

Getting Started Guide

Follow all instructions in this document, so you fully understand how to leverage everything that has been provided.

There are several sections to this document as part of the support for this course, to help you be successful. Use each as required. Sections are used in tandem, to complete setup and configuration of your local machine – and to ensure you have all information required to complete the course.

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How do I get started?

SPVCs, or "Self-Paced Virtual Classes", are online web-based courses that are designed for independent study, over a period of time that is much longer than the classroom course. This provides the use with time in their busy schedule to plan their learning, work around their day-to-day activities, and complete work as shorter tasks – all at their own pace and place.

- Access is not indefinite please take note of the Access Expiry Date of your course, to
 ensure you do not run out of time while completing your course.
- Enrollment begins as soon as you apply your Access Code.
- If you already have an Access Code, you can log into the Learner Portal. You need an
 account to access the Learner Portal, so if you do not have one already, you will need to
 create one by following the instructions in your enrollment confirmation letter.
- Apply Access Code, to log in and access the course you are taking.
- Once you are logged into the Learner Portal, you can access your course.

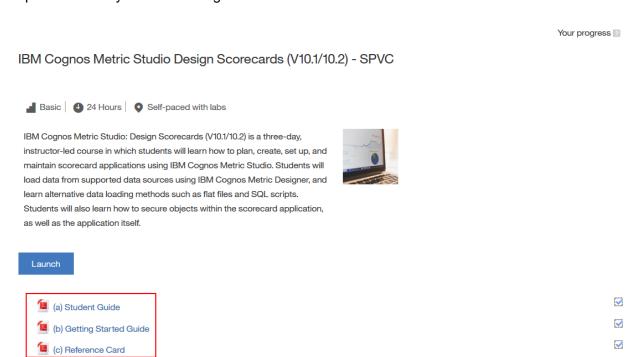
IBM





Parts of the course

Once you are successfully enrolled in and accessing your course in the Learner Portal, review all provided materials to enable you to complete the course content and leverage the remote lab to practice what you are learning.

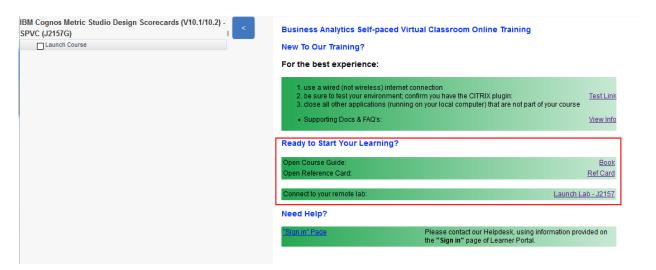




"Launch" the course

Once you "Launch" the main content, you have access to the same supporting information provided on the main page of the course.

Leverage all course guides and/or reference materials provided (these are the theory, as well as step-by-step demos and workshops) and the remote lab (for hands-on practice), when taking your course. Launch the remote lab by clicking the "Launch Lab" link provided.





Browser Settings and Course Navigation

Disable popups blockers

Please take note that launching the course will open in a new window. Please disable pop-ups blockers.

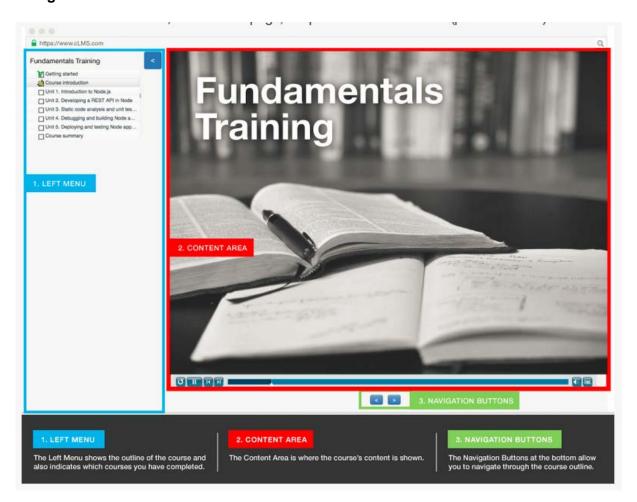
Minimize Scrolling

- Zoom out: command or ctrl (minus)
- Zoom in: command or ctrl + (plus)
- Zoom Default: command or ctrl 0 (zero)

Flash Player

You may be prompted to install the Flash plugin. Get Flash plugin.

Navigation





Remote Lab Environment – the IRLP page

When you provision your remote lab environment – by clicking the "Launch Lab" link – you are taken to a new landing page hosted on the IRLP VM platform with details of your lab remote instance. IBM migrated all self-paced remote labs to the IRLP VM environment in late 2015. As a result of this migration, the connection information embedded within the training content may not accurately reflect the procedures for connecting to your remote lab. One significant example of this is that a Citrix plugin is no longer required.

IRLP VM Overview

IRLP VM is a cloud computing platform that enables you to access and control your remote lab environment anywhere that has an internet connection. These environments can be used for pretty much anything you'd use a traditional on-site computing network for, including development, testing, demos, and even production. Our focus is on flexibility and ease of use, so ideally you'll be able to manage your remote lab environments (virtual machines) with minimal outside assistance.

Virtual Machines (VMs)

A VM runs a guest operating system as well as any installed applications. VMs have their own virtual hardware resources, including CPUs, RAM, file system storage, a CD/DVD drive, and network interfaces.

Accessing VM Desktops with Your Browser

IRLP VM's browser-based client is the quickest and easiest way to access and use your VM's desktop. You launch the browser client by clicking on the lab link embedded within the content. The IRLP VM environment automatically routes you to the correct lab environment. Once you open the VM's "desktop", you can interact with the VM as if it were a local, physical machine.

Access Requirements

To view a VM's desktop from the IRLP VM, you must meet the access requirements listed below.

You can use the Connectivity Checker tool to test whether you meet the minimum access requirements. For more information, see Using the Connectivity Checker.



Remote Lab Access Requirements

Refer to: http://help.skytap.com/Access_Requirements.html

Basic Access Requirements

These are the access requirements to use the IRLP VM website and VM access clients.

To use Skytap virtual machines, you need:

- A modern web browser like Chrome, Firefox, Microsoft Edge, Internet Explorer 11, or Safari.
- A good network connection for connecting to VMs. This means: •At least 1.16 Mbit/s (150 kbyte/s) for each concurrent browser session with a VM.
- Low latency (150ms or less) to the region where your VMs are located.

To check if you meet these basic requirements:

- Use <u>Connectivity Checker</u> to test your browser and network access.
 For instructions, see <u>Using the Connectivity Checker</u>.
- Use <u>Speed Test</u> to test your bandwidth and latency to Skytap regions.
 For instructions, see <u>Testing bandwidth and latency with Speed Test</u>.

If you are on a restricted network, or if you want additional information about these requirements, see the sections below.



Detailed Access Requirements

Requirements for accessing https://cloud.skytap.com:

Operating Systems	You can access Skytap from any operatir the following browsers. This includes mos Windows, Apple OS X, and most major L	st versions of Microsoft	
Browsers	A modern web browser that supports WebSocket technology. This includes: Google Chrome Microsoft Edge (Windows 10 only) Mozilla Firefox Microsoft Internet Explorer 11 Apple Safari	 Notes: Skytap supports the current and the three previously released versions of Chrome, Edge, and Firefox. Skytap does not support Internet Explorer in compatibility view. Because Chrome supports the WebP image format, Chrome users should see a significant reduction in bandwidth usage when accessing VMs with the browser client. 	
Port Ranges and IP Addresses	To access the Skytap web interface, you need direct access to: • The HTTPS/SSL port (TCP/IP port 443) at cloud.skytap.com (76.191.118.28). Test access here. • The HTTPS/SSL port (TCP/IP port 443) at cloud.skytapstatic.com (76.191.118.23). Test access here. Contact your network administrator if you don't have access to these sites.	Some services may require additional open ports. For more information, see What IP addresses and port ranges does Skytap use?.	



Detailed Requirements for Accessing VM Desktops

Requirements for accessing VMs with the browser client:

Browser	You must meet the browser requirements defined in Detailed Access Requirements above.		
Bandwidth	Minimum download speed of 1.16 Mbit/s (150 kbyte/s) for each concurrent browser session with a VM. For example, if you have 15 students, each using the browser client from the same physical location at the same time, the minimum recommended amount of bandwidth is 17.5Mbit/s (1.16 Mbit/s (150 kbyte/s) for each concurrent browser session with a VM x 15 sessions).	 Notes To estimate the bandwidth of your connection, see Testing bandwidth and latency with Speed Test. Actual bandwidth consumption may depend on how you use your VMs. For example, working within a command line interface requires fewer network resources, but using Flash and video requires much more bandwidth than the minimums recommended above. More connections to the same VM cause slower performance for each user. We recommend no more than 10 simultaneous browser client sessions per VM. 	
Latency	Latency of 150ms or less is strongly re Latencies above 250ms may not provi		
IP addresses and port ranges	IP addresses and port ranges For more information about the specific IP addresses and port ranges used by the browser client, see What IP addresses and port ranges does Skytap use?		
VM requirements	The browser client works best when the VM has the latest version of VMware Tools installed (9.4.10 build 2092844).	Notes To check the version of VMware Tools installed on a VM, see http://kb.vmware.com/kb/1003947 To install or upgrade VMware Tools, see Installing and upgrading VMware Tools on Windows VMs or Installing and upgrading VMware Tools on Linux VMs	



Opening the VM's Desktop in the Browser

Clicking the "Launch Lab" link will open the VM page. If you see this pop-up window, read through the instructions and click "OK".

When your remote lab opens, a DOS window may appear on the desktop inside the remote lab.

This is a normal process. The DOS window must remain open while you are working with your remote lab.

Please ignore any messages that appear in the DOS window, minimize this DOS window, and proceed with your work.

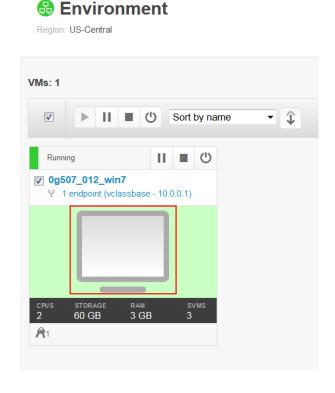
DO NOT close the DOS window at any time.

The first time you load the VM, you will see this:

Your lab environment is being created, please wait...



You can open the VM's desktop by clicking on the thumbnail image of a running VM within the IRLP VM environment.





Exploring the Browser Client Toolbar

When you click on the thumbnail image of a VM, the VM's desktop will open in your browser. From here, you can interact with your VM as if it were a local machine. You can also use the toolbar at the top of the screen to change the VM's power state, access saved credentials, and customize your VM session.





The toolbar at the top of the screen includes the following features, listed in order from left to right:

Button		Descr	iption	
₽	Displays a drop-o	down list of all the \	/Ms in an environi	ment.
II ■ U	Changes your VI Running and Sto	M's runstate. For mepping VMs.	ore information po	ower options, see
Ctrl-Alt-Del	Enters the Ctrl+A	Alt+Delete keyboard	d combination on t	he VM.
		screen keyboard thuts to the VM. To ty		
	Keyboard			⊗
	Alt + Tab	Alt + Shift + Tab	Ctrl + Esc	Ctrl + Shift + Esc
	Alt + Esc	Left Win Key	Right Win Key	Show Keyboard
A	Opens the crede VM's Credentials	ntial manager, whic page.	ch displays creder	ntials from the
	Allows you to cop	oy and paste text be	etween your local	machine and the
	•	's screen resolutior um screen resolutio		
	Provides several resolution.	additional options	for changing the $ackslash$	/M's screen





Displays the quality of your browser's connection to the VM and provides several options for changing the display quality. If the connection is fair or poor, you can reduce the display quality to improve performance. Lowering the display quality will reduce the amount of bandwidth that your session requires. The browser client now takes advantage of Google Chrome's built-in WebP image format to reduce bandwidth requirements. Try using Chrome for better network performance.

Notes:

- Changing the display settings will not change your Good, Fair, or Poor rating. However, you should see better performance as you use the VM.
- If you are experiencing connection issues due to high latency, the display quality settings will not improve performance. To get more detailed information about your connection, see <u>Testing Your</u> <u>Bandwidth and Latency Using the Speed Test</u>.



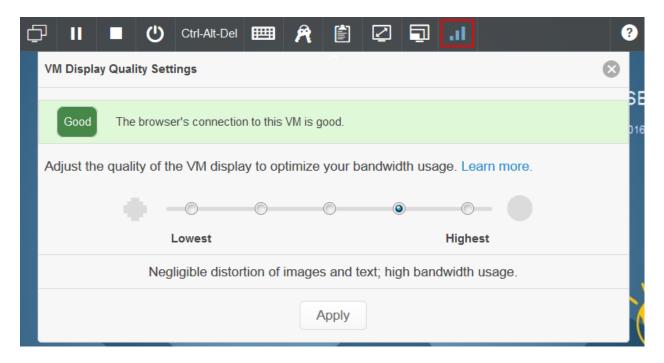
Opens a help link defined by the environment owner.

