
# 600-210

## Implementing Cisco Service Provider Mobility UMTS Networks

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**SUCCESS GUIDE TO CISCO CERTIFICATION**

Exam Summary – Syllabus – Questions

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# Introduction to 600-210 Exam on Implementing Cisco Service Provider Mobility UMTS Networks

A great way to start the Cisco Service Provider Mobility UMTS to LTE Specialist (SPUMTS) preparation is to begin by properly appreciating the role that syllabus and study guide play in the Cisco 600-210 certification exam. This study guide is an instrument to get you on the same page with Cisco and understand the nature of the Cisco Service Provider Mobility UMTS to LTE exam.

Our team of experts has composed this Cisco 600-210 exam preparation guide to provide the overview about Cisco Implementing Cisco Service Provider Mobility UMTS Networks exam, study material, sample questions, practice exam and ways to interpret the exam objectives to help you assess your readiness for the Cisco SPUMTS exam by identifying prerequisite areas of knowledge. We recommend you to refer the simulation questions and practice test listed in this guide to determine what type of questions will be asked and the level of difficulty that could be tested in the Cisco Service Provider Mobility UMTS to LTE certification exam.

## Cisco 600-210 Certification Details:

| | |
|---|---|
| Exam Name | Implementing Cisco Service Provider Mobility UMTS Networks |
| Exam Number | 600-210 SPUMTS |
| Exam Price | $300 USD |
| Duration | 90 minutes |
| Number of Questions | 65-75 |
| Passing Score | Variable (750-850 / 1000 Approx.) |
| Recommended Training | Implementing Cisco Service Provider Mobility UMTS Networks – (SPUMTS) |
| Exam Registration | PEARSON VUE |
| Sample Questions | Cisco 600-210 Sample Questions |
| Practice Exam | **Cisco Service Provider Mobility UMTS to LTE Specialist Practice Test** |

# Cisco 600-210 Exam Syllabus:

| Section | Weight | Objectives |
|---|---|---|
| CDMA | 4% | 1 Identify key functions of CDMA and basic understanding of architecture and interfaces<br><br>2 Describe the attach procedure and call flow |
| MIP/Proxy MIP/Simple IP | 9% | 1 Simple IP<br>a) Describe Simple IP protocol and interfaces<br><br>2 Mobile IP<br>a) Describe Mobile IP protocol and interfaces<br>b) Describe Mobile IP registration/registration revocation<br>c) Describe MIPv4 in foreign agent mode<br><br>3 Proxy MIP<br>a) Describe proxy MIPv6 protocol and interfaces<br>b) Describe dual stack mobile IPv6 protocol and interfaces<br>c) Describe integration with LTE networks |
| Diameter (MPC centric) | 11% | 1 Define and understand diameter base protocol<br><br>2 Understand transport layer functionality of diameter protocol<br><br>3 Understand and implement diameter routing agents<br><br>4 Understand diameter peer discovery<br><br>5 Understanding diameter message processing<br><br>6 Understanding diameter error handling mechanism<br><br>7 Describe and understand diameter re-authorization procedure<br><br>8 Describe and understand DCCA model |
| Tunneling Protocols | 12% | 1 Basics of tunneling and encryption<br>a) Identify application of tunneling in wireless data networks<br><br>2 Generic Routing Encapsulation (GRE)<br>a) Identify applications of GRE in wireless data networks<br>b) Configure GRE tunnels<br>c) Troubleshoot GRE tunnels |

