CCNP Software-Defined Wide Area Network (SD-WAN) Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- **Practice answering questions under realistic conditions,**
- **Improve accuracy and speed,**
- **Review explanations to strengthen weak areas, and**
- **Approach the exam with greater confidence.**

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here’s how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 – 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don’t just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There’s no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

1. **Explain the role of vBond in Cisco SD-WAN bootstrap and certificate-based enrollment.**

   A. **vBond authenticates new devices, provides current vSmart/vManage reachability, and guides devices to enroll with vManage using certificates during initial bootstrap.**

   B. **vBond configures QoS policies.**

   C. **vBond manages VPNs.**

   D. **vBond handles data-plane encryption.**

2. **Which overlay transport protocol carries encrypted control and data traffic between WAN Edge devices?**

   A. **DTLS/TLS**

   B. **CAPWAP**

   C. **STP**

   D. **SNMP**

3. **Which SD-WAN component provides centralized provisioning, policy, and visibility through a web-based interface?**

   A. **vBond**

   B. **vSmart**

   C. **WAN Edge**

   D. **vManage**

4. **Data policy governs which aspects of traffic in the SD-WAN overlay?**

   A. **Path selection, shaping, and SLA-based actions**

   B. **Route advertisement only**

   C. **Physical link selection**

   D. **IP addressing only**

5. **Which Cisco SD-WAN feature accelerates branch deployment by automatic controller discovery and onboarding?**

   A. **Zero-touch provisioning**

   B. **BFD monitoring**

   C. **STP optimization**

   D. **BPDU filtering**

6. Which policy category controls route advertisement and path preference decisions?

A. File policy

B. Control policy

C. URL policy

D. SNMP policy

7. Which Cisco SD-WAN feature coordinates centralized templates for consistent device onboarding and policy application?

A. Device templates

B. VPN segmentation

C. Centralized data policy

D. App-aware routing

8. Which policy construct controls centralized route advertisement and acceptance behavior?

A. QoS policy

B. Control policy

C. Access policy

D. Logging policy

9. What are the prerequisites for Zero-Touch Provisioning to provision a new edge?

A. Manual device configuration after boot.

B. Initial lead time before a device can join.

C. No central controller interaction needed.

D. Prerequisites include initial reachability to vBond/vManage and configuration templates.

10. In Cisco SD-WAN, OMP routes are present on vSmart but absent from WAN Edge routing tables. Which issue is the most likely cause?

A. CAPWAP join failure

B. EtherChannel suspension

C. STP root inconsistency

D. Control policy filtering the routes

Answers

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

Explanations

1. Explain the role of vBond in Cisco SD-WAN bootstrap and certificate-based enrollment.

A. vBond authenticates new devices, provides current vSmart/vManage reachability, and guides devices to enroll with vManage using certificates during initial bootstrap.

B. vBond configures QoS policies.

C. vBond manages VPNs.

D. vBond handles data-plane encryption.

vBond serves as the bootstrap orchestrator that gets a new Cisco SD-WAN device into the fabric. On first boot, the device uses its pre-provisioned identity to contact vBond, which authenticates the device and confirms it's allowed to join the network. vBond then provides the device with current reachability to the SD-WAN controllers (vSmart and vManage) so the device knows where to connect. It also guides the device through certificate-based enrollment, coordinating with the certificate authority and vManage so the device obtains a valid certificate and enrolls to receive its full fabric configuration. Once enrolled, the device can join the overlay and start exchanging policies via vManage through vSmart. vBond does not configure QoS policies, manage VPNs, or handle the data-plane encryption itself. QoS and VPN management are handled by vManage/vSmart, and the actual data-plane encryption is established as part of the overlay tunnels between devices, not by vBond.

