



SYSTEM REQUIREMENTS

January 2017

STORMWIND STUDIOS CAMPUS

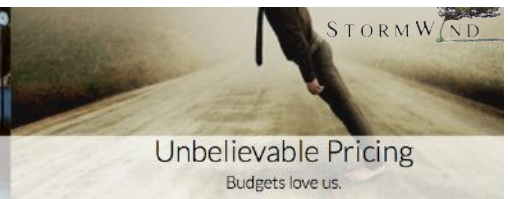
The StormWind Studios Campus is capable of being accessed on a multitude of internet-ready devices and network configurations



Real World Knowledge
Tips and shortcuts that matter.



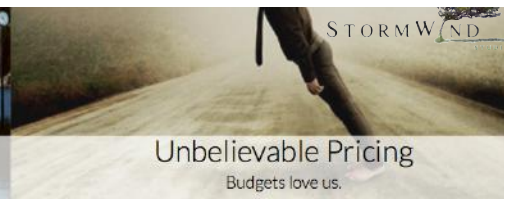
Work-friendly 2hr Sessions
College-style learning chunks.



Unbelievable Pricing
Budgets love us.

Contents

| | |
|---|----------|
| Campus Requirements | 3 |
| Recommended Browser Plugins..... | 3 |
| Live Class Requirements | 3 |
| Windows | 3 |
| Mac OS | 3 |
| Linux | 4 |
| Recommended Plug-in | 4 |
| Bandwidth | 4 |
| Ports | 4 |
| Testing Client Connectivity..... | 4 |
| Recorded Class Requirements | 4 |
| Operating Systems Supported | 4 |
| Browsers Supported | 4 |
| Mobile OS Support | 5 |
| Internet Connection Speed | 5 |
| Practice Exams Requirements | 5 |
| Boson Practice Exams (ExSim-Max)..... | 5 |
| Operating System Options..... | 5 |
| Network..... | 5 |
| MeasureUp Practice Exams..... | 6 |
| Lab Requirements | 7 |
| Boson Labs (NetSim) | 7 |
| Operating System Options..... | 7 |
| Network..... | 7 |
| Virtual Lab Requirements..... | 7 |
| System Requirements..... | 7 |
| Virtual Lab Browser Support..... | 8 |
| Port Check..... | 8 |
| Speed Test | 8 |
| Firewall Exception Rule Information | 8 |
| IT Pro/Office Desktop Library Requirements | 9 |
| Windows OS | 9 |
| Windows OS Browser Options..... | 9 |
| MacOS | 9 |
| MacOS Browser Options..... | 9 |
| Additional System Requirements..... | 9 |
| Bandwidth Requirements..... | 9 |



Campus Requirements

In order to use our online Campus, your system must comply with the following requirements.

Our Campus is capable of being accessed on a multitude of internet-ready devices. The learner interface is supported by devices of all sizes (desktop / tablet / mobile phones). The following browsers are supported:

- Chrome (Desktop / Tablet / Mobile)
- Internet Explorer 8 / 9 / 10 / 11 (Desktop / Tablet / Mobile)
- Firefox (Desktop)
- Safari (Desktop / Tablet / Mobile)
- Android (Tablet / Mobile)
- Microsoft Edge

With the exception of Internet Explorer, only the most recent versions of each browser will be officially supported.

Keep in mind that these are Campus requirements only, and your individual course content may have additional requirements above and beyond the browser, depending on the materials that are included.

Recommended Browser Plugins

- Adobe® Flash® Player 10.x or higher (current version recommended)
- <http://get.adobe.com/flashplayer>
- JavaScript enabled

Live Class Requirements

In order to attend our online classes, your system must meet the following Adobe Connect specifications:

Windows

- 1.4GHz Intel® Pentium® or faster processor (or equivalent) for Microsoft® Windows 7, Windows 8, or Windows 8.1
- Windows 10, 8.1 (32-bit/64-bit), 8.0 (32-bit/64-bit), Windows 7 (32-bit/64-bit)
- 512MB of RAM (1GB recommended) for Windows 7 or Windows 8
- Internet Explorer 8 or later; Windows Edge browser; Mozilla Firefox; Google Chrome
- Adobe Flash Player – Latest version recommended. <http://get.adobe.com/flashplayer/>

