ITU Centres of Excellence Network for Arab Region

Sudatel Telecommunications Academy (SUDACAD)

Face-to-Face Training Course on
"Big Data"
Khartoum-Sudan, 22-24 September 2020

TRAINING OUTLINE

COURSE DESCRIPTION

Title	Big Data
Method of delivery	Face-to-Face
Objectives	The main goal of this course is to help participants learn and understand the concepts of Big Data and its tools, and the skills you need to store, manage, process, and analyze massive amounts of structured, semi-structured or unstructured data, in addition when and how to use Big Data to solve problems. Including the study of modern computing Big Data technologies and scaling up machine learning techniques focusing on industry applications. Mainly the course objectives are: How to Plan and implement a Big Data strategy for your organization, for a better business decision-making
Dates	22-24 September 2020
Duration	3 Days
Registration deadline	14 September 2020
Training fees	USD 150
Course code	20WS24941ARB-A

LEARNING OUTCOMES

It is expected that upon completion of the training session, participants will be able to:
- Understand the concepts of Big Data and its tools.

- Understand the skills needed to store, manage, process and analyze massive amount of data.
- Know when and how to use Big Data to solve problems.
- Understand the modern computing Big Data technologies.
- Understand how to scale up machine learning techniques focusing on industry applications.
- Plan and implement a Big Data strategy for their organization.

TARGET POPULATION

This training targets analytics managers, business analyst, software developers, data storage and data processing staff, telecom staff, IT staff, Data Center staff, regulators and decision makers.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Dr. Shazali Siddig Mohammed Mr. Ali Abdallah Abaker	Shazali33@gmail.com Misterali88@gmail.com

EVALUATION

The assessment of the participants shall be based on the attendance and a final test. The final test will be short a questions on the different parts of the course.

TRAINING SCHEDULE AND CONTENTS / AGENDA

Date for 1st day	Time; Start time	Topics/Activities
22/9/2020	08:30 - 09:00	Registration
	09:00 - 09:30	Welcome Remarks
	09:30 - 12:00	- Introduction to Big Data - What is Big Data? - Big Data: Why & Where? - Big Data Ecosystem, Industry outlook - Big Data Applications - Types of Big Data - Characteristics of Big Data - Four V's in Big Data
	12:00 - 13:00	Lunch

	13:00 - 17:00	• Why Analysing Big Data? • Industry use cases - Popular big data analytic applications • Data Warehousing and Big Data Analytics • Big Data & Data Science • Big Data Engineers and Data Scientists & Data Analyst
Date for 2nd day	**Time; Start time**	**Topics/Activities**
23/9/2020	09:00 - 12:00	• Introduction to Hadoop • What is Hadoop • Big Data Hadoop Stack • Hadoop Hardware and Software Requirements • Hadoop Architecture • Main Hadoop Components • Challenges when Managing & Analyzing Big Data • Key Components in Big Data Analytics Environment
	12:00 - 13:00	Lunch time
	13:00 - 17:00	• Hadoop Architecture & Cluster • Resource Management: YARN Architecture • Resource Management: Working with YARN • Limitations of Hadoop • Hadoop Features and Characteristics • Demo – Uses Case
Date for 3rd day	**Time; Start time**	**Topics/Activities**
24/9/2020	09:00 - 12:00	• Hadoop Applications & HDFS • HDFS Architecture & Configuration • HDFS Clusters – Name node, Data node • Hadoop MapReduce Framework • Describe the MapReduce philosophy
	12:00 - 13:00	Lunch time
	13:00 - 17:00	• MapReduce Architecture & Framework • Processing & Generating large Data sets • Data Flow in MapReduce • MapReduce Life cycle

		• Introduction to Spark
		• Components of Spark Unified Stack
		• Resilient Distributed Dataset (RDD)
		• Demo – Example Use Case

METHODOLOGY

- Pre-test.
- Instructor-Led Class Lectures and power point presentations.
- Reviews and Revisions.
- Case Studies.
- Group exercises & assignments.

TRAINING COORDINATION

Training Coordinator:	**ITU Coordinator:**
Eng. Mohaned Abdalla Suleiman Senior Engineer Planning & Development Dept., SUDACAD Mobile: +249 120 120 983 Tel: +249 183 490 999 E-mail: mohanedas@sudatel.sd	**Eng. Mustafa Al Mahdi** Programme Officer ITU Arab Regional Office Tel: +202 3537 1777 Mobile: +20114 1177573 Fax: +202 3537 1888 Email: mustafa-ahmed.al-mahdi@itu.int

REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.

To be able to register for the course you MUST first create an account in the ITU Academy portal at the following address:

https://academy.itu.int/index.php/user/register

Training registration

When you have an existing account or created a new account, you can register for the course online at the following link: https://academy.itu.int/index.php/training-courses/full-catalogue/big-data-0

You can also register by finding your desired course in our training catalogue https://academy.itu.int/index.php/training-courses/full-catalogue

Payment

1. On-line payment

A training fee of USD 150 per participant is applied for this training. Payments should be made via the online system using the link mentioned above for training registration at https://academy.itu.int/index.php/training-courses/full-catalogue/big-data-0

2. Payment by bank transfer

Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. All bank transaction fees must be borne by the payer.

Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment

Institutional Contacts are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the **"My account"** button in the user menu. At the bottom of this page you should see two buttons:

a. If you want to **become an institutional contact**, click on the "**Apply to be an Institutional Contact"** button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on **"continue"** and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.

b. If you want to **belong to an existing organization**, click on the **"Request to belong to an Institutional Contact"** button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on **"continue"**, a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:

Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union International des Telecommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	150 USD
Payment Reference:	CoE-ARB 24941– WBS No. P.40592.1.06

4. Other method of payment

If due to national regulations, there are restrictions that do not allow the payment to be made using options 1 & 2 above, please contact the ITU coordinator for further assistance.