2. Which overlay transport protocol carries encrypted control and data traffic between WAN Edge devices?

A. DTLS/TLS

B. CAPWAP

C. STP

D. SNMP

The overlay transport protocol used to carry encrypted control and data traffic between WAN Edge devices is DTLS/TLS. In SD-WAN, the overlay tunnel must secure both control-plane messages (routing, signaling, policy) and data-plane traffic. TLS provides mutual authentication and encryption for control communications, while DTLS brings the same security to datagram (UDP) traffic, which many overlays use for efficiency and NAT traversal. This setup ensures confidentiality, integrity, and authenticity across the entire overlay between WAN Edges. The other options aren't suited for this role: CAPWAP is for wireless AP management, STP is a layer 2 loop-prevention protocol, and SNMP is a management protocol.

3. Which SD-WAN component provides centralized provisioning, policy, and visibility through a web-based interface?

A. vBond

B. vSmart

C. WAN Edge

D. vManage

The function of central provisioning, policy, and visibility delivered through a web-based interface is provided by the management plane component that hosts the GUI for configuration and monitoring. This is vManage. It acts as the centralized controller for the SD-WAN fabric, letting you create and apply device templates, push configurations to WAN Edge devices, define and enforce routing and security policies, and view dashboards that show the health and performance of the network. vBond focuses on initial device authentication and secure onboarding, not on providing a web UI for provisioning. vSmart handles the control plane, distributing policies and routing information to edges, but it isn't the web-based provisioning interface. WAN Edge devices are the traffic-forwarding endpoints; they rely on vManage for centralized configuration rather than providing the management interface themselves. So, the web-based centralized provisioning, policy, and visibility capability belongs to vManage.

4. Data policy governs which aspects of traffic in the SD-WAN overlay?

A. Path selection, shaping, and SLA-based actions

B. Route advertisement only

C. Physical link selection

D. IP addressing only

Data policies in an SD-WAN overlay govern how user traffic is treated across the network. They determine which path the traffic takes, how the traffic is shaped or prioritized, and what actions are taken to meet service-level objectives. Path selection is about choosing the best available transport for a given flow (for example, routing certain apps over the lowest-latency link while keeping bulk traffic on cheaper paths). Shaping and QoS control how much bandwidth a flow or class of traffic can use, and how different classes are prioritized, ensuring critical applications get the performance they need. SLA-based actions enforce performance targets—if latency, jitter, or packet loss breach thresholds, the policy can trigger changes such as rerouting, altering priority, or applying different rate limits to maintain agreed service levels. The other options describe aspects that aren't about how traffic is treated inside the overlay. Route advertisement is a control-plane activity, not a data-policy action. Physical link selection is encompassed by path selection but data policies aren't limited to choosing a single physical link. IP addressing is separate from traffic handling and does not define how traffic is managed across the overlay.

5. Which Cisco SD-WAN feature accelerates branch deployment by automatic controller discovery and onboarding?

A. Zero-touch provisioning

B. BFD monitoring

C. STP optimization

D. BPDU filtering

Zero-touch provisioning accelerates branch deployment by letting devices automatically discover the SD-WAN controllers and enroll into the fabric without manual configuration. When a new branch edge powers up, it uses a predefined bootstrap to reach the control plane—typically starting with the vBond orchestrator for initial authentication and connectivity. Once trust is established, the device pulls its policy and configuration from the central manager (vManage) and registers with the vSmart controllers, enabling the branch to start forwarding traffic with minimal human intervention. This automation dramatically speeds up site-by-site deployments and reduces the risk of misconfiguration. Bidirectional Forwarding Detection is about rapid link-failure detection, not onboarding. STP optimization and BPDU filtering relate to Layer 2 bridging behavior, not the provisioning or onboarding of SD-WAN devices.

6. Which policy category controls route advertisement and path preference decisions?

A. File policy

B. Control policy

C. URL policy

D. SNMP policy

Route advertisement and path preference decisions are made by the control plane, so they are governed by the control policy. In SD-WAN, the control policy defines how routing information is shared with other devices and how the best path is chosen for each destination. It determines which routes get advertised to peers and which transport link to prefer based on metrics, SLA requirements, application type, or other criteria. This is distinct from how traffic is finally forwarded once it's on the data plane, which is handled by data-plane policies. Other policy categories handle different concerns: file policy relates to file transfer controls, URL policy to web-content filtering or redirection, and SNMP policy to management and monitoring access. None of these dictate how routes are advertised or how paths are selected, which is why the control policy is the correct choice.

