HCIA-LTE V1.0 Exam Outline

Certificate Summary

HCIA-LTE certification is positioned to validate the general knowledge about LTE network and the capability of LTE radio network O&M with Huawei products, aiming at standardizing entry-level skills in LTE radio network O&M.

HCIA-LTE certification curriculum includes but is not limited to LTE system overview and air interface principles, Huawei LTE eNodeB product hardware and specifications, basic network configuration, operation and troubleshooting as well as equipment commissioning and deployment for LTE radio networks.

With an **HCIA-LTE certification**, you demonstrate the capabilities of independently performing the deployment and commissioning of Huawei LTE radio network, operations and onsite maintenance of eNodeBs, and general troubleshooting for Huawei LTE radio networks.

With engineers who are **HCIA-LTE** certified, enterprises are able to deploy and maintain LTE radio network to ensure smooth network operation.

Prerequisites

None

Validity Period of Exam Results

This exam result is valid for 3 years.

Recertification Method

Before a certificate expires, the certificate holder can extend the validity of this certificate using either of the following methods:

- *Take and pass the written examination again.*
- *Take and pass any written examination of a higher certification level in the same technical field*

Key Points of Exam

LTE System Overview (15%)

1. Evolution of Cellular Networks
1. 3GPP Releases
2. E-UTRAN Architecture
3. E-UTRAN Interfaces and Protocols
4. EPC Architecture
5. EPC Interfaces and Protocols
6. Radio Interface Techniques
7. Principles of OFDM
8. LTE Channel Structures

9. LTE Frame Structure
10. Downlink OFDMA
11. Uplink SC-FDMA
12. Multiple Input Multiple Output
13. Multimedia Broadcast Multicast Service
14. The Huawei eNodeB family
15. Products and application scenarios
16. Operation and Maintenance

eNodeB LTE Product Description (5%)

1. eNodeB System Overview
2. eNodeB System Structure
3. eNodeB Auxiliary Devices
4. eNodeB Typical Networking

MBTS GUL Field Maintenance (10%)

1. Alarm Management on the U2020
2. MBTS Device Maintenance
3. MBTS Transport Layer Maintenance
4. MBTS Radio Layer Maintenance
5. MBTS Tracing and Monitoring Management
6. MBTS System Management
7. MBTS Board Replacement

MBTS GUL Software Commissioning (15%)

1. Overview of MBTS Commissioning
2. Commissioning the MBTS based on U2020
3. Commissioning the MBTS based on U2020+USB

LTE eRAN Automatic OMCH Establishment (3%)

1. Automatic OMCH establishment phase during base station deployment by PnP
2. DHCP introduction
3. Schemes for Obtaining VLAN Information
4. Procedure for Obtaining Configuration Information in different Scenarios

MBTS GUL Field Operation and Maintenance (10%)

1. Hardware Check
2. Hardware Replacement Operations and Procedure
3. Routine Maintenance Lists

eNodeB LTE Data Introduction for Initial Configuration (10%)

1. eNodeB Data Configuration Introduction
2. Common Data Configuration Introduction
3. Data Preparation in Special Scenarios

eNodeB LTE Initial Configuration by CME (5%)

1. Flow Chart of eNodeB Data Configuration by Using the CME
2. Introduction to the Summary Data File
3. Implementation of Initial Configuration by Using the CME

eNodeB LTE Troubleshooting (10%)

1. Troubleshooting Overview
2. Troubleshooting Cell Unavailable Faults
3. Troubleshooting IP Transmission Faults
4. Troubleshooting Application Layer Faults
5. Troubleshooting Synchronization Faults
6. Troubleshooting Transmission Security Faults
7. Troubleshooting RF Unit Faults
8. Troubleshooting License Faults

eNodeB LTE TOP Alarm Handling (2%)

1. Alarm Overview
2. Top Alarm

eNodeB LTE Site Solution (15%)

1. Huawei LTE Product Introduction
2. Typical Out Door Site Coverage Solution
3. Typical In Door Site Coverage Solution
4. High-Speed Railway and Road Coverage Solution
5. FDD+TDD Site Solution
6. Easy Marco Site Solution
7. Tower Solution
8. Related Cable Solution

NOTE

The exam content provided here serves only as a general guide to participants. Other basic knowledge not mentioned here may also be included in the actual exam.

References

LTE System Overview

LTE Field Maintenance

EPC Principle

Recommended Training Program

Training Program	Level	Duration
HCIA-LTE Training	II	10 days