| Section | Weight | Objectives |
|---|---|---|
| | | 3 Layer 2 Tunneling Protocol (L2TP)<br>a) Identify applications of l2TP in wireless data networks<br>b) Describe LNS selection and load balancing<br>c) Describe L2TP over IPSec<br>d) Configuring L2TP tunnels<br>e) Troubleshoot L2TP tunnels<br><br>4 Internet Protocol Security (IPsec)<br>a) Configure IPSec tunnels on the GGSN<br>b) Identify applications of IPSec tunnels as applied to mobile wireless networks<br>c) Describe IPSec for IPv6<br>d) Troubleshoot IPSec<br><br>5 MPLS over BGP<br>a) Describe MPLS over BGP in mobile packet core networks<br>b) Configure MPLS over BGP<br>c) Troubleshoot MPLS over BGP |
| Home Agent (3G CDMA) | 11% | 1 Network functions HA<br>a) Describe the HA architecture and interfaces<br>b) Describe the IPv4 and IPv6 address allocation to UE<br>c) Explain the basic functions of EVDO-RevA QoS<br><br>2 Authentication and Authorization<br>a) Configure and implement RADIUS authentication and authorization<br><br>3 Accounting and Charging<br>a) Configure and implement RADIUS Accounting<br>b) Configure and implement Online Charging (OCS) via Gy interface<br>c) Configure and implement Offline Charging (OFCS) via Rf/Ga interface<br>d) Configure and implement the Enhanced Charging Service<br>e) Configure and implement EDR/UDR<br>f) Configure and implement policy and charging control via Gx interface<br><br>4 SGi Termination<br>a) Configure and implement various tunneling GRE, IP-in-IP, IPSec |
| PDSN/Foreign Agent (3G CDMA node) | 13% | 1 Network functions PDSN<br>a) Describe the PDSN architecture and interfaces<br>b) Describe IPv4 address allocation to UE for Simple IP |

| Section | Weight | Objectives |
|---|---|---|
| | | c) Configure SIP/PMIP/MIP<br><br>2 Authentication and Authorization<br>a) Configure and implement RADIUS authentication and authorization<br><br>3 Accounting and Charging<br>a) Configure and implement RADIUS accounting<br>b) Configure and implement the enhanced charging service<br>c) Configure and implement EDR/UDR<br><br>4 Configure and implement RP interfaces to RNC/PCF |
| HSGW (4G EHRPD node) | 20% | 1 Network functions HSGW<br>a) Basic understanding of HSGW architecture and interfaces<br>b) Basic understanding of HSGW call flows MIP/PMIP/QoS<br>c) Basic understanding of MAG service on HSGW<br>d) Basic understanding of LMA service on PGW<br>e) Basic understanding of PGW selection<br>f) Optimized and non-optimized handover between 3GPP and non-3GPP<br><br>2 Authentication and Authorization<br>a) Configure and implement STa diameter authentication and authorization<br><br>3 Accounting and Charging<br>a) Configure and implement Online charging (OCS) via Gy interface<br>b) Configure and implement Offline charging (OFCS)<br><br>4 Policy<br>a) Configure and implement policy via Gxa interface<br><br>5 Radio Network Interface<br>a) Configure and implement RP interfaces to eRNC |
| Inline Services | 20% | 1 Packet Inspection<br>a) Explain common L7 applications<br>b) Describe packet processing by the traffic inspection engine<br>c) Describe and configuration of rules to be used for traffic inspection |

| Section | Weight | Objectives |
|---|---|---|
| | | d) Describe and configuration of the charging rules<br>e) Configure charging policies<br>f) Design and configuration of rule bases, and designs the priorities for the rules and their corresponding charging policies<br>g) Describe Handling of VOIP traffic<br>h) Configure post processing rules<br>i) Troubleshoot packet Inspection<br><br>2 P2P Detection<br>a) Configure the rules for the various P2P applications<br>b) Describe mechanism of updating the software to detect newer P2P applications<br><br>3 Content Filtering<br>a) Describe the various content filtering mechanisms available<br>b) Describe ICAP protocol<br>c) Configure content filtering<br>d) Troubleshoot content filtering<br><br>4 Firewall Policies<br>a) Describe the basics of stateful attacks<br>b) Configure access rules<br>c) Troubleshoot firewall policies<br><br>5 NAT<br>a) Configure NAT IP Pools and Port Chunk Groups to be used<br>b) Configure the NAT accounting records<br>c) Troubleshoot NAT<br><br>6 Event Based Charging<br>a) Configure Event Data Records (EDRs)<br>b) Configuration flow based charging records (Enhanced GCDR Records)<br>c) Describe report generation using EDRs for different types<br><br>7 Fraud Detection<br>a) Describe DNS snooping<br>b) Explain the various mechanisms available for detection of tethered traffic<br>c) Describe updating the database for the list of known tethered devices<br>d) Configure fraud detection<br>e) Troubleshoot fraud detection |

| Section | Weight | Objectives |
|---|---|---|
| | | 8 HTTP Header Enrichment<br>a) Describe HTTP header enrichment<br>b) Configure HTTP header enrichment<br>c) Troubleshoot HTTP header enrichment |

# 600-210 Sample Questions:

**01. Which two functions does the SGSN perform?**
(Choose two.)
**a)** mobility management
**b)** charging
**c)** dynamic IP address allocation to a subscriber
**d)** dynamic policy control
**e)** deep packet inspection

**02. In MGT-based routing, which option is the GT address format of the called party?**
**a)** E.212
**b)** E.164
**c)** E.412
**d)** E.214
**e)** E.216

**03. Which two options are benefits of Port Resource Pooling?**
(Choose two.)
**a)** allows for increased number of network-requested PDP activations
**b)** reduces the number of GGSN initiated deactivate procedure
**c)** provides resiliency
**d)** reduces the signaling towards the SMSC
**e)** reduces the number of inter-SGSN RAU procedures

**04. In which two ways is GRE used in GGSN?**
(Choose two.)
**a)** to transport the subscriber traffic between MS and GGSN
**b)** to transport AAA packets between GGSN and the service provider RADIUS server
**c)** to transport AAA packets between GGSN and the corporate RADIUS server
**d)** to transport the enterprise subscriber packets to the corporate gateway
**e)** to transport the enterprise subscriber packets to the Internet

**05. Which option lists the contents of the flow label in a GTPv0 header?**
**a)** IMSI and NSAPI
**b)** MSISDN and NSAPI
**c)** IMEI and NSAPI
**d)** IMSI and Transaction Identifier
**e)** IMEI and Transaction Identifier

**06. Which interface in the UMTS domain uses the BSSAP+ layer?**
**a)** Gs
**b)** Gr
**c)** Ge
**d)** Ga

**07. According to RFC 4006, for which two purposes is Diameter Control Credit Application designed?**
(Choose two.)
**a)** authentication and authorization of access
**b)** real-time content charging
**c)** credit card payment authorization online
**d)** credit authorization of prepaid users
**e)** billing for postpaid users
**f)** IMS core authorization
**g)** collection of user statistics

**08. What layer of the OSI model does the BSSAP+ protocol map to?**
**a)** Data link layer
**b)** Network layer
**c)** Transport layer
**d)** Application layer

**09. Which two services does GPRS support?**
(Choose two.)
**a)** MMS
**b)** SMS
**c)** Video Calling
**d)** EMM
**e)** ESM

**10. In which two circumstances is Diameter Peer Discovery needed?**
(Choose two.)
**a)** The Diameter client is rejected by the peer.
**b)** The Diameter client must contact a first-hop Diameter agent.
**c)** The Diameter agent must reply to the connect request of a Diameter client.
**d)** The Diameter agent must search the next agent so that Diameter messages can reach the Diameter server.
**e)** The Diameter agent must close the session with a Diameter client.

# Answers to 600-210 Exam Questions:

| | | | | |
|---|---|---|---|---|
| Question: 01<br>Answer: a, b | Question: 02<br>Answer: d | Question: 03<br>Answer: c, d | Question: 04<br>Answer: c, d | Question: 05<br>Answer: a |
| Question: 06<br>Answer: a | Question: 07<br>Answer: b, e | Question: 08<br>Answer: d | Question: 09<br>Answer: a, b | Question: 10<br>Answer: b, d |

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on feedback@nwexam.com