

User Guide for Microsoft Virtual Labs in edX Courses

Accessing Microsoft Virtual Hands-on Labs from edX

This document provides a guide to how you access and use the Virtual Labs provided for Microsoft courses hosted on edX.

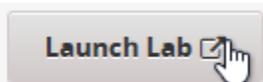
How to Launch a Lab

When studying a Microsoft provided edX course which includes Hands-on labs, the courseware index will include items titled “**Lab Activity X.X**”. To launch a lab environment for a specific exercise:

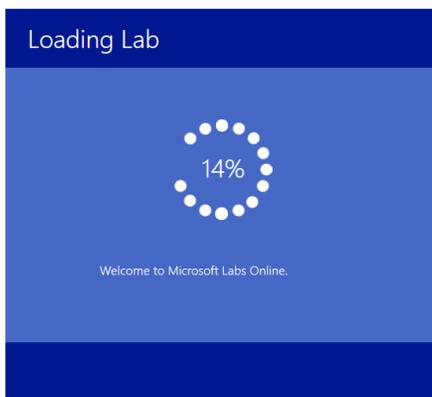
1. Under the **Courseware** tab, click on the Lab Activity entry



2. Read the lab instructions on the right, including the Lab Objectives, which are sometimes shown *below* the “**Launch Lab**” button
3. Scroll down until you can see the “**Launch Lab**” button and click it



4. Read any message presented regarding a 3rd party application. If you agree to the terms click OK to access the labs.
5. While your lab environment is being prepared, a “spinner” will be displayed. Typically it takes under 30 secs to create your unique lab environment



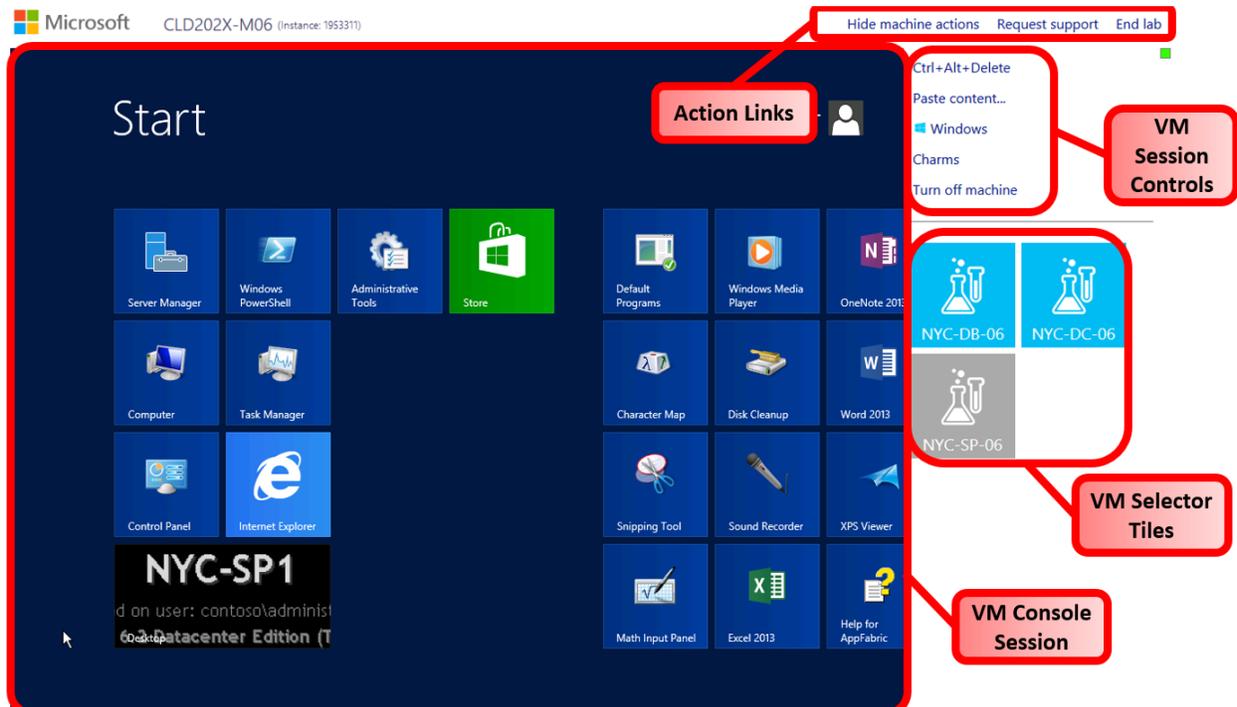
6. Once the environment is ready, your lab view will be displayed. See the following section for instructions on how to navigate the Lab View and interact with the virtual machines in your personal lab environment.

How to Navigate the Lab Environment

Once your Lab View is displayed, a number of options are available to allow you to interact with the Virtual Machines provided for each lab scenario.

The Lab View Page

The Lab View page displays the current lab environment. Each of the areas of the page are described in detail below.



VM Console Session – The large window rendered on the left of the Lab View represents the current VM console session. To interact with the currently selected VM desktop simply click within this area then use the keyboard and mouse to remotely control that VM.

VM Selector Tiles – Each Lab Environment consists of one or more Virtual Machines integrated in a virtual network. The current VM Console session can be switched between available VMs by clicking on the tile with that VM's name. Note that additional lab materials, including lab notes and user guides may also be represented by tiles in this area.

VM Session Controls – This group of links can be used to send specific control signals to the currently selected VM Console. Available controls vary by VM and Course, but typically include:

- **Ctrl+Alt+Delete** – Sends the Windows Ctrl-Alt-Delete command to the session, typically used to open the login window
- **Paste Content...** – Pasting text (only) from the user's machine to the remote VM is accomplished with this link. It displays a text window in which the required text is first entered on the local user machine. Clicking the **Paste** button then injects the text characters into the remote VM

session. To cut and paste items within the VM session (not using the local clipboard) it is recommended to use **RightClick-Copy** and **RightClick-Paste** as the behavior of Ctrl-C and Ctrl-V under remote sessions varies between browsers.

- **Windows Key** – This replicates the pressing and the keyboard Windows key on the remote machine. This is normally captured by the local machine. Clicking the link injects that keystroke in the remote VM.
- **Charms** – When working on Windows 8 or 8.1 or Server 2012/R2 virtual machines, it is possible to simulate swiping in from the right of a touch screen using this link
- **Turn off Machine** – This option should not normally be used during a lab as it shuts down the remote virtual machine, breaking the console session. It is possible to restart such VMs but this is not a common scenario.

Action Links – This group of links at the top right of the window control the entire lab session not an individual VM connection. The options typically available include:

- **Hide Machine Actions** – Clicking this link hides the VM Session control links area
- **Request Support** – Displays a window with contact details for obtaining support for lab platform issues
- **End Lab** – This link should be used to close down an entire lab environment once the lab steps are complete and the VMs are no longer needed. Note that all work carried out within the VMs will be discarded once this option is used. A confirmation message box is displayed to prevent accidental use.

Extending a Lab Session

All lab sessions have a configured duration. This time is set to ensure unused labs are not left running, when those resources could instead be used by other students. Lab durations are typically set to a time well in excess of the time it normally takes to complete the lab steps.

In some cases, a student may need extra time to complete a particular lab, perhaps due to an interruption. To allow a session to be extended in such a case, 30 minutes before a lab session is due to be automatically closed down, the user is prompted with a message box, asking if they wish to extend the session by 30 minutes. Clicking **Extend** adds 30 minutes to the lab duration for that user's lab session.

There is no limit to the number of extensions which can be applied to a specific session, however the user must be present to select the option.

Reconnecting to a Lab Session

If a user closes their browser without ending the Lab Session (without clicking the **End Lab** link) then the lab virtual machines will continue to run and the session remains active until the configured duration is exceeded.

While that session is running, the user may reconnect to it at any time by simply launching a browser, from the same or a different computer or location, logging into the edX course and re-launching the lab.

System Requirements and Troubleshooting

System Requirements

To access the Microsoft Labs Online from the edX course your client computer system must meet the following requirements:

- Windows XP SP3 or above
- 32 bit Microsoft Internet Explorer 10.0 or higher
- TCP Port 80 open with inbound/outbound access to the Internet
- 15 kbps per user network bandwidth
- Ideal screen resolutions are above 1280x1024

In addition, the labs may be accessed from other browsers and OS environments including:

- Chrome
- Safari

Troubleshooting Connection Problems

If a remote desktop session drop or fails to connect, the Lab View web page will attempt to reconnect automatically. If those attempts fail (possibly due to a network interruption) then a button will be displayed to initiate a manual session re-connection attempt.

If those mechanism do not succeed in reconnecting to the virtual machine desktop, the browser page can be refreshed. This will reconnect all of the virtual machines on that page and look for the best connection port to each VM session.