

CISCO NETWORK PROGRAMMABILITY DESIGN AND IMPLEMENTATION SPECIALIST (NPDESI) PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

<https://cisconpdesi.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

SAMPLE

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

SAMPLE

1. In the DevOps culture, what does the acronym CALMS stand for?
 - A. Culture, Automation, Lean, Manageability, Source Code
 - B. Culture, Automation, Lean, Measurement, Sharing
 - C. Culture, Autonomy, Lean, Measurement, Speed
 - D. Culture, Autonomy, Limited, Manageability, Speed
2. NETCONF operates primarily over which transport protocol?
 - A. UDP
 - B. MQTT
 - C. TCP
 - D. FTP
3. What command is used to execute a command with root privileges?
 - A. pushd
 - B. sudo
 - C. cat
 - D. head
4. Which file is commonly referenced for DNS information?
 - A. resolv.conf
 - B. /etc/network/interfaces
 - C. host
 - D. dns.conf
5. Which role in APIC-EM has the least amount of privileges?
 - A. Administrator Assistant
 - B. Observer
 - C. Installer
 - D. Policy Administrator
6. Which command would you use to check DNS resolution of a specific hostname?
 - A. ping
 - B. dig
 - C. nslookup
 - D. traceroute

- 7. Which management protocol is tightly coupled with YANG?**
- A. NETCONF
 - B. REST
 - C. RESTCONF
 - D. gRPC
- 8. What does APIC-EM's northbound communication rely on?**
- A. SNMP
 - B. CLI
 - C. REST APIs
 - D. CDP
- 9. What command configures a repository to use a remote Git server?**
- A. git link
 - B. git remote add
 - C. git push origin
 - D. git connect
- 10. What characteristics are part of the Agile Software Development Process?**
- A. Requires well-defined requirements upfront
 - B. Use sprints
 - C. Linear Development
 - D. Iterates through the life of the project

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. In the DevOps culture, what does the acronym CALMS stand for?

- A. Culture, Automation, Lean, Manageability, Source Code
- B. Culture, Automation, Lean, Measurement, Sharing**
- C. Culture, Autonomy, Lean, Measurement, Speed
- D. Culture, Autonomy, Limited, Manageability, Speed

The acronym CALMS, which plays a significant role in the DevOps culture, stands for Culture, Automation, Lean, Measurement, and Sharing. Each component contributes to fostering an effective DevOps environment. Culture emphasizes the importance of collaboration between development and operations teams, breaking down silos and promoting a culture of shared responsibilities and common goals. This collaborative culture is foundational for successful DevOps practices. Automation refers to the need for automating repetitive tasks and processes within software development and IT operations. Automation helps improve efficiency, reduce errors, and speed up deployments, thereby allowing teams to focus on more strategic tasks. Lean principles aim to eliminate waste and enhance the flow of value to customers. By adopting lean practices, organizations can streamline processes and optimize resource utilization, which is critical in a fast-paced, continuous delivery environment. Measurement involves the practice of capturing data and analyzing it to understand performance, identify areas for improvement, and guide decision-making. Metrics and KPIs help teams assess how well they are meeting objectives and can inform future strategies. Sharing encourages open communication and sharing of knowledge, tools, and practices within teams and across organizations. This transparency helps in building trust, learning from each other, and fostering a collaborative environment that is essential in a successful DevOps culture.

2. NETCONF operates primarily over which transport protocol?

- A. UDP
- B. MQTT
- C. TCP**
- D. FTP

NETCONF primarily operates over TCP, which is a reliable, connection-oriented transport protocol that ensures messages are delivered in the correct order without errors. This reliability is crucial for the management and configuration of network devices, as it allows NETCONF to provide consistent and secure communications between clients and devices. The use of TCP helps manage the complexities of interruptions in communication, such as packet loss or reordering, which is vital for maintaining state and consistency in network operations. The other transport protocols mentioned, such as UDP, MQTT, and FTP, serve different purposes. For example, UDP is a connectionless protocol that does not guarantee delivery or order, making it less suitable for configuration tasks that rely on message integrity. MQTT is a lightweight messaging protocol primarily used for IoT applications, while FTP is designed for file transfer rather than real-time management and configuration tasks that NETCONF is built to handle. Hence, TCP's characteristics make it the most appropriate choice for NETCONF operations.

3. What command is used to execute a command with root privileges?

- A. pushd
- B. sudo**
- C. cat
- D. head

The command that is used to execute a command with root privileges is "sudo." It stands for "superuser do," and it allows authorized users to run programs as the superuser or another user, as specified by the security policy configured in the system. Using "sudo" is particularly important in Unix-like operating systems, where many administrative tasks require elevated permissions that a regular user does not possess. By prefixing a command with "sudo," the user is granted temporary elevated privileges to perform actions that usually require root access, which enhances security by limiting the need to log in as the root user. Other commands in the list have different functionalities. For instance, "pushd" is used for managing directories in the command line, "cat" is utilized for displaying the contents of files, and "head" is used to view the beginning of a file. These commands do not provide the ability to execute tasks with elevated permissions and are primarily focused on file manipulation and navigation.

4. Which file is commonly referenced for DNS information?

- A. resolv.conf**
- B. /etc/network/interfaces
- C. host
- D. dns.conf

When discussing DNS information within Linux and Unix-like operating systems, the file commonly referenced is "resolv.conf". This file is essential because it contains configuration information that allows the system resolver to find DNS servers and thereby resolve domain names into IP addresses. The "resolv.conf" file typically includes directives that specify the nameserver's IP addresses, search domains, and options for DNS resolution. When a user or application queries a domain name, the system first consults this file to determine which DNS servers to query. The presence of this file is critical for proper DNS functionality on a system, making it the standard configuration file for DNS settings. The other options serve different purposes: for instance, "/etc/network/interfaces" is primarily associated with network interface configurations, "host" may refer to the command or program used to query DNS, and "dns.conf" is not a standard file in typical DNS setups. Thus, "resolv.conf" stands out as the correct reference for managing DNS information in a system environment.

5. Which role in APIC-EM has the least amount of privileges?

- A. Administrator Assistant
- B. Observer**
- C. Installer
- D. Policy Administrator

The role of Observer in APIC-EM (Application Policy Infrastructure Controller - Enterprise Module) is designed to have the least amount of privileges among the different user roles. Observers are primarily provided with read-only access, allowing them to view information about the network without the ability to make any changes or modifications to the system's configuration. This role is particularly useful for stakeholders who need to monitor the network's status or review data and reports without risking any alterations to the network settings or policies. They can access network health statistics, logs, and resources to stay informed without impacting the operational integrity of the network. In contrast, the other roles—Administrator Assistant, Installer, and Policy Administrator—are designed with greater privileges, enabling users to perform specific tasks that involve managing and configuring the network environment, thus making them more powerful than the Observer role.

6. Which command would you use to check DNS resolution of a specific hostname?

- A. ping
- B. dig**
- C. nslookup
- D. traceroute

The command that is most commonly used to check DNS resolution of a specific hostname is "nslookup." This utility is designed specifically for querying the Domain Name System (DNS) to obtain domain name or IP address mapping information. When you use nslookup, you can perform lookup operations to retrieve the IP address associated with a hostname or vice versa. It provides a simple interface to interact with DNS servers and can also help troubleshoot DNS-related issues. While "dig" (which stands for Domain Information Groper) is also used for DNS queries and provides detailed information about DNS records, it is often regarded as more advanced and typically favored by network administrators for in-depth DNS analysis. Nevertheless, for straightforward hostname resolution, "nslookup" is widely used due to its simplicity and ease of access. The "ping" command, on the other hand, primarily checks the reachability of a host and can reveal the IP address associated with that host through DNS resolution indirectly, but it is not a dedicated DNS query tool. "Traceroute" focuses on displaying the route packets take to reach a network destination, which does not specifically address DNS resolution. In summary, "nslookup" is the appropriate choice for checking DNS resolution as it directly queries DNS servers to resolve hostnames

