# XtremeLabs

Flexible. Agile. Reliable.

# XtremeLabs

## Self-Service Student Guide

Welcome to XtremeLabs, a service of the Xtreme Consulting Group, Inc. This document provides step-by-step instructions on how to:

- Create an account.
- Add course codes.
- Use your virtual labs through the self-service portal.
- Troubleshoot connectivity issues.

If you are using virtual labs during class hours, follow the steps for creating an account and accessing your labs in the In the Classroom section of this document.

If you are using virtual labs outside of class hours, use the At Home section to configure your home computer for access to your labs.

# Contents

## System Requirements

To access the lab hosting system, your client system must meet the following requirements:

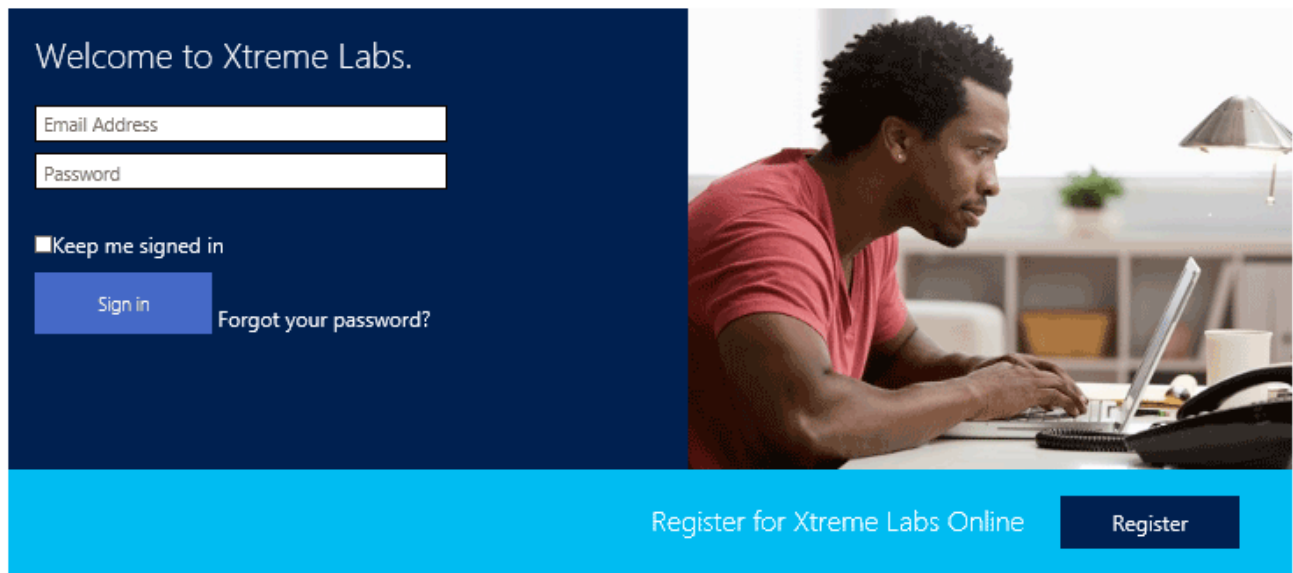| | ActiveX Requirements | HTML5 Requirements |
|---|---|---|
| Windows XP SP3 or later (Windows RT is not supported) | x | x |
| .NET Framework 3.5 or later | x | x |
| Browser | Internet Explorer 7+ | Internet Explorer 10+ Google Chrome 39+ Safari 7+ |
| Minimum KBps per user network bandwidth | 128 KBps | 256 KBps |
| Ideal screen resolution is above 1280 x 1024 | x | x |
| Viewer Installation | Local Admin | N/A |
| TCP Port 80 and 443 open with inbound/outbound access to the Internet | x | x |
| For some corporate firewalls, a proxy client (such as Forefront TMG Client) may be required | x | N/A |

## In the Classroom

Perform the following steps to create an account and access your virtual labs.

### Create a Microsoft Official Courseware (MOC) or Microsoft Official Academic Course (MOAC) Labs Online Account

The first step to accessing your virtual labs will be to create an account.

1. In Internet Explorer, navigate to http://labs.xtremeconsulting.com (MOC) or http://moac.microsoftlabsonline.com (MOAC).



2. If you have an account, you can sign in. If you do not yet have an account, click **Register**.

Create an account

First name

Last name

Your email address will be used as your login and to retrieve a lost password, so please enter a valid address.

Email

Confirm email

Password

Confirm password

**Type the characters you see in this picture.**
This ensures that a person, not an automated program, is creating this account.

Type the text

Register

Sign in to Xtreme Labs Online     Sign in

Terms of use     Privacy & Cookies     Download User Guide     FAQ

3.  To create your account, fill in the fields on the **Create an account** page.

    **Note**  The email address used to create your account is also used for password reminders. It is important to use a valid email address.

4.  Click **Register**.

5.  You will be redirected to the **My codes** page.

## Add a Course Code

1. On the **My codes** page, in the **Add a code to your account** text box, enter the code given to you by your instructor.



2. Click **Add code**. Your course will be added to the **My codes** page. Note that all active courses will be displayed on the left side under the 'My labs' title.

3. To see the lab modules in your active course labs, click on the course number. Your course's lab modules should now be visible.



**Note** If you do not see the labs associated with your particular course on your course home page, you should inform your instructor.