Collapses or displays the toolbar.



Improving Network Performance During a Desktop Session

By adjusting the display quality during a desktop session, you can adjust how much bandwidth your connection will consume. To adjust the display, click the Settings icon in the toolbar and select a new display quality.



Generally:

- A higher quality display will look clearer, but it requires more bandwidth to transmit over the network. By default, your VM will use the high image quality setting.
- A lower quality display will be compressed, which can cause noticeable distortion within images and around text. Although the image quality is diminished, the connection will consume less bandwidth and may provide better network performance.

Lower quality display options are especially useful for customers with fair or poor network connections or customers that hold multiple sessions on the same network at the same time.



Known Issues with VM Desktop Sessions

- If the client loses its connection, IRLP VM will automatically try to reconnect the client for you. Connection issues may be caused when:
 - The browser first loads in single-VM view.
 - o The VM power state changes (e.g., the VM is run, suspended, shut down, etc.)

If the automatic reconnection attempt does not work, you can manually refresh the browser or close the browser window and restart the session.

- If a VM is accessed by multiple clients at the same time, certain keys may become unresponsive. As a workaround, close all of the browser sessions and restart the VM.
- The Caps Lock and Num Lock keys on the VM may get out of sync with the Caps Lock and Num Lock Keys on your physical keyboard. For example, the Caps Lock key may be toggled on in the VM, while it is toggled off on your physical keyboard. This would cause the Caps Lock key to appear stuck when you are typing in the VM. To re-synchronize the keys, you can click the Caps Lock or Num Lock key on the VM's on-screen keyboard; alternately, you can press the keys on your physical keyboard while the screen is focused outside of the web client (e.g., on another window or tab).

By separating the physical key on/off states from the VM's key on/off states, it prevents the client from rapidly toggling the Caps Lock or Num Lock keys on and off when multiple users are using the VM at the same.

- The Num Lock key does not work in Firefox 38 browsers; this will be fixed in an upcoming release.
- The double quote (") and tilde (~) characters may not work on Ubuntu 14.04 VMs; to fix this issue, you will need to adjust the VM's keyboard settings from within the guest OS. For more information, see Troubleshooting Broken Keys on an Ubuntu 14.04 VM.



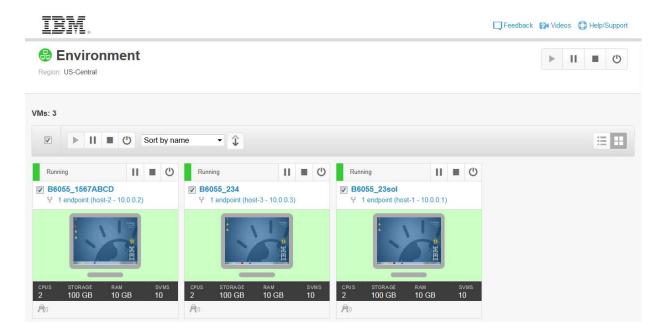
Viewing All VMs in the Browser

Opening the All VMs View

To access a high-level overview of the environment, you can:

- Open one or more VMs through the IBM Learner Portal class.
- Click the All VMs button on the toolbar if you are viewing the VM's desktop.

By default, you will see the name, status, and hardware of each VM, as well as an image of its desktop.



If you have a large number of VMs, you might want to try the Index view using the button in the upper-right hand corner. Index displays the same information, but without the images.



Viewing and Managing VMs

From the All VMs view, you can manage, view, and access your VMs:

- Use the environment-wide Run, Suspend, and Power buttons to change the VM runstates.
 You can click the Power button to display additional power options. If you want to apply a
 power option to select VMs, use the Select options to select All or None of the VMs. Then
 select or deselect individual VMs by clicking the checkbox to the left of their name.
- Above the VM list, use the Sort by menu to sort your VMs by several different options. Note that Status sorts by a VM's operational state, first displaying Running VMs, then Suspended, then Shut Down, and finally Powered Off.
- Click on the image of a desktop to open the desktop in your browser (see <u>Exploring the Browser Client Toolbar</u> above).

