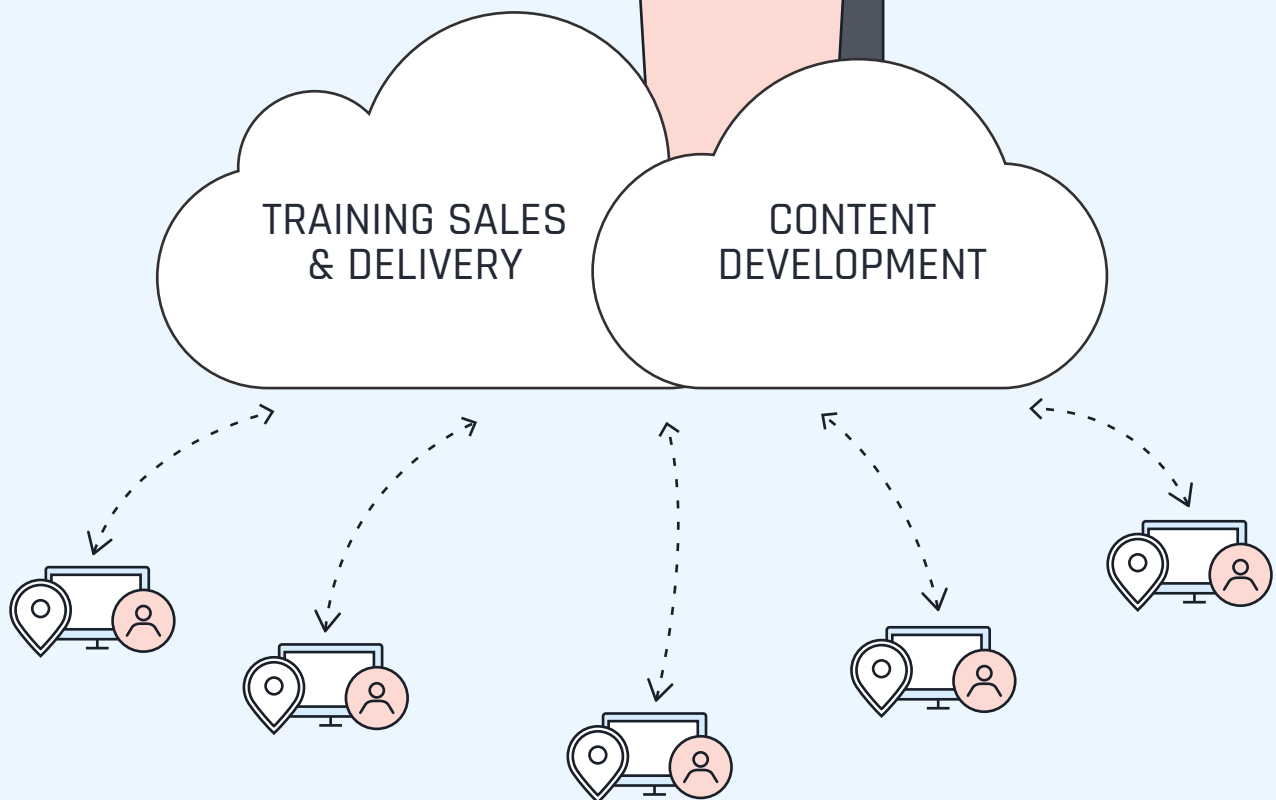


HOW TO BOOST TRAINING WITH LMS & VIRTUAL TRAINING LABS



FORGEROCK
CASE STUDY



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Introduction

According to global research firm Technavio, the global corporate e-learning market is expected to reach over USD 31 billion by 2020. Driving this growth is the rise in digitization and the adoption of advanced technologies, such as the cloud, providing reach, agility and cost-effective scalability. As the market grows, so do the types of training tools available, making it a challenge for organizations to run a high quality, lean, and scalable software training program.

Corporate training programs for employees, customers, and partners have been found to bring real business benefits and revenue growth.

Successful training programs:

- Empower employees to be more effective and productive
- Encourage customers to use more functionality
- Increase customer satisfaction
- Increase retention
- Open new revenue streams through growth of partner channels with fully trained and accredited partners.