## Take a Lab

1. From any page, select an active course that is listed under the 'My labs' title (see above). Then select the lab module that you want to launch by hovering over the lab module's 'Lab Details' box



(which will turn dark gray) and clicking it. This will open the lab module's Description box:



The duration and description of the subject lab module will be presented here.

2.  To launch the lab module, hover over and click on the 'Take Lab' button.

3.  While your lab environment is being prepared, a "spinner" will be displayed. Typically, it takes fewer than 30 seconds to create your unique lab environment. A large lab environment might take up to 2 minutes.
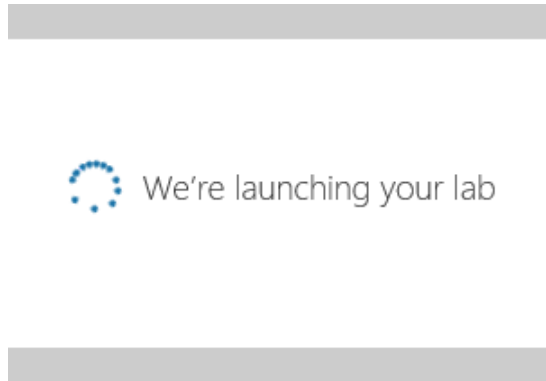


**Note**  If your lab takes longer than five minutes to load, refresh your browser page by pressing the **F5** key. If you still cannot access your lab, please alert your instructor.

**Note**  Some labs have been modified from the on-premises version to operate correctly in an online environment. If a lab has been altered, a "Lab Notice" message will appear after the lab loads. Clicking the **Notes** tile will launch a Lab Notes document that contains additional information regarding the changes made to the lab steps.
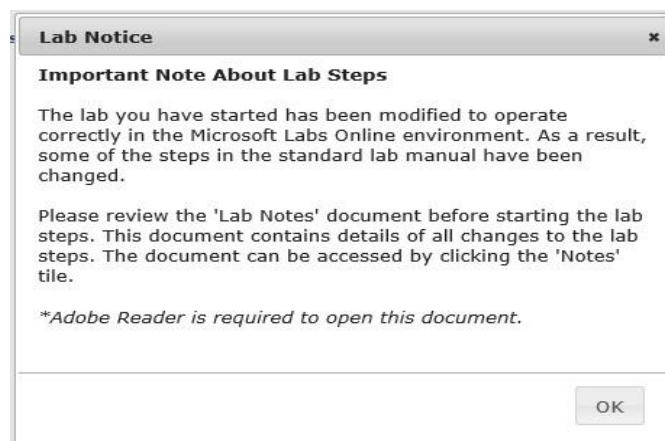


4.  Once the lab loads and the environment is ready, your lab view will be displayed.
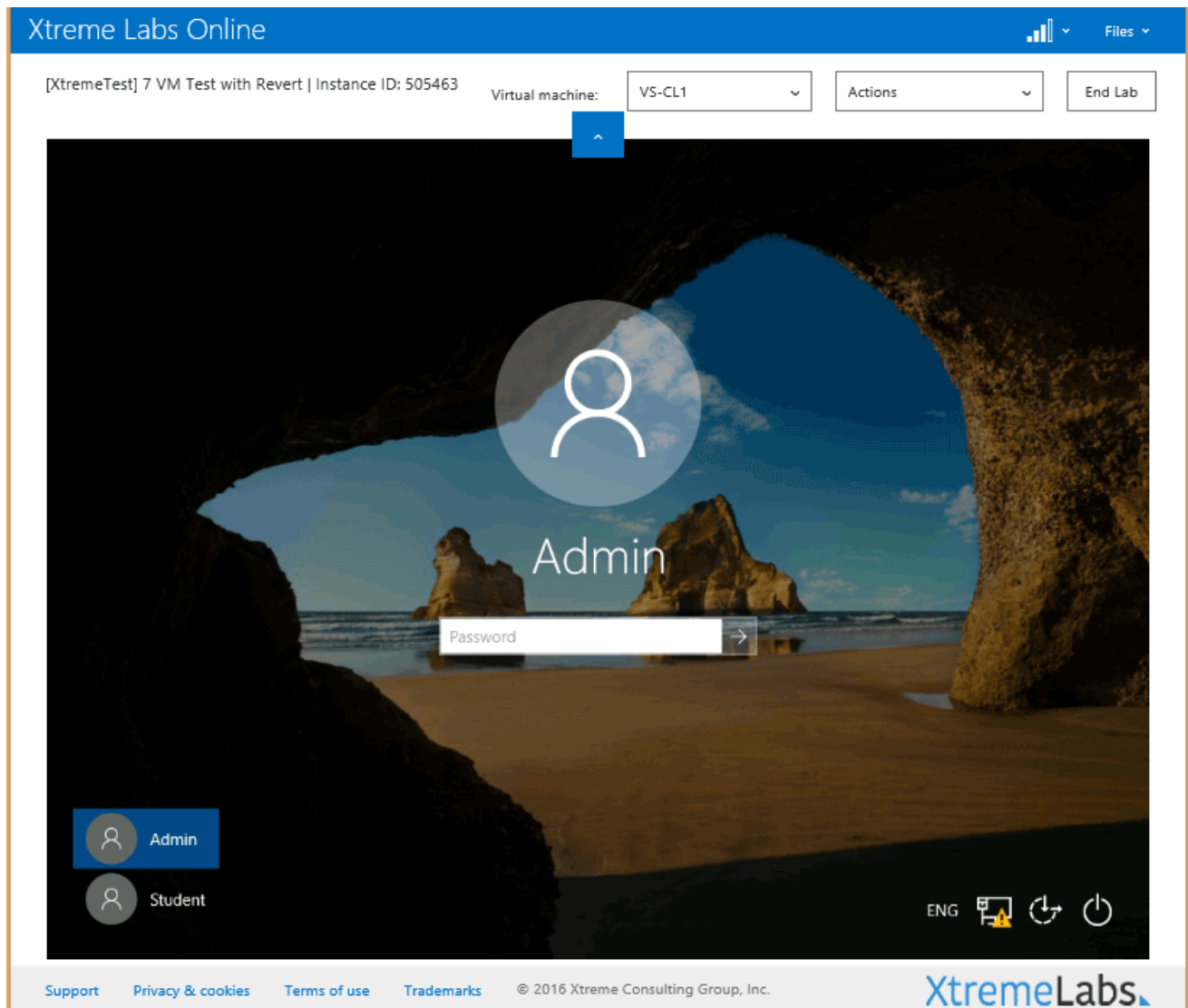
## How to Navigate the Lab Environment

