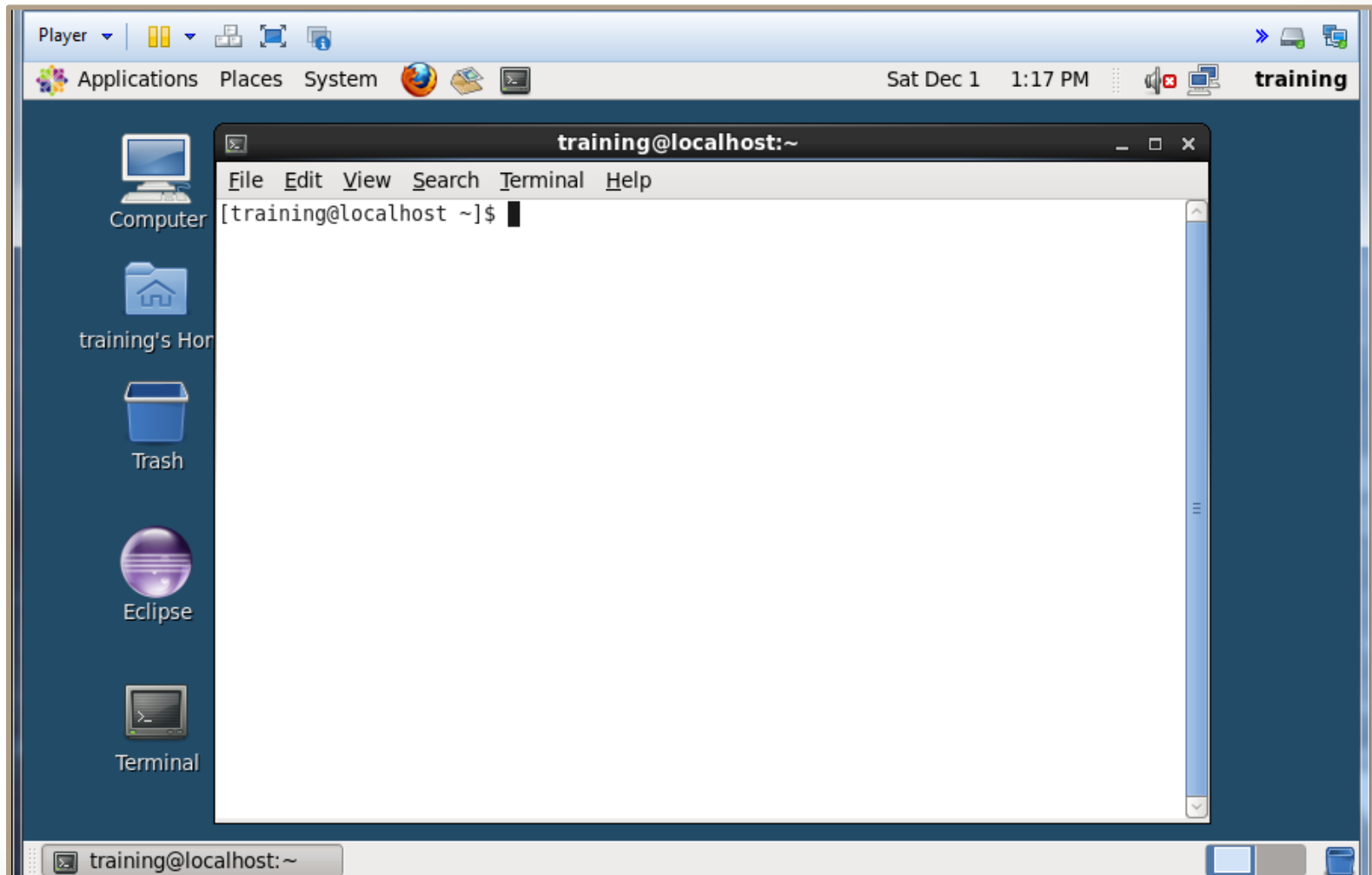
Remounting root filesystem in read-write mode: [ OK ]
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Mounting local filesystems: [ OK ]
Enabling local filesystem quotas: [ OK ]
Enabling /etc/fstab swaps: Adding 1999992k swap on /dev/sda2. Priority:-1 exte
nts:1 across:1999992k [ OK ]

