

Technology Primer: Blockchains

Blockchains have revolutionized the financial industry with the help of Bitcoins. Blockchains are now moving into other industries like telecommunications to help verify various transactions. This course provides an overview of Blockchains from a telecom perspective. Blockchains are explored from a definition, underlying technology and use-cases perspective. It starts with an introduction to Blockchains. The course then moves to key Blockchains use cases and the Blockchains technologies. The course concludes with a discussion on how a telecom operator will need to enhance their network to support Blockchains.

Intended Audience

A high-level technical overview to personnel involved in product management, marketing, planning, design, engineering, and operating wireless (4G, 5G) and wireline access networks

Objectives

After completing this course, the student will be able to:

- Define the types of Blockchains
- List the key telecom use cases for Blockchains
- Compare and contrast Blockchains and Bitcoin
- List different requirements for supporting Blockchains

Prerequisites

- None

Required Equipment

- None

Course Outline

1. Introduction to Blockchains

- 1.1 What are Blockchains?
- 1.2 Blockchains vs. Bitcoin
- 1.3 Types of Blockchains

2. Blockchains Use Cases

- 2.1 How is telecom different?
- 2.2 Telecom use cases
- 2.3 Telecom impacting use cases
- 2.4 Impact of Blockchains on telecom architecture

3. Blockchains Overview

- 3.1 How Blockchains work
- 3.2 Building a Blockchain
- 3.3 Verifying a Blockchain

4. Basics of Supporting Blockchains

- 4.1 Requirements on the Edge Device and End-User Devices
- 4.2 Requirements on the Network Devices
- 4.3 Challenges and key considerations