Labs on Demand

Introduction Guide
Introduction
Labs on Demand is a new product from gtslearning, specifically created to enable online practice labs to be delivered to your students in a classroom environment.

Online practice labs are a highly cost-effective and time-efficient way of giving your students access to real equipment without the expense or hassle of setting up a classroom full of kit.

All that is required (see system requirements below) is an Internet browser and a high-speed Internet connection.

It is the perfect complement to gtslearning’s CompTIA CAQC Official learning products. All CompTIA labs exclusively use gtslearning’s courseware labs as their source material, ensuring a perfect match for trainers delivering gtslearning curriculum.

Portfolio
Labs on Demand products have been built specifically to complement gtslearning’s CompTIA CAQC Official learning materials. Labs on Demand are available for the following products:

- CompTIA A+ 220-801, 220-802
- CompTIA Network+ N10-005
- CompTIA Security+ SY0-401

Labs on Demand products for Microsoft certification exams are also available, please contact us (sales@gtslearning.com) for details.

Take a demo
The best way to understand how all the features of Labs on Demand can help you in the classroom is to take a demo. Please contact us (sales@gtslearning.com) and we will arrange a demonstration.
Key features

Follows gtslearning curriculum... All CompTIA labs are exclusively based on gtslearning’s CAQC Official classroom courseware, meaning your students are studying using the very best resources. Labs on Demand ensures they can practice their skills in the classroom or at home.

Easy to get started. Requires just a web browser and a high speed Internet connection.

No hardware required. Eliminates hardware and software in the classroom, reducing costs and time spent in setting up equipment for students.

Anytime, anywhere learning. Convenient web-based access to computer software or network environments.

No simulations, just real equipment. Your student practices real-world technical skills on live machines using actual software. No simulations.

Robust and reliable. The Labs on Demand software is constantly maintained and updated to ensure quality of service. It also includes Connection Intelligence to preserve the student’s lab if their Internet connection drops.

Intuitive interface. Easy to use interface with full chat, voice and video tools included. Persistent lab state and step tracking helps the student keep track of their progress.

Restore points. Students can create Restore Points in their labs, to help them get instantly back to a known good state.

Fully customisable interface to suit students preferences and learning style.

Optional adaptive guidance provides a read, see, do environment that suits almost any learning style. Adaptive guidance provides as much or as little guidance as the student requires to successfully complete the lab.

Over the shoulder tools allow your trainers and students to collaborate as if they were in the same room – perfect if you are offering post-course help to your students.

Easy student setup. Your students are enrolled (along with your instructors) into our Learn on Demand LMS. This provides a simple way to manage student enrolments and to track their lab progress in class and outside too if you are delivering a blended learning programme.
**System requirements**

The Labs on Demand user interface is an HTML-based application that uses one of three virtual machine access controls. The control used depends on the browser, available plug-ins for the browser and the style of the lab.

All of these offer excellent performance in a browser, where the student’s Internet connection has consistency or quality of service issues, the best performance is achieved using the Active-X plugins.

The requirements to connect depend on which of the Labs on Demand clients you choose to use (or can use) with your browsers. Each browser can support a different combination of clients.

Use the table below to determine your specific requirements:

<table>
<thead>
<tr>
<th>Virtual Machine Client</th>
<th>Internet Explorer</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Version</td>
<td>Ports</td>
<td>Version</td>
<td>Ports</td>
</tr>
<tr>
<td>VMRC ActiveX*</td>
<td>8+</td>
<td>2179</td>
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<td>HyperVMRC HTML5</td>
<td>10+</td>
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<tr>
<td>HyperVMRC Silverlight</td>
<td>Silverlight 4+</td>
<td>80</td>
<td>Silverlight 4+</td>
<td>80</td>
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<tr>
<td>VMware Remote Console**</td>
<td>6+</td>
<td>902</td>
<td>11+</td>
<td>902</td>
</tr>
</tbody>
</table>

* [Preferred client]
** [Windows & Linux OS’s only]

Each browser has a preferred virtual machine client order and will attempt to use its preferred client by default.

- Internet Explorer will use Active-X first, then HTML5 (for IE10+), then Flash, then Silverlight
- Chrome, Firefox and Safari will attempt HTML5 first, then Flash, then Silverlight

You can switch between any available virtual machine client in the lab interface by clicking on the *Options* section and then selecting the desired client from the drop down list.

**Firewall Exception Rule information**

Should you need to create a firewall exception rule to allow connectivity to the Labs on Demand servers, the following information can be used to create a limited destination rule:

- Domain name: *.labondemand.com
- IP range: 67.214.104.129/25

The Labs on Demand platform is a cloud-based platform that automatically provisions and connects the learner with private sandboxed resources. We provide a range of IP addresses and only a second level domain name as it’s never possible to predict the IP address.
assignment in the cloud. See the diagram below for a visual of how the Learn on Demand LMS and Labs on Demand platforms connect and pass data.

Connecting a user – technical step-by-step

1. The student connects to the LMS over HTTPS and logs on to the platform

2. The student clicks the ‘Launch’ button in the LMS to start a lab

3. The LMS connects to the Labs on Demand platform and makes the student’s lab request

4. The Labs on Demand platform scans the LoD resource cloud and chooses the optimal resources to deliver the lab

5. The LoD resource cloud provisions and starts the requested virtual machines in a private sandbox for the student

6. The student’s browser presents the Labs on Demand user interface using secure connections to the Labs on Demand platform, wrapping the selected Virtual Machine controls to the LoD resource cloud. The ports and destination will correspond to the selected virtual machine client and sandbox lab location in that cloud.