Cheat Sheet for comprehensive Cisco Certified Network Professional (CCNP) - Collaboration

Cisco Unified Communications Manager (CUCM)

Deployment and Configuration

- **CUCM Deployment Steps:**

- Install prerequisites (Java, SQL, etc.)
- Run CUCM installer
- Configure IP settings
- Run Deployment Wizard
- Configure DNS and NTP
- Add and configure devices

- **CUCM Clustering:**

  - **Primary CUCM:**

- Initial deployment
- Configure cluster parameters

  - **Secondary CUCM:**

- Join existing cluster
- Synchronize configurations

- **Device Configuration:**

  - **Phones:**

- Add phone via Device > Phone
- Configure lines and services
- Assign device pools and CSS

  - **Gateways:**

- Add gateway via Device > SIP Trunk
- Configure IP and signaling protocols
- Set up dial peers

Management and Monitoring
- **CUCM Administration:**

- **User Management:**

- Create users via User Management
- Assign device and services

- **Serviceability:**

- Monitor system health
- Use CallManager Real-Time Monitoring
- Generate and analyze reports

- **Troubleshooting:**

- **Logs:**

- Access via System > Tools > Logs
- Analyze CallManager, CDR, and CMR logs

- **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on devices and services

Cisco Unity Connection (CUC)

Deployment and Configuration
- **CUC Deployment Steps:**

- Install prerequisites
- Run CUC installer
- Configure IP settings
- Run Deployment Wizard
- Integrate with CUCM

- **User and Voicemail Configuration:**

- **User Management:**

- Add users via User Management
- Assign voicemail boxes

- **Voicemail Settings:**

- Configure greetings and options
- Set up auto-attendant

- **CUC Administration:**

  - **User Management:**

- Manage user voicemail settings
- Configure forwarding and notifications

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze Unity Connection logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco Emergency Responder (CER)

Deployment and Configuration
- **CER Deployment Steps:**

- Install prerequisites
- Run CER installer
- Configure IP settings
- Integrate with CUCM and E911 provider

- **Location Configuration:**

  - **Location Profiles:**

- Create and assign location profiles
- Configure emergency numbers

  - **Device Locations:**

- Assign locations to devices
- Verify location accuracy

- **CER Administration:**

  - **Location Management:**

- Monitor and update locations
- Configure location policies

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze CER logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco Jabber

Deployment and Configuration

- **Jabber Deployment Steps:**

- Install prerequisites
- Run Jabber installer
- Configure IP settings
- Integrate with CUCM and CUC

- **User Configuration:**

  - **User Management:**

- Add users via User Management
- Assign Jabber licenses

  - **Jabber Settings:**

- Configure presence and IM settings
- Set up call forwarding and voicemail

- **Jabber Administration:**

  - **User Management:**

- Manage user Jabber settings
- Configure presence and IM policies

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze Jabber logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco Expressway

Deployment and Configuration
- **Expressway Deployment Steps:**

- Install prerequisites
- Run Expressway installer
- Configure IP settings
- Integrate with CUCM and CUC

- **Security Configuration:**

  - **Firewall Rules:**

- Configure inbound and outbound rules
- Set up NAT and port forwarding

  - **Encryption:**

- Enable TLS/SSL encryption
- Configure certificates

- **Expressway Administration:**

  - **Security Management:**

- Monitor and update firewall rules
- Configure encryption policies

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze Expressway logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco Webex

Deployment and Configuration

- **Webex Deployment Steps:**

- Install prerequisites
- Run Webex installer
- Configure IP settings
- Integrate with CUCM and CUC

- **User Configuration:**

  - **User Management:**

- Add users via User Management
- Assign Webex licenses

  - **Webex Settings:**

- Configure meeting and collaboration settings
- Set up call forwarding and voicemail

- **Webex Administration:**

  - **User Management:**

- Manage user Webex settings
- Configure meeting and collaboration policies

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze Webex logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco TelePresence

Deployment and Configuration
- **TelePresence Deployment Steps:**

- Install prerequisites
- Run TelePresence installer
- Configure IP settings
- Integrate with CUCM and CUC

- **Room Configuration:**

  - **Room Management:**

- Add rooms via Device > TelePresence
- Configure room settings and services

  - **Video Settings:**

- Configure video codecs and resolutions
- Set up call forwarding and voicemail

- **TelePresence Administration:**

  - **Room Management:**

- Monitor and update room settings
- Configure video and audio policies

  - **Serviceability:**

- Monitor system health
- Generate and analyze reports

- **Troubleshooting:**

  - **Logs:**

- Access via System > Tools > Logs
- Analyze TelePresence logs

  - **Diagnostics:**

- Use Diagnostics > Trace to capture call traces
- Run diagnostics on services

Cisco Collaboration Tools

Cisco Webex Teams

- **Deployment:**

- Install Webex Teams client
- Integrate with CUCM and CUC

- **Configuration:**

- Configure user accounts
- Set up team collaboration spaces

Cisco Spark Board

- **Deployment:**

- Install Spark Board
- Integrate with CUCM and CUC

- **Configuration:**

- Configure room settings

- Set up collaboration tools

Cisco Collaboration Endpoints
- **Deployment:**

- Install endpoints (phones, video, etc.)
- Integrate with CUCM and CUC

- **Configuration:**

- Configure device settings
- Set up services and features

Best Practices and Tips

Security
- **Encryption:**

- Use TLS/SSL for all communications
- Configure certificates for secure connections

- **Access Control:**

- Use strong passwords and multi-factor authentication
- Restrict access to sensitive data

Performance
- **Optimization:**

- Regularly update software and firmware
- Optimize network settings for low latency

- **Monitoring:**

- Use monitoring tools to track system performance
- Set up alerts for critical issues

Troubleshooting
- **Common Issues:**

- Call failures: Check dial peers and signaling
- Device registration: Verify IP and DNS settings
- Voicemail issues: Check user and mailbox settings

- **Tools:**

- Use CallManager Real-Time Monitoring

- Run diagnostics and capture traces

Summary

- **CUCM:** Core of Cisco Collaboration, manages phones and services

- **CUC:** Voicemail and auto-attendant services

- **CER:** E911 and emergency services

- **Jabber:** Unified communication client

- **Expressway:** Security and connectivity for collaboration

- **Webex:** Meeting and collaboration tools

- **TelePresence:** Video conferencing solutions

- **Best Practices:** Security, performance, and troubleshooting tips

This cheat sheet provides a comprehensive overview of the key components and best practices for Cisco Certified Network Professional (CCNP) - Collaboration. Use this as a quick reference for deployment, configuration, management, and troubleshooting of Cisco Collaboration solutions.

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