# Real Time College

**Course: Cloud Services - AWS**

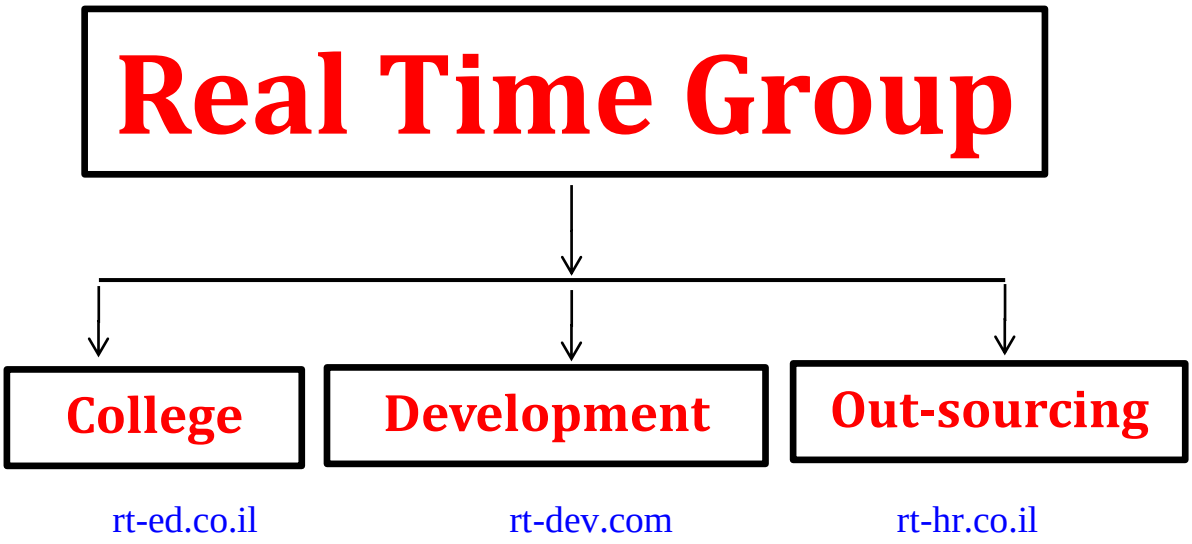
**Duration:** 35 Hours

Hands-On-Training: 75%

Real Time Group is a multi-disciplinary dynamic and innovative Real-Time O.S. and Embedded Software Solutions Center, established in 2007.

Providing Bare-Metal and Embedded Linux solutions, professional services and consulting, end-to-end flexible system infrastructure, outsourcing, integration and training services for Hardware, Software and RT-OS \ Embedded Systems.

The company is divided into the following three Divisions:




## Training Division:

Professional Training Services for Hardware, Software, RT-OS and Embedded systems industries.

We provide the knowledge and experience needed to enable professional engineers to Develop, Integrate and QA Hardware, Software and Networking Projects.

In order to ensure experience, all courses are practical – hands-on-training.
The latest Development, QA and Automation equipment which are adopted by the industry are used.

All students are supplied with Development-Boards for home-work and course projects.

## Course Overview:

The introduction of cloud computing has revolutionized the tech world. The easy accessibility of large storage options and cheap computing power has resulted in the Cloud becoming one of the most popular forms of data storage and computational infrastructure. In addition to data storing, cloud computing has also become a standard for creating manageable and scalable web application services.

Amazon entered the cloud market in 2006 and has turned into the most popular public cloud service provider with its current AWS (Amazon Web Services). Many organizations have now moved their servers on the cloud and are additionally opting for building applications on borrowed servers to save time and money.

This step by step course will cover everything from Introduction to AWS, a detailed description on concepts such as EC2 (Elastic Cloud Compute). It will also include going over Amazon's Databases such as Amazon RDS, DynamoDB, and other related technologies including IAM (Identity and Access Management) along with the S3 basics (simple storage service).

At the end of this course you will be able to apply AWS skills and best practices in your own projects. This course is the perfect stepping stone on your journey to master AWS.

## Who should attend:

- This Course is intended for testers, programmers, DevOps or IT professionals who would like to learn and to understand what AWS is, how it works and to get hands-on experience with the AWS platform, products, and services.

## Prerequisite:

- Understanding of Software Development Life Cycle.
- Knowledge about Linux is mandatory.
- Basic Testing concepts are an advantage.

# AWS Course Outline

1. **Introduction to Cloud Services**
   a. What is a cloud service?
   b. How do cloud services work?
   c. What are the benefits of cloud services?
   d. What types of cloud services are there?
   e. Software as a Service (SaaS)
   f. Infrastructure as a Service (IaaS)
   g. Platform as a Service (PaaS)
   h. How are cloud services delivered?
   i. Public cloud services
   j. Private cloud services
   k. What's the future of cloud services?

2. **Introduction to AWS**
   a. What are AWS?
   b. How AWS works?
   c. Creating an AWS Account
   d. Introduction to AWS Management Console
   e. AWS Documentation overview

3. **AWS IAM (Identity & Access Management)**
   a. IAM Overview What and Why?
   b. IAM User and Group
   c. IAM Policies + Quick Lab
   d. IAM Roles overview and How to Create a Role
   e. IAM Best Practices

4. **EC2**
   a. EC2 Basics
   b. AMIs
   c. EBS
   d. Security Groups
   e. Lab: Launching an EC2 Instance
   f. EC2 Lab Demo
   g. Lab: Use an EC2 Instance Part 1
   h. Lab: Use an EC2 Instance Part 2
   i. Summary

5. **Amazon S3 Simple Storage Service**
   a. S3 Basics
   b. S3 Storage Classes
   c. S3 Lab

6. **AWS Database Services**
   a. AWS Database Services Introduction
   b. Lab: Launch RBS DB Instance
   c. DynamoDB Introduction
   d. Lab: DynamoDB
   e. Modifying + Cleaning up the Resources

7. **Other Services**
   a. Cloud Watch
   b. Elastic Load Balancing
   c. EC2 Auto Scaling
   d. Amazon Route 53
   e. AWS Lambda

8. **Advanced AWS usage (Based on Timing Constraints)**
   a. Advanced AWS Command line Interface (CLI)
   b. Lab Session - AWS Command Line Interface (CLI)
   c. AWS Elastic Beanstalk
   d. Lab Session - Highly Available and Fault Tolerant NodeJS Server