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 has three parts:

- Top bar
- Virtual machine window
- Footer
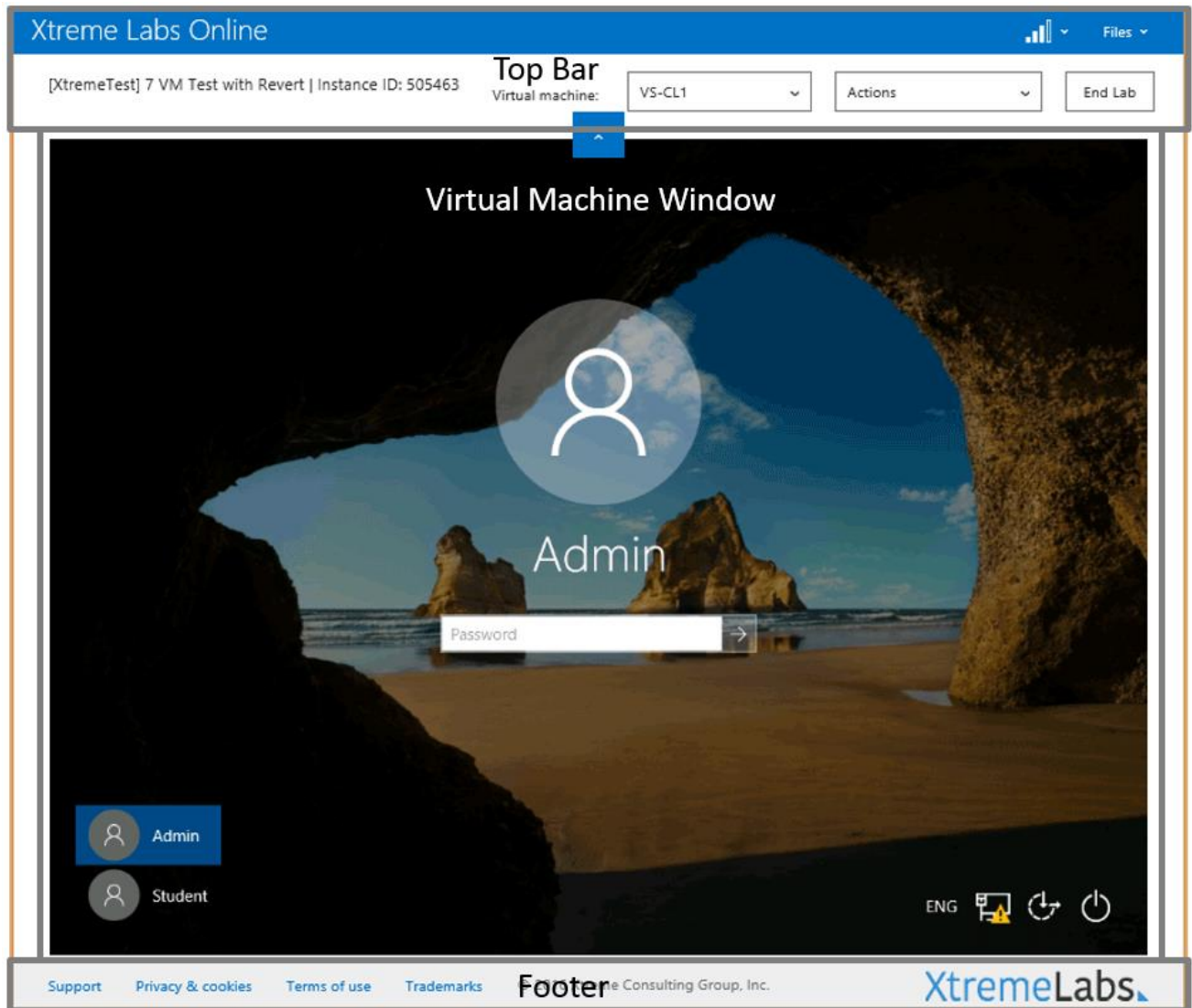
## Top Bar

