Let's go cisco live! #CiscoLive



Earning your CCIE Enterprise Wireless

Muhammad Omar Ramzan (Exam Program Manager)
BRKCRT-3450



Cisco Webex App

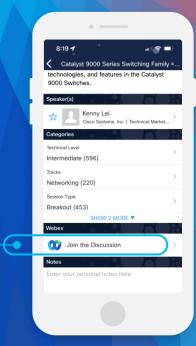
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

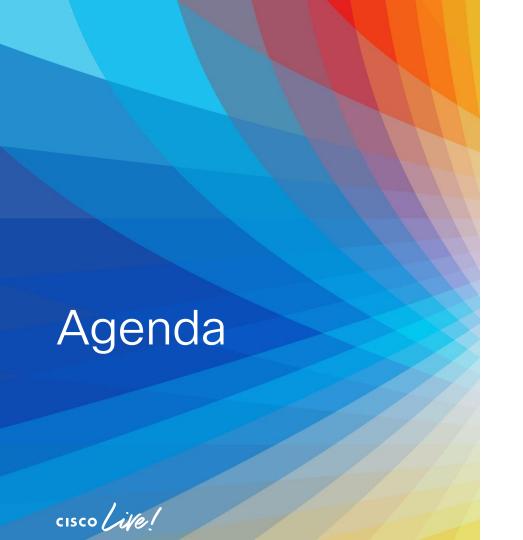
- 1 Find this session in the Cisco Live Mobile App
- 2 Click "Join the Discussion"
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 9, 2023.



https://ciscolive.ciscoevents.com/ciscolivebot/#BRKCRT-3450





- Program Updates
- CCIE Enterprise Wireless Exam
- · LDS Demo
- 9800-CL Deployment and Day 0 Config Demo
- Study, Preparation and Closing

Session Abstract

- If you're starting the journey to gain your CCIE Wireless number, this session is for you!
- The main objective of this session is to provide candidates with clear expectations of what to expect with the exams.
- There is no prerequisite to this session.
- The questions shown as examples are just for the understanding of the item types asked during the exam not the content. The content shown is just for illustration purpose.



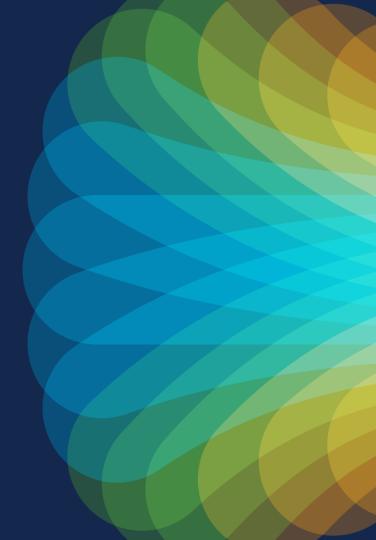
Disclaimer

- Not all topics discussed today appear on every exam
- Due to time restraints, we are unable to discuss every feature and topic described in the exam blueprint





Program Updates





Future Roadmap

Agile & Incremental Revisions

Building a roadmap to update CCIE tracks to ensure technology alignment and skills needed for the current job market.

Minor revisions are changes to the exam topics (blueprints) which contain less than 20% update. It may also include upgrading hardware models and/or updating software versions.

Will continue to provide 6-month notification for any changes/revisions.



Certification Roadmap

How it works:

- 1. Cisco reviews each technology on the same quarterly schedule each year to make sure our exams align with the latest Cisco technologies.
- 2. We announce blueprint changes 3 months in advance along with revised exam topics and release notes.

Q3 (Feb-Apr 2023)

3. We **publish** the updated exam 3 months after the exam blueprint publication.

Data Center and Collaboration Service Provider and CCNA Data Center and Collaboration Security and Enterprise DevNet and CyberOps Security and Enterprise Data Center and Collaboration Service Provider and CCNA Data Center and Collaboration FY2301 FY23Q2 FY2303 FY23Q4 FY2401 FY24Q2 FY2403 FY24Q4 Q2 (Nov-Jan 2023) Q2 (Nov-Jan 2024) Q4 (May-Jul 2023) Q4 (May-Jul 2024) Security and Enterprise DevNet and CyberOps Security and Enterprise Data Center and Collaboration Data Center and Collaboration Service Provider and CCNA Security and Enterprise DevNet and CyberOps = Review certification exams = Announce blueprint changes = Publish updated exam

Q1 (Aug-Oct 2023)

Dates shown reflect Cisco's fiscal year calendar.

