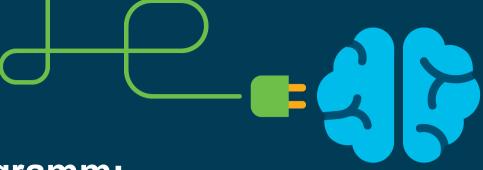
CISCO Academy



Neuerungen im Programm: Neue Kursversionen IT-Essentials und CCNA, veränderte Zertifikatsstruktur (und Innovationen auf der Lernplattform)

Thomas Meuser - Tobias Koeppel (– Eugene Morozov) Cisco Networking Academy Hochschule Krefeld, 12.09.2019





Übersicht

- 1. Warum neue Kurse?
- 2. IT Essentials 7.0
- 3. CCNA 7.0
- 4. Neue Zertifikate
- ("...und Innovationen auf der Lernplattform" folgt im Technical Update)



Warum neue Kurse?

## Warum neue Kurse? - The Network is changing ....

Enabling IT to adapt fast and at scale



#### Virtualization & Cloud

Enabling new business models and global scaling on demand



#### Automation

Supporting over 4 billion users plus 10 billion IoT devices

Technologies powering digital transformation



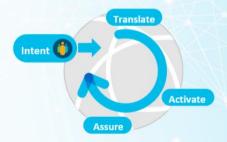
#### 5G Mobility

Secure access to business critical applications and data



#### Analytics & Al

Distilling zetabytes (10<sup>7</sup>) of data to find relevant insights



### Intent-Based Networks

Achieve business objectives using DevOps principles

Charakter



### Multi-Domain Networking

Unify and secure diverse networking domains

Netz-

Infractrukturen



### **Programmable Networks**

Drive automation, agility, and scale securely

Administration

# Neue Anforderungen an die IT-Infrastruktur und die neuen Technologien fordern erweiterte Kompetenzen (advanced skillset)



Digitale Geschäftsmodelle & – architekturen basieren auf Softwaredefined-Network (SDN)



Programmieren wid integraler Bestandteil für Systemadministratoren



Automatisierung und Virtualisierung breiten sich in alle Netzwerke aus



Wireless-Technologien sind ein erheblicher Teil des Zugriffs auf Netzwerke



Netzwerk Device-Management entwickelt sich von CLI zu API



Wachsende Sicherheitbedrohungen verlangen neue Fähigkeiten

Employers expect foundational IP skills <u>and</u> breadth of knowledge from network admins

### **CISCO** Academy







☐ Instructor Training Required



NDG NetLab+

NDG CCNA CyberOps Lab



**OPENEDG** 

CPA: Programming Essentials in C++

CPP: Advanced Programming in C++



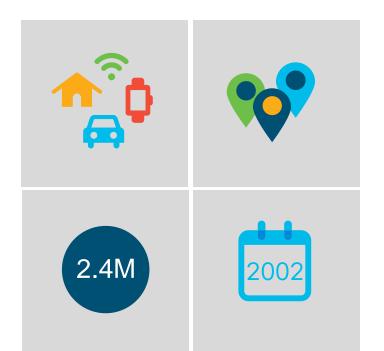
## IT Essentials 7.0



## IT Essentials @ NetAcad

Grundlegende Kompetenzen für Einstiegsniveau IT-Berufe

Über 2,4 Millionen Students weltweit



Verfügbar in 21 Sprachen

6 Versionen seit Einführung vor 17 Jahren

NRW: ~ 1.500 Students in IT Essentials pro Jahr

## Neuerungen in IT Essentials Version 7

Active Learning – aktives Lernen



Expanded Coverage – erweiterter Inhalt



Improved Outcomes – verbesserte Ergebniss



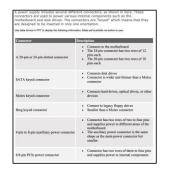


## Active Learning - mehr Bilder + Videos

# Mehr Bilder, weniger Text

Mehr Videos,

weniger Text



Version 6





Same Topic Version 7

4-5 Minutes Videos,

75

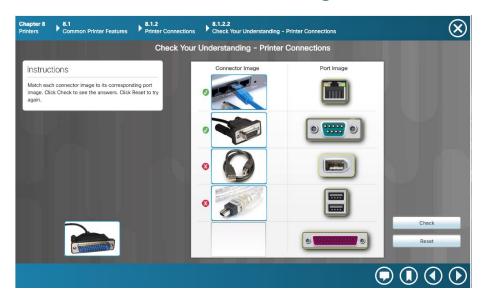


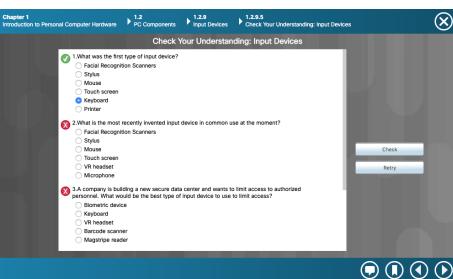
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## Active Learning – mehr Aktivitäten und Quizze

