

## Internet of Things Foundation

### Course Summary

#### Description

The Internet of Things Foundation course provides an overview and insight into the emerging technology.

The course covers the basic concepts, terminology, and key components of IoT. It explains the business perspectives of IoT including the advantages of early adoption and monetization models. It further expands on the technologies enabling IoT and the various challenges to expect. Several scenarios describe the use cases and applications of IoT that result in smart applications and services to inspire organizations making the move to IoT. The course provides future insights in IoT and forecasts the status of the connected world in 2020.

This interactive and thought provoking course includes group discussions and lab activities to allow you to experience IoT applications: These are in-class lab exercises which will allow participants to experience IoT applications. The course also offers case scenarios around IoT and module end questions.

The Internet of Things Foundation exam is delivered and evaluated by the Cloud Credential Council. The exam vouchers can be obtained when you take the course. The test can be online or paper based and is closed book. The test is 60 minutes in duration with an additional fifteen minutes for non-native candidates. The test is composed of 40 simple multiple choice questions (one mark per question) and a passing grade is 65%. There are no formal prerequisites for the exam, but the participants must be conversant with cloud concepts and vocabulary. The exam can be taken on the last day of the course.

#### Objectives

After taking this course, students will be able to:

- Define concepts and terminologies of IoT.
- Examine new devices and interfaces that are driving IoT growth.
- Relate to business perspectives of IoT (advantages of early adoption of IoT technologies).
- Predict implications of IoT for your business.
- Examine the role of enabling technologies for IoT, such as cloud computing and Big Data.
- Identify security and governance issues with IoT.
- Examine future growth opportunities of IoT in the coming years.

#### Topics

- Course Introduction
- Concepts and Terminologies
- Business Orientation
- Basic Building Blocks of IoT–Architecture
- Enabling Technologies of IoT + Lab Activities
- IoT Security and Top Governance Issues
- IoT Case Studies and Future Predictions
- Exam Preparation Guide
- Mock Exam

#### Audience

The Internet of Things Foundation course is most interesting for business and management professionals, including application consultants, business analysts, business process architects, developers, developer consultants, enterprise architects, program / project managers, solution architects, system administrators, system architects, technology consultants, and users.

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### **Course Summary (cont'd)**

#### **Prerequisites**

Before taking this course, students should have basic knowledge of Internet concepts (Difference between Internet and Web, URL, Http/Https, DNS, etc.), Cloud Computing characteristics, Big Data concepts, and Networking concepts (LAN/WAN/MAN, routers, protocols, topologies, etc.)

It recommended that students complete the Cloud Technology Associate (CTA) course and the Big Data Foundation course.

#### **Duration**

Two days

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### Course Outline

- I. Course Introduction**
- II. Concepts and Terminologies**
  - A. Introduction: Internet, Things, and IoT
  - B. IoT Types, History and Evolution of IoT
  - C. Cyber-Physical Systems and Differences Among IoE, M2M, and IoT
  - D. Facts and Figures Around IoT and IoT Application Areas
- III. Business Orientation**
  - A. Drivers of IoT
  - B. Benefits of a Connected World
  - C. IoT Business: Opportunities, Benefits, and Challenges
  - D. IoT Monetization Strategies and Models
- IV. Basic Building Blocks of IoT–Architecture**
  - A. Architecture of IoT Components
  - B. Network Protocols Within IoT
- V. Enabling Technologies of IoT + Lab Activities**
  - A. Role of Social Media and Mobility in IoT
  - B. Defining SMACT
  - C. Role of Big Data and Analytics in IoT
  - D. Role of Cloud Computing in IoT
- VI. IoT Security and Top Governance Issues**
  - A. IoT Security Challenges
  - B. Causes of IoT Security Breaches
  - C. IoT Security Risks
- VII. IoT Case Studies and Future Predictions**
  - A. IoT Usage Scenarios
  - B. IoT Growth Perspectives
  - C. IoT Future Predictions
- VIII. Exam Preparation Guide**
- IX. Mock Exam**