



Step Ahead's ODL™ (On Demand Labs) the revolutionary cloud based custom configured computing assets to deliver on demand instant labs for any technology training.

**Customer Details— Federal Aviation Authority** is a federal agency responsible for regulating civil aviation to promote safety, encourage and develop civil aeronautics, including new aviation technology. Developing and operating a system of air traffic control and navigation for both civil and military aircraft as well as researching and developing the National Airspace System and civil aeronautics. They also develop and carry out programs to control aircraft noise and other environmental effects of civil aviation. FAA regulates U.S. commercial space transportation.

### The Requirements

The FAA's Remote Maintenance Systems Engineering Team (RMSET/AJW-175) had an urgent requirement for Python software training. The training will provide RMSET's software team the ability to develop enhancements to Remote Monitoring and Logging System (RMLS) software applications with the Python software programming language and to modify existing code to function on new hardware being deployed as part of RMLS technology refresh. The RMSET software team consists of intermediate and highly experienced software developers.

### Challenges/Objectives

- ⇒ External software or applications installation inside their Intranet.
- ⇒ Security and Data privacy of the training center
- ⇒ Changes or reconfigurations to the lab environment to deliver Python 3 training
- ⇒ Data latency or performance issues
- ⇒ Unavailability of systems when required
- ⇒ Expiration of training environment
- ⇒ Risk of system failures during training



### Solution

Step Ahead adopted a new approach by leveraging cloud computing and delivering the On Demand Lab (ODL™) through Cloud Application Provisioning System (CAPS™).

#### What is ODL™?

End user virtual computer with instant access to the lab environment on demand.

#### Why ODL™?

Easy to use, customizable, lab failure proof, always available, reduced cost, available after training session (small fee for storage), can be accessed from anywhere as long as you have an internet connection.

#### What is CAPS™ ?

Web based multi-cloud provider management system to orchestrate, manage, provision, monitor and deliver ODL™. Provides personalized personal system vault for every user.

#### Why CAPS™ ?



User friendly interface to manage cloud assets across multiple cloud providers. Reduces complexity and increases value.



## Value Based Delivery

### Results

- ⇒ Operating system, python 3 development framework, MySQL database and database connections — pre-installed and configured to work with zero effort
- ⇒ Content, data and lab activities delivered on time and no setup tasks were done by students, everything was working as expected for every student
- ⇒ Ease of use and performance was greatly appreciated
- ⇒ Delivered value and reduced cost using our ODL™ demonstrating effective delivery of Python 3 training and ability to use the labs with ease and increased participation and productivity.

### Benefits

- ⇒ 100% availability with extreme performance
- ⇒ Ability to park and reuse cloud based system to effectively reduce cost, because ODL™ is billed by usage
- ⇒ Access to ODL™ outside the training facility thereby enabling greater participation by the students
- ⇒ Tightly integrated with custom security of the customer
- ⇒ Auto scaling to increase or reduce the number of student participation
- ⇒ On demand access of lab systems when required.

### Value Delivered

- ⇒ Lab environment that was developed did not interfere with their existing environment
- ⇒ From start to finish, minimum involvement by the customer
- ⇒ Every requirement for the training was delivered on time and within budget
- ⇒ Customer was satisfied much to the delight of their students as the training instructor was extremely knowledgeable, content well presented and the lab systems were extremely effective in their learning of python 3
- ⇒ Catered to the needs of mid level to advanced level students for python 3.



## Step Ahead Case Study Federal Aviation Authority

### Case Study Details

**Industry:** Aerospace

**Customer:** Federal Aviation Authority (FAA)

**Service Areas—** On Site instructor led Python 3 training, training labs delivered using Step Ahead's ODL™ built on cloud computing

**Duration—**5 days (40 hours)

**Hardware—**IaaS from AWS, t2.medium with 4GB memory and 50GB storage

**vCPU:** 2 ECU's : 6.5 (equivalent to 6.5GHz 2007 Xeon processor)

**Operating System:** Windows Server 2008 R2

**Software Installed:** Python 3 development framework, MySQL database, Windows PDF viewer, Notepad++, McAfee Antivirus, Google chrome, python Django, python 3 training slides in PDF format and python 3 study reference guide links.

**Usage—**Continuous, with ability to park and reuse

**Managed Services—**Support 5 x 24

**Outages—**None

#### Customer Location

AAQ-630 Laboratory Support

FAA

William J. Hughes Technical Center

Building 300, Fourth Floor

Atlantic City International Airport

Atlantic City NJ 08405

**Award No:** DTFAC-17-P-00260

**Award Date:** 9/27/2017

**Delivery :** Nov 27, 2017 to Dec 1, 2017

**Contract Officer:** Debra Monzo

Email: [debra.monzo@faa.gov](mailto:debra.monzo@faa.gov)

**FAA Technical Point of Contact:** Audrey Donovan,

Email: [audrey.donovan@faa.gov](mailto:audrey.donovan@faa.gov)

#### Customer Quote:

THE ODL ENVIRONMENT WAS SIMPLE TO USE AND PERFORMED VERY WELL. IT PROVIDED A PERFECT DEVELOPMENT ENVIRONMENT FOR OUR PYTHON CLASS

### Survey Results

Number of student participation: 15

Rating: 1 least and 5 best

**Quality of the Content :** 4.5 stars

**Instructor knowledge and delivery :** 5 stars

**Lab activity guide :** 4 stars

**Lab access and delivery :** 5 stars

### Contact Details

**Robert Joseph**

Program Manager

Step Ahead Solutions, Inc.

19925 Stevens Creek Blvd. Ste.100

Cupertino, CA-95014

Email: [kjoseph@stepaheadsolution.com](mailto:kjoseph@stepaheadsolution.com)

Mobile: 408.771.9663

Off: 408.725.7560 xtn 5130

Fax: 408.973.7259