Entering non-interactive startup
Calling the system activity data collector (sadc):
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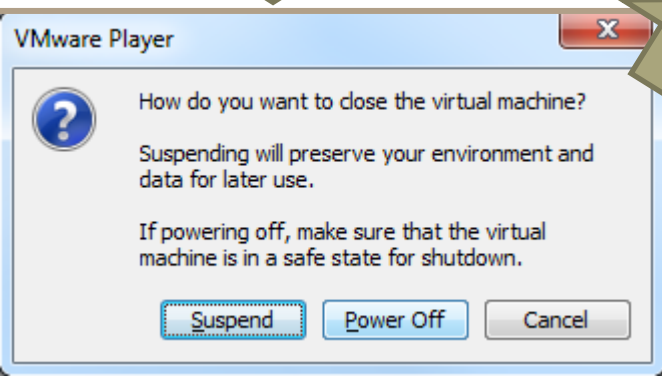
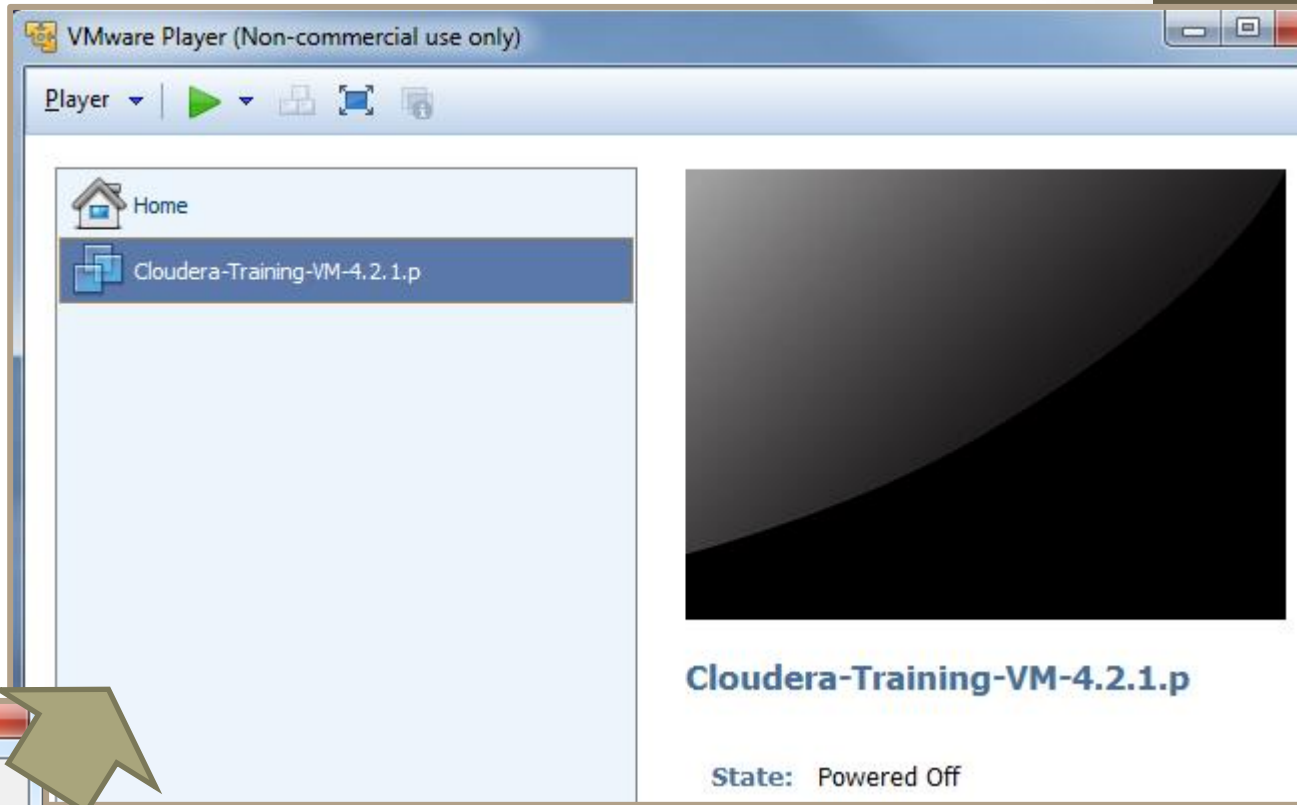
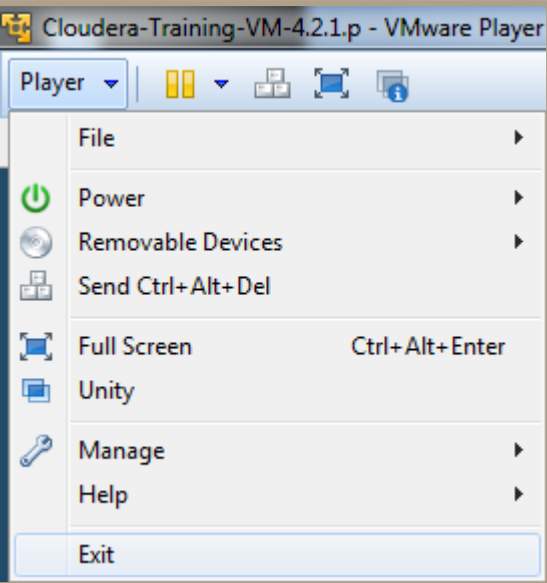
# Setup VM VMWare (6)

- Note: The VM is running



# Setup VM VMWare (7)

- Shutdown VM (select Exit and Power Off)



# Setup VM VMWare (8)

- Optional: Increase memory if you have enough RAM to spare.  
Set to 2 GB.

## Cloudera-Training-VM-4.2.1.p


**State:** Powered Off

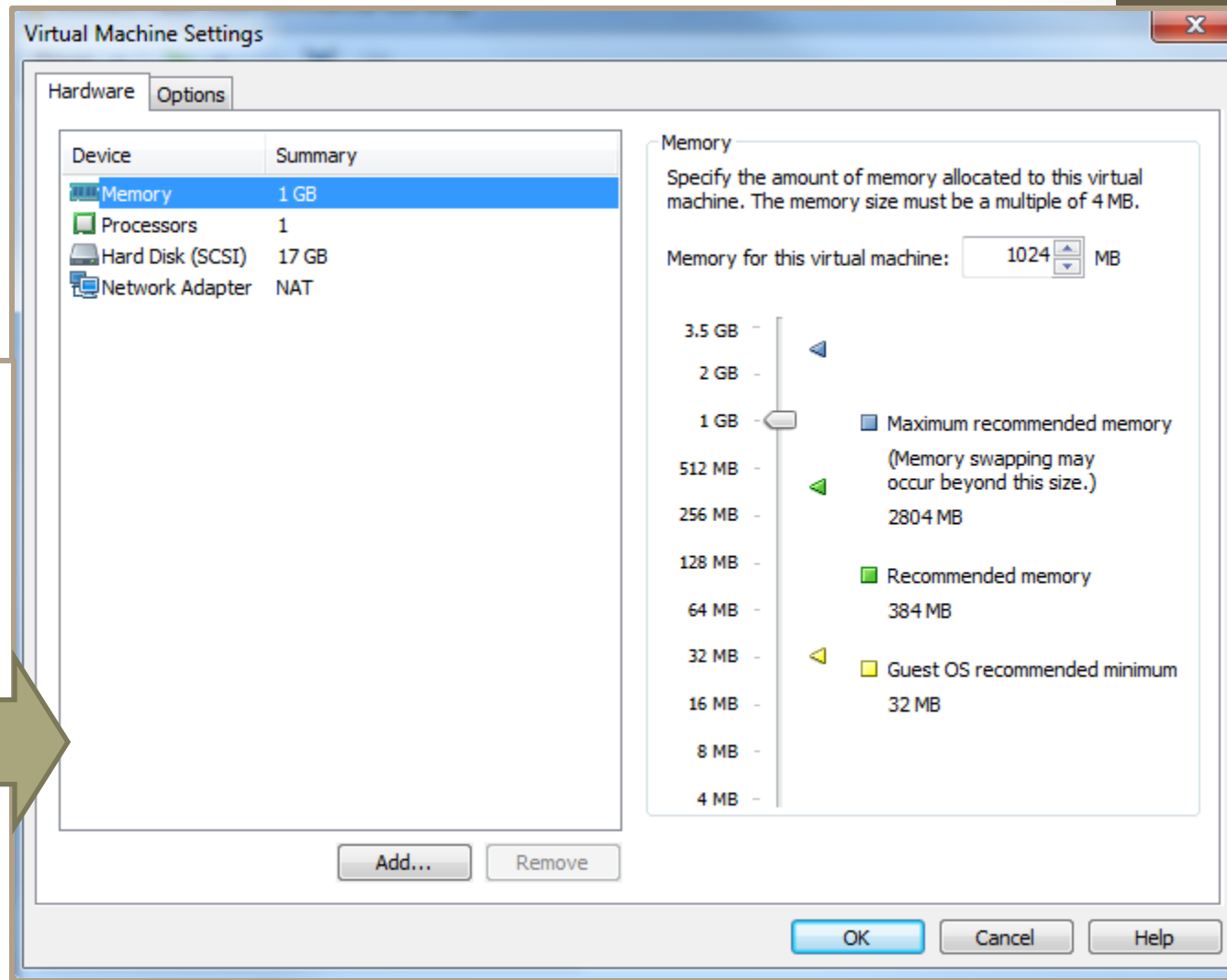
**OS:** Other Linux 64-bit

**Version:** Workstation 5.x virtual machine

**RAM:** 1 GB

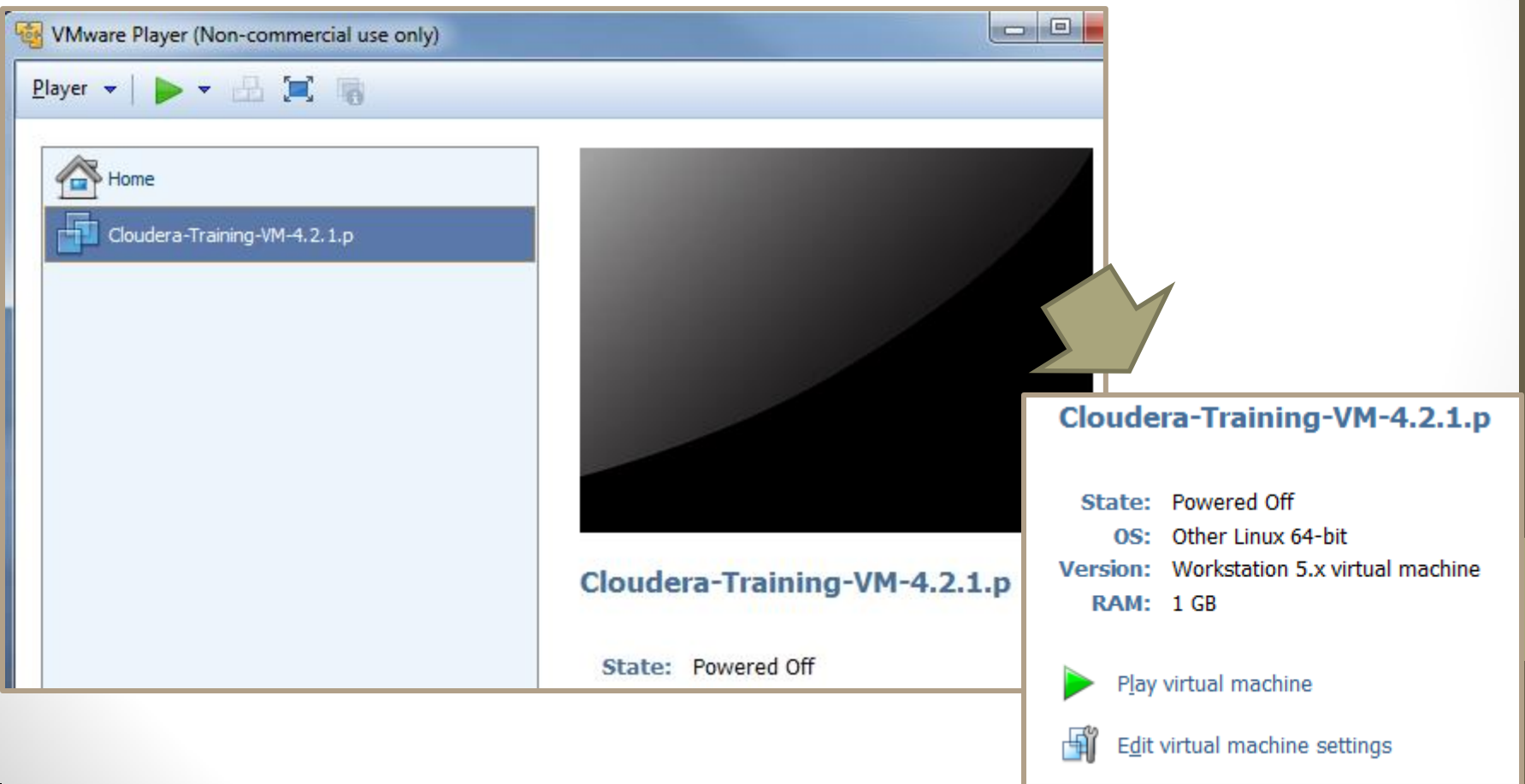
 Play virtual machine