Q1 (Aug-Oct 2022)



Q3 (Feb-Apr 2024)

Revision Framework

Major Revision

(Traditional Revision Model)

Blueprint version number v2.1 v3.0

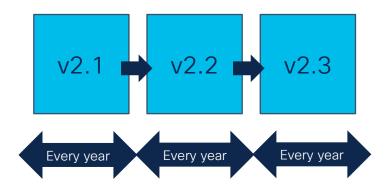
Every 3-5 years

- Large revisions
- Major changes
- Steep learning curve
- Wider Alignment (Product & Technology)

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Minor Revision

(Agile Revision Model)



- Smaller modular revisions
- Incremental changes
- Easy bite-size learning model
- Frequent alignment (Product & Technology)

Blueprint Revision Framework - Comparison

	Major Revision	Minor Revision	
Definition	Larger infrequent changes	Smaller but frequent changes	
Frequency	Every 3-5 years	Every year	
Blueprint Version Number X.Y	X will increment e.g., from 2.1 to 3.0 Y will increment e.g., from 2.1 to 2.2		
Exam Topics Changes	Above 20%	Below 20%	
Topology Changes	Yes	Yes (if needed)	
Software Changes	Yes (major OS revs)	Yes (if needed)	
Hardware/Equipment Model Changes	Yes (EOL, NPI, hw/sw evolution)	No	
Notification / Announcement	6 months	3 months – Associate & Professional 6 months – Expert	

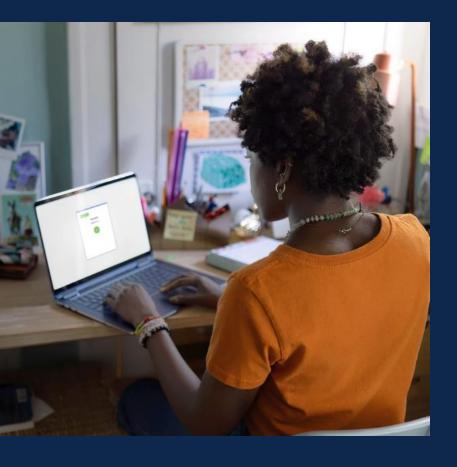


Certification Roadmap

- What's Changing
- Blueprint version number will incrementally update (1.1 to 1.2)
- Minor blueprint revision can result in up to 20% changes in exam topics
- Where necessary, the software version for Cisco products may be upgraded

- What's NOT Changing
- Exam numbers (e.g., CCNA 200-301)
- Notification/Announcement:
 - 3-months for Associate & Professional
 - 6-months for Expert
- Hardware models/equipment do not change in minor revisions, but may change during major revisions





Resources

Release Notes:

- Overview of program technology
- Summary blueprint changes
- Side-by-side versions

Learning Matrix:

- Reference books with chapters identified
- Cisco Live! 365 presentations
- Training courses
- Webinars
- VoDs
- White papers



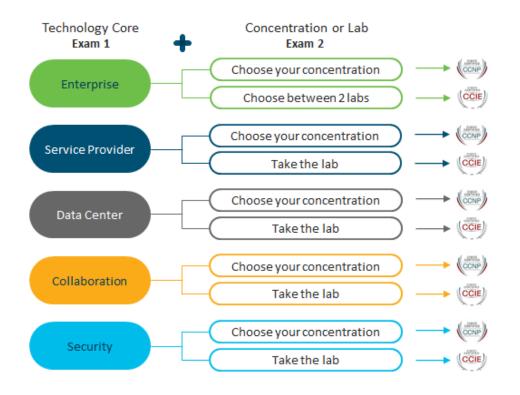
www.cisco.com/go/CertRoadmap



Exam Prep and Enablement



Expert Qualification





Concentration Exam

Choose one concentration exam in your technology. Concentration covers products, solutions, and/or roles.



Lab

Choose one, 8hr lab focusing on full lifecycle. Lab exam covers design, deploy, automate, operate, and optimize.



Expert Recertification

All certifications will be active for three years from the date certification is achieved.

Each time recertification requirements are met; the certification active status will be extended for an additional three years (the sliding window concept). No more *Suspended* year/state.

How to recertify your CCIE?

- o Earn 120 CE credits (ce.cisco.com), or
- o Pass the CCDE written exam, or
- o Pass any one expert-level Lab/Practical exam, or
- Pass any three separate professional concentration exams, or
- o Pass one technology core exam and pass any one professional concentration exam.

It is your responsibility to recertify on time. Recertification email reminders are sent at 90, 60 and 30 days

5-calendar-days exam retake policy for the written exam, and 30-calendar-days for the lab exam.

www.cisco.com/go/recertification



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CCIE Practice Labs

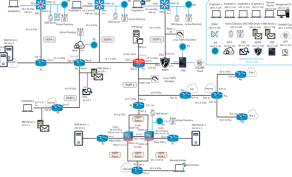


CCIE Practice Labs

Remote Rack rental service (4 hrs. slots) at US\$ 50 per session including access to:

- Launched for the CCIE Enterprise Infrastructure and CCIE Security track. To be expanded to other tracks, stay tuned.
- Scenarios focusing on BP topics
- A topology that is representative of the exam topology
- Access to equipment (varies # of devices per POD)
- Access to the same lab exam delivery system (LDS)





cisco.com/go/cciepracticelabs



CCIE Prep Webinar Series



CCIE Prep Webinar Series

- Overview, Scope, and Preparation
- Build Your Own Lab and Beyond
- Technical Deep Dives
- Ask Me Anything

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CCIE Prep Program

Accelerate your learning

Join Now



https://learningnetwork.cisco.com/s/ccie-prep-program



CCIE Enterprise Wireless Exam



CCIE Enterprise Wireless Exam

Step 1: Pass the qualifying exam

• 350-401 ENCOR: Implementing Cisco Enterprise Network Core Technologies

Step 2: Pass the Wireless lab exam

• CCIE Enterprise Wireless v1.0 Lab Exam



CCIE Wireless Exam Blueprint v1.0

1.0 Radio Frequency and Standards	15%	~
2.0 Enterprise Wired Campus	10%	~
3.0 Enterprise Wireless Network	25%	~
4.0 Wireless Security and Identity Management	20%	~
5.0 Wireless business applications and services		~
6.0 Automation, Analytics, and Assurance	10%	~



Lab Hardware and Software

Equipment

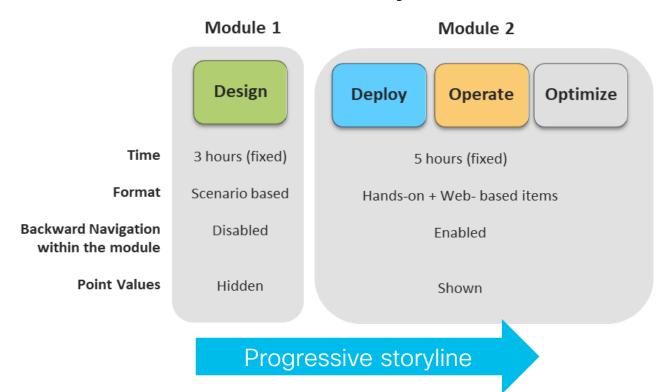
- Cisco Catalyst Series Switches
 - o Cisco Catalyst 9300 Series Switches
 - Cisco Catalyst 9200 Series Switches
 - Cisco Catalyst 3650 Series Switches
- Cisco CMX
- Cisco DNA Center
- · Cisco Identity Services Engine
- Cisco Prime Infrastructure
- · Cisco Wireless Access Points
 - o Cisco Catalyst 9115 Series Access Point
 - Cisco Aironet 3800 Series Access Points
 - Cisco Aironet 3700 Series Access Points
 - Cisco Aironet 1850 Series Access Points
- Cisco Wireless LAN Controllers
 - Embedded Catalyst 9800 on a Catalyst 9300 switch
 - Mobility Express on 1850
 - o Physical 3504 Wireless Controller
 - Private cloud Catalyst 9800-CL
 - Virtual Cisco Virtual Wireless Controller

Software

- Cisco Catalyst Series Switches
 - o 9300 Gibraltar-16.12
 - o 9200 Gibraltar-16.12
 - o 3650 Gibraltar-16.12
- Cisco CMX 10.6
- Cisco DNA Center, Release 1.3.1
- Cisco ISE 2.4
- Cisco Prime Infrastructure 3.7
- Cisco Wireless Autonomous Access Point 15.3
- Cisco Wireless LAN Controllers
 - Embedded 16.12
 - Mobility Express 8.10 / 16.12
 - Physical 8.10
 - Private Cloud 16.12
 - Virtual 8.10



Lab exam format summary





CCIE practical exam format - module 1



What?