Power Options

The power options are explained in the order they generally appear in:

- Run starts a suspended or powered off VM.
- Suspend "pauses" a running VM. The machine will stop running, but it won't be fully
 powered down. This enables you to resume operations from exactly where you left off with
 little to no start up time. Given these advantages, it's usually better to suspend a VM rather
 than use the shut down or power off commands.
- Shut down safely shuts down a running VM.
- Reset power offs and then powers on a running VM; it will also keep any resources (e.g., ISOs) mounted. Reset cannot be applied at the environment level.
- Power off "pulls the plug" on a running or suspended VM. This forces the VM to power off, without a graceful shut down. Powering a VM off could cause data corruption; power off should only be used when your VMs are unresponsive.

Troubleshooting

For troubleshooting assistance, try our guided troubleshooting assistant at <u>Troubleshooting VM</u> Access.

Switching Between the HTML5-based Client and the Java Applet

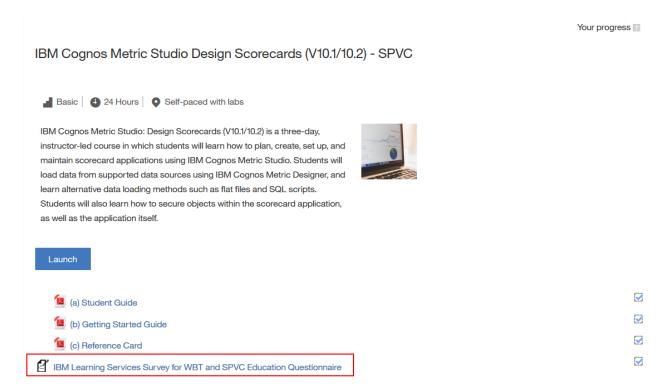
If you are using an HTML5-supported browser and you want to switch between the HTML5-based web client and the Java applet, see <u>Switching Between the Browser Client and the Java Applet</u>.



Course Completion and Certificates

Completing the Course

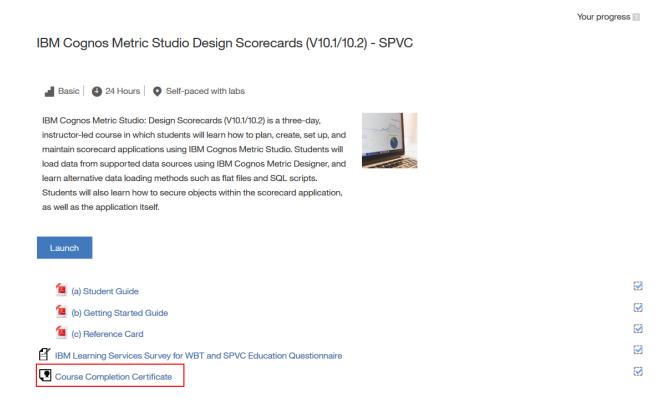
After you close the course window, a link to the IBM Learning Services Survey appears on the course home page.





Course Certificate

After you complete the Survey, a link to the Course Completion Certificate appears on the course home page.



You will then be able to view, download, and print your certificate.



Need Help? - Learner Portal, Connections, or Content

Contact IBM Help Desk 1-844-335-7094 (for outside US & Canada, call +1 469-619-2474) or email at: LPSupp@us.ibm.com.

		providing content-related questions (ie. a question about topics covered, steps in that you include the following when escalating:				
•	Student details:					
	0	Full Name:				
	0	Learner Portal User ID:				
	0	Email (if different from User ID):				
•	Globa	Training Partner (GTP):				
Course code:						
•	Issue details:					
	0	Module/Unit #:				
	0	Demo/Exercise#:				
	0	Task #:				
	0	Step #:				
	0	Page # (from the bottom corner of the guide, for example 3-62):				
•	Descri	be the action taken immediately before the issue:				
	0	What was the expected result?				
	0	What was the actual result? Please include screenshot/s highlighting the issue.				
•		you confirmed that all previous steps leading up to the issue you are now encing were completed correctly?				

• Have you confirmed that all previous demonstrations were completed successfully?

Ensure you are no longer performing work inside the lab. You should remain out of the lab during the support cycle. This will avoid further changes/issues while the request is supported. You will be advised once the lab is ready to continue learning.



You can also self-register on <a>SCCD (Smart Cloud Control Desk) in order to:

- 'Browse Solutions' under SCCD Self Service center which will enable you to find Solutions and resolve problems on your own.
- Submit a SR 'service request' to Service Desk for further assistance.
- Initialize live chat with Help Desk agent for real time support.

