

There are several environments available to do exercises for DS220:



Oracle VirtualBox
(Recommended!)



Amazon AWS



Your own computer

You only need to choose and follow the instructions for one of the above options to setup your environment.

Oracle VirtualBox

Prerequisite Software

Install the software [Oracle VirtualBox](#) (Windows/Mac OSX/Linux).

Note: VMware Workstation should also work with the provided virtual machine; however, we do not officially support it.

Requirements

CPU – Multi-core 64-bit CPU

Disk Size – 12GB free space

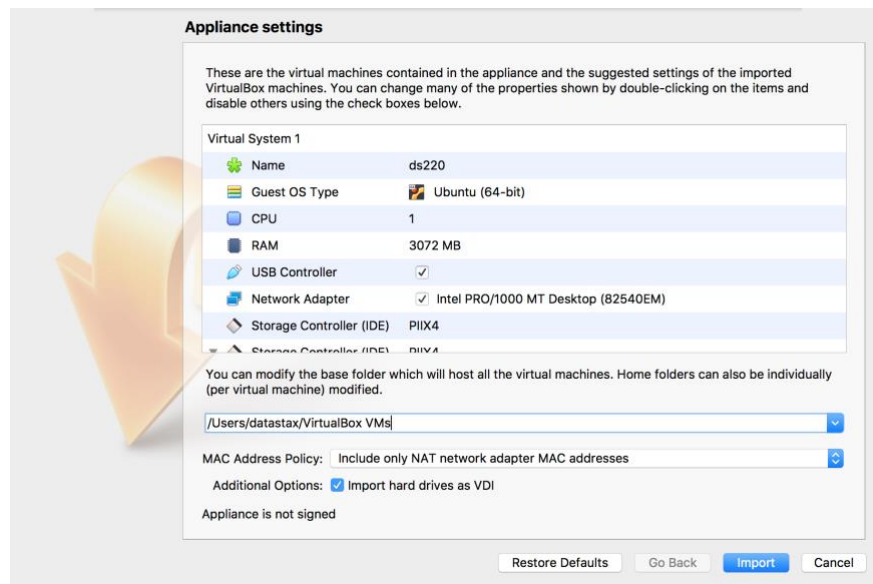
Memory – 4GB or more

Operating System – Windows / Mac OSX / Linux

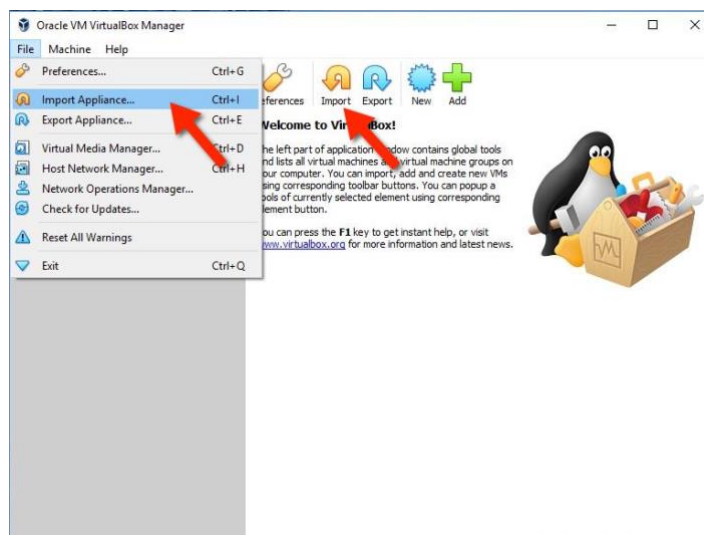
You'll also need to have Intel Virtualization Technology (VT-x) or AMD Virtualization (AMD-V) enabled in your BIOS or UEFI settings. See [this article](#) for more details.

Instructions

1. Download the VM file, listed in the [DS220 Course Assets](#) as **DS220: Virtual Machine**.
2. On your computer, double-click the file DS220-VM-6.0.ova. Follow the instructions to import the virtual machine.