While these programs may begin as just a few instructor-led classes, they frequently expand into extensive courses and practice work, self-paced classes and certification programs. Furthermore, they often need to be delivered to multiple students scattered around the globe and across time zones. While enterprises employ multiple systems and platforms to deliver software training services, Learning Management Systems (LMS), and virtual training labs, are often the key anchors to these solutions. However, while these systems add value individually, integration is required to enable training organizations to operate at maximum efficiency and to boost return from training resources.

“Incorporation of new technologies help improve teaching and learning methods, while enhancing the quality of training and employee productivity.”

—
Jhansi Mary J

Technavio lead education technology research analyst

About LMS/TMS Systems

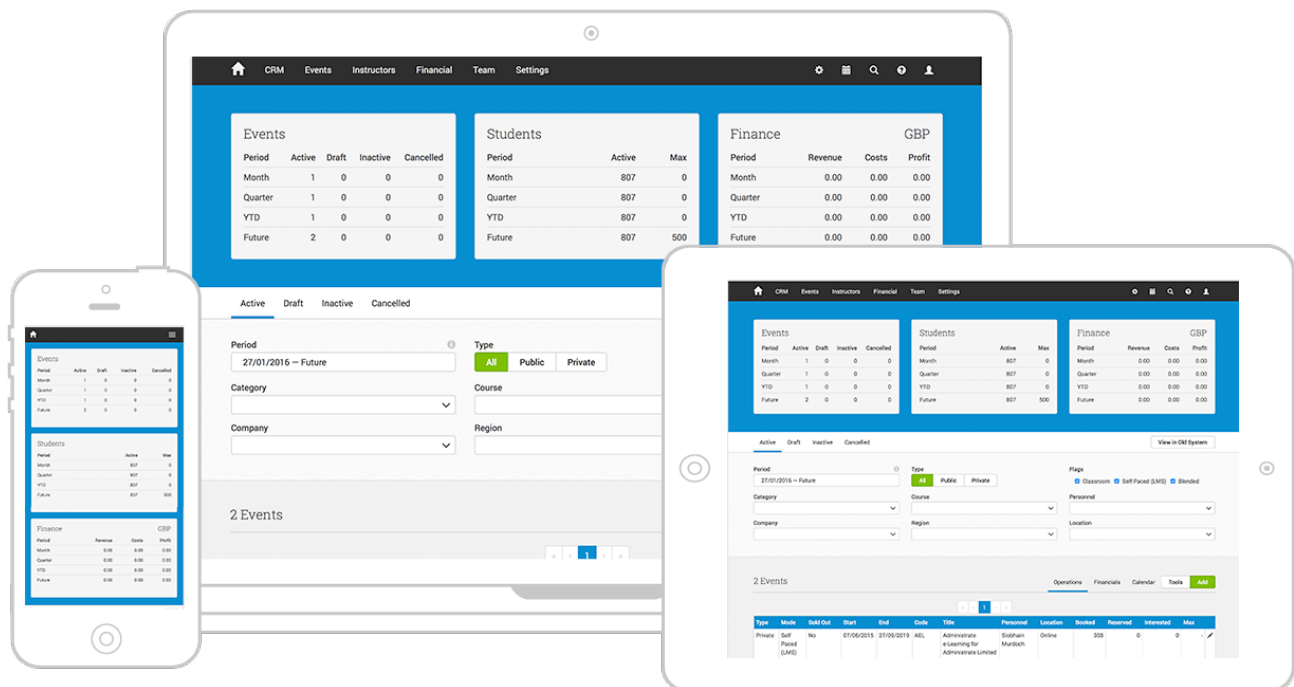
A Learning Management System (LMS) is a single overarching and unifying solution that coordinates tasks involved in scheduling, delivering, administering, tracking, and documenting classroom and online learning and training programs.

The increase in enterprise software training has driven up demand for powerful LMS platforms. LMS provide capabilities to manage complicated online learning scenarios such as arranging instructors, gathering vital student details, organizing class schedules, and delivering relevant support materials.

A close relative of the LMS, the Training Management System (TMS), performs a similar function, but with added emphasis on workflow and automated communications. The TMS gives further support to administrators of training organizations. In this white paper, we will use the term LMS to include the more specialized TMS.

"The learning management system (LMS) marketplace is currently over \$3 billion in size (2016), and includes hundreds of platforms to help companies manage all aspects of their employee training."

