cisco live!







CCIE Data Center Overview

Breakout-Part 1

Mubasher Nawaz – Exam Program Manager @munawaz BRKCRT-3000a



Cisco Webex App

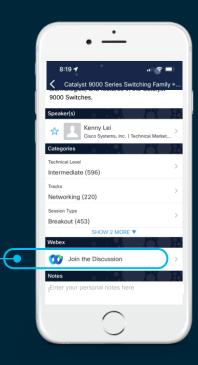
Questions?

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 17, 2022.



https://ciscolive.ciscoevents.com/ciscolivebot/#BBRKCRT-3000a



Session Abstract

- If you're starting the journey to gain your CCIE Data Center 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.
- This session is divided into 2 parts BRKCRT-3000a and BRKCRT-3000b.

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







Agenda

- Program Update
- CCIE DC Exam
- Study, Preparation and Closing



"It's not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change."

Charles Darwin



Program Updates



CCIE/CCDE Mobile Events - delivery types



Cisco-kit Mobile Event

@Cisco locations, all exams

Cisco **provides** candidates with end-user environment (aka Cisco-kit): desktop PC, keyboard, mouse, dual 24-inch monitors.

Lab exam fee for Cisco kit mobile event is US\$ 1,900



www.cisco.com/go/mobilelabs



BYOD Mobile Event

@Cisco locations, all exams

Candidates must **bring their own** devices (BYOD) to take the exam: laptop, keyboard, mouse, and external monitor (optional).

Lab exam fee for BYOD mobile event is US\$ 1,600





www.cisco.com/go/byodlabs



DevNet Expert

- Launched May 2nd, 2022
- Distinguish yourself as a leader in NetDevOps technologies
- Validates advanced skills in designing, developing, and maintaining complex automation-driven networks

Uniquely qualified as a leader—applying evolving software technologies and deep-domain

expertise. This expertise will help you meet business requirements dependent on an agile

automation-driven IT infrastructure.





CCDE v3.0

- Launched in November 2021
- Covers designing and architecting Enterprise networking solutions
- The CCDE v3.0 Practical Exam is an 8-hour scenario-based exam, that is built to be modular and provides you the flexibility to focus on your area of expertise, in addition to validating core Enterprise architecture technologies.
- The CCDE v3.0 Practical exam is now delivered in-house at Cisco Certification centers aka CCIE Lab locations (both permanent brick-n-mortar locations as well as mobile lab locations).
- The new #400-007 CCDE Written Exam validates High-Level Design (HLD) aspects as well as business requirements within the context of Enterprise network architecture. This new written exam is the only 400-xxx series expert-level exam that provides singleexam recertification option for your CCIE recertification.



www.cisco.com/go/ccde



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.

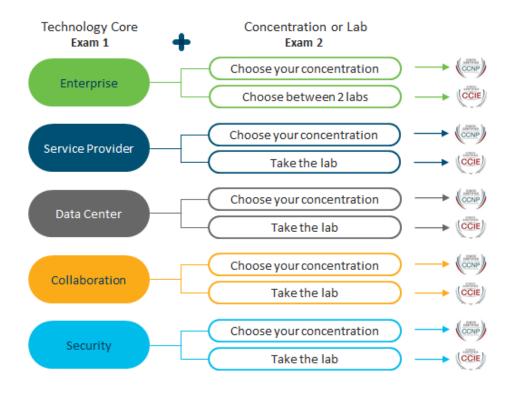




Exam Prep and Enablement



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
- o 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



CCIE Practice Labs

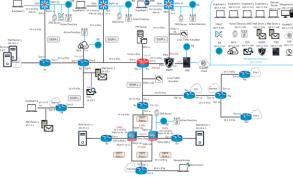


CCIE Practice Labs

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 ~20-30 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

cisco

CCIE Prep Program

Accelerate your learning

Join Now



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





Agenda

- Program Update
- CCIE DC Exam
- Study, Preparation and Closing



CCIE DC Exam

- Step 1: Pass the qualifying exam
 - Implementing and Operating Cisco Data Center Core Technologies (DCCOR 350-601)
- Step 2: Pass the lab exam
 - CCIE Data Center v3.0