Mac OS

- 1.83 GHz Intel Core™ Duo or faster processor
- 512MB of RAM (1GB recommended)
- Mac OS X 10.8, 10.9, 10.10
- Mozilla Firefox; Apple Safari; Google Chrome
- Adobe Flash Player – Latest version recommended. <http://get.adobe.com/flashplayer/>



Linux

- Ubuntu 14.04; Red Hat Enterprise Linux 6; OpenSuSE 13.1
- No Add-in support Linux. Users on Linux can attend meetings in the browser.
- Google Chrome
- Adobe Flash Player – Latest version recommended. <http://get.adobe.com/flashplayer/>

Recommended Plug-in

- We highly recommend the Adobe [Connect Add-in](#) for the ultimate viewing experience
- <https://www.adobe.com/support/connect/downloads-updates.html>

Bandwidth

- 700Kbps Minimum. 1Mbps Recommended
- Connection: DSL/Cable (wired connection highly recommended)

Ports

Classes are normally delivered as HTTP data on port 80, while audio and video streams are delivered as RTMP data on port 1935. When students are inside a corporate firewall that blocks these optimal ports, we use fallback mechanisms to deliver RTMP data on ports 80 and 443. This fallback technology is called tunneling. This tunneling mechanism results in additional overhead that impacts overall throughput and the student experience.

Testing Client Connectivity

Connectivity can be tested via the Adobe® Connect™ Diagnostics check. This will ensure that you have all the prerequisites installed correctly on the client. Enter as “Guest”

Adobe Connect Diagnostic Test: http://guidestream.tv/common/help/en/support/meeting_test.htm

After you pass the Adobe Connect Diagnostic Test, please verify that you can hear and see video within a StormWind Adobe Connect classroom: <http://epiclive.adobeconnect.com/test?lightning=true>

Recorded Class Requirements

In order to view the recorded classes, your system must comply with the following requirements.

Operating Systems Supported

Our platform is friendly with all operating systems, including Mac OS, Windows, and Linux.

Browsers Supported

Recorded class videos will work on any browser that supports Adobe Flash and/or HTML5 (in the form of MP4 video with an h.264). We default to HTML5 in most cases. If, however, you find that your player looks a little different, you’re probably viewing the Flash player. The only requirement for viewing the Flash content is Flash Player 9 or greater. To check which version of Flash you are running, head to their download page. To ensure the best play-back, we typically recommend remaining up to date with Flash version whenever possible.



<http://www.adobe.com/support/flash/downloads.html>

We also work with all the major browsers and version of Internet Explorer (as far back as IE8), Firefox, Safari, and Chrome.

- Google Chrome (which auto-updates)
- Safari
- Firefox (which auto-updates)
- IE9, 10, 11
- Microsoft Edge

We do not support IE8 in conjunction with Windows XP (for security reasons), but IE8 should work fine with our videos on other Windows operating systems.

Microsoft has abandoned support for Windows XP as of 2014. They have also decided to abandon support for IE. Our videos will still play in many Windows environments, but we are not actively supporting play back in browsers outside of IE9, 10, and 11 as well as Edge. IE8 will still work outside of Windows XP.

Mobile OS Support

Most mobile devices only support HTML5 playback, which is our default for mobile. This includes Android phones and tablets (4.1 and up), and iOS devices like iPhones and iPads.

In the odd instances where mobile devices support *do not* support HTML, we'll serve a Flash version. Our embed codes are designed to seamlessly flip between HTML5 and Flash, based on type of device and OS detected.

Internet Connection Speed

We recommend a connection speed of at least 5 megabits per second for an optimal experience with HD capability.

Practice Exams Requirements

Depending on your course(s), it may include one of the following types of Practice Exams.

Boson Practice Exams (ExSim-Max)

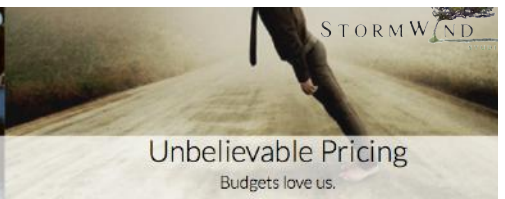
In order to use the Boson Practice Exams, your system must comply with the following requirements.

