

# 3CX Academy Advanced Certification Practice Test (Sample)

## Study Guide



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## **Questions**

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- 1. What does a failure in the firewall checker indicate when troubleshooting audio issues?**
  - A. Potential routing errors**
  - B. Network security blockages**
  - C. Configuration issues in 3CX**
  - D. Hardware malfunction**
- 2. Which of the following is true about calls terminated by the IP phone?**
  - A. A BYE message is sent**
  - B. A CANCEL message is sent**
  - C. A SIP INVITE is sent**
  - D. No messages are sent**
- 3. What functionality does "hot desking" provide in 3CX?**
  - A. Enables users to print documents from any extension**
  - B. Allows logging into any available phone/extension**
  - C. Facilitates the sharing of conference rooms**
  - D. Restricts access to certain extensions only**
- 4. Which of the following describes the function of the 3CX Instance Manager?**
  - A. To manage user accounts**
  - B. To perform batch updates for multiple 3CX instances**
  - C. To monitor network traffic**
  - D. To configure firewall settings**
- 5. What is a requirement for the virtual extension to work properly between master and slave configurations?**
  - A. Must match the public IP addresses**
  - B. Must match the master side virtual extension**
  - C. Must be identical in all settings**
  - D. Must have the same SIP trunk connection**

- 6. What must be different in bridged systems for outgoing calls to function correctly?**
- A. The routing table**
  - B. The numbering plan**
  - C. The SIP settings**
  - D. The network protocols**
- 7. Does the 3CX Instance Manager require a specific hardware configuration?**
- A. Yes, it must be a physical server**
  - B. No, any standard server will suffice**
  - C. Yes, it needs a high-performance processor**
  - D. Only specific brands are compatible**
- 8. Regarding transitions from older configurations to Secure SIP, what must be managed manually?**
- A. All existing user data**
  - B. Secure SIP certificates in devices**
  - C. Network settings for each extension**
  - D. Software updates for the 3CX system**
- 9. Which of the following statements about the Blacklist interval is true?**
- A. It can only be changed to a minimum of 1200 minutes**
  - B. It is set by default to 1800 minutes**
  - C. It will automatically reset every day**
  - D. It influences the number of allowed calls**
- 10. What is a "cold transfer" in a call scenario?**
- A. A transfer where the agent speaks to the receiving party first**
  - B. A transfer that occurs without notice to the receiving party**
  - C. A transfer involving the use of multiple lines**
  - D. A transfer that includes a brief introduction by the agent**

## **Answers**

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1. B
2. A
3. B
4. B
5. B
6. B
7. B
8. B
9. B
10. B

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## **Explanations**

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**1. What does a failure in the firewall checker indicate when troubleshooting audio issues?**

**A. Potential routing errors**

**B. Network security blockages**

**C. Configuration issues in 3CX**

**D. Hardware malfunction**

A failure in the firewall checker indicating network security blockages is crucial in troubleshooting audio issues because the firewall plays a fundamental role in managing traffic between the 3CX system and the external network, including SIP and RTP packets essential for audio communication. If the firewall checker indicates problems, it suggests that the firewall settings may be preventing the necessary audio streams from properly reaching their destination, which can directly lead to issues such as one-way audio or calls dropping. Understanding this aspect helps administrators ensure that the appropriate ports are open and that the firewall is configured to allow the correct traffic, thus enabling successful audio transmission during calls. Ensuring that network security measures do not interfere with VoIP functionality is vital for maintaining clear and reliable communication.

**2. Which of the following is true about calls terminated by the IP phone?**

**A. A BYE message is sent**

**B. A CANCEL message is sent**

**C. A SIP INVITE is sent**

**D. No messages are sent**

A call terminated by an IP phone is signified by the transmission of a BYE message. In the context of the Session Initiation Protocol (SIP), the BYE message is specifically designed to indicate that one party has chosen to end an existing call. Once the call participant sends the BYE message, the other participant acknowledges it with an OK response, which formally concludes the call session. Understanding the other options provides clarity on why they are not applicable in this scenario. A CANCEL message would be used to cancel a pending request for a call establishment, not to terminate an already established session. A SIP INVITE message initiates a call, not terminates it. Lastly, stating that no messages are sent is incorrect because there is indeed a structured process involving the BYE message to formally end the call. Thus, the correct statement accurately reflects the functioning of SIP in terminating a call via an IP phone.

