

# Tutorial:

## Using HortonWorks Sandbox 2.3 Locally

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### 1. Overview

#### Welcome

Before diving into Cloud Applications, we need to set up the environment for doing tutorials or programming assignments. This course uses an all-in-one virtual machine made by Hortonworks. This tutorial covers the critical skills needed to work with this VM.

#### Objectives

Upon completing this tutorial, students will be able to:

- Set up an all-in-one Hadoop installation
- Start and Stop the Virtual Machine
- Install “nano” Text Editor
- Connect to the VM through SSH

### 2. Requirements

#### Hypervisor

To run the all-in-one virtual machine you need to have a hypervisor such as **Virtual Box** installed. You can grab a copy of **Virtual Box** for free from this URL.



<https://www.virtualbox.org/wiki/Downloads>

#### SSH Client

For command line steps you need a SSH client:

- For Linux and OS X, you should already have it installed.
- For Windows, you can download a free copy of **Putty** from the following URL.



<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

### 3. Setup Hadoop Virtual Machine

**Step 1:** Download the Hortonworks Sandbox (Sandbox) Image:

Download the **Virtual Machine for VirtualBox** from the following link:



<http://hortonworks.com/products/hortonworks-sandbox/#install>

You may be asked to fill out a form before you can proceed to download.

Please make sure that you download “HDP 2.3.2 on Hortonworks Sandbox” which is available in the “HortonWorks Sandbox Archive”. Do not download the latest version, only 2.3.2.



For more information about this virtual machine and details about the installation process, please refer to the Install Guide at:

<http://hortonworks.com/products/hortonworks-sandbox/#install>

**Step 2:** Open **VirtualBox**; then select **File > Import Appliance ....**

**Step 3:** Follow the instructions to import the downloaded file. Make sure the VM uses the following settings:

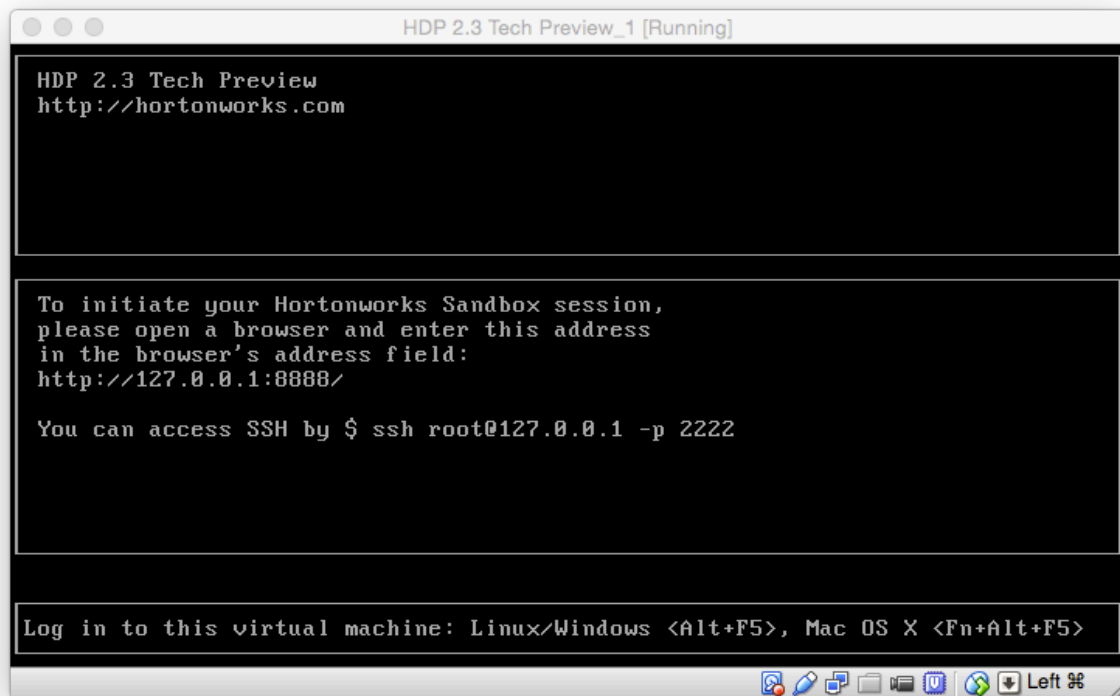
Ram	2048 MB
CPU	2

**Step 4:** Wait until the import process is done.

#### 4. Start HDP Virtual Machine

**Step 1:** From the main windows of **Virtual Box** select the “HortonWorks Sandbox” VM; then click on **start**.

**Step 2:** Wait for a few moments until you see the login screen on the virtual machine window.



## 5. Connect to the Virtual Machine

**Step 1 (OS X, Linux):** Open the terminal on your machine (not the virtual machine), and log in to the virtual machine via SSH protocol. The password is **hadoop**. (Ignore the leading # in the commands. It is just an indicator that the command has to run in a terminal.)

```
# ssh root@127.0.0.1 -p 2222
```

**Step 1 (Windows):** Open Putty on your machine, and log in to the virtual machine via SSH protocol using following information:

Server	127.0.0.1
Port	2222
Username	root
Password	hadoop

**Step 2:** After successfully logging in, you should see a prompt similar to the following:

```
[root@sandbox ~]#
```



Ignore the leading # in the commands.  
It is just an indicator that the command has to run in a terminal.

## 6. Install “nano” Text Editor

If you are new to Linux, you might find it challenging to use the default text editor in the terminal. Therefore, it is recommended you use **nano**. Unfortunately, nano is not installed by default in the HDP Sandbox. Fortunately, it is relatively easy to install.

**Step 1:** Run this command, and follow the installation instructions:

```
# yum install nano
```

**Step 2:** After the installation is done, check the installation:

```
# nano
```

**Step 3:** Quit nano.

## 7. Stop HDP Virtual Machine

**Step 1:** Run the following command from the SSH Terminal:

```
# poweroff
```

**Step 1 (Alternative):** From the main windows of **Virtual Box**, right click on the “HortonWorks Sandbox” VM; then select **Close > ACPI Shutdown**.

**Step 2:** Wait for a few moments until the VM has fully shut down.



Always stop the VM after you are done to prevent performance effects on your workstation.