Operating System Options

- Windows 10, Windows 8, Windows 7, Windows Vista, Windows XP
- Processor: 1-GHz Pentium processor or equivalent (Minimum); 3-GHz Pentium processor or equivalent (Recommended)
- RAM: 512 MB (Minimum); 2 GB (Recommended)
- Hard Disk: Up to 100 MB of available space
- Display: 1024 x 768, 256 colors (Minimum); 1024 x 768 high color, 32-bit (Recommended)

Network

- Active Internet connection



MeasureUp Practice Exams

| Platform | Operating System | Browser | | | | |
|----------------------|-------------------|-----------|------------|-----------------------------|----------------------|----------------------|
| | | Chrome 39 | Firefox 34 | Internet Explorer 10 and 11 | Safari 8 | |
| PC | W7 x86 | x | X | x | | |
| | W7 x64 | x | X | x | | |
| | W8.1 x86 | x | X | x | | |
| | W8.1 x64 | x | X | x | | |
| LINUX | Linux x64 | x | X | | | |
| | Linux x86 | x | X | | | |
| MAC | OSX 10.9 | x | X | | x | |
| | OSX 10.10 | x | X | | x | |
| SURFACE PRO | Windows 8 | x | X | x | | |
| Platform | Operating System | Browser | | | | |
| | | Safari 8 | Android | Chrome 39 | Internet Explorer RT | Internet Explorer 11 |
| IPAD* | IOS 8 | x | | x | | |
| IPHONE 5 or higher* | IOS 8 | x | | x | | |
| IOS PHONE 4* | IOS 7 | x | | x | | |
| ANDROID TABLET* | 4.0 or higher | | X | x | | |
| ANDROID PHONE* | 4.0 or higher | | X | x | | |
| LUMIA 920 or higher* | Windows Phone 8.1 | | | | | x |
| SURFACE | Windows RT | | | | x | |



Lab Requirements

Depending on your course(s), you may interact with one of the following type of Labs.

Boson Labs (NetSim)

In order to use the Boson products, your system must comply with the following requirements.

Operating System Options

- Windows 10, Windows 8, Windows 7, Windows Vista, Windows XP
- Microsoft .NET Framework Version 4.0
- Processor: 1-GHz Pentium processor or equivalent (Minimum); 3-GHz Pentium processor or equivalent (Recommended)
- RAM: 512 MB (Minimum); 2 GB (Recommended)
- Hard Disk: Up to 200 MB of available space
- Display: 1024 x 768, 256 colors (Minimum); 1024 x 768 high color, 32-bit (Recommended)

Network

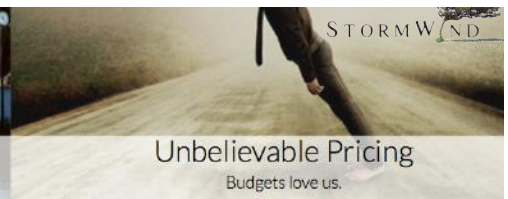
- Active Internet connection

Virtual Lab Requirements

System Requirements

To launch and use a hosted lab, the following requirements must be met:

- Have a supported browser
- Be connected to a network that allows at least one of the following:
 - Secure Web sockets on port 443 (HTML5 control)
 - Web sockets over HTTP port 80 and HTTP over Port 843 (Flash Control)
 - RDP over port 21xxx or 443 (Enhanced Control)
- If you are installing the Enhanced control, you must have administrative rights on the local machine.