### Mehr interaktive Übungen





Über 90 "Self-Diagnostic Interactive Activities and Quizzes"



### **Erweiterter Kursinhalt**

# Improved Flow

#### **Version 6 Topics**

- 1. Introduction to the Personal Computer System
- 2. Introduction to Lab Procedures and Tool Use
- 3. Computer Assembly
- 4. Overview of Preventive Maintenance
- 5. Windows Installation
- 6. Windows Configuration and Management
- 7. Networking Concepts
- 8. Applied Networking
- 9. Laptops and Mobile Devices
- 10. Mobile, Linux, and OS X Operating Systems
- Printers
- 12. Security
- 13. The IT Professional
- <u>14. Advanced Troubleshooting</u>

### Version 7

- 1. Introduction to Personal Computer Hardware
- 2. PC Assembly
- 3. Advanced Computer Hardware
- 4. Preventive Maintenance and Troubleshooting
- 5. Networking Concepts
- 6. Applied Networking
- 7. Laptops and other Mobile Devices
- 8. Printers
- 9. Virtualization and Cloud Computing

NEW!

- 10. Windows Installation
- 11. Windows Configuration
- 12. Mobile, Linux, and OS X Operating Systems
- 13. Security
- 14. The IT Professional



## Erweiterter Inhalt im Detail

#### Neue Themen

#### **Hardware**

- USB-C specifications
- Synchronization with cars
- SSO for mobile environment
- Managed and unmanaged switches
- Cloud-based network controllers
- IoT device installation and configuration
- RFID, Zigbee, Z-wave, 3G, 4G, 5G, and LTE
- IPv6 link-local addresses
- DHCP reservations
- Wireless Mesh Networks (WMN)
- QR scanners, VR headsets, and signature pads
- 3D printers and plastic filament
- Off-site email applications
- Cloud file storage services
- Virtual application streaming/cloud-based applications
- Virtual desktop
  - Virtual NIC

#### **Software**

- Windows 10 (7, 8, and 8.1 remain)
- Chrome OS
- HFS and swap partition
- Control panels
- Credential Manager and Sync Center
- Active Directory Security guard
- Server locks, and USB locks
- MDM policies, port security, and certificates
- RADIUS and TACACS
- DoS, DDoS, and Rainbow table
- Change management best practices
- Disaster prevention and recovery
- Scripting basics
- Remote access technologies

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## Verbesserte Lernzielerfolgskontrollen

Formative and Summative Assessments



2 Practice Course Final Exams



2 Course Final Exams





1 Comprehensive Final Exam

• 5 Certification Practice Checkpoints



2 Certification Practice Exams



Exams are dynamically generated from pool of questions, maintaining exam integrity and validity



## ITE 7 Equipment Requirements

Focus is on Microsoft Windows 10, but includes Windows 7, Windows 8 and 8.1. Only one Microsoft operating system installation media is required to complete the curriculum labs.

#### **Curriculum requirements:**

Ratio of one Lab PC per student

#### **Lab PC Hardware Requirements:**

- 1 PC Case with 300W power supply
- Intel or AMD CPU, 1 gigahertz (GHz) or faster with support for PAE, NX, and SSE2
- 1 gigabyte (GB) RAM (32-bit) or 4 GB RAM (64-bit) (2 X 1GB or 2 X 2GB suggested)
- 60 GB hard drive (minimum); 80 GB or more (recommended)
- 1 DVD-ROM (minimum), DVDR, or BD/BDR
- 1 PCI, PCIe (recommended), or AGP video card

Detailed equipment information will be available in the Instructor Lab source files and the ITE Equipment List located in the IT Essentials resources folder on <a href="mailto:netacad.com">netacad.com</a>

#### **Lab PC Repair Tools**

- · Phillips and Flathead screwdriver
- · Electrostatic discharge (ESD) wrist strap and cord
- · Safety glasses, Lint-free cloth and a Flashlight
- · Thermal compound
- Wire cutters, RJ-45 Crimpers, Cable strippers and a modular cable tester
- Multimeter and power supply tester