—
Josh Bersin, Analyst



Consoles from the [Administrate](#) training management system

About Virtual Training Labs

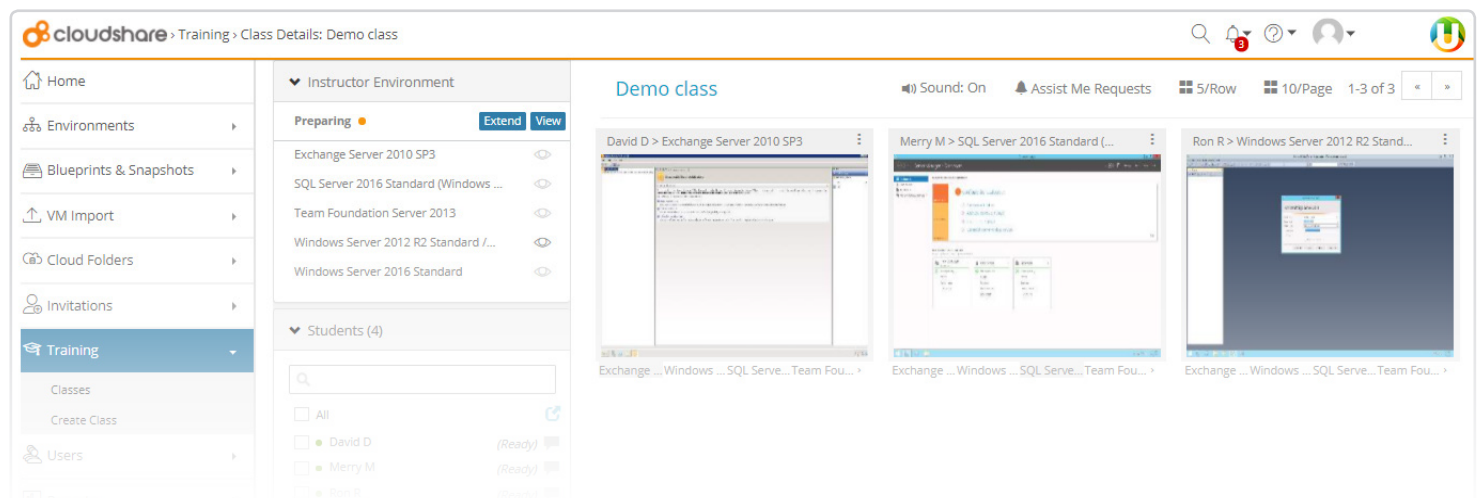
Cloud-based IT labs, or virtual training labs, bring complex environments online so students and trainees can benefit from fully interactive experiential learning in a secure and fail-safe atmosphere.

Much enterprise training, whether instructor-led or self-paced, involves preparing students to work with complicated software and network environments. To do so successfully, learners need to have practiced in real-world scenarios before taking on responsibility for the 'real thing'. In fact, identical elements theory has shown that when both the training task and the on-the-job task are the same, transfer of knowledge is more likely to stick and increase both confidence and performance in the learner.

Virtual training labs can be set up quickly either by uploading an organization's own environments or using the provider's pre-built templates. Once

created, training organizations can make as many copies of the environments as they need and easily reuse or tweak them for different software versions with minimal IT support. Learners simply access the labs through a link on their browser. In addition, specialized virtual lab providers enable suppliers of on-premise apps employing complex network topologies to train students on realistic environments running on the cloud.

To enhance the effectiveness of online training programs, leading virtual training lab providers offer practical features such as an instructor console, virtual "over-the-shoulder" assistance, and chat capabilities between students and with instructors, to name a few. The use of specialized cloud-based training lab solutions enables training organizations to be significantly more productive, responsive, and cost-effective.