 Edit virtual machine settings



# Setup VM VMWare (9)

- To start up VM again:
  - Select Virtual Machine (Cloudera-Training-VM-4.2.1.p)
  - Play Virtual Machine



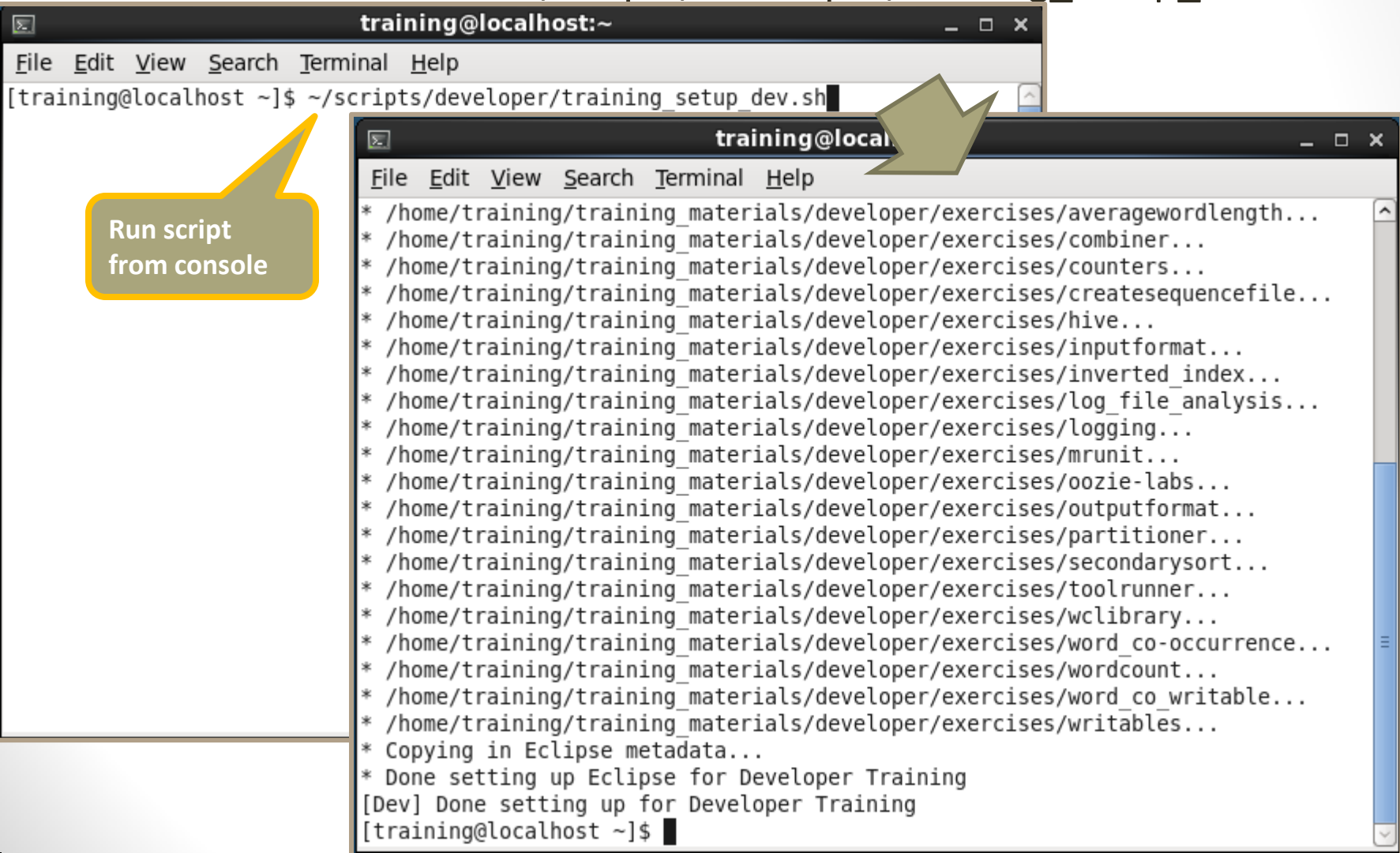
# Prepare VM for Labs (0)

