appsembler

Power Your Training With Virtual Labs' Immersive Learning Experiences

The Complete Guide to Virtual Software Training Labs
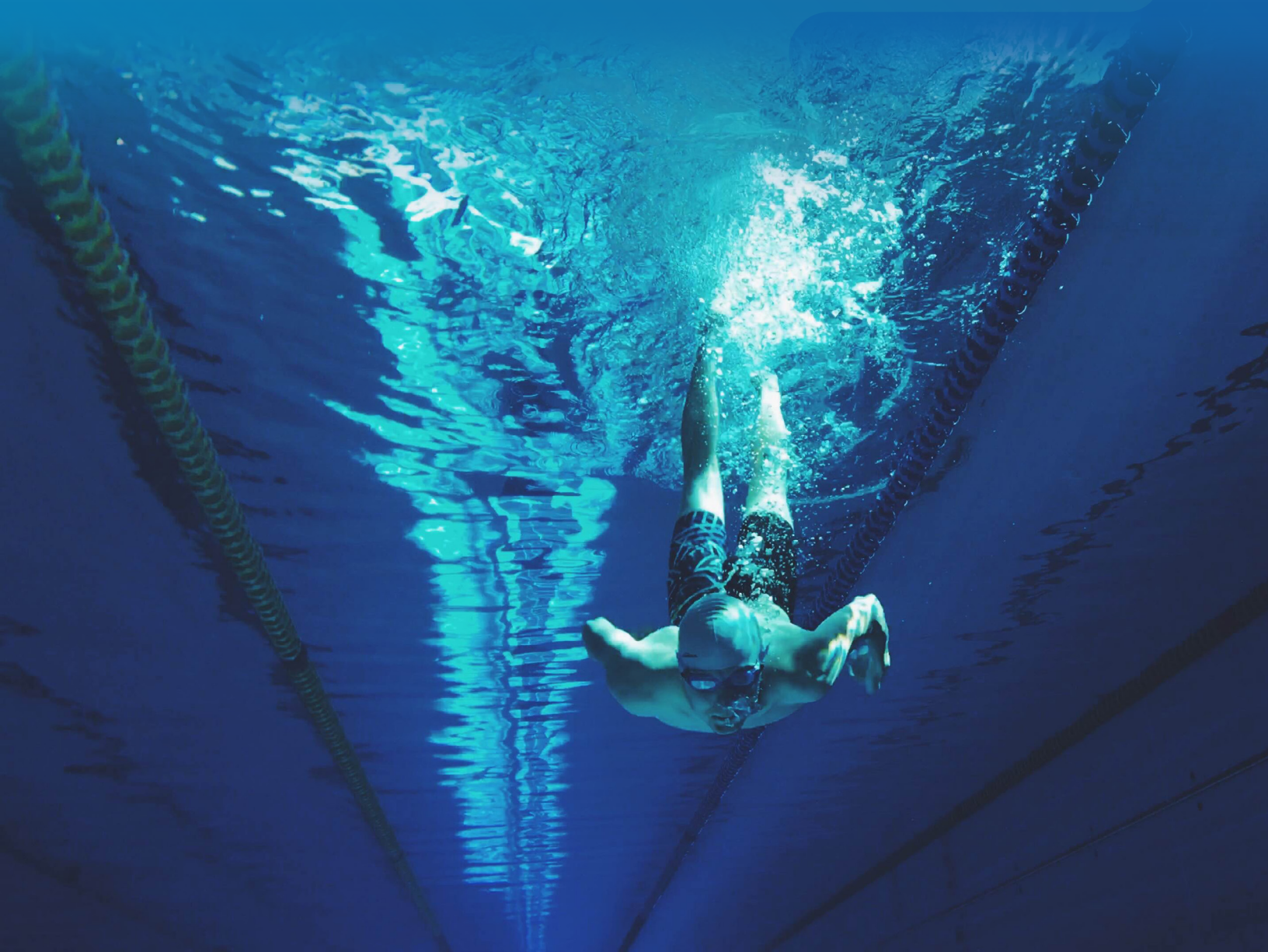
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Introduction

Traditional methods for delivering software training to the modern learner have their limitations.

Traditional methods for delivering software training to the modern learner have their limitations. They are often expensive, time-consuming to set up and run, difficult to scale, and don't always produce the best results. To get the most out of their training, companies need to provide a hand-on, learning-by-doing approach that allows learners to grasp the concepts behind more technical subjects.