Virtual Lab Browser Support

Machines in your lab can be accessed using any one of four virtual machine controls. You can freely change between controls to find the one that works best for you.

| Control | Internet Explorer | | | Microsoft Edge | | | Firefox | | |
|-------------------------|-------------------|------------|-----------------------|----------------|------------|-----------------------|----------------|------------|-----------------------|
| | Version | Protocol | Ports | Version | Protocol | Ports | Version | Protocol | Ports |
| HTML5 ¹ | 10+ | Websockets | 443 | 1+ | Websockets | 443 | 11+ | Websockets | 443 |
| Flash | Flash 11+ | Websockets | 80 & 843 ³ | Flash 11+ | Websockets | 80 & 843 ² | Flash 11+ | Websockets | 80 & 843 ² |
| Silverlight | Silverlight 4+ | HTTP | 443 | NA | NA | NA | Silverlight 4+ | HTTPS | 443 |
| Enhanced ^{3,4} | 8+ | RDP | 21xxx or 443 | NA | NA | NA | NA | NA | NA |

| Control | Chrome | | | Safari | | |
|-------------------------|----------------|------------|-----------------------|----------------|------------|-----------------------|
| | Version | Protocol | Ports | Version | Protocol | Ports |
| HTML5 ¹ | 16+ | Websockets | 443 | 6+ | Websockets | 443 |
| Flash | Flash 11+ | Websockets | 80 & 843 ² | Flash 11+ | Websockets | 80 & 843 ² |
| Silverlight | Silverlight 4+ | HTTP | 443 | Silverlight 4+ | HTTP | 80 |
| Enhanced ^{3,4} | NA | NA | NA | NA | NA | NA |

¹ Preferred client

² Port 843 is required by Flash Socket Policy to authorize the use of Websockets

³ Requires Internet Explorer. The 21xxx value depends on which host server in the cloud the lab is running on. If connection on port 21xxx fails, the Enhanced client will rollover and attempt the connection on port 443.

⁴ Internet connections that traverse a proxy are not supported.

Port Check

If you are having trouble connecting to your lab machines, it might be helpful to check if your machine can communicate on the appropriate ports. Note: the port check requires Java

[Port Test](#)

Speed Test

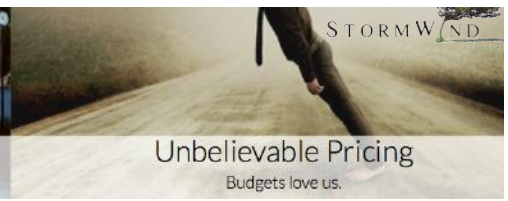
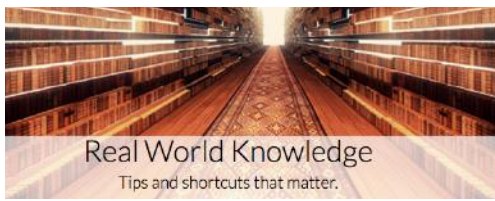
If you are experiencing frequent disconnects or lag when controlling your machines, you may be asked to run an internet speed check. Note: the speed test requires Java

[Speed Test](#)

Firewall Exception Rule Information

For those that need to create a firewall exception rule to allow connectivity to the servers, the following information can be used to create a limited destination rule to only allow the above protocols and ports from your network to the Lab on Demand cloud.

- Domain Names: *.labondemand.com, *.learnondemand.com
- IP Range: 67.214.104.129/25



IT Pro/Office Desktop Library Requirements

In order to play our e-learning courses, your system must meet the following minimum requirements:

Windows OS

- Windows 2000, XP, Vista, or 7/8
- Windows XP (SP2 or later)
- Minimum 500MHz Processor
- 128 MB RAM (512 MB RAM recommended)
- 1024 x 768 screen resolution

Windows OS Browser Options

- Internet Explorer 7.0 or higher
- Firefox 3.0 or higher
- Chrome 3.0 or higher
- Safari 4.0 or higher

MacOS

- Mac OS X 10.4 or higher
- Minimum 500MHz Processor
- 1024 x 768 screen resolution

MacOS Browser Options

- Firefox 3.0 or higher
- Chrome 3.0 or higher
- Safari 4.0 or higher

Additional System Requirements

- Windows Media Player 9.0 or higher*
- JavaScript, popup windows and cookies enabled
- Adobe Flash Player 10.0 or higher**
- Sound card with speakers or headphones strongly recommended

Bandwidth Requirements

56K minimum connection; broadband (256 kbps or higher)

**Windows Media format video is available for Internet Explorer (IE) users who do not have Adobe Flash Player. Windows Media Player not required for users who have Adobe Flash Player.*