### 3. What functionality does "hot desking" provide in 3CX?

- A. Enables users to print documents from any extension
- B. Allows logging into any available phone/extension**
- C. Facilitates the sharing of conference rooms
- D. Restricts access to certain extensions only

Hot desking in 3CX provides the functionality that allows users to log into any available phone or extension. This feature is particularly beneficial in environments where employees may not have fixed desks, such as in flexible workspaces or during periods of remote or hybrid work. It enables individuals to easily access their personal phone settings and features from any compatible device within the organization's network. By logging into any available extension, users can make and receive calls, access their voicemail, and utilize other personalized settings without being tied to a specific phone or desk. This flexibility increases mobility and productivity, empowering users to work from different locations as needed. The other options describe functionalities that do not align with the concept of hot desking, such as document printing, conference room sharing, or restricting access to extensions, which do not enhance the ability to log into various devices.

### 4. Which of the following describes the function of the 3CX Instance Manager?

- A. To manage user accounts
- B. To perform batch updates for multiple 3CX instances**
- C. To monitor network traffic
- D. To configure firewall settings

The 3CX Instance Manager is specifically designed to streamline the management of multiple 3CX instances from a single interface, which includes the functionality of performing batch updates. This feature allows administrators to efficiently update several instances simultaneously rather than managing each one individually. This capability is especially beneficial for organizations or service providers that operate numerous 3CX systems, as it saves time and reduces the risk of errors during the update process. Managing user accounts, monitoring network traffic, and configuring firewall settings are important tasks associated with VoIP systems, but they do not fall under the primary function of the Instance Manager itself. User account management typically occurs within the 3CX management console. Network traffic monitoring and firewall configuration are generally handled separately, often involving dedicated tools or settings outside the purview of the Instance Manager. Thus, the function of the Instance Manager is clearly aligned with batch updating multiple 3CX instances, making it the correct answer.

**5. What is a requirement for the virtual extension to work properly between master and slave configurations?**

- A. Must match the public IP addresses**
- B. Must match the master side virtual extension**
- C. Must be identical in all settings**
- D. Must have the same SIP trunk connection**

For a virtual extension to work properly between master and slave configurations, it is essential that it matches the master side virtual extension. This match is crucial because the virtual extension serves as a link between the two configurations, ensuring that calls can be routed correctly and that the settings align in a functional way. When the virtual extension on the slave configuration mirrors the master's specifications, including parameters such as extension number and associated settings, it facilitates seamless communication and call handling interoperability. This synchronization ensures that users can access the system and maintain operational continuity without issues. While it is important for the overall configurations to share certain aspects, such as SIP trunk connectivity and networking setups, the direct matching of the virtual extension on the master side is the focal requirement for efficient communication between master and slave setups. Other settings may vary, but the virtual extension's alignment is critical for proper functionality.

**6. What must be different in bridged systems for outgoing calls to function correctly?**

- A. The routing table**
- B. The numbering plan**
- C. The SIP settings**
- D. The network protocols**

For outgoing calls to function correctly in bridged systems, the numbering plan must be properly configured and distinct. In a bridged scenario, different systems may be using their own dialing formats or country-specific numbering schemes. A consistent numbering plan ensures that when a call is initiated, the call is routed correctly across different systems or locations. Properly aligning the numbering plans allows for seamless communication across various platforms, thus ensuring that users can make outgoing calls without encountering mismatched dialing formats that may lead to call failures. If the numbering plans do not align, calls may be incorrectly routed or fail altogether, leading to poor user experience and operational disruption. In contrast, the routing table, SIP settings, and network protocols do play significant roles in call processing and establishing connections but do not specifically address the critical element of how numbers are formatted and recognized between different systems. This makes the numbering plan a key focus in ensuring outgoing calls are processed accurately in a bridged environment.