CCIE DC Exam Blueprint v3.0

1.0 Data Center L2/L3 Connectivity	20%	~
2.0 Data Center Fabric Infrastructure	15%	~
3.0 Data Center Fabric Connectivity	15%	~
4.0 Data Center Compute	15%	~
5.0 Data Center Storage Protocols and Features	10%	~
6.0 Data Center Security and Network Services	10%	~
7.0 Data Center Automation and Orchestration	15%	~



Lab Hardware and Software

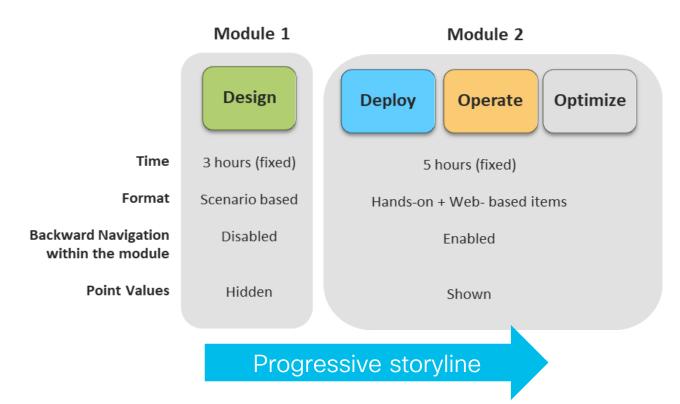
Lab Equipment

- · APIC cluster
- Nexus 9336 ACI Spine Switch
- · Nexus 9332 ACI Spine Switch
- Nexus 9372 Switch
- Nexus 93180 Switch
- Nexus 93108 Switch
- Nexus 7004 Switch
 - Supervisor 2 Enhanced
 - 48-Port 10-Gb Ethernet SFP/SFP+ (F3 module)
- Nexus 5672 Switch
- Nexus 2348 Fabric Extender
- UCS C220 M4 Series Rack Server
 - Virtual interface card (VIC) for C-Series
- UCS-6248 Fabric Interconnect
- UCS 5108 Blade Server Chassis
 - B200 M4 Blade Server
 - Cisco Virtual Interface Card
 - VIC 1340
- · Dual Attached JBOD
- · Cisco Catalyst 3750 Switch
- Cisco 2911/K9 terminal Server
- Cisco HyperFlex HX220c M5

Software

- Cisco NX-OS v8.x on Nexus 7000 switches
- Cisco NX-OS v7.x on Nexus 5000 switches
- Cisco NX-OS v9.x on Nexus 9000 switches
- Cisco UCS Manager Release 4.x Fabric Interconnect
- Cisco Application Policy Infrastructure Controller 4.x
- Cisco Data Center Network Manager 11
- Cisco Integrated Management Controller 4.x
- Cisco UCS Director 6.x
- Cisco Hyperflex version 4.x
- ACI Multi-site Software version 2.x

Lab exam format summary





CCIE practical exam format - module 1



What?

To measure a candidates 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



BRKCRT-3000a

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.

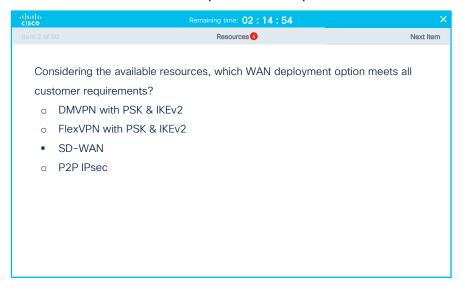
Item types?