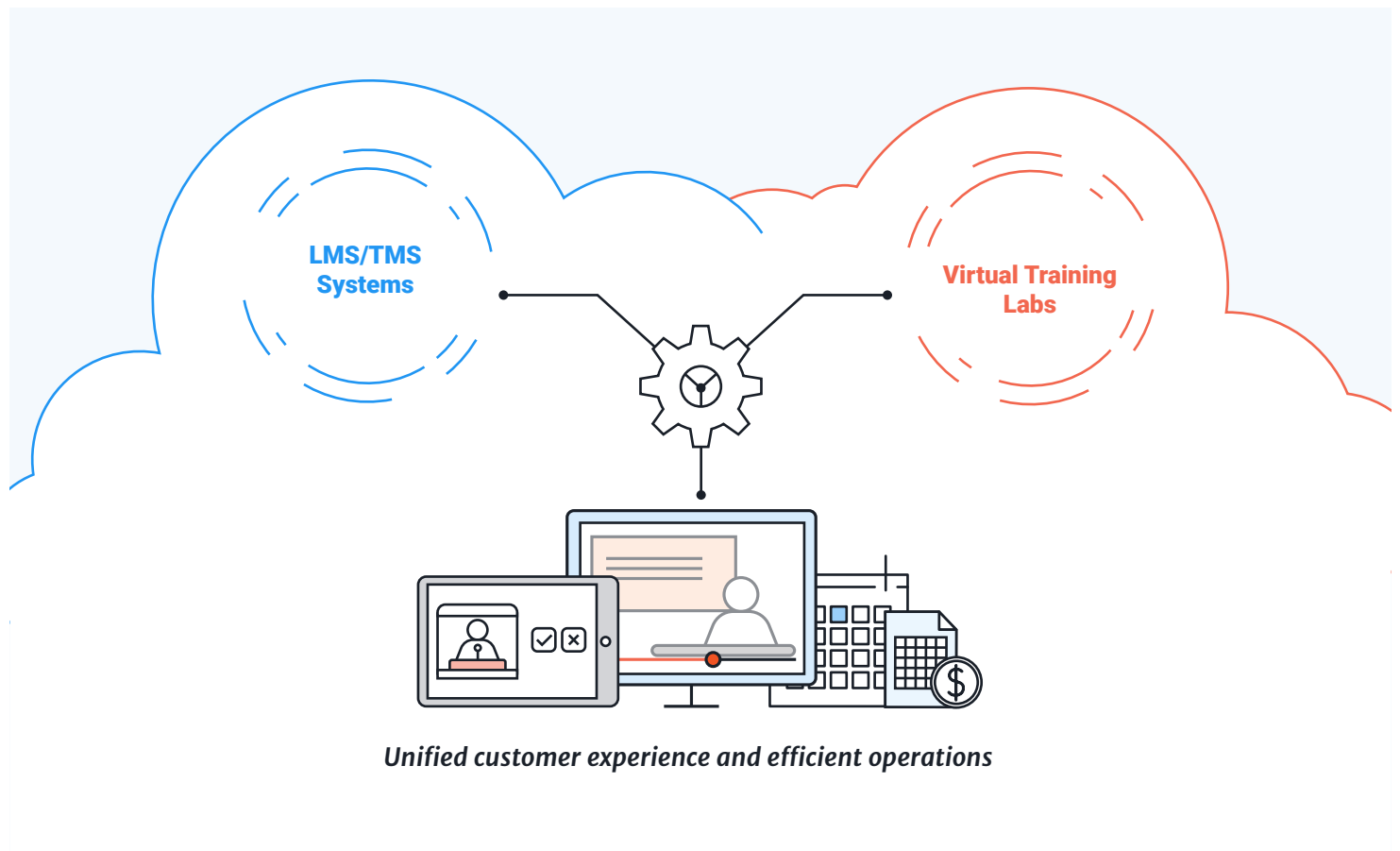


[CloudShare](#) instructor console

Advantages of Integration

Many global software training organizations can benefit from both LMS and virtual training labs as part of their online training arsenal, but having them operate as separate information silos is neither efficient, nor effective. Integration enables changes in one system to be automatically propagated to the other, eliminating the need to manually update both systems and reducing errors when one system is not up to date.

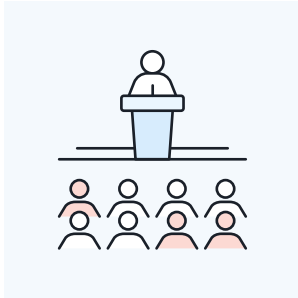
By automating work flows and synchronizing data across both platforms, training organizations benefit from seamless processes that eliminate the need for manual entry of data between systems and reduce the possibility of errors. This allows training organizations to allocate precious resources towards improving training content, rather than administrative details.