To measure a candidate's ability to create, analyze, validate and optimize network designs, which is the base for all deployment activities. Candidates will need to understand capabilities of different technologies, solutions and services, translate customer requirements into solutions and assess the network readiness to support proposed solutions.

Environment?

- Scenario based. Web based items.
- Backward navigation is disabled.
- Point values are hidden.

Time?

3 hours

Done? Up to Module 2!

Progressive storyline



CCIE practical exam format - module 1



How?

The design module itself runs as a progressive storyline, that will evolve as the candidate progresses through the module.

At the start of the module, you are presented generic information, that is expected to be used across the entire module.

- General storyline introduction
- overarching requirements and restrictions,
- the current state of the network
- main topology drawings

Throughout the course of the module, the candidate is presented with resources, which can be simulated to be coming in as documents, emails, or any other meaningful way.

Item types?

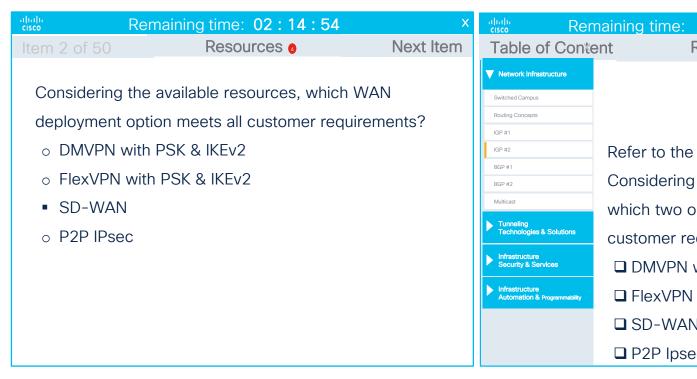
MCxA - Hotspot - Drag and Drop - Dropdown - Matrix

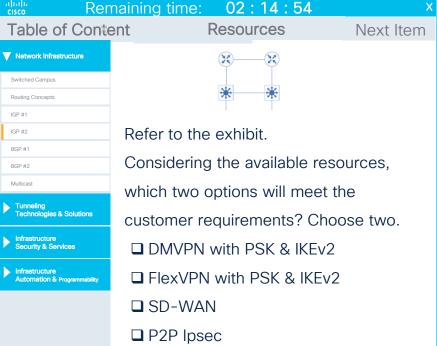


Item types: MCxA simple

MCxA with plain text options

MCxA with plain text options



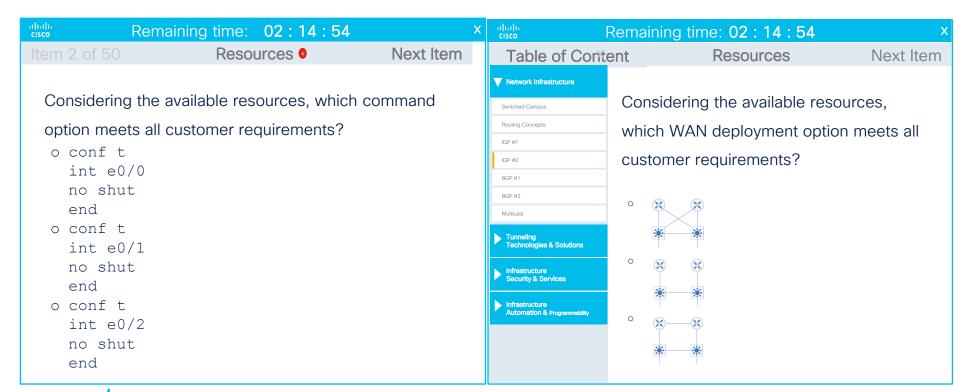




Item types: MCxA HTML

MCxA with multi-line options

MCxA with picture as options

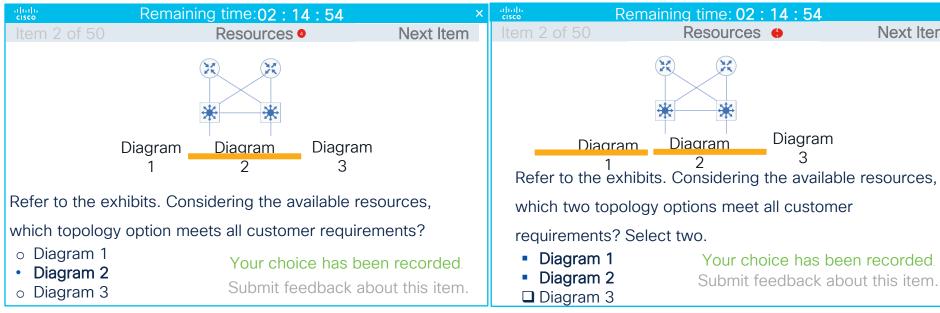




Item types: MCxA tabbed

MCSA with Tabbed options

MCMA with Tabbed options



- Each option refers to a separate exhibit
- Selecting an option will activate the corresponding tab
- Tabs can also be activated by selecting/clicking on their tab name
- MCSA = Can select only one option (i.e. selecting another option will unselect any previously selected option)