MCxA - Hotspot - Drag and Drop - Dropdown - Matrix

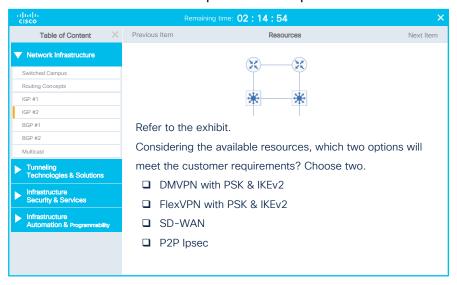


Item types: MCxA simple

MCxA with plain text options



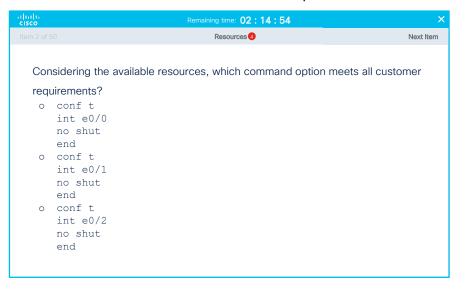
MCxA with plain text options



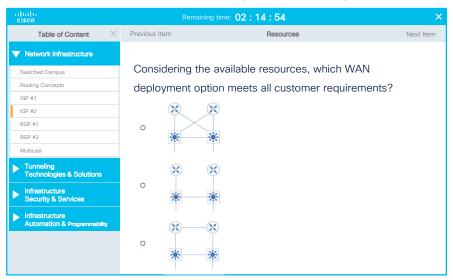


Item types: MCxA HTML

MCxA with multi-line options



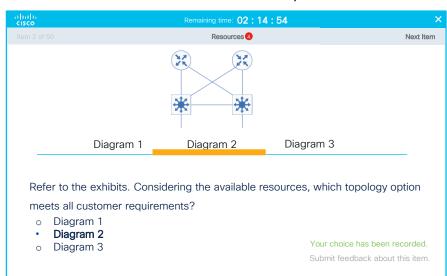
MCxA with picture as options





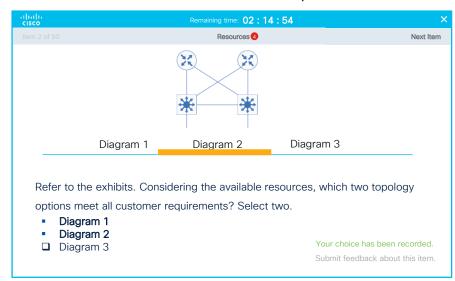
Item types: MCxA tabbed

MCSA with Tabbed options



- · 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)

MCMA with Tabbed options

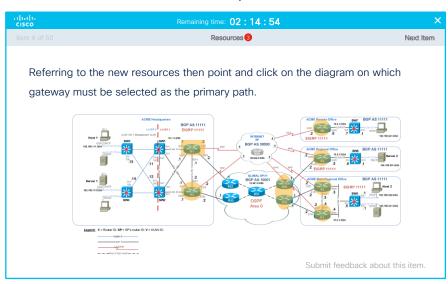


- · Each option refers to a separate exhibit
- Selecting an option will activate the corresponding tab
- · Tabs can also be activated by selecting/clicking on their tab name
- MCMA = Can select multiple options



Item types: hotspot

Hotspot

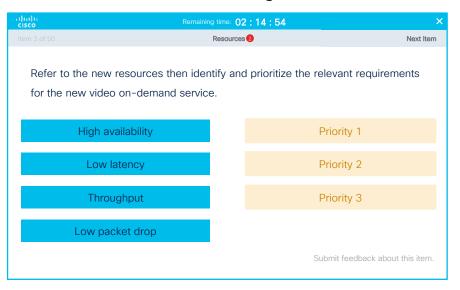


- Clickable area may be identified on the picture (of poly, circle and rect shapes)
- · Only one possible selection
- Fixed min-width of popup (avoid resizing picture and clickable map)

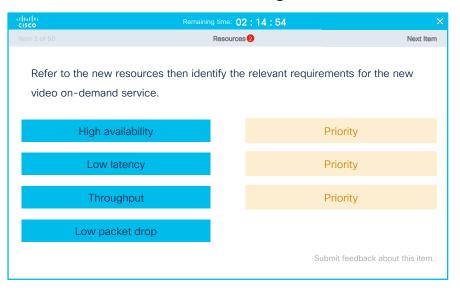


Item types: drag'n drop simple

Ordered targets



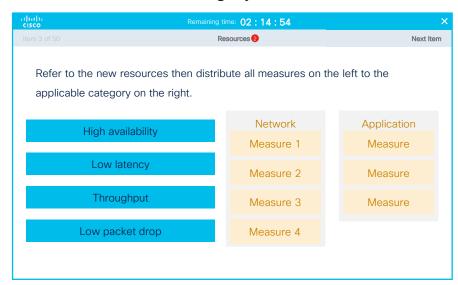
Unordered targets





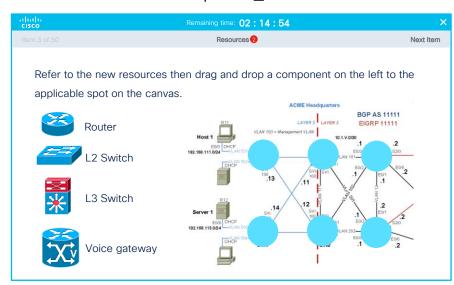
Item types: drag'n drop

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

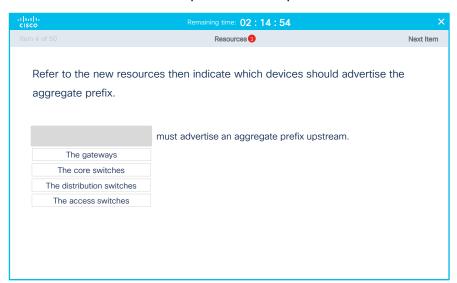


- Drag icon/options on the left to one drop_spot on the picture/canvas
- Each option can be dragged any number of times to any drop_zone
- Each drop zone can receive only one icon/option



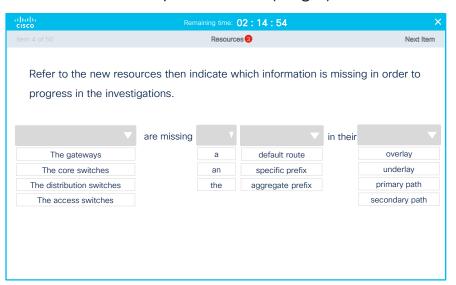
Item types: dropdown

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)

Dropdown Row (single)

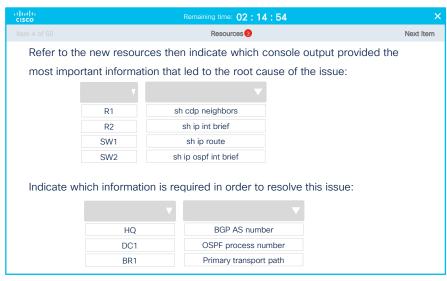


• Any number of dropdown, sequenced in a row.



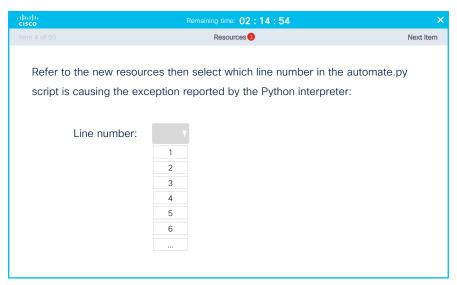
Item types: dropdown

Dropdown rows



• Any number of dropdown, sequenced in a row.

Dropdown range

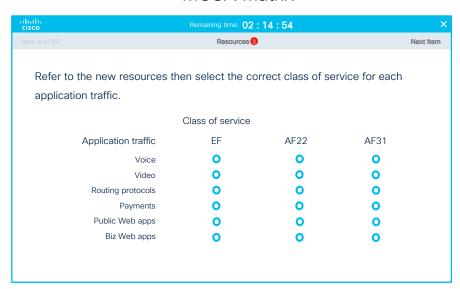


· Large number of options in the dropdown, as a sequence of integer with min/max



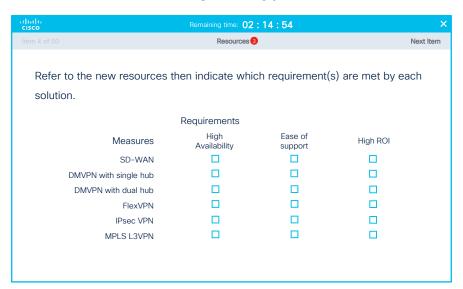
Item types: MCxA matrix

MCSA Matrix



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

MCMA Matrix

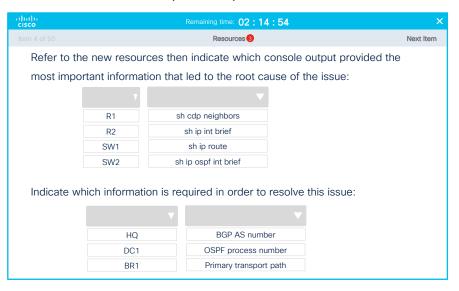


- Multiple MCMA, one per row (i.e. multiple columns may be selected per row)
- · Great for compare/contrast