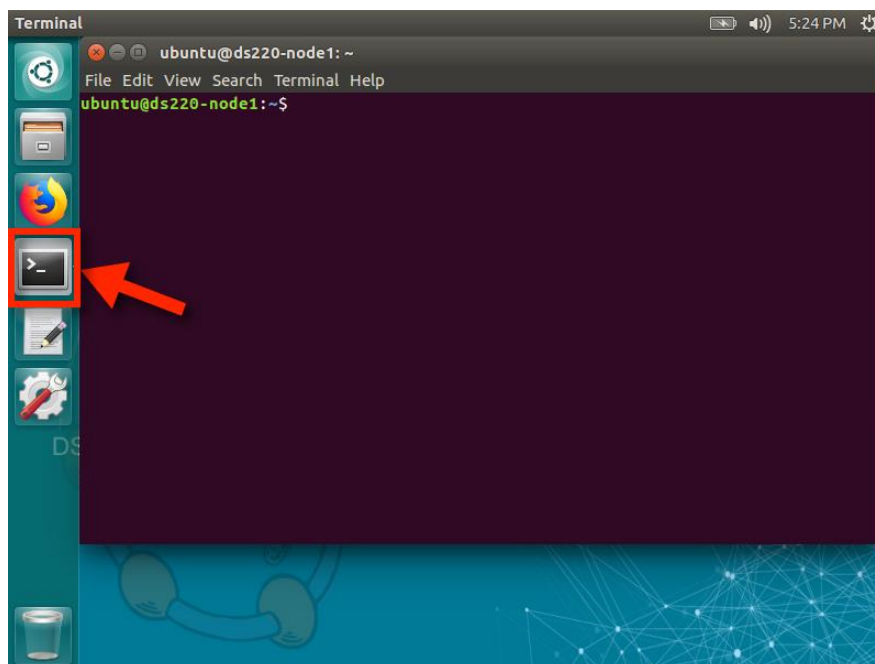
You can also open VirtualBox and click on the import button, or select the option *File > Import Appliance* from the menu. Afterwards, select the **DS220-VM-6.0.ova** file.



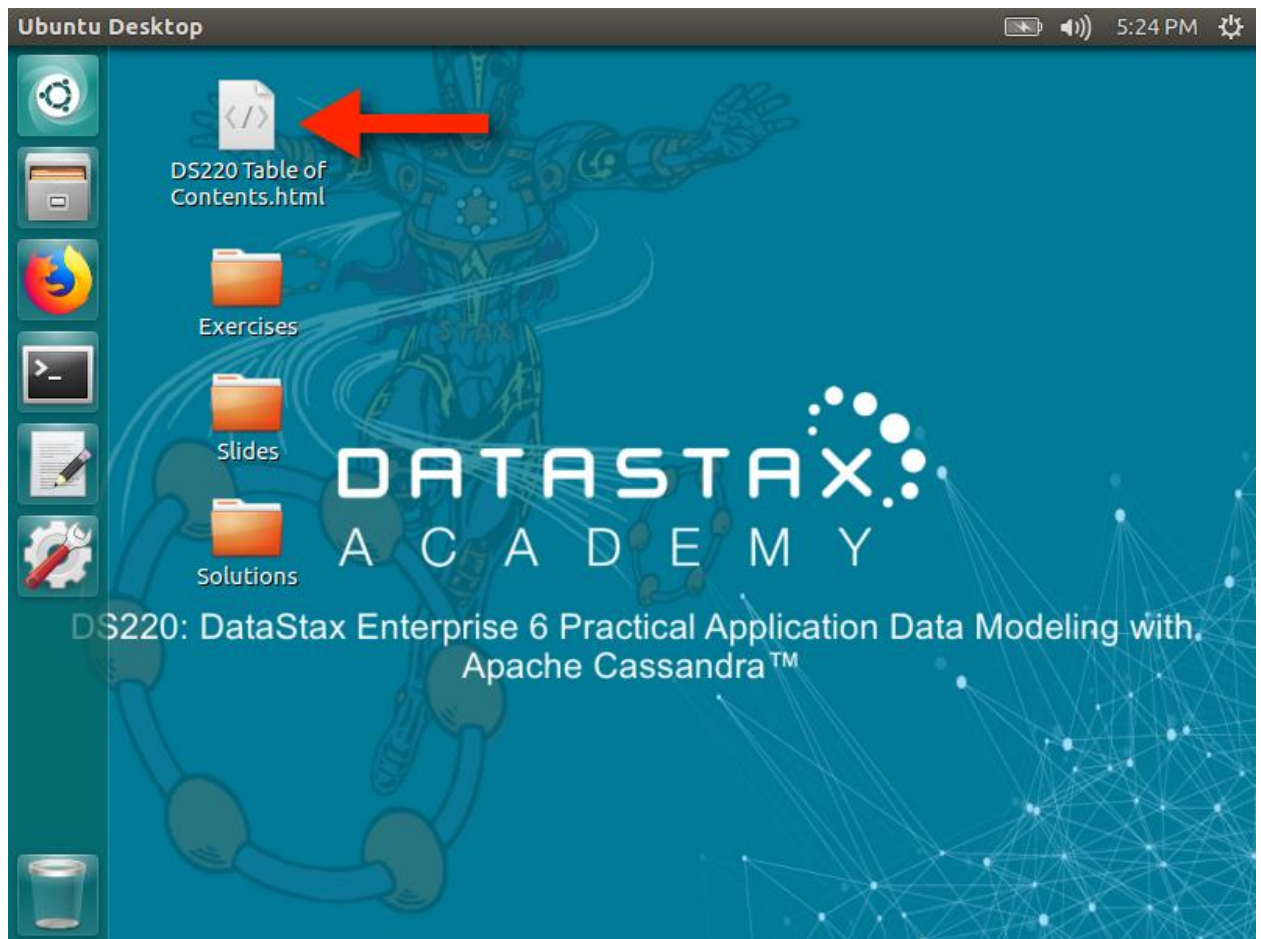
3. Start the DS220 virtual machine by double-clicking **ds220** from the Oracle VM VirtualBox Manager.



4. Once the virtual machine has started, click on the Terminal icon from the launcher to open a terminal session. This is where you should start wherever exercises tell you to SSH to a cloud instance.



The slides, exercise instructions, and exercise solutions are available on the desktop. Double-click on the **DS220 Table of Contents** file to browse.

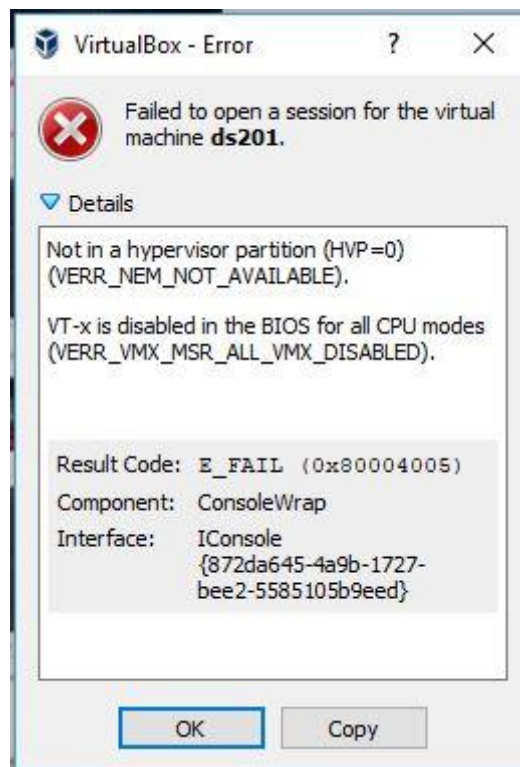


Troubleshooting

Hardware virtualization is not enabled

You may run into this error message when starting up the virtual machine:

VT-x is disabled in the BIOS for all CPU modes
(VERR_VMX_MSR_ALL_VMX_DISABLED) .



Please check out [this article](#) for possible solutions to resolve this error.

Login Credentials

There may be situations when using the virtual machine where you are redirected to a login prompt and need to enter user credentials to proceed.

The default account used by the DS220 virtual machine uses the following credentials:

User: ubuntu

Password: datastax

Note that there is no root account set up, but you can use the **sudo** command to obtain root privileges if needed.

End of Oracle VirtualBox setup

Amazon AWS

We suggest choosing this option **only** if you are familiar with AWS and have an account. Charges do apply to start up and run instances.

Requirements

DS220 requires one EC2 instance with at least 4GB of memory to run exercises. The suggested instance type is **t3.medium**.

AMI List

AMI ID	Region
ami-050afe9ec27c545f3	N. Virginia (us-east-1)
ami-0d898609c716a923d	Ohio (us-east-2)
ami-0d583ade7fe09191c	N. California (us-west-1)
ami-0f2bc68d1e53e80f9	Oregon (us-west-2)
ami-061ed968ce26a15ef	Ireland (eu-west-1)
ami-06685e1504e0e4afb	Sydney (ap-southeast-2)

Ports

The DS220 instance will need the following ports open:

Port Number	Application
22	SSH

Instructions

1. Start an instance in the region closest to you, using the AMI list above.
2. SSH to the instance.

More details can be found in the [Amazon AWS Instructions](#) and [SSH Instructions](#), if needed.

End of Amazon AWS setup

Your Own Computer

This option is provided for users that really prefer to run exercises outside of a virtual machine or cloud instance.

However due to the variety of different computing environments, no other support is provided outside of this document. We recommend using one of the other exercise environment options instead to avoid setup issues.

Prerequisite Software

DataStax Enterprise 6.0+

Requirements

CPU – Multi-core 64-bit CPU

Disk Size – 12GB free space

Memory – 4GB or more

Operating System – Mac OSX / Linux

Instructions

1. Download **DS220: Data Files and Scripts** from the [DS220 Course Assets page](#) and extract the resulting zip file.
2. Open a terminal window to start the DS220 exercises.

End of Your Own Computer setup