The elements in the top bar are called out and described here:
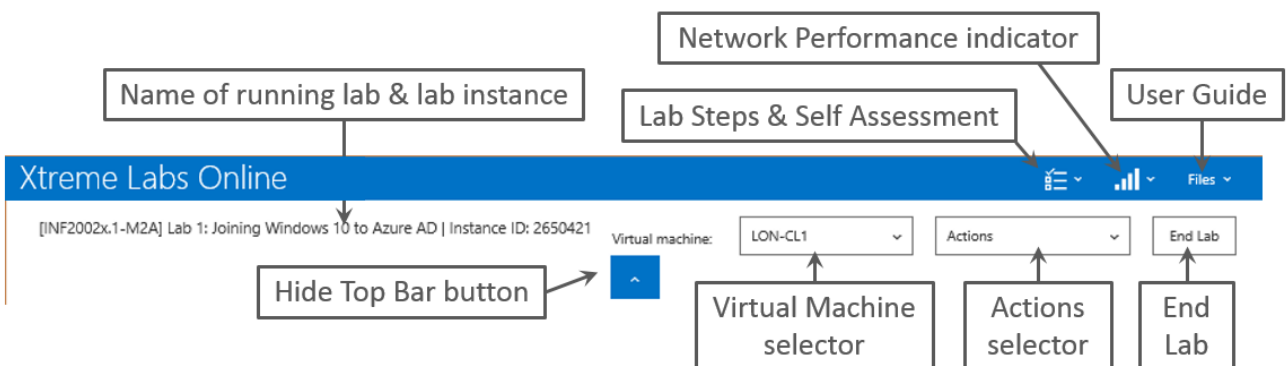
**Name of running lab & lab instance** – This displays the name of the open lab module along with the instance of this lab. If requesting support, this information will be important.

**Hide Top Bar button** – Click this button to hide or reveal the top bar.

 Hide  Reveal

**Virtual Machine selector** – This is a drop-down list that displays all of the virtual machines in the running lab module. Click a specific virtual machine to open it in the virtual machine window. The name of the virtual machine currently in the virtual machine window is listed in the text box.



**Actions selector** – This is a drop-down menu that displays the special actions you may need to perform in the virtual machine that would normally be performed by the client machine's operating system.
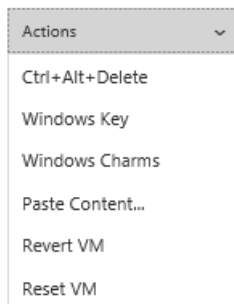


The action choices are:
- **Ctrl+Alt+Delete** – Sends this command to the virtual machine.
- **Windows Key** – Replicates the Windows logo key in the virtual machine.
- **Windows Charms** – Opens the charms within the virtual machine (if the virtual machine's operating system includes charms).
- **Paste Content** – Inserts the content of the client machine's clipboard into the virtual machine.
- **Revert VM** – Reverts the VM to it's original state.  Should be used only when the lab steps direct you to revert the VM.
- **Reset VM** – Resets the VM.  Should be used only when the lab steps direct you to reset the VM.

**Network performance indicator** – The bars in this indicator show the response speed between the user's browser and the virtual machine server. The fuller the bars, the better the network

performance.   A drop-down arrow displays the last ping's round-trip in milliseconds and includes a Refresh text link that initiates a new ping. The round-trip timing of the new ping is then displayed in the drop-down box and is shown in the indicator.
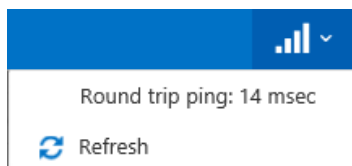


**Lab Steps and Self-Assessment** – If the lab module being viewed includes a lab steps overlay or a self-assessment test, this icon will appear in the top bar.  Clicking on the lab steps icon will open a drop-down that indicates whether the lab module has either a lab steps overlay or self-assessment test (which includes a lab steps overlay).  If the lab steps overlay is closed, clicking on the 'Lab Steps' or 'Self Assessment' text will open the lab steps overlay.

 or 

Note that if there is a lab steps overlay in the lab module, the overlay will open by default when the lab module is launched.

**Files** – The **Files** drop-down menu displays up to three links.
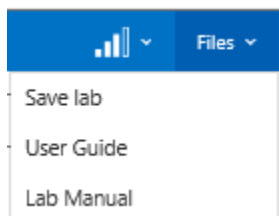


- **Save lab** – See the **Save lab** section below.
- **User Guide** – Clicking on the **User Guide** link opens a separate window where the XtremeLabs Student User Guide (this document) can be displayed and downloaded from within XtremeLabs..
- **Lab Manual** – When the launched lab includes a downloadable lab manual, this link will appear. Clicking on the **Lab Manual** link enables the downloading of the subject lab manual.

**End Lab** – Click **End Lab** to close the lab and terminate the virtual machines in the lab module.



You will be prompted to confirm that you want the lab to end.  Clicking on the **OK** button will end the lab.

Your lab has ended

Thank you for using Microsoft Labs Online

Close

Click **Close** to close the lab's browser tab and return to the course player.

## Save Lab

If you want to save your work and complete a lab at a later time, open the **Files** drop-down menu on the top bar of the screen and click **Save lab**. This will save your progress and your work will be stored for up to eight days (192 hours).
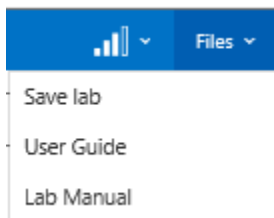


**Note:** The **Save lab** function is not available on MOAC labs. The Save lab link will only appear in the Files drop-down menu if this feature is available for your launched lab module.

Saving the lab will take you to the **My saved labs** page where a tile of your saved lab is displayed.



During the saving process, the Lab Details pop-up will state that "*Your session is currently being saved. Please refresh the page in a few minutes to resume your lab.*" Once the save has been completed, the Lab Details pop-up will state the date and time that your saved lab will be available until.
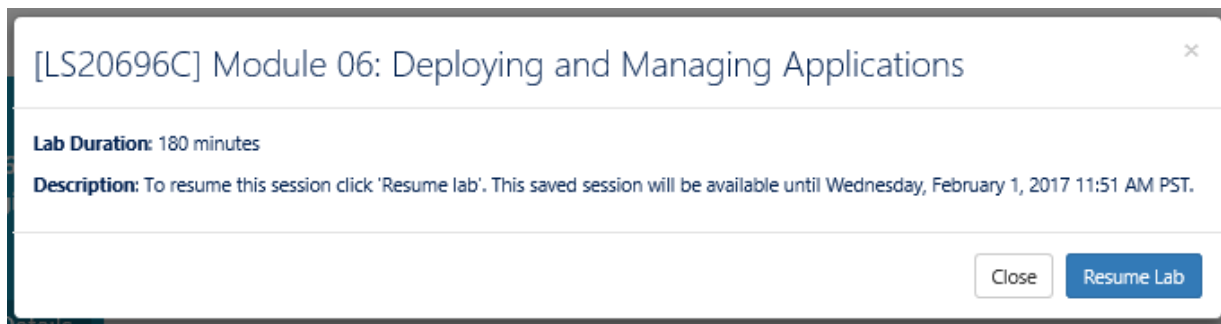
You can resume the lab at any time until then. After that stated date your saved lab will be deleted.

You can resume the lab either from the **My saved labs** page or from the course's page. Saved labs will have their own tile in the appropriate course's page and this tile will be displayed in the last position.
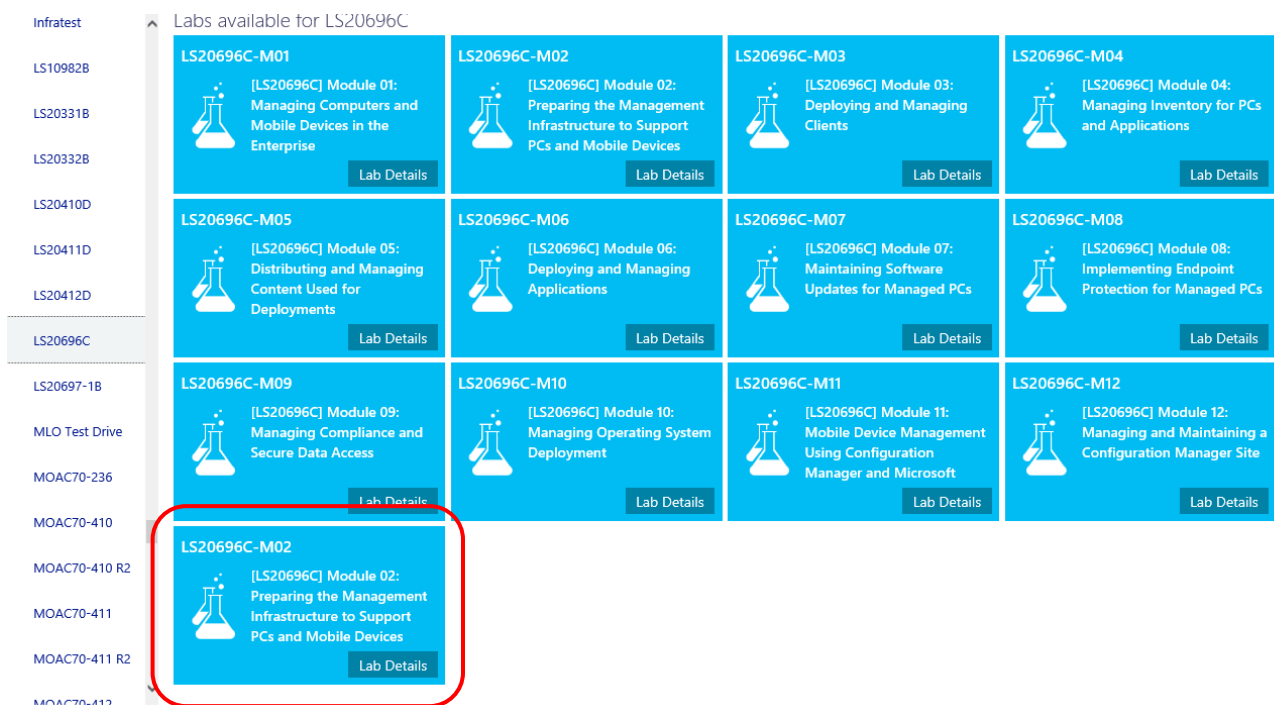


When you click the **Resume Lab** button in the Lab Details pop-up, the lab will restart at the place where you left off.

If you have saved a lab and sign out of http://labs.xtremeconsulting.com (MOC) or http://moac.microsoftlabsonline.com (MOAC) and then sign back in to the site within the save timeline, the My saved labs section will be opened by default to remind you that you have a saved lab waiting for you:
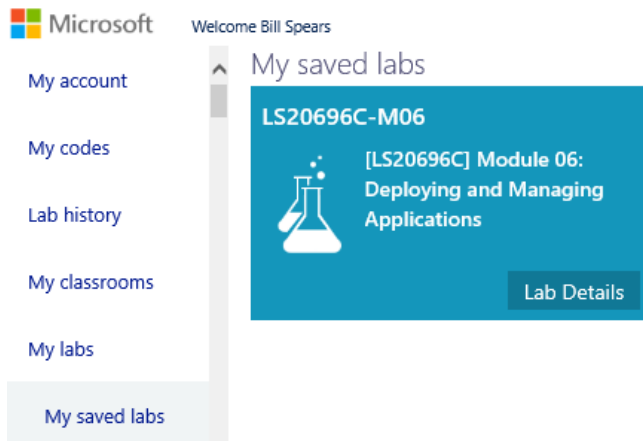
**Note:** Only one lab can be saved at a time. If you already have a saved lab and you then save another, it will overwrite the first saved lab.

## Virtual Machine Window

This is the large window that fills most of the lab view. This window allows interaction with the virtual machines that form the virtual labs.

Only one virtual machine can be active in this window at a time. Use the virtual machine selector (identified earlier in this guide) to switch between virtual machines in a lab module.

As long as the focus is within this window, the keyboard and pointing device will control the virtual machine.

**NOTE**: Instructions for logging into and interacting with the VMs should be in the lab manual documentation.  However, the most commonly used Administrator passwords used for Lab VMs are **Pa$$w0rd** and **Pa55w.rd**.

Once launched, labs will run for 90, 120, 180, or 240 minutes, depending upon the scope of the lab and the steps to be performed.  At the end of this period the lab will be disconnected and a message will be displayed.  This message informs you that the lab is about to expire and it gives you an opportunity to either end the lab or extend the lab for an additional 30 minutes:

Extend your lab

Your lab is about to expire. Would you like to extend your lab by 30 minutes?

Time until expiration: 00:04:18
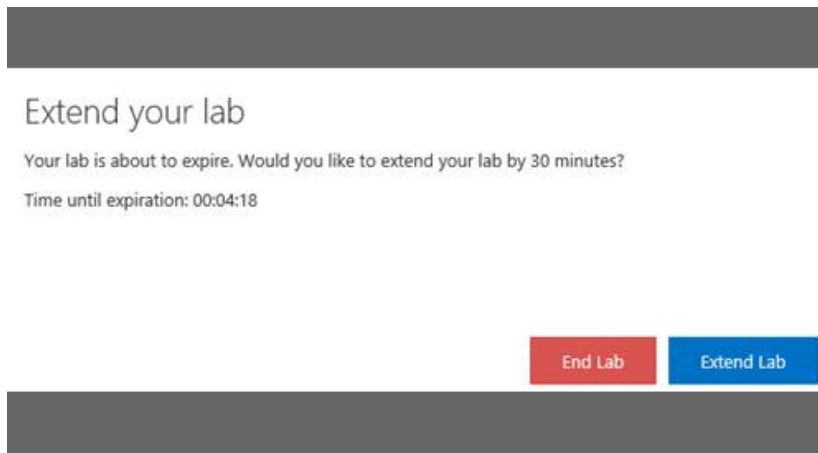
End Lab    Extend Lab

When this message is displayed, you will have 5 minutes to click on the **Extend Lab** button before the lab is automatically ended.

You can end the lab at any time while this message is displayed by clicking on the **End Lab** button.

**NOTE:** The RDP (Remote Desktop Protocol) connection between the client machine and the virtual machine may be interrupted occasionally due to networking events, but the connection will be automatically restored. If the connection is lost, the screen will turn dark and a "Connection lost.  Reconnecting…" pop-up message will appear.



Connection lost. Reconnecting…

Abort
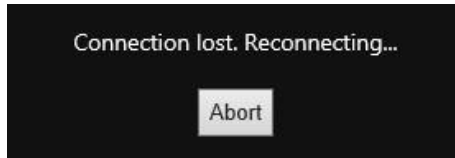
The desktop session will resume upon reconnection.

## Footer



There are five elements in the Footer: the **Support** link, the **Privacy & Cookies** link, the **Terms of Use** link, the **Trademarks** link, and the **XtremeLabs** link.

**Support** - Click **Support** to open a menu with two text links: General FAQs and Contact us.



Click **General FAQs** to view a .pdf file of the Frequently Asked Questions.

Click **Contact us** to open a pop-up form for sending email to the XtremeLabs support team. This form also provides the toll-free number to contact the XtremeLabs support team and a Chat now button to initiate a chat session with a team member.



To send email to the XtremeLabs support team, fill in the text input boxes with the appropriate information and click **Submit**. Note that the text input boxes denoted with a red asterisk (*) cannot be left blank.

After you click Submit, you will see an acknowledgment that the email has been sent. The XtremeLabs support team will contact you shortly.

If an issue is urgent, call the XtremeLabs support team using the toll-free number provided on the form or click **Chat now** during the listed support hours. (The listed support hours are in the Pacific Time zone.)

**Privacy & Cookies** – This links to the Microsoft Privacy Statement web page.

**Terms of Use** – This open a page with the XtremeLabs Online EULA (End-user License Agreement).

**Trademarks** – This links to the Microsoft Trademarks web page.

**XtremeLabs** – This links to the home page of Xtreme Consulting Group, Inc., the fine people who bring you XtremeLabs – and much more.

## At Home

The In the Classroom section of this document provides instructions for creating an account and accessing your labs in the classroom.

If you also plan to use virtual labs outside of class hours, this At Home section will help you configure your home computer to access to your labs.

### Configuring Your Home Computer

1.  In Internet Explorer, navigate to http://labs.xtremeconsulting.com.
2.  Sign in using the email address you specified when creating your account. You will be redirected to your course home page.

    **Note**  If you have not created a user account, follow the steps in the In the Classroom section of this document.

3.  To begin a lab, click **Take Lab**.
4.  After your lab loads, you may be asked to install an ActiveX control.

    This website wants to install the following add-on: 'Xtreme RDP ActiveX Control' from 'Xtreme Consulting Group Inc.'.
    What's the risk?                                                                                     Install     ×

5.  Click **Install**.

    **Note**  Installation of this control requires administrative access.

6.  Once installation is complete, the virtual machine connection window will refresh and you will have access to your virtual lab environment.

## Connectivity Preference

By default, all connections to lab virtual machines are made via HTML. However, there are some networking issues that can be resolved by switching to the ActiveX RDP (Remote Desktop Protocol) control.  To make this change, open **My account** page and select the ActiveX option.

## Update your RDP preferences

Click below to set your RDP preferences. Please note that the HTML5 connection method is only available on Internet Explorer 10+. Additionally, some classroom functionality is not available via the ActiveX control connection method.

○ Use the **ActiveX** RDP control connection method. *(Internet Explorer 7+ required)*
◉ Use the **HTML5** connection method. *(Internet Explorer 10+ required)*

Update Preferences

**Note**  If ActiveX is selected as your RDP preference, a different user interface will be presented. You will then want to download the Student User Guide written for that UI.  Go to https://labs.xtremeconsulting.com/LabManuals/Guides/Self-ServiceStudentGuidetoMLO_ActiveX.pdf  to download this version of the Student User Guide.

**Note**  If you select HTML5 as your preference, but the machine on which you have signed in does not support it (for example, the browser version is not recent enough), then the UI will revert to ActiveX automatically.

# Troubleshooting

If you have trouble connecting to the lab images once they have launched, the information in this section may help identify the issue.

## Advanced Firewall Configuration

By default, the lab hosting system offers connections to lab virtual machine console sessions from an end user's web browser via an ActiveX control embedded in the web page. That ActiveX control makes one or more connections to a Hyper-V server in order to display the virtual machine console windows within the browser window.

All ActiveX controls make their network connections outside of the scope of Internet Explorer. In other words, their traffic is not managed through the Internet Explorer proxy settings. Changing proxy settings on the browser will not enable the traffic. Instead, all ActiveX controls open network ports directly through the Windows TCP/IP protocol stack. This is generally seen as a key benefit of the ActiveX architecture.

The network traffic between the ActiveX control and the lab portal is running over TCP port 443. That port is typically used to transfer HTTPS traffic. However, in this case, the network protocol being transferred over port 443 is RDP. In most cases, proxy/firewall configurations are not sensitive to the protocol being transmitted over the port and this traffic flows without a problem. However, in more secure environments (and this may include your network boundary), packet inspection of traffic over port 443 may block the RDP traffic since it does not conform to the HTTPS protocol.

To enable the lab session traffic from the ActiveX control to reach the Internet via a proxy server (such as Microsoft Forefront TMG), follow the instructions in the Internet proxy/firewall client step, described next. If that does not resolve the issue, try the Firewall configuration step that follows.

- **Internet proxy/firewall client**
  First, install a client proxy agent on your machine and then configure that client to connect to the Internet via the proxy/firewall server. If your network is protected by Forefront TMG, for example, you will need to install the Forefront TMG client on your machine and configure it to connect to the Internet via the gateway. The TMG client can be downloaded from the [Microsoft Download Center](). Other firewall/proxy products typically have an equivalent client agent.

- **Firewall configuration**
  If the firewall has been configured for packet inspection (that is, the rules are sensitive to the protocols running over certain ports), then the outbound rules on the firewall need to be altered to allow the RDP protocol to run over port 443 to the specific addresses used by the lab portal. Namely:

  Destination IP address ranges:

  | | |
  |---|---|
  | 67.21.174.1 | through 67.21.174.25 |
  | 67.21.175.69 | through 67.21.175.88 |
  | 67.21.173.141 | through 67.21.173.150 |

  Destination port:
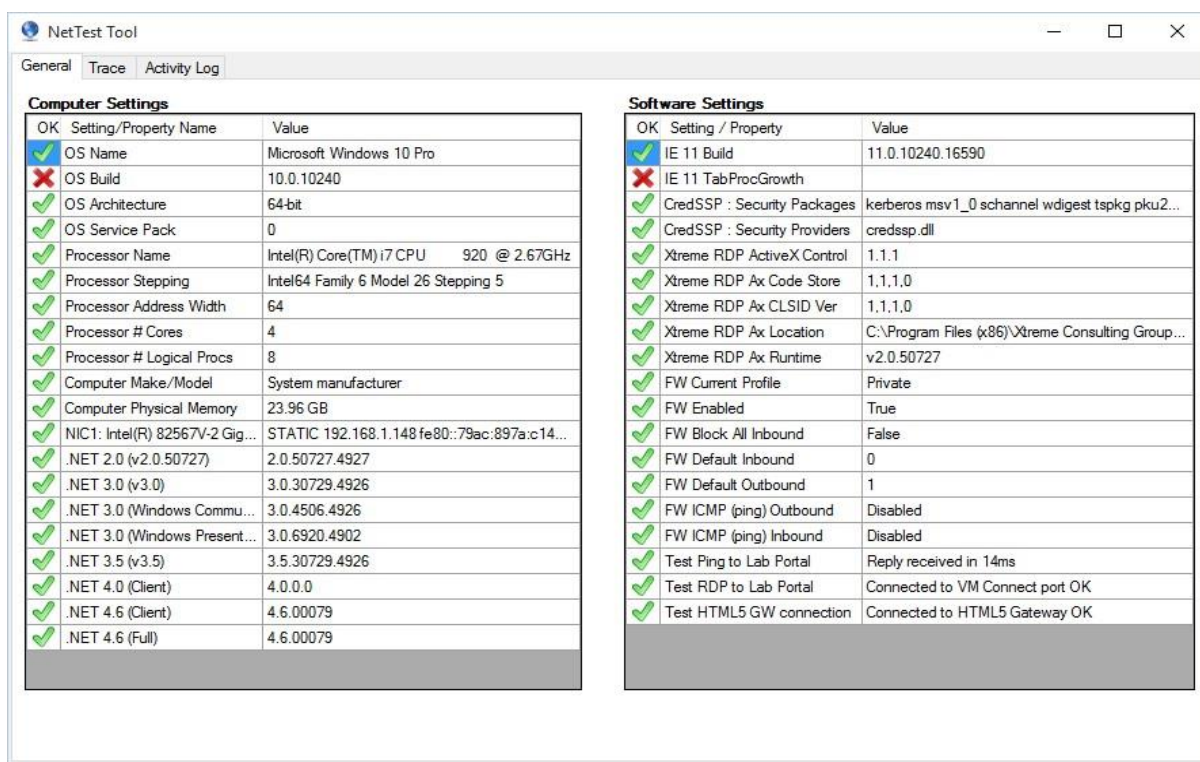
  TCP 443

  Protocol:

  RDP

**Note** Configuration of access to port 443 for RDP traffic is beyond the scope of Internet Explorer proxy settings.

## Checking Connectivity

If you have trouble accessing your labs, use the NetTest tool to check your connectivity and then provide the results to the XtremeLabs Support team for analysis. The tool is available at https://labs.xtremeconsulting.com/content/NetTestSetup.exe.

After installing the tool on the computer used to access XtremeLabs, launch it with elevated rights as Administrator.

The tool has three tabs. As soon as it launches, it will start to populate the first tab ("General") with system and software settings data, highlighting any settings that may need to be investigated.



Once the general scan is complete, switch to the second tab ("Trace") and press **Trace Test** to initiate a series of ping burst tests to each of the network routers between your computer and the XtremeLabs servers.

| OK | Hop | IP Address | DNS Name | RTT | Burst | Notes |
|---|---|---|---|---|---|---|
| ✔ | 1 | 10.100.100.2 | main-firewall.xtremecgi.com | 0.0 | 0/0/0/0/0 | |
| ✔ | 2 | 172.76.22.145 | | 1.0 | 1/1/1/1/1 | |
| ✔ | 3 | 74.40.1.153 | ae3---0.cor01.sttl.wa.frontiernet.net | 2.0 | 2/2/2/2/2 | |
| ✔ | 4 | 74.40.5.122 | ae0---0.cbr01.sttl.wa.frontiernet.net | 3.6 | 4/4/5/2/3 | |
| ✔ | 5 | 206.81.80.19 | six.zayo.com | 2.0 | 2/2/2/2/2 | |
| ✔ | 6 | 64.125.32.158 | xe-0-0-0.mpr1.sea25.us.zip.zayo.com | 3.8 | 2/2/2/11/2 | |
| ✔ | 7 | 64.125.32.170 | te-8-2.car1.sea02.cl.mgmt.zip.zayo.com.32.125.64.in-addr.ar... | 2.0 | 2/2/2/2/2 | |
| ? | 8 | * | | 0.0 | | No response from hop destination |
| ✔ | 9 | | Lab Portal | 2.2 | 2/3/2/2/2 | |

Finally, click to the third tab ("Activity Log") and send the details to the support team either by copying the clipboard or by saving to a file and sending as an attachment. The support team will review the log for any potential issues.

**Note** This tool is focused on issues around using the RDP ActiveX control for session connectivity (although it also measures general network settings/connectivity). It checks the ActiveX installation and the RDP CredSSP settings, as well as firewall checks specific to running RDP through the firewall.

If there are any issues with running the RDP ActiveX control, the simplest solution may be to switch your user profile to use the HTML5 viewer. HTML5 is a per-user choice (not per machine) and currently defaults to ActiveX. The Connectivity Preference section in this document describes how to switch to HTML5.

## Support

If you have technical issues with the online labs, you can contact the XtremeLabs support team. Examples of technical issues include:

- The virtual desktop does not display.
- The online lab runs slowly or is non-responsive.

If an issue is urgent, call the XtremeLabs support team using the toll-free number provided on the form or click the link to initiate a chat session with a team member during the listed support hours. (The support hours are in the Pacific Time zone.)

| XtremeLabs - Support Contacts | |
|---|---|
| Phone | (1) 800-239-7051 |
| Email | mocsupp@xtremeconsulting.com |
| Hours | Mon-Fri: 12:00 am to 6:00 pm (Pacific Time) |