- Start VM as appropriate

# Prepare VM for Labs (1)

- Enter into Console: `~/scripts/developer/training_setup_dev.sh`

Run script  
from console



```
training@localhost:~  
File Edit View Search Terminal Help  
[training@localhost ~]$ ~/scripts/developer/training_setup_dev.sh  
* /home/training/training_materials/developer/exercises/averagewordlength...  
* /home/training/training_materials/developer/exercises/combiner...  
* /home/training/training_materials/developer/exercises/counters...  
* /home/training/training_materials/developer/exercises/createsequencefile...  
* /home/training/training_materials/developer/exercises/hive...  
* /home/training/training_materials/developer/exercises/inputformat...  
* /home/training/training_materials/developer/exercises/inverted_index...  
* /home/training/training_materials/developer/exercises/log_file_analysis...  
* /home/training/training_materials/developer/exercises/logging...  
* /home/training/training_materials/developer/exercises/mrunit...  
* /home/training/training_materials/developer/exercises/oozie-labs...  
* /home/training/training_materials/developer/exercises/outputformat...  
* /home/training/training_materials/developer/exercises/partitioner...  
* /home/training/training_materials/developer/exercises/secondarysort...  
* /home/training/training_materials/developer/exercises/toolrunner...  
* /home/training/training_materials/developer/exercises/wclibrary...  
* /home/training/training_materials/developer/exercises/word_co-occurrence...  
* /home/training/training_materials/developer/exercises/wordcount...  
* /home/training/training_materials/developer/exercises/word_co_writable...  
* /home/training/training_materials/developer/exercises/writables...  
* Copying in Eclipse metadata...  
* Done setting up Eclipse for Developer Training  
[Dev] Done setting up for Developer Training  
[training@localhost ~]$
```