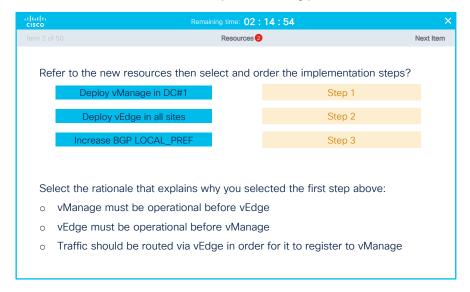


Item types: multiple question per Item

Multiple dropdown rows



Various question types





CCIE practical exam format - module 2

Start Module 2

Progressive storyline

Deploy

Operate

Optimize

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

Optimize

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.

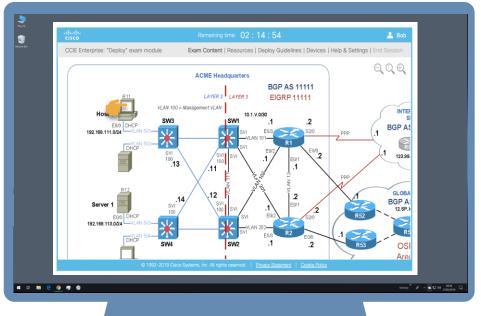
Item types?

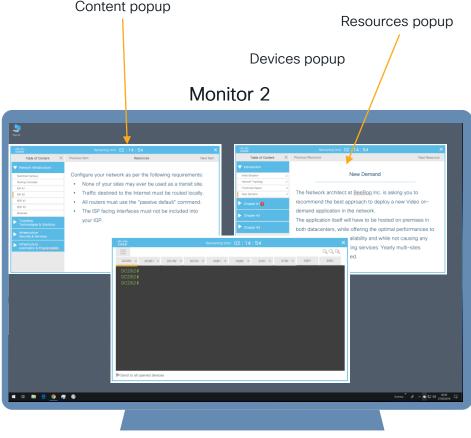
Hands-on and web-based.



CCIE lab delivery system

Monitor 1



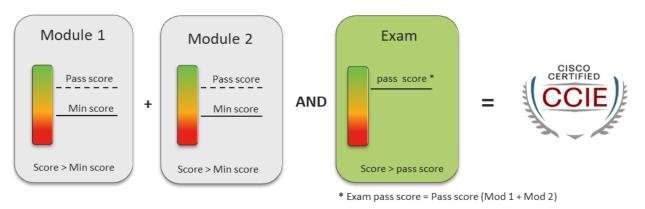




Exam scoring



Exam score evaluation



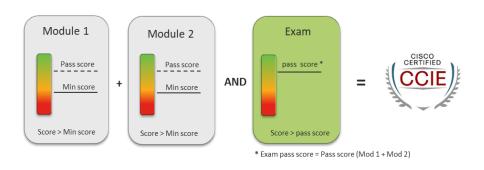
To pass the exam, candidates need to score higher than the aggregated pass score of both modules <u>and</u> score higher than the minimum score set on each of the modules individually.

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.



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%



BRKCRT-3000a



Agenda

- Program Update
- CCIE DC Exam
- Study, Preparation and Closing



Preparation and Study



Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time.

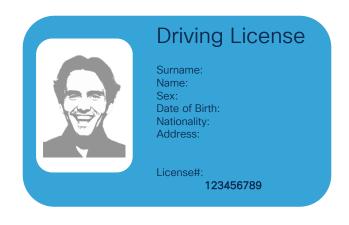
Thomas A Edison



Exam Strategy

 Did you drive the same way on your driving license test compared to how you drive in real life?







Lab Exam Strategy

"Just".