One of the models companies currently use to deliver software training is onsite and instructor-led training using lectures and slideshow presentations. This approach is often ineffective, as it doesn't hold learners' attention, they can't move at their own pace, and it isn't personalized to fit with different roles and levels of expertise.

Some companies have started to deliver training online through learning and content management systems, which often involves videos, articles, and quizzes. While these solutions have improved the way companies deliver training, they are not without their flaws, as they don't provide an immersive or hands-on training experience.

These methods of training are holding companies back from enabling learners to get the most out of their software. Delivering effective training allows students to learn how to use software quickly and to its fullest capability. According to the Technology Services Industry Association:

56%
use more product features/ functions

68%
of users are able to use the product more
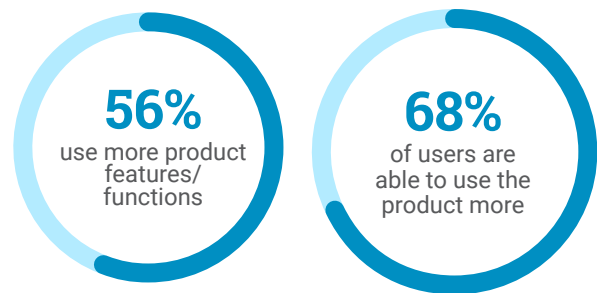
Effective is the key word here – any kind of training itself is not enough. How you deliver software training is extremely important. Technical training needs to meet the needs of the 21st century learner by being engaging and immersive, while taking advantage of the pace of technological innovation.

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The Complete Guide to Virtual Software Training Labs

According to Training Magazine, a virtual lab is: "a virtual environment for learners to have hands-on experience with the same software they will eventually use on the job." Virtual labs can overcome the challenges of traditional software training models by providing a hands-on, immersive training environment that engages learners, leading to more successful training outcomes. They provide learner-first experiences that enable every student to get the most out of the software and to appreciate the positive impact it can make on the way they do their job.

This white paper dives into what virtual labs are, why they matter for technical and software training, and how real companies are using them as solutions today.

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Appsembler Virtual Labs

Appsembler offers a virtual labs solution that can provide that superior learning experience to engage learners to achieve their potential. Appsembler Virtual Labs is already being used by leading organizations across the globe to provide real world training that generates leads, accelerates adoption, decreases support tickets, reduces churn, and upskills employees.

Challenges of Modern Learners

The way IT and technical training content is traditionally delivered does not meet the needs of the modern learner. Software training is constantly competing with devices that are sapping learners' limited brain space and attention span, and lead to information overload and constant multitasking. According to research from Microsoft, people now generally lose concentration after eight seconds.

Just as our phones are decreasing our attention spans, the plethora of devices we use are also affecting how modern learners want to consume training content. Delivering one training session of several hours at a set time just doesn't work anymore, nor does delivering a PowerPoint presentation, as according to Brainshark, participants remember an average of 4 slides from a 20-slide, standalone, text-only PowerPoint presentation.

Leaving learners to consume videos and articles on their own isn't an effective use of technology either. People learn by doing – and learning from the mistakes they make.

Modern learners want to be able to access training at any time, from anywhere and to do it at their own pace. Rather than a one-size-fits-all approach, they want more options and flexibility so anything they spend their time on is relevant to their lives and work.

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Challenges of Traditional Software Learning

There are five main ways that companies have traditionally provided software training:

| On-site training | Physical labs | Installing software on learners' laptops | Simulated environments | Traditional e-learning |

There are challenges which each of these methods that still need to be overcome.

On-site training

Setting up on-site training sessions is costly, time-consuming, complicated, and ineffective. Not only is it not the best way for learners to absorb information, it also takes time to organize the logistics of getting together all the learners in one place with the instructor. If a company has a dispersed workforce, either an instructor has to travel to the relevant site or the learner does not receive training at all.

Physical labs

The pace of technological innovation is relentless. When new products are being released on what seems like a daily basis, how is it possible to provide training that can keep up? Offering training that is so far removed from the new tech norms such as requiring people to come to a physical location at a certain time of day means that learners feel no motivation to complete it.

Using a physical space puts a limit on how many people can be trained at a time, when they can receive the training, and how they can be trained. It also depends on people being able to come to this location, or flying a trainer around the world to train each person at their own office at great cost.