Unified customer experience and efficient operations

Sample Integration Flows

While organizations can connect LMS and virtual labs in different ways and automate different processes to suit their specific needs, the following integration scenarios are particularly useful:



Creating classes. Integration between LMS and virtual labs enables the smooth scheduling, canceling, and rescheduling of classes from within the LMS system while automatically updating all learning environments in the virtual labs updated to match the scheduling changes. With a fully integrated system, scheduling a class in the LMS automatically triggers the creation of the appropriate virtual environments in the cloud-based IT labs at the right time.



Adding and editing students. Adding and removing students to a class or an organizational group is far faster and smoother when the LMS is integrated with virtual labs. Information can be batch edited to add or remove multiple students to or from a class at the same time without concern that one might be wrongly processed due to lengthy manual operations.



Managing updates and corrections. Virtual learning providers should have the flexibility to edit any part of their course at any time. Mistakes can happen even at the last minute. Occasionally, the name, scheduled time, included content, or environment of a class needs to be altered and all those affected informed at very short notice. With automatic synchronization between systems, everyone is updated about every change.



Analysis. After a training program or class has ended, data—such as final attendee numbers and usage of training environments—can be transferred from the virtual training lab system back into the LMS, reported, and analyzed. This makes it possible to get a clear picture of student involvement and more comprehensive ROI measurements from the LMS.

Key Benefits

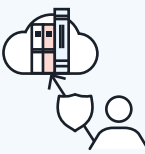
Here are some concrete benefits you can gain by integrating your LMS and virtual training lab systems:



Scalability and consistency.

Without comprehensive integration, every new system added to the online training technology

landscape requires additional work to be performed. With an integrated cloud-based solution, training organizations can expand their customer base and increase their student load without traditional data center expansion investment and risks. Information is kept and flows consistently across the systems; efficiency is maintained.



Increase security and availability of content.

Keep content and virtual class environments on the cloud secured and available

via your online training vendors. Remove the IT management hassle while also making the class available to students and/or partner companies across the globe at short notice.



Facilitate analysis and reporting.

With the time saved and the information readily available on both ends, it's possible to produce

higher-level analytics and tracking metrics on the LMS side; for example, to better understand student performance in a virtual labs class.



Experiment easily. Cloud-based systems make it easy and cost-effective for training organizations to test the feasibility of projects

that might otherwise be expensive, such as extending training classes to small numbers of students who are widely dispersed around the world.



Save time and money.

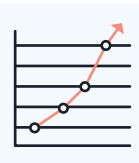
Use automation to spend less time on administrative tasks, such as maintaining lists of courses and

students separately in the two systems. As a result, the organization can keep the team lean and process efficient. There's no need to increase human resources even as training offerings grow in scope and quality.



Track ROI. Running an integrated solution allows training managers to track and allocate costs and revenues of their management

systems and virtual labs. Information flow between the systems allows consolidated reporting on usage and costs of every training course, enabling managers to analyze and maximize ROI.

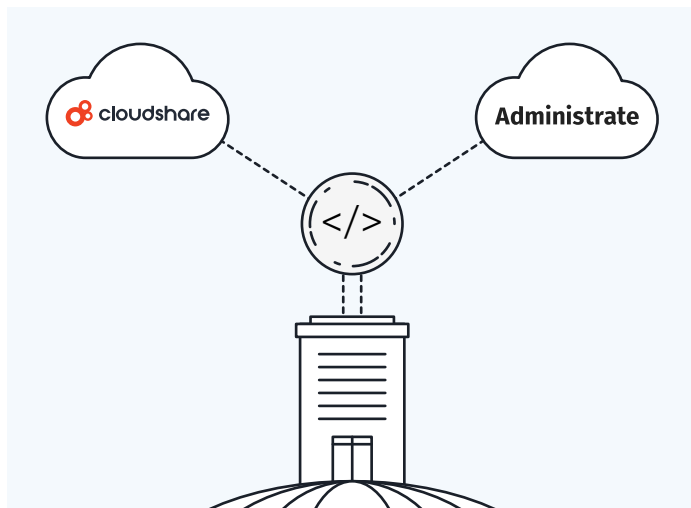


Invest and grow. Deliver a better product because time and money saved through integration can be reinvested into developing better

learning content, delivering a better service, and understanding how to better support the overall business.

