CCIE Voice Written Exam Topics v3.0

The CCIE Voice Written Exam (#350-030) has 100 multiple-choice questions and is two hours in duration.

The exam will include topics such as Cisco Unified Communications Manager, Cisco CallManager Express, Cisco Unity Connection, Cisco Unity Express, Cisco Presence and Messaging, Cisco Contact Center Express, and Integrated Contract Distribution.

The topic areas listed are general guidelines for the type of content that is likely to appear on the exam. Please note, however, that other relevant or related topic areas may also appear.

Exam Sections and Sub Task Objectives

		Exam Topics	√
1.00		Infrastructure Protocols	
1.01		DNS	
1.02		TFTP	
1.03		NTP	
1.04		Power over Ethernet	
1.05		Voice and Data VLAN	
1.06		Troubleshooting Infrastructure Protocol	
2.00		Telephony Protocols	
2.01		SCCP	
2.02		MGCP	
2.03		SIP	
2.04		H323 and RAS	
2.05		IP Voice Signal Interconnect (CUBE)	
2.06		RTP & cRTP	
2.07		Analog Signalling (FXS/FXO/E&M/CAMA)	
2.08		Digital Signalling (T1/E1. PRI/CAS, Common Channel Signalling vs. Channel Associated Signalling)	
2.09		IOS Dial-peer and Digit Manipulations	
2.10		Troubleshooting Telephony Protocols	
3.00		Cisco Unified Communications Manager (CUCM)	
3.01		Device Registration	

3.02	Device Settings	
3.03	Device Redundancy	
3.04	Codec Selection	
3.05	CUCM Call Features	
3.06	Dial Plan	
3.07	Media Resources	
3.08	CUCM Applications (EM, AC, IPMA)	
3.09	CUCM CTI Integration	
3.10	CUCM Serviceability and OS Administration	
3.11	CUCM Disaster Recovery	
3.12	Troubleshooting CUCM	
4.00	**IOS IP Telephony**	
4.01	CUCME	
4.02	SRST	
4.03	CUE	
4.04	CUCME Call Features	
4.05	IOS Based Call Queueing	
4.06	IOS Media Resources	
4.07	Troubleshooting IOS IP Telephony	
5.00	**QoS**	
5.01	Link Efficiency: LFI, MLPPP, FRF.12, cRTP, VAD	
5.02	Classification and Marking	
5.03	Congestion Management: Queuing	
5.04	CAC: RSVP, GK	
5.05	Traffic Policing and Shaping	
5.06	LAN QoS	
5.07	Troubleshooting QoS	
6.00	**Unified Messaging**	
6.01	Integration	
6.02	MWI	
6.03	Call Handlers	

6.04	VPIM	
6.05	Troubleshooting Unified Messaging	
7.00	**UCCX**	
7.01	Integration	
7.02	ICD Functions	
7.03	Scripting	
7.04	Troubleshooting UCCX	
8.00	**Presence**	
8.01	Presense Components	
8.02	CUPS Administration	
8.03	CUPC	
8.04	Troubleshooting Presence	
9.00	**UC Security**	
9.01	DHCP Snooping	
9.02	OS Hardening	
9.03	Phone Authentication and Encryption	
9.04	TCP/UDP Port List	
9.05	Firewalls and NAT	
9.06	Troubleshooting UC Security	
10.00	**Application Protocols**	
10.01	IP Multicast	
10.02	Video	
10.03	Fax and Modem	
10.04	Troubleshooting Application Protocols	
11.00	**Operations and Network Management**	
11.01	UC Product Upgrade Management	