Installing software on learners' laptops

Installing the program on users' own laptops carries a high overhead cost to get that off the ground, especially when catering for different hardware and software.

Depending on corporate IT policies, as well as hardware and software requirements and variations, users might not be able to download and install all the software necessary to complete the training. At best, the trainer has to spend valuable time trying to setup and configure the environment. It's also difficult for trainers to troubleshoot problems as the entire lab environment is on the learners' computer, and the instructor has no easy way to access it.

Simulated environments

Setting up simulated environments to offer interactive training can be expensive, which is an issue as most training budgets are limited. They environments also need to be optimized and maintained, which also comes at a high cost. This process of creating a simulated environment is also subject to human error, such as one part of the process to carry out a task is not carried over into the simulation.

Finally, simulated environments don't allow learners to carry out the training by themselves, making mistakes and trying again, and at a time, pace and place that best works for them. If they encounter a different scenario other than the one in the simulated environment then it will be more difficult for them to figure out what to do.

Traditional e-learning

Traditional e-learning environments involving watching videos, reading articles, and doing quizzes can be personalized and tailored for learners and delivered in bitesize chunks. However, they are still heavily theory-based and don't enable learning by doing. When the learner starts using the software, they will have to refer back to these videos or articles to try to solve the problems and get the work done, which slows down adoption.

If you're providing training, especially software training, you've probably all felt some of this pain. Let's talk about how virtual software labs can help you.

Challenges of Meeting Customers' Needs

Whether you're trying to generate leads into sales, or providing post-sales support for new and existing customers, product demos, videos, and manuals no longer provide the impactful learning experience that your learners need.

Traditionally, when generating leads for a software product, sales teams either send collateral or set up staged demo environments. These demos only run through pre-configured use cases and don't speak to the problems the buyer is trying to solve by implementing this software.

In these static lead generation activities, buyers either don't fully understand the complexity of the solution or don't get a complete picture of what it can do as they are unable to test it themselves. At best, they can sign up for a free trial where they only have access to limited use cases, and lack the ability to test out specific examples that apply to their company. This leads to a break down or stalling in the sales cycle. It's also a burden (in terms of time and costs) on the customer success team as they have to train and onboard the prospect while they are trying out the software.

Equally, this type of traditional training environment can lead to issues for customer success teams. If, when training users in a post-sales environment, the learners can't get to try the software themselves in a controlled environment, then they are more likely to have issues using it fully or to submit support tickets to the customer success team. It may even lead to problems with churn due to companies not being able to use the software for their desired outcomes.

That's why companies need to have access to interactive product experience and hands-on software training to provide an experience that empowers learners.

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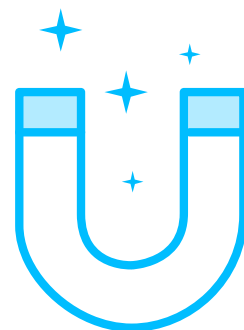
What are Virtual Labs?

Virtual labs help learners achieve their goals and improve performance. In a recent survey from Training Industry Magazine, two-thirds of learners said that using virtual labs instead of traditional classroom training methods helps them achieve what's important to them, helps them accomplish their goals faster, and has a tangible and positive impact on their performance. Meanwhile, The Research Institute of America found that virtual training has the power to increase information retention rates by as much as 60%. There's also a benefit to a business's bottom line, with Ambient Insight reporting that 42% of companies have reported that virtual training has led to increased revenue.

Virtual labs were traditionally delivered on-premise using virtual machines. This still meant that learners had to go to a physical location to access the labs on these virtual machines.

Now virtual labs are being run in the cloud so there is no need to install software on a computer, and learners can complete training from any device, anytime, wherever they are. As learners only need a browser and an internet connection to run virtual labs, there are no technological constraints and no need to be running certain versions of software. This provides a more consistent learning experience. Businesses can see a further boost in revenue through cloud-based training, with IBM reporting that every dollar invested in online training yields $30 in productivity.

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Virtual Labs: Features and Benefits

Here are some of the key features and benefits of using a virtual labs solution to provide the type of software training that will transform the learning experience.

Individualized And Personalized Learning

Virtual labs solutions enable companies to create as many labs as necessary. Each lab can be personalized and tailored to the kind of training each learner needs. Learners can start off at different stages of the training with different pre-loaded information. For example, these solutions enable the creation of beginner and advanced courses, allowing students to start at different entry points.

Each learner has their own personal URL, which they can access at any time from anywhere at the click of a button, with no sign up required. They can spend as long as they like going through each stage, making mistakes, and starting over again as many times as necessary. This URL will stay live for however long the training continues, and the learners can pick up where they left off when they exit the training. The environment can also be reset or destroyed, and the student can restart at the beginning.

Conduct Live Events

The Live Events feature of Appsembler's Virtual Labs solution makes it easy to efficiently manage online and onsite hands-on training meant to take place within designated time windows. This easy-to-configure, event-centric feature is useful if you need to train many learners in a live scheduled session and start multiple lab environments simultaneously. With Live Events, you'll be able to automatically spin up a set of labs and provide learners with an interface for accessing those labs outside of an LMS. Administrators can also set the length of an event, designate an expiration date, and set usage caps for learners.

Optimize IT Resources and Decrease Training Budget

The software environment is hosted by the virtual labs solution provider to ease the burden on the IT department's resources. Instead of asking the IT department to set up a virtual lab, anyone, with any level of technical knowledge, can create a personalized, cloud-based learning environment with the click of a button. These labs can also be scaled up to meet student demand without any intervention from IT, and modifications can be made to the lab by the course creator through the admin panel without involving developers. Companies can also choose to use developers to maintain the labs if they prefer.

Analyze Training Success

Virtual labs solutions comes with built-in analytics capabilities, as well as a dashboard to help manage the labs. These statistics include how many labs have been started from a given project, and how many times a given student has accessed their lab. It's also possible to access the labs to audit the work learners have completed and make sure they are progressing through the training course correctly.

Accelerate Software Adoption

As virtual labs enable users to learn by doing, this helps boost knowledge retention and get up-to-speed with the software quicker. The immersive, hands-on training allows learners to use more of the product and its features, and understand how they can use it to improve the way they carry out their work on a day-to-day basis. Virtual labs also provide a more fun way of learning the software, which encourages users to complete more of the course, and carry out more training.

Reduce Churn and Support Tickets

Delivering training using virtual labs ensures that learners more fully understand the product before they start to use it regularly. This means that they are less likely to face issues that they need to create a support ticket for. Better user adoption also means that the software will have more of a positive impact on the business, and reduces the likelihood of churn.

Generate Leads

Virtual labs can be used for passive lead generation and turning these leads into paying customers. Setting up a sandbox environment for leads using virtual labs enables them to see how the software could be used to solve their exact issues, improve the day-to-day running of their business, and make life easier for their staff.

Appsembler Virtual Labs

About Appsembler's solution

Setup

Appsembler uses Docker Swarm technology to set up different virtual lab environments for students at the same time. To create virtual labs, you need Docker images and containers.

To create snapshots of your software at a certain point with specific configurations, you need to create an image of your software using Docker. This image is like the blueprint of your software, which will define what your learners will have access to when they log into the virtual lab – how you have configured the software, what access they will have, and what they will be able to do with it.

This image includes everything you need for your learners to run your software, including its code, requisite libraries, runtime, and any necessary configuration. The image can be reproduced as many times as you like for as many students as you like. You can also create different images according to the different training needs of your learners.

To run this image, you need a Docker container. If the image is the blueprint of your software then the container is the building that has been created from this blueprint; it is what your image becomes when it has been executed.

Requirements

As Appsembler's Virtual Labs spins up a virtual environment of your own program, there are technical requirements that your software needs to meet. These are

◯ Runs on Linux

◯ Docker compatible

◯ Web-based software, or at least has a web-based interface.

Alternative Option: Virtual Machines

If your application doesn't meet the above criteria, then there is still a possibility that we can work with your software. In this case, we would run a Docker container in conjunction with another cloud-based Virtual Machine instance.

We may also be able to work with your application if your software doesn't meet all of the above criteria, but this requires more configuration, so the best option is to get in touch to see what we can do.

Popular Use Cases

There is a wide range of use cases for a virtual labs solution both for internal and external training, as we explain below.

Internal

New hire onboarding: when recruiting a new employee, it's important to get them up-to-speed on the software as soon as possible. Virtual labs provide a learning environment that gives specific examples and exercises of how they will be using the software. Each environment can be tailored according to the team, role, technical knowledge, or seniority.

Product training: existing employees also need regular training to get the most out of any software. Virtual labs can provide continuous refresher courses, as well as deliver learning on product updates and new features (to internal employees and external customers).