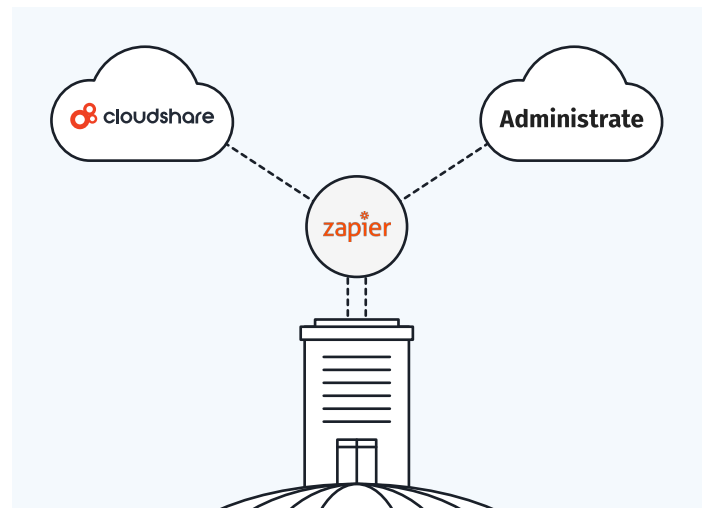
Technical Integration Options

There are two primary ways organizations can integrate their LMS and virtual training labs:



By connecting directly through point-to-point coding using both systems' REST APIs library.

The REST APIs included in the LMS can be used to trigger actions in the cloud-based labs and to receive responses in return. REST APIs make the integration between the LMS and the cloud-based labs highly flexible, eliminating the burden of updating two separate systems. However, this approach requires development professionals to implement the integration.



An even easier way to connect virtual labs with an LMS is by using a pre-integrated code-free tool, such as Zapier.

When both the cloud-based labs and the LMS are pre-integrated with Zapier, they enable bi-directional integration via an easy and intuitive user interface. The interface is entirely code-free, with tasks represented by simple icons, and drag and drop actions to move data so that users don't need to be developers to implement it. Administrators and analysts can use this type of interface to orchestrate flows between the LMS and the virtual labs.

When looking for an LMS or a virtual labs system, enterprises should carefully examine their ecosystems and out-of-the-box integrations, as these can make it easier to create a fully integrated solution.



Case Study:

How ForgeRock University Grew Training Revenues from Zero to \$1M in One Year

The Main Challenge

As their products are purchased by companies around the world, ForgeRock needs to be able to provide consistent learning experiences to small and widely scattered groups of students who cannot be gathered into a single classroom, or even a single virtual classroom, all at the same time. The company's training team has to provide authentic, realistic, complex training environments that faithfully mimic the challenges students will face in the real world. In addition, the solution needed to be capable of scaling with their fast-growing business and be cost-effective to boot.

The Solution: Integrating CloudShare and Administrate

Kevin Streater, Vice President of ForgeRock University took on the challenge. After investigating his options, he knew he wanted ForgeRock University's entire training portfolio to be cloud-based and to include: virtual instructor-led online classes, self-paced learning courses, and accreditation programs. After starting with one of the large generic cloud providers, the company moved to a fully integrated solution anchored by CloudShare's virtual training labs and Administrate's training management system. The transition to the integrated solution enabled ForgeRock to regain control of both costs and resources. ForgeRock University is now able to quickly respond to all customer requests for training or accreditation, regardless of where the customers or trainers are located.

The Benefits of an Integrated Solution

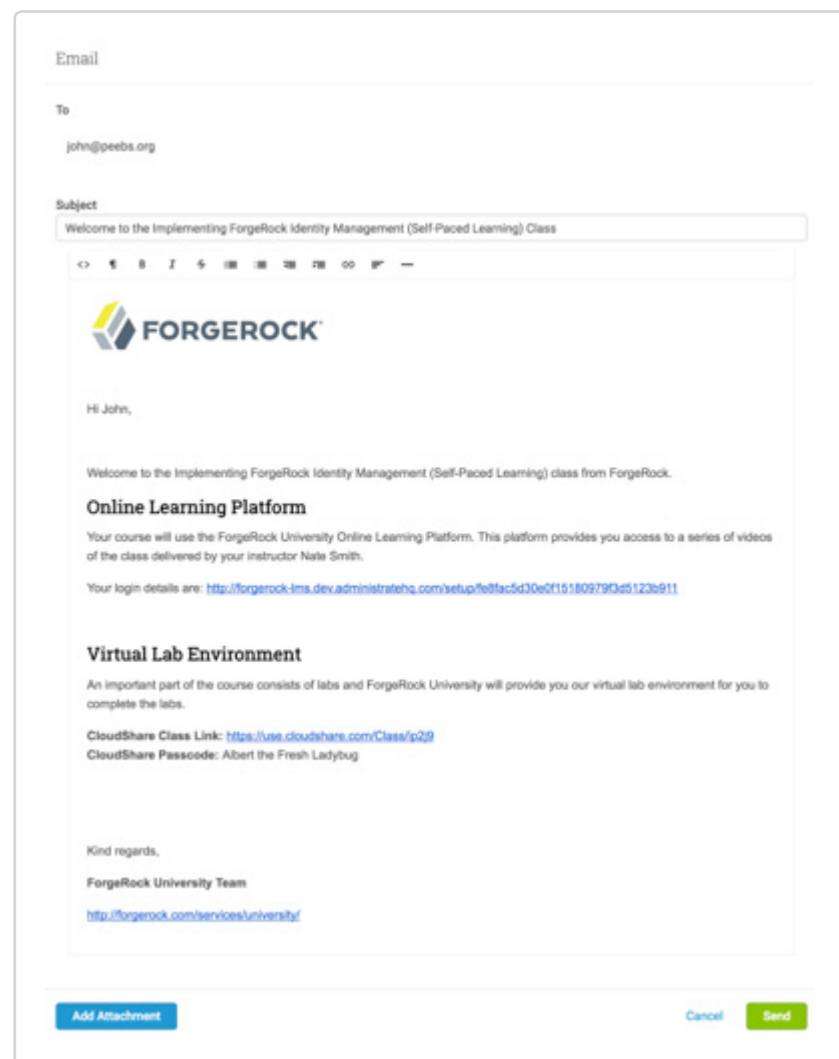
“With our integrated solution, we can put our focus where we want it to be, which is creating the quality content.”

“If someone wants our skills, we should be able to provide them with a solution immediately. And we can. We’ve been given many challenging scenarios but we haven’t had a problem. CloudShare’s tech can cope with pretty much any network environment of any customer.”

—
Kevin Streater,
VP ForgeRock University at
ForgeRock

The benefits of using an integrated framework incorporating CloudShare and Administrate have been manifold. ForgeRock has:

- Increased student hours 20 fold while maintaining the same, lean operating team.
- Reduced time spent on provisioning training lab environments from 3 to 5 days to a few hours.
- Gained total visibility into who has been participating in their training offerings, where and when students are active, and which content is the most successful.
- Able to focus more time and energy on improving their content rather than on dealing with how to deliver it.



Integrated Student Communication from [ForgeRock](#) containing course and lab details in same email

Conclusion

Good training empowers employees to be more effective and productive, encourages customers to use more functionality, increases retention, and opens new revenue streams through growth of partner channels with fully trained and accredited partners.

The rise in digitization and the adoption of advanced technologies, such as the cloud, means the number of training tools in the market is multiplying. As separate stand-alone systems, LMS and virtual labs are often the key anchors to enterprise software training solutions. However, while these systems add value individually, integration is required to enable training organizations to operate at maximum efficiency and effectiveness, and receive the maximum return from their training resources.

With integration between LMS and virtual labs, training organizations can spend their resources on enhancing their training and not on administrative tasks. Thus, training organizations can provide and sell more classes without adding headcount.

Integration brings improvements for students, too. Learners benefit from better communication, fewer missed updates, and the ability to conveniently access a class and all related labs and documentation from a single location. A software training solution that integrates cloud-based LMS and virtual labs is a great way to boost your training effectiveness and your training revenues.



CloudShare provides specialized turnkey virtual IT labs that offer numerous features designed specifically to meet the needs of training leaders, administrators, course developers, instructors and students.

For more information, visit www.cloudshare.com



Administrate is a training management platform that runs in the cloud. It was built to make the lives of training administrators easy.

For more information, visit www.getadministrate.com