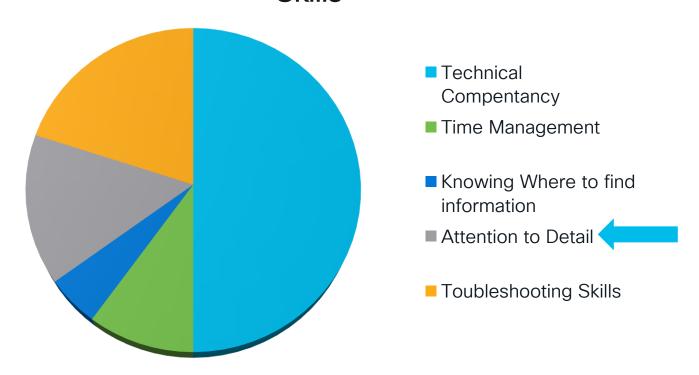


Keeping Your Eye on the Prize

- Be prepared to commit to at least 4-8 months
- Studying becomes a work/life commitment
- Home Lab where possible (N1K, UCSPE, VIRL)
- Hands on Experience is a MUST (Remote labs included)
- Plan your success!
 - Set milestones/goals and do what's needs to be done to achieve them.



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





BRKCRT-3000a

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. Many lab scenarios are treated as a dataCenter solution – questions may have an impact on other 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







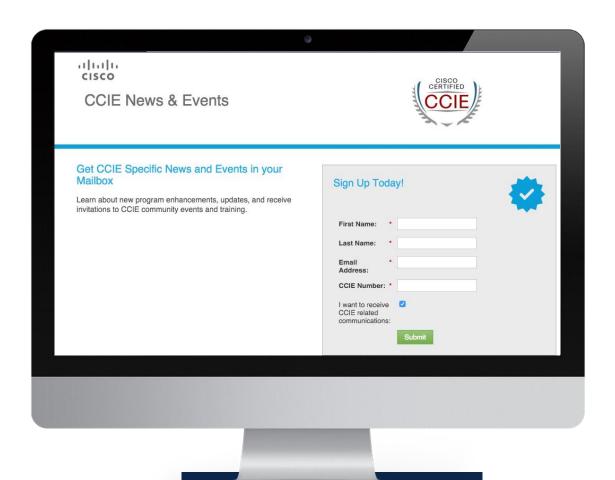
Stay Connected!



Stay Connected!

Opt-In for CCIE
Specific Information

cisco.com/go/cciecomms





Cisco Certifications SME Recruitment Program

Collaborate and network with other engineers

Use and sharpen technical expertise

Join creativity with experience, knowledge and skills



Directly influence Cisco Career Certifications (Design, Author, Review)

Give back to community

Experience with assessment techniques

cisco.com/go/certsme

SME= Subject Matter Expert



Available Resources

- Learning @ Cisco Forum for asking questions, support and free online resources such as webinars and other virtual events https://learningnetwork.cisco.com/community/certifications/ccie data center
- Recommended Reading List
 - https://learningnetwork.cisco.com/docs/DOC-13986
- Recommended Training
 - https://learningnetwork.cisco.com/docs/DOC-13985
- Online Resources
 - https://learningnetwork.cisco.com/docs/DOC-13987
- Other Courses
 - http://www.cisco.com/web/learning/le31/ase/offerings/datacenter/index.html



Got a Question After the Session?

- Join the CCIE Data Center Study Group on CLN
- https://learningnetwork.cisco.com/groups/ccie-data-center-studygroup
 - Ask technical questions
 - Find study partner(s)

Open a CertSupport case at http://www.cisco.com/go/certsupport

Send me an email at munawaz@cisco.com



Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!
- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.
- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.



Cisco Learning and Certifications

From technology training and team development to Cisco certifications and learning plans, let us help you empower your business and career. www.cisco.com/go/certs



(CLCs) are prepaid training vouchers redeemed directly with Cisco.



Learn



Train



Certify



Cisco U.

IT learning hub that guides teams and learners toward their goals

Cisco Digital Learning

Subscription-based product, technology, and certification training

Cisco Modeling Labs

Network simulation platform for design, testing, and troubleshooting

Cisco Learning Network

Resource community portal for certifications and learning



Cisco Training Bootcamps

Intensive team & individual automation and technology training programs

Cisco Learning Partner Program

Authorized training partners supporting Cisco technology and career certifications

Cisco Instructor-led and Virtual Instructor-led training

Accelerated curriculum of product, technology, and certification courses



Cisco Certifications and Specialist Certifications

Award-winning certification program empowers students and IT Professionals to advance their technical careers

Cisco Guided Study Groups

180-day certification prep program with learning and support

Cisco Continuing Education Program

Recertification training options for Cisco certified individuals

Here at the event? Visit us at The Learning and Certifications lounge at the World of Solutions





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!