Skills development: Virtual labs can up-skill and retrain a development team (and retraining internal staff is cheaper than hiring new employees) to help them learn a new SDK, API or programming language. They can get hands-on, real-world experience without needing certain dependencies installed on their computer.
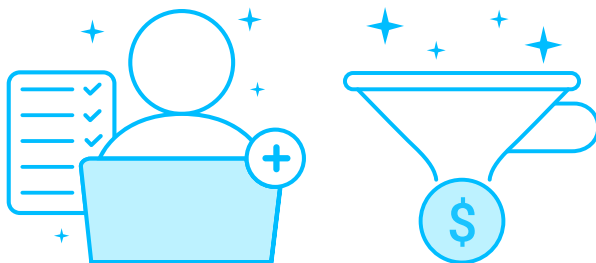
External

Generating leads and closing sales using a virtual lab can help convince a customer of the value of buying a product by providing real world examples of how the software can solve their problems. Instead of giving a static demo, customer can try out the software in their own time. Offering hands-on, interactive training post implementation to learners anywhere in the world is also a good value-add to offer when trying to sell a product.

Post-sales training: once a company has purchased software, the next step is to train the users. Using virtual labs means these employees can try out the tasks they would complete in their day-to-day jobs but in a controlled environment.

Partner training: having to fly an instructor out to train partners and having to install software on external computer is expensive, ineffective, complicated and time-consuming. The only requirement for a partner that wants to access a virtual lab is that they have a browser with an internet connection.

Developers: to set up integrations with a piece of software, external developers can access a sandbox environment to debug and check the code will work in a live deployment.

Virtual Labs in Action: Case Studies

Leading organizations have already started transforming their training programs with the help of virtual labs. Find out more about their journey, and the benefits they have seen, below.

Intersystems: Product Demos to Encourage Sales

Intersystems, a big data company that serves government, healthcare and business customers, uses Appsembler Virtual Labs to let prospects try out the software before they buy it. From the company's homepage, you can click a "Try" button, which takes you to a page where you can use an Intersystems sandbox for training on the product and the industry.

For example, when you take the financial fraud detection challenge, you are guided through a big data analysis exercise, and can understand the value of using Intersystems software for this purpose.

InterSystems also redesigned its internal training program using Open edX and Appsembler Virtual Labs. It now offers its learners immersive, individualized, and online lab environments.
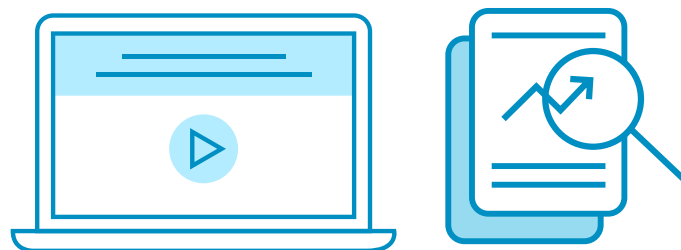
Redis Labs: Boost Brand and Generate Leads

In-memory database platform Redis Labs used Docker-powered virtual labs to create its online training portal Redis University. This public-facing platform allows anyone to take its courses – both existing and prospective users. The courses help generate leads as the company can see who the most engaged prospective users are, and pass this information to the sales team.