#### **Additional Required Lab Equipment**

- 1 Internet connection for Internet searches and driver downloads
- 1 printer or integrated printer/scanner/copier for the class to share
- 1 wireless router with WPA2 support for the class to share
- 2 Wireless network adapters (compatible with the above wireless router) for the class to share
- Various USB flash drives for moving files between computers in the labs.
- Smartphones and tablets are desirable for use with the labs in the Mobile Devices chapter

## IT Essentials 7

#### Course Overview

IT Essentials covers fundamental computer and career skills for entry-level IT jobs. Students apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, and software.

#### **Benefits**

For students seeking career-oriented, entry-level hardware and software skills to prepare for technical support roles, this course aligns with the CompTIA A+ certification.

This course also serves as a foundation for CCNA-level courses.

#### **Learning Components**

- · 14 chapters
- 83 hands-on labs and 128 interactive activities
- · 75 videos
- 6 Cisco Packet Tracer activities

 14 chapter exams, 2 checkpoint exam, 2 skills review exams, 2 practice final exams, 3 final exams, 2 skills-based assessment, and 7 practice exams for CompTIA A+ certification



Target Audience: Secondary and 2-year college vocational students

Prerequisites: None

Instructor Training Required: Yes

Languages: English

Course Delivery: Instructor-led

End of course documents: Certificate of Completion and Letter

Estimated Time to Complete: 70 hours

Recommended Next Course: CCNA R&S Introduction to Networks

Mehr Infos zu Kursen: https://www.netacad.com/portal/resources/course-resources



CCNA 7.0
Cisco Certified Network Associate

## What you need to know about CCNA

#### Course

- New course coming in November 2019 aligned to the new CCNA cert.
- Translations to come starting mid 2020

#### Content

- Core: Networking and IP
- New: More Wireless, Automation, Programmability and Security.

### Certification

- CCNA R&S EOL 23 Feb 2020
- CCENT EOL 31 July 2020
- New CCNA cert. (1 exam only) from 24 Feb 2020

### CCNA X

- CCNA Security course continues the same
- CCNA Security cert. EOL 23 Feb 2020
- CCNA Security = CCNA cert. + Security Training Badge from 24 Feb 2020
- CCNA Cyber Ops course and cert. continue the same

### Closer Look at New CCNA

IP Foundation (Core Networking)



Security



Automation & Programmability



Solid IP foundation including coverage of digital transformation technologies

- Virtualization
- Security

Network Programmability

Cloud

- Automation
- Analytics

Wireless



Align to new CCNA certification



Improved course layout to increase student engagement



Expanded use of learning tools emphasizing hands-on learning



Secure assessments with dynamic sections and items to combat cheating

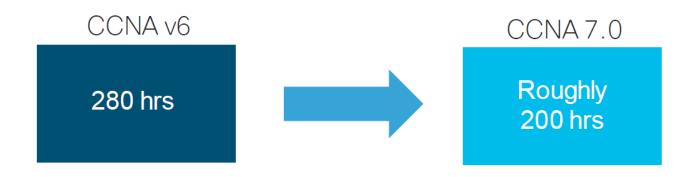


New user experience with improved accessibility conformance



NetAcad badges for course completions and passing assessments

### CCNA 7.0 Instructional Content



Opportunity to accelerate path to job readiness

### New CCNA 7.0 Course Evolution

#### CCNA v7 Course #1

Based on CCNA 6.0 Intro to Networking (ITN)

Minor updates and refinements

#### CCNA v7 Course #2

#### Blend of CCNA 6.0 ...

- ✓ Routing and Switching Essentials (RSE)
- ✓ Scaling Networks (ScaN)
- √ + New topics\*

\*Addition of WLAN and Security topics

#### CCNA v7 Course #3

#### Blend of CCNA 6.0 ...

- ✓ Routing and Switching Essentials (RSE)
- ✓ Scaling Networks (ScaN)
- ✓ Connecting Networks (CN)
- √ + New topics\*\*

\*\*Addition of Automation, Programmability, VPN, and Security topics

## CCNA 7.0 Course Outlines

#### CCNA v7 Course #1

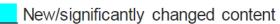
Networking Today
Basic Switch and End Device
Configuration
Protocol Models
Physical Layer
Number Systems
Data Link Layer
Ethernet Switching
Network Layer
Address Resolