



200-401

Managing Industrial Networks with Cisco
Networking Technologies

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SUCCESS GUIDE TO CISCO CERTIFICATION

Exam Summary – Syllabus – Questions

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Introduction to 200-401 Exam on Managing Industrial Networks with Cisco Networking Technologies

A great way to start the Cisco Industrial Networking Specialist (IMINS) preparation is to begin by properly appreciating the role that syllabus and study guide play in the Cisco 200-401 certification exam. This study guide is an instrument to get you on the same page with Cisco and understand the nature of the Cisco Industrial Networking exam.

Our team of experts has composed this Cisco 200-401 exam preparation guide to provide the overview about Cisco Managing Industrial Networks with Cisco Networking Technologies exam, study material, sample questions, practice exam and ways to interpret the exam objectives to help you assess your readiness for the Cisco IMINS exam by identifying prerequisite areas of knowledge. We recommend you to refer the simulation questions and practice test listed in this guide to determine what type of questions will be asked and the level of difficulty that could be tested in the Cisco Industrial Networking certification exam.

Cisco 200-401 Certification Details:

Exam Name	Managing Industrial Networks with Cisco Networking Technologies
Exam Number	200-401 IMINS
Exam Price	\$300 USD
Duration	75 minutes
Number of Questions	55-65
Passing Score	Variable (750-850 / 1000 Approx.)
Recommended Training	Managing Industrial Networks with Cisco Networking Technologies Networking Fundamentals for Industrial Control Systems (INICS) Control Systems Fundamentals for Industrial Networking (ICINS)
Exam Registration	PEARSON VUE
Sample Questions	Cisco 200-401 Sample Questions
Practice Exam	Cisco Industrial Networking Specialist Practice Test

Cisco 200-401 Exam Syllabus:

Section	Weight	Objectives
Install, Replace, and/or Remove an End-Device	15%	<ul style="list-style-type: none"> - Demonstrate knowledge of different industrial end-point devices and the interconnections for those devices to perform appropriately in an industrial setting to incorporate elements of bandwidth, real-time, precision, etc. - Given a config script for a topology, determine the appropriate location for the installation of the industrial ruggedized end-point device and how that device will interact with other elements - Ensure proper industrial network operation of a given end-device following replacement by verifying that industrial ruggedized elements (ports, IP address, connectivity, subnet mask, default gateway) are appropriately configured/connected - Demonstrate an understanding of safe physical installation of various industrial ruggedized end-devices within an industrial setting following a terminal block diagram
Install, Replace, and/or Remove an Infrastructure Device	23%	<ul style="list-style-type: none"> - Demonstrate a knowledge of how different industrial application/network protocols operate within the network topology (Ethernet/IP, 61850, etc.) - Demonstrate familiarity with basic CLI/GUI configuration within an industrial network by accessing, configuring, saving, validating (ports, IP address, connectivity, subnet mask, default gateway) and exiting a network device - Demonstrate understanding of safe physical installation of various industrial ruggedized network devices within an industrial setting, (e.g. following a schematic such as a terminal block diagram, and the interdependencies of the network infrastructure devices) - Demonstrate knowledge of different industrial network infrastructure devices, their places in the industrial network, and the networking/device characteristics such as QoS, precise timing, industrial topologies, network resiliency, ruggedization, bandwidth, etc. - Illustrate understanding of the interconnections for the full network within a validation of the entire industrial network connectivity and that it is aligned with the provided design diagram (correct number of devices and/or IP addresses, cables are properly labelled and connected to the proper places, usage of appropriate icons) to

Section	Weight	Objectives
		<p>include ensuring that configuration files are up to date and available</p> <ul style="list-style-type: none"> - Illustrate an understanding of the safety and security risks (company or industry, e.g. Purdue model) for a given industrial infrastructure device and apply the appropriate steps to secure it (e.g. are unused ports turned off, telnet versus SSH, https versus http, network segmentation)
<p>Install, Replace, and/or Remove Cables (Network and/or Power)</p>	<p>10%</p>	<ul style="list-style-type: none"> - Demonstrate the selection of cable channel for an industrial application with appropriate cable and connectors, for example two-pair, four-pair cable, high-flex, high- EMI, unshielded, fiber, and copper - Demonstrate safe and secure installation, identification, and documentation best practices for various industrial environments including grounding, bonding, shielding, etc. (for example: TIA1005, TIA568c.0, EN10174, TIA606b, and NEC article 800) - Identify the steps and tools for validating the newly installed cabling and connectors (for example: TIA568c.2)
<p>Troubleshooting</p>	<p>35%</p>	<ul style="list-style-type: none"> - Layer 1 <ol style="list-style-type: none"> 1. Identify cable or device issues by visual inspection, test tools, and examining traffic statistics via system logs and/or end devices UIs 2. Characterize the symptoms associated with a duplex mismatch situation - Layer 2 <ol style="list-style-type: none"> 1. Given a scenario in an industrial setting, troubleshoot a switch port by reviewing the UI, configuration, link lights, and/or looking at counters or packet capture (e.g. multicast, QoS) 2. Given network symptoms identify the likely errors and the root causes of those errors (e.g. baud rate, network loops, spanning tree) - Layer 3 <ol style="list-style-type: none"> 1. Given a scenario in an industrial setting, troubleshoot a networking device by reviewing the UI, configuration, addressing/subnet mask, link lights, and/or

Section	Weight	Objectives
		<p>looking at counters or packet capture (e.g. routing protocol, QoS, duplicate IP)</p> <ol style="list-style-type: none"> 2. Determine if there is layer 3 connectivity using common tools (e.g. trace route, ping, etc.) <p>- End to End</p> <ol style="list-style-type: none"> 1. Determine if there is application connectivity and appropriate industrial performance using common tools (e.g. trace route, ping, telnet, etc.) <p>- Relevant Networking Issues</p> <ol style="list-style-type: none"> 1. Identify and collect relevant troubleshooting information for issue reporting/escalation/duplication 2. Demonstrate appropriate knowledge to proactively identify cyber and physical security incidents 3. Demonstrate an understanding of secure, safe, and non-disruptive methods during industrial network monitoring and diagnosis
<p>Maintain Appropriate End-Devices and Industrial Network Infrastructure Devices</p>	<p>17%</p>	<ul style="list-style-type: none"> - Given a scenario, ensure reliable back-ups of current configuration are being made - Given a scenario, verify that the appropriate firmware is loaded to support the system - Demonstrate an understanding of the importance of maintaining updated firmware to minimize security holes - Demonstrate an understanding of appropriate techniques to upload software to a Cisco IOS networking device - Provided a deployed asset inventory database illustrate an understanding of appropriate methods for updating and/or maintaining the database (hardware, operating system and patch level, which people have access to different systems) - Demonstrate an understanding of the conditions that cause deterioration of equipment (cables, devices, etc.) as related to industrial environments - As part of the change management process identify the relevant documentation artifacts to be maintained for all stakeholders

200-401 Sample Questions:

01. Why is SSH preferred over Telnet as a method of accessing a network device to alter or view the configuration?

- a) Telnet encrypts only the login information, not the entire transmission.
- b) SSH requires fewer network resources and no additional configuration.
- c) Telnet is more difficult to use and configure than SSH.
- d) SSH encrypts the login and session information.

02. EtherNet/IP is an Ethernet implementation of which protocol?

- a) CIP
- b) Industrial Protocol
- c) DeviceNet
- d) ControlNet

03. At which Layer would you check ACLs for TCP ports being blocked?

- a) Layer 1
- b) Layer 2
- c) Layer 3
- d) Layer 4

04. Which characteristic causes multimode fiber-optic cable to differ from single mode?

- a) by allowing multiple network services in the same cable
- b) shorter maximum network segment length for a given bandwidth
- c) a wider variety of available connector types
- d) use outdoors as well as indoors

05. What do deflections indicate to the time domain reflectometer user?

- a) They indicate splices, water in the cable, split pairs, and discontinuities or faults.
- b) Do not connect live circuit cables to the input of the time domain reflectometer. Connect the cable that is being tested to the cable connector on the front panel of the time domain reflectometer.
- c) Upward deflections indicate high-impedance mismatches or opens, and downward deflections indicate shorts or low-impedance mismatches.
- d) They are used to select the I/O impedance of the time domain reflectometer. You can select 50, 75, 95, or 125 impedances.

06. How does the optical time domain reflectometer use "backscattered" light to make measurements?

- a) It uses pulses to locate and test for sheath faults, damaged conductors, loose connectors, splices, bridge taps, split pairs, and other problems.
- b) It performs wire mapping to measure that all pins are correctly connected.
- c) It correlates the returned light pulses with a location in the fiber.
- d) It measures light-pulse width to measure that all pins are correctly connected.

07. With a Cisco IE 2000 switch, what does a port status LED indicate when it is solid amber?

- a) The port is sending or receiving data.
- b) A link is present.
- c) No link is present.
- d) There is a link fault.
- e) The port is not forwarding.

08. According to the Purdue Reference Model, at which layer would you perform manufacturing operations and control?

- a) Level 0
- b) Level 1
- c) Level 2
- d) Level 3
- e) Level 4

09. In which two ways could you minimize the impact of monitoring an industrial network?

(Choose two.)

- a) Send random messages to a device and see what the response is.
- b) Do frequent ping sweeps to industrial devices to check for their proper operations.
- c) Make a copy of all the network traffic and analyze it offline.
- d) Use an industrial-network-grade IDS-IPS system.

10. What is a reason to use user EXEC mode on an industrial switch?

- a) to verify commands that you have entered
- b) to change terminal settings
- c) to configure VLAN parameters
- d) to configure parameters that apply to the entire switch

Answers to 200-401 Exam Questions:

Question: 01	Question: 02	Question: 03	Question: 04	Question: 05
Answer: d	Answer: a	Answer: d	Answer: b	Answer: c
Question: 06	Question: 07	Question: 08	Question: 09	Question: 10
Answer: c	Answer: e	Answer: d	Answer: c, d	Answer: b

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on feedback@nwexam.com