Redis University also gives prospective customers a chance to try before they buy. If they like using the platform, then they may eventually recommend it as an option for the company they currently work for.
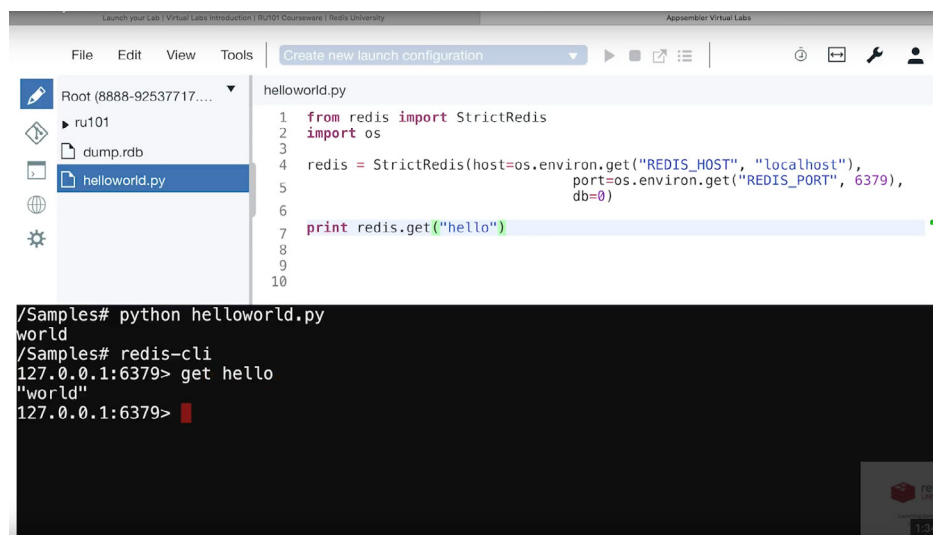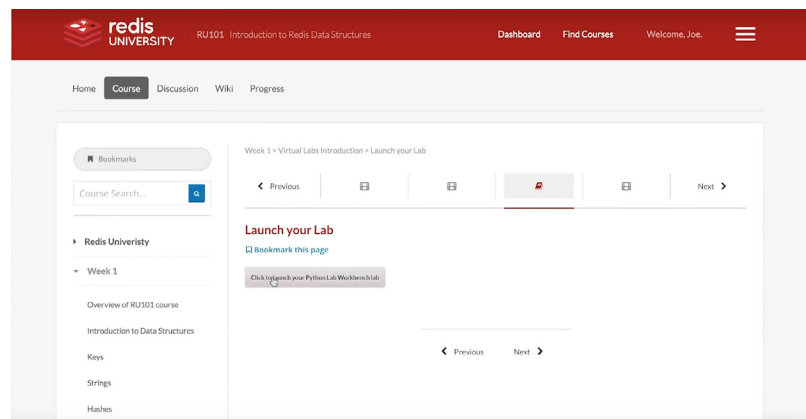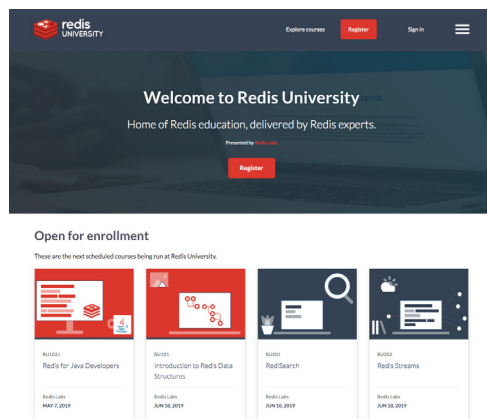
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itential

Itential: Scaling Training Beyond the Classroom

Network automation software Itential previously only had one trainer who was on the road non-stop delivering classroom-based training. The company wanted to find a more scalable way to deliver training.

Itential implemented Appsembler's experiential learning platform including Virtual Labs and its Tahoe learning management system. Using Appsembler's Virtual Labs, Itential was able to deliver dynamic HTML lab guides and provide each learner with a personal lab environment. The company has saved 80% of the time it used to take to deliver training, and has had a 100% increase in attendance rate.

Conclusion

We hope this white paper has been useful in helping you learn more about the benefits of using virtual labs for your online training needs.

Built on the belief that learning by doing is the most effective way to learn, Appsembler is on a mission is to help companies unlock the full potential of their employees, customers, and users. This is why we developed Virtual Labs to empower trainers and educators to deliver immersive, hands-on learning experiences.

No matter what level of technical knowledge you have, you can use Appsembler's Virtual Labs to set up and deploy a personalized, cloud-based lab environment with the click of a button to provide real-world training. With our Docker-powered solution, learners only need a browser to start their training, with no software installation necessary. These labs can be launched in seconds to deliver virtual training

to anyone, anytime, anywhere, with automatic scaling, hosting, versioning and back-ups.

The Appsembler Virtual Labs solution can improve the way you deliver your software training by:

- Overcoming the challenges of catering to modern learners and the fast pace of innovation
- Providing a more immersive, hands-on, and personalized learning experience to increase user adoption and engagement
- Enabling anytime, anywhere software training
- Improving the lead generation and post-sales support processes
- Saving your IT team time and money by enabling quick and easy setup and maintenance, and the ability to scale more quickly.

See the difference with the leading experiential learning platform.

Request a Demo

Ready to scale your training and engage your learners? Book your live demo today and discover how you can accelerate your business and empower your teams, partners and customers every day.