

**Tracston**



# **Cloud Computing Hand-On Labs**

**Release Date: 10/2018**

**Tracston LTD.**

# Amazon Web Services

## Cloud computing hands-on Labs

**Cloud computing** is a new form of Internet-based computing that provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources (e.g., computer networks, servers, storage, applications and services), which can be rapidly provisioned and released with minimal management effort. Basically, Cloud computing allows the users and enterprises with various capabilities to store and process their data in either privately owned cloud, or on a third-party server in order to make data accessing mechanisms much more easy and reliable. Data centers that may be located far from the user—ranging in distance from across a city to across the world. Cloud computing relies on sharing of resources to achieve coherence and economy of scale, similar to a utility (like the electricity grid) over an electricity network.

**Amazon Web Services (AWS)** - is a subsidiary of Amazon.com that provides on-demand cloud computing platforms to individuals, companies and governments, on a paid subscription basis. The technology allows subscribers to have at their disposal a virtual cluster of computers, available all the time, through the Internet.

AWS Cloud services can be accessed by software developers, cloud administrators and other enterprise IT professionals over the public internet or through a dedicated network connection. AWS Platform offers services for compute, storage, networking, big data, machine learning and the internet of things (IoT), as well as cloud management, security and developer tools.

## Objectives

This course is designed to introduce you to fundamental AWS cloud computing and concepts including infrastructure, building your own solution, management, Security, logging, and development methods. It also covers security-related compliance protocols and risk management strategies.

## Target Audience

- Anyone looking to gain knowledge to the AWS Cloud Platform

## Prerequisites

- You'll need a basic understanding of cloud technologies.

Duration: **2 days** (16 hours)

## Module 1 – Day 1

- What is cloud computing?
- Cloud Computing models: SaaS, PaaS, IaaS
- Cloud implementation models: Public, Private, Hybrid
- What's AWS?
  - Main services overview (Compute, Storage, DB, Network )
- Planning & design cloud services
- Amazon Elastic Compute Cloud (EC2)
  - Configure an Amazon Machine Image (AMI)
- Amazon S3, Lambda
- Amazon Relational Database Service (RDS) vs. installing your own database.
- DynamoDB, AWS Elastic Beanstalk, AWS, CloudFormation
- Kinesis Data Firehose, & Kinesis Client Library
- Familiarity with architectural trade-off decisions (high availability vs. cost,
- Elasticity and scalability
- Summary

## Module 2 – Day 2

- CloudWatch – Monitoring & Management
- Cloud Security Best Practices to code a cloud solution.
- Elasticity and scalability
- Automation
- Architecture for development, testing, and staging environments.
- Recognize and implement secure procedures for optimum cloud deployment and maintenance.
- Programming with AWS APIs
  - SDK
  - IDE tools
  - CLI
- Best Practices in debugging.
- General troubleshooting information and questions
- Summary