7. Which management protocol is tightly coupled with YANG?

- A. NETCONF**
- B. REST
- C. RESTCONF
- D. gRPC

The management protocol that is tightly coupled with YANG is NETCONF. NETCONF, or Network Configuration Protocol, was designed to provide a standardized way to install, manipulate, and delete the configuration of network devices. One of its main features is its use of XML to encode data and configuration information. YANG, which stands for Yet Another Next Generation, is a data modeling language used to model configuration and state data for network devices. The synergy between NETCONF and YANG comes from the fact that NETCONF utilizes the YANG data models to define the capabilities and structure of device configurations. When using NETCONF, network administrators can retrieve, modify, and manage configurations based on these YANG models, ensuring that device configurations adhere to defined structures and semantics. While REST and RESTCONF also deal with network management, RESTCONF specifically is a RESTful API that works with YANG data models through HTTP, facilitating web-based access to the configuration. gRPC, on the other hand, is a modern open-source remote procedure call (RPC) framework that can also interface with YANG, but it's not as tightly integrated as NETCONF is. Thus, NETCONF's inherent design to work directly with YANG makes it the most closely associated protocol.

8. What does APIC-EM's northbound communication rely on?

- A. SNMP
- B. CLI
- C. REST APIs**
- D. CDP

APIC-EM, which stands for Application Policy Infrastructure Controller Enterprise Module, utilizes REST APIs for its northbound communication. REST APIs provide a standardized way for different applications or services to communicate with one another over HTTP. This is particularly important in network programmability as it allows for interaction with the APIC-EM from various applications or orchestration tools. By using REST APIs, APIC-EM enables developers and admins to create scripts and applications that can easily manage the network infrastructure, automate tasks, and integrate with other systems. This flexibility is a cornerstone of modern network programmability, allowing for easier integration into existing environments and facilitating operations like network monitoring, configuration, and management. The other options mentioned—SNMP, CLI, and CDP—represent different forms of communication. SNMP is primarily used for network management and monitoring, while CLI facilitates direct command-line interface interactions with devices. CDP, on the other hand, relates to device discovery and topology information rather than the application-level interactions that REST APIs are designed for. In the context of APIC-EM's northbound communication, the reliance on REST APIs highlights its focus on integration and programmability within modern network environments.

9. What command configures a repository to use a remote Git server?

- A. git link
- B. git remote add**
- C. git push origin
- D. git connect

The command that configures a repository to use a remote Git server is "git remote add." This command is essential in the Git version control system, as it allows a local repository to establish a connection to a remote repository, enabling collaboration and version sharing. When you execute this command, you typically provide it with two arguments: the name you want to assign to the remote (often "origin" by convention) and the URL of the remote repository. This setup allows you to pull changes from and push changes to the specified remote server seamlessly. Setting up a remote repository is a crucial step in using Git effectively, especially when working in team environments or managing code hosted on platforms like GitHub or GitLab. It lays the foundation for other commands, such as fetching updates or pushing local commits to the remote repo.

10. What characteristics are part of the Agile Software Development Process?

- A. Requires well-defined requirements upfront
- B. Use sprints**
- C. Linear Development
- D. Iterates through the life of the project

The Agile Software Development Process is characterized by its iterative and incremental approach, which allows for flexibility and adaptability throughout the development lifecycle. One of the key characteristics of Agile is the use of sprints. Sprints are time-boxed periods, typically lasting from one to four weeks, during which a specific set of features or functionalities is developed and delivered. This enables teams to focus on smaller, manageable tasks, gather feedback quickly, and make necessary adjustments in subsequent sprints. By utilizing sprints, Agile teams can prioritize face-to-face communication, which fosters collaboration and promotes a shared understanding of the project's goals. This iterative approach also allows teams to revise project scope and incorporate changing requirements, enhancing the responsiveness to stakeholder needs. The other characteristics mentioned do not align with Agile principles. For example, requiring well-defined requirements upfront goes against the Agile philosophy, which emphasizes flexibility and welcoming changes even late in the development process. Similarly, a linear development model, often associated with waterfall methodologies, does not fit the iterative nature of Agile. Finally, while Agile does iterate through the life of the project, the specific characteristic that defines Agile practice most clearly in this context is the use of sprints.

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://ciscopdesi.examzify.com>

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

SAMPLE