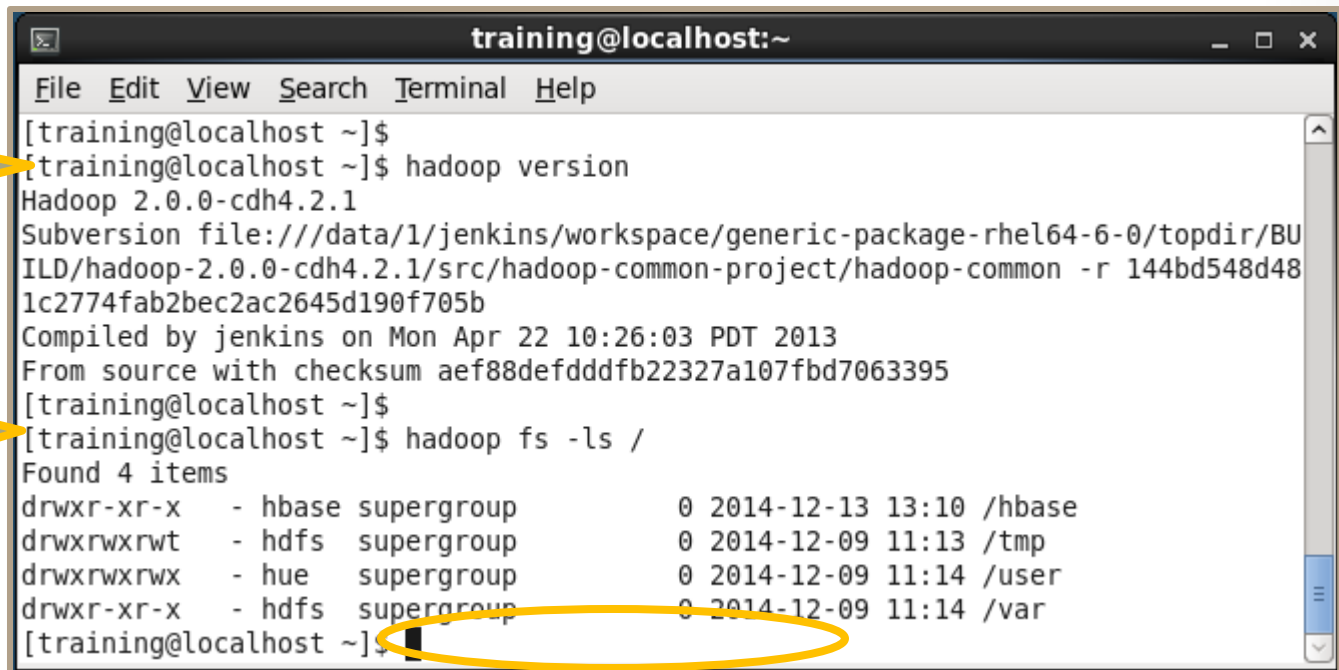


# Prepare VM for Labs (2)

- Enter into Console: `hadoop version`
- Enter into Console: `hadoop fs -ls /`

Check that Hadoop is installed

List directories in HDFS



A terminal window titled 'training@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
[training@localhost ~]$  
[training@localhost ~]$ hadoop version  
Hadoop 2.0.0-cdh4.2.1  
Subversion file:///data/1/jenkins/workspace/generic-package-rhel64-6-0/topdir/BU  
ILD/hadoop-2.0.0-cdh4.2.1/src/hadoop-common-project/hadoop-common -r 144bd548d48  
1c2774fab2bec2ac2645d190f705b  
Compiled by jenkins on Mon Apr 22 10:26:03 PDT 2013  
From source with checksum aef88defdddfb22327a107fbd7063395  
[training@localhost ~]$  
[training@localhost ~]$ hadoop fs -ls /  
Found 4 items  
drwxr-xr-x - hbase supergroup 0 2014-12-13 13:10 /hbase  
drwxrwxrwt - hdfs supergroup 0 2014-12-09 11:13 /tmp  
drwxrwxrwx - hue supergroup 0 2014-12-09 11:14 /user  
drwxr-xr-x - hdfs supergroup 0 2014-12-09 11:14 /var  
[training@localhost ~]$
```

A yellow oval highlights the prompt '[training@localhost ~]\$' at the bottom of the terminal window.

Type your name into the console and take a screen shot

# Setup Virtual Machine