7. Which Cisco SD-WAN feature coordinates centralized templates for consistent device onboarding and policy application?

A. Device templates

B. VPN segmentation

C. Centralized data policy

D. App-aware routing

Coordinating consistent device onboarding and policy application across the SD-WAN fabric is accomplished through device templates. Device templates in the controller define a reusable, centralized set of settings and policies that can be applied to many devices as they join the network. When a new edge device is onboarded, it is associated with a template that specifies common parameters (such as device role, site ID, VPN configurations, time settings, and policy defaults) and the related security and routing policies. This ensures every device starts with the same baseline configuration and governance, eliminating manual per-device setup and reducing configuration drift. The other options address different functions: VPN segmentation is about isolating traffic within VPNs, not provisioning or standardizing onboarding; centralized data policy governs data-plane policy decisions rather than onboarding templates; and app-aware routing determines how traffic is steered based on application needs, not how devices are onboarded or policies are initially applied.

8. Which policy construct controls centralized route advertisement and acceptance behavior?

A. QoS policy

B. Control policy

C. Access policy

D. Logging policy

Routing advertisement and acceptance in a centralized SD-WAN environment are governed by a control policy. This policy construct defines how routes are shared between devices (which routes to advertise, to which links, and which routes to accept), and it can assign attributes or filtering rules to shape routing decisions across the network. By centralizing these rules, the controller ensures consistent routing behavior across all sites. Other policy types serve different purposes: QoS policy manages how traffic is treated (priority, bandwidth, shaping); Access policy controls who or what can connect or access resources; Logging policy determines what events are recorded. None of these directly steer which routes are advertised or accepted, which is why the control policy is the appropriate choice.

9. What are the prerequisites for Zero-Touch Provisioning to provision a new edge?

A. Manual device configuration after boot.

B. Initial lead time before a device can join.

C. No central controller interaction needed.

D. Prerequisites include initial reachability to vBond/vManage and configuration templates.

Zero-Touch Provisioning works by letting a new edge boot with minimal local configuration and then reach the SD-WAN control plane to receive its full setup. The essential prerequisites are that the edge can reach the orchestration components, specifically vBond and vManage, and that the necessary configuration templates are already stored in vManage. vBond handles initial authentication and helps the edge discover a path to vManage, while vManage holds the device templates, policies, and parameters that will be applied to the edge automatically. With these pieces in place, the edge can boot, authenticate, join the fabric, download its template, and configure itself without manual intervention. If reachability to vBond/vManage or the availability of templates is missing, provisioning cannot proceed automatically. Manual post-boot configuration isn't part of ZTP, and there is no required lead time before the device can join when these prerequisites exist.

10. In Cisco SD-WAN, OMP routes are present on vSmart but absent from WAN Edge routing tables. Which issue is the most likely cause?

A. CAPWAP join failure

B. EtherChannel suspension

C. STP root inconsistency

D. Control policy filtering the routes

In Cisco SD-WAN, OMP distributes routing information from vSmart to WAN Edges, but what actually gets installed on an edge depends on the edge's control policies. If OMP routes exist on vSmart but don't appear in the WAN Edge routing table, it's because a control policy on the edge is filtering those routes and preventing their import. The policy might deny certain prefixes, rely on tags, or have conditions that don't match the routes, so they're dropped before being installed in the edge's routing table. CAPWAP join failures would stop the edge from joining the fabric and OMP exchange altogether, not result in selective route absence. EtherChannel suspension affects link aggregation, not the selective import of routes. STP root inconsistencies pertain to Layer 2 topology and aren't about OMP route distribution. To fix this, inspect the WAN Edge control policies and their import rules for those routes, adjust the policy to permit the prefixes, and verify route tagging/matching.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

https://ccnpsdwan.examzify.com

We wish you the very best on your exam journey. You've got this!