**7. Does the 3CX Instance Manager require a specific hardware configuration?**

- A. Yes, it must be a physical server**
- B. No, any standard server will suffice**
- C. Yes, it needs a high-performance processor**
- D. Only specific brands are compatible**

The idea that any standard server will suffice for the 3CX Instance Manager is accurate because the software is designed to be compatible with a broad range of hardware configurations. This flexibility allows organizations to deploy the 3CX system according to their existing infrastructure without needing to invest in proprietary or high-end hardware. 3CX can run on both physical and virtual environments, meaning that as long as the server meets the minimum requirements recommended by 3CX in terms of CPU, memory, and storage, it can effectively host the application. This adaptability is particularly beneficial for businesses that utilize a mix of hardware or those that might opt for cost-effective solutions using what they already have available. While higher performance hardware might improve performance under heavy loads or increase capacity, it is not a strict requirement for the successful installation and operation of the 3CX Instance Manager.

**8. Regarding transitions from older configurations to Secure SIP, what must be managed manually?**

- A. All existing user data**
- B. Secure SIP certificates in devices**
- C. Network settings for each extension**
- D. Software updates for the 3CX system**

Managing Secure SIP certificates in devices is crucial when transitioning from older configurations to a more secure setup. This process typically requires manual intervention because certificates are often unique to each device and must be installed properly to ensure secure communication. When setting up Secure SIP, it's necessary to generate and install the appropriate SSL certificates on the endpoints (like IP phones and softphones). This manual management guarantees that each device can authenticate the SIP server and establish secure communications, minimizing vulnerabilities associated with unencrypted traffic. The other options pertain to different aspects of the transition. While user data could potentially be migrated automatically depending on the system's capabilities, SSL certificate deployment requires explicit attention to each device's configuration. Network settings for extensions and software updates, while important, are usually part of a broader automated system management strategy and do not inherently require the same level of manual oversight specific to Secure SIP certificate configuration.

**9. Which of the following statements about the Blacklist interval is true?**

- A. It can only be changed to a minimum of 1200 minutes**
- B. It is set by default to 1800 minutes**
- C. It will automatically reset every day**
- D. It influences the number of allowed calls**

The statement that it is set by default to 1800 minutes is true. In the context of a phone system's blacklist feature, this setting determines how long a number will remain in the blacklist after being added due to suspicious or unwanted behavior. The duration of 1800 minutes (or 30 hours) provides a significant window during which calls from that number will be blocked, helping to mitigate issues related to unwanted communications. This default setting helps administrators manage blacklisted numbers effectively, ensuring that malicious or spam calls are filtered out for a longer period, providing a balance between accessibility and security in communications. Adjusting this time interval may be beneficial for different organizational needs but starting at 1800 minutes is a common configuration to prevent abuse while still allowing room for legitimate calling patterns to resume.

**10. What is a "cold transfer" in a call scenario?**

- A. A transfer where the agent speaks to the receiving party first**
- B. A transfer that occurs without notice to the receiving party**
- C. A transfer involving the use of multiple lines**
- D. A transfer that includes a brief introduction by the agent**

In a call scenario, a "cold transfer" refers to a transfer that occurs without notice to the receiving party. This means the agent handling the call does not inform the recipient about the nature of the call or provide any context before transferring the caller. The recipient of a cold transfer typically answers the call without any awareness of who is calling or why, which can lead to confusion or a lack of preparedness on their part to handle the incoming inquiry. When we consider other potential interpretations for call transfers, they focus on informed transitions. For instance, a transfer with a brief introduction by the agent allows the receiving party to be aware of the caller's needs and context, enhancing the call's continuity. In contrast, speaking to the receiving party before transferring or using multiple lines suggests a more involved process, which does not align with the characteristics of a cold transfer. Therefore, it's essential to understand the specific implications of a cold transfer in communications, particularly in customer service and support environments, to ensure effective handling of calls.