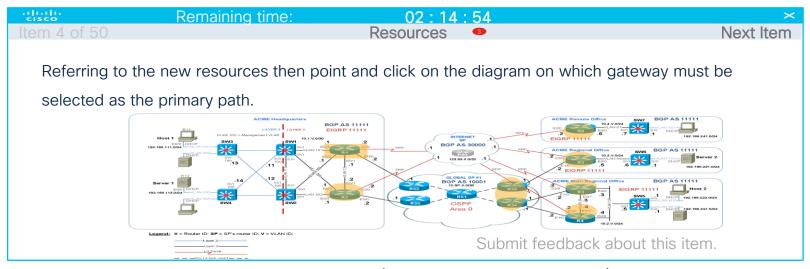
- Each option refers to a separate exhibit
- Selecting an option will activate the corresponding tab
- Tabs can also be activated by selecting/clicking on their tab name
- MCMA = Can select multiple options



Next Item

Item types: hotspot

Hotspot



- Clickable area may be identified on the picture (of poly, circle and rect shapes)
- Only one possible selection
- Fixed min-width of popup (avoid resizing picture and clickable map)

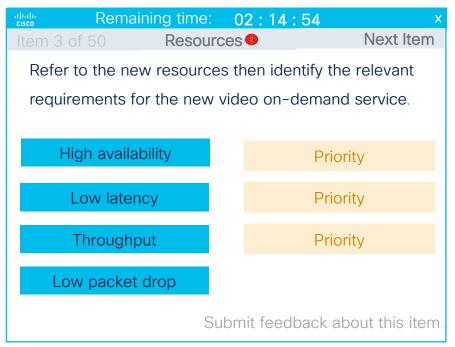


Item types: drag'n drop simple

Ordered targets

alialia cisco Remaining time: 02:14:54 Resources 2 Next Item Refer to the new resources then identify and prioritize the relevant requirements for the new video ondemand service. Priority 1 High availability Low latency Priority 2 Throughput Priority 3 Low packet drop Submit feedback about this item.

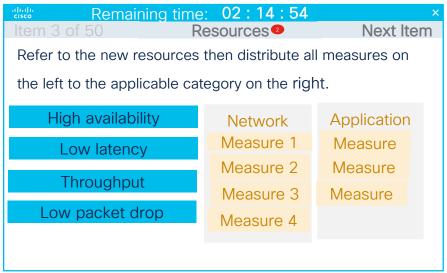
Unordered targets





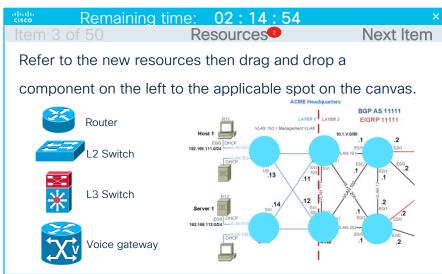
Item types: drag'n drop

Category_DnD



- Drag options on the left to one category on the right
- Can have more options than targets, and vice-versa (each category can have between one and the total options)
- Options on left can be randomized
- Each category can be ordered or unordered

Graphical_DnD

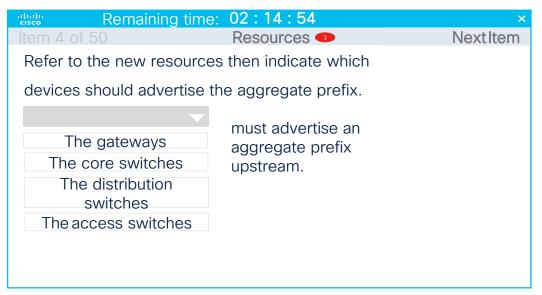


- Drag icon/options on the left to one drop_spot on the picture/canvas
- Each option can be dragged any number of times to any drop_zone
- Each drop_zone can receive only one icon/option



Item types: dropdown

Dropdown Simple

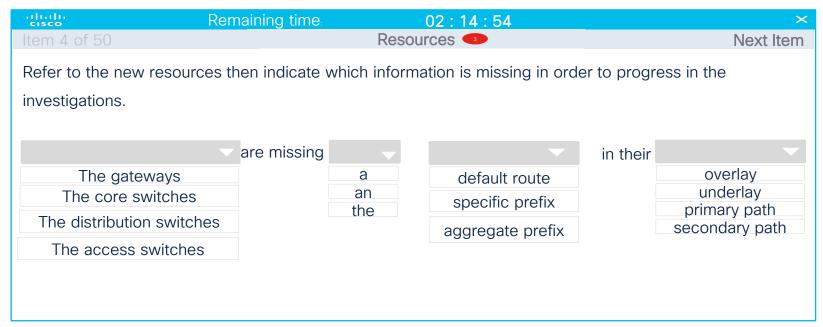


- Very similar to a MCSA, "just" presented as a dropdown
- Might be more appropriate in some case vs MCSA (e.g. when completing a sentence)



Item types: dropdown

Dropdown Row (single)

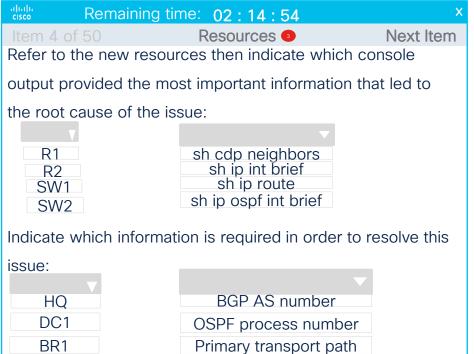


Any number of dropdown, sequenced in a row.

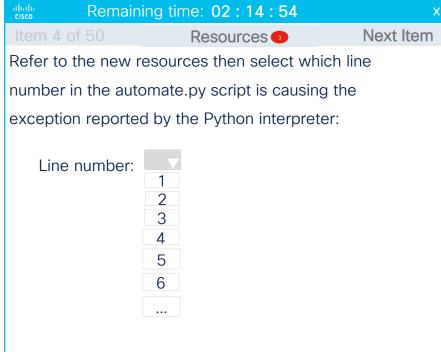


Item types: dropdown

Dropdown rows



Dropdown range



Any number of dropdown, sequenced in a row.

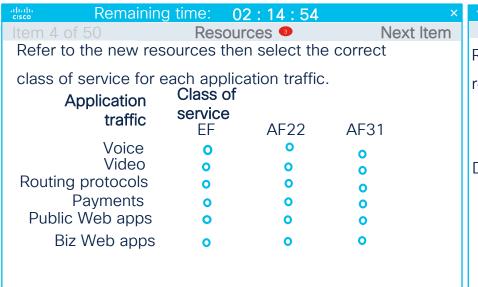
cisco life!

Large number of options in the dropdown, as a sequence of integer with min/max

Item types: MCxA matrix

MCSA Matrix

MCMA Matrix



Remaini Remaini	ng time: 02	2:14:54	×			
Item 4 of 50	Resource	es 3	Next Item			
Refer to the new resources then indicate which						
requirement(s) are met by each solution. Measures Requirements						
SD-WAN	High Availability	Ease of support	High ROI			
DMVPN with single hu	ıb 🗆		_			
DMVPN with dual hu	b 🗖					
FlexVPN						
IPsec VPN						
MPLS L3VPN						

- Multiple MCSA, one per row (i.e. only one column may be selected per row)
- Great for compare/contrast

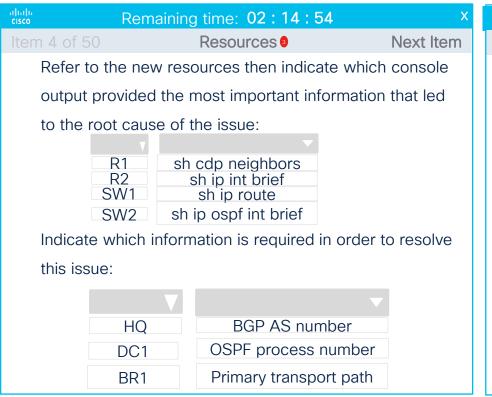
- Multiple MCMA, one per row (i.e. multiple columns may be selected per row)
- Great for compare/contrast

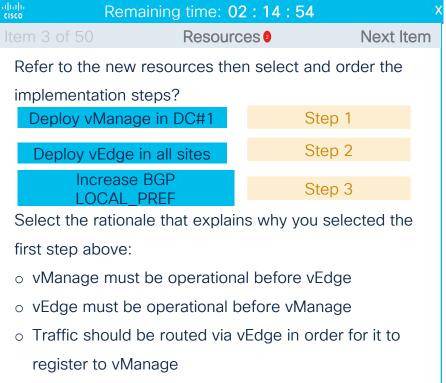


Item types: multiple question per Item

Multiple dropdown rows







CCIE practical exam format - module 2

Start Module 2

Progressive storyline

Deploy

Operate

Optimiz e

What?

Candidates will build the network according to the design specifications, customer requirements and restrictions <u>AND</u> will operate and optimize given network technologies and solutions.

Environment?

- Hybrid: Hands-on (focus)+ Web-based items.
- Virtual environment (where possible)
- Backward navigation is enabled.
- Point values are shown.

Time?

5 hours





CCIE practical exam format - module 2

Start Module 2

Progressive storyline

Deploy

Operate

Optimiz e

How?

The DOO module is a hands-on module focusing on deploying the network.

While the DOO module is <u>not</u> a 1:1 mapping to the Design module, there is a progressive storyline shared between both modules.

- Same main topology, diagram, IP addressing
- Same set of devices.
- Build upon the same high level design solutions: i.e. choice of RP, etc.

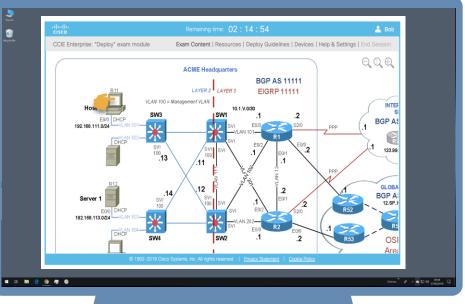
Item types?

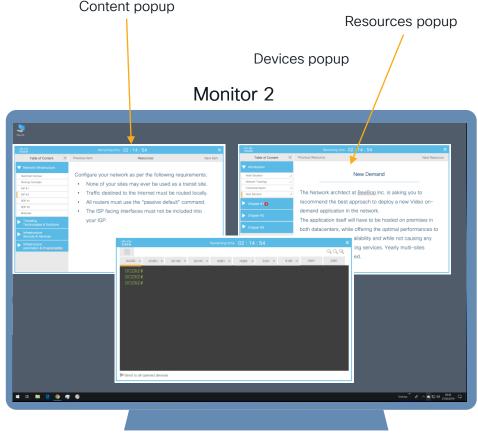
Hands-on and web-based.



CCIE lab delivery system

Monitor 1







LDS Demo - Video

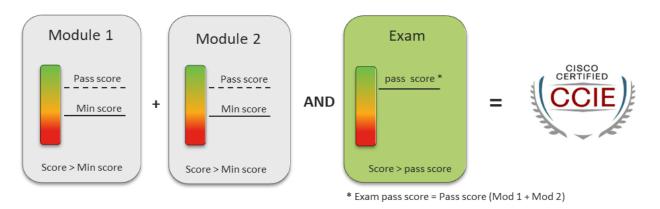


Exam Scoring





Exam score evaluation



To pass the exam, candidates need to score higher than the aggregated pass score of both modules <u>and</u> score higher than the minimum score set on each of the modules individually.

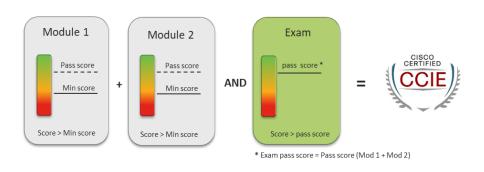
If candidates score less than the overall aggregated pass score of both modules OR score less than the minimum score set on 1 (or more) of the individual modules, they will fail the exam.



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Exam score reports

Candidates that fail the exam will be given a score report, indicating what module(s) they passed or failed. Additionally, candidates will be provided cumulative scoring percentages on a per domain level, across both modules.



Score report

Module 1: Pass Module 2: Fail

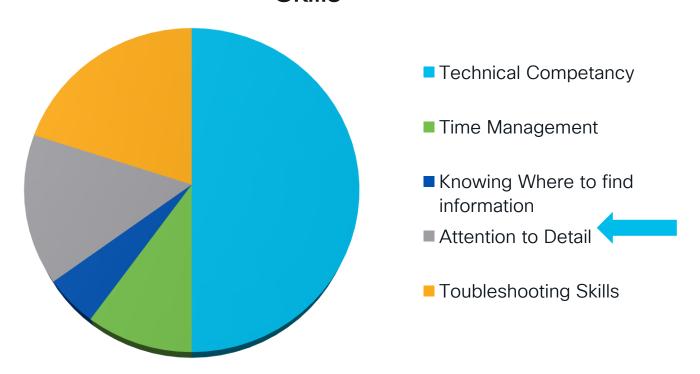
Domain 1: 75%
Domain 2: 20%
Domain 3: 40%
Domain 4: 19%
Domain 5: 90%

9800-CL Deployment and Day 0 Config Demo - Video

Study and Preparation



What Does it Take to Pass a CCIE Lab Exam? Skills





Lab Exam: Tips & Tricks

Before the exam

- Prepare for the exam! Practice
- Plan your study
 - Do self assessment, "know what I don't know"
 - Dedicate time per day
 - Always ask "What if"
 - · Practice, practice and practice
- Learn how to browse on Cisco Documentation (sort, don't search)
- Choose materials from trustworthy source
- Practice for speed and troubleshooting

Build a study plan that works for you



Don't Do It Alone

- There are many groups, forums and study groups available.
 - 95% of successful CCIEs participate in a study group of some form.
 - On going groups available including Learning @ Cisco etc.
- If you can't team up locally, do it virtually



What Happens if I Get Stuck???

- If you get into a question and hit a wall (not sure what to do), make a note, move on and come back to it.
- Lab Exams are composed of multiple questions and multiple tasks.
 Weigh the score value against the time invested. Sometimes its better to skip a question and focus on the rest.
- Some questions may affect others. Questions may have an impact on outcome of another.



A Note on Lab Proctors

- Proctors are there to run the exam.
- They are not there to help you on any technically related questions
- A Proctor will:
 - Clarify a Question
 - Deal with Hardware Issues if encountered
- A Proctor will not:
 - Solve or Troubleshoot Configuration Issues
 - Answer questions on how to configure devices (Confirming good/bad configuration)
 - Answer Questions regarding a choice of how to configure something



Lab Exam: Tips & Tricks

Aftermath

- If you pass
 - CONGRATULATION!
- If you fail
 - Release the anger! Do whatever you have to do
 - Try to switch from "Denial" to "Curious" quickly
 - Start looking for your mistakes
 - Repeat the scenarios in your own lab
 - Back to lab practice focusing on the failed scenarios
 - Book the next lab exam in 4 weeks time.
 - Even some of the best TAC engineers require multiple attempts!
 - If you are 100% sure the CCIE Program team is wrong ask for review*
 - *Additional Costs involved







Stay Connected!

Opt-In for CCIE
Specific Information

cisco.com/go/cciecomms





Available Resources

- Learning @ Cisco Forum for asking questions, support and free online resources such as webinars and other virtual events
- https://learningnetwork.cisco.com/s/ccie-enterprise-wireless
- New Cisco Training Program
- https://www.cisco.com/c/en/us/training-events/training-certifications/trainingcatalog.html?product and technology=wireless
- Learning Matrix
- https://www.cisco.com/content/dam/en_us/training-events/le31/le46/cln/marketing/learning-matrix/CCIE-Enterprise-Wireless-v1-Learning-Matrix.xlsx
 - · Other Courses ENCOR
 - https://learningnetworkstore.cisco.com/on-demand-e-learning/implementing-and-operating-cisco-enterprise-network-core-technologies-encor-v1.2/ELT-ENCOR-V1-023973.html



Got a Question After the Session?

- Join the CCIE Wireless Study Group on CLN
- https://learningnetwork.cisco.com/s/topic/0TO3i0000008jYFGAY/e nterprise-wireless-certifications-community
 - Ask technical questions
 - Find study partner(s)
- Open a CertSupport case at http://www.cisco.com/go/certsupport



Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes



Continue your education

- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand



Thank you



Cisco Live Challenge

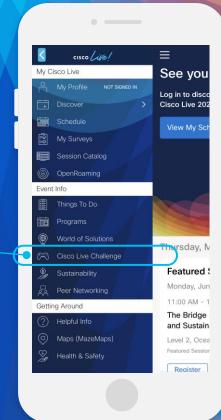
Gamify your Cisco Live experience! Get points for attending this session!

How:

- Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:







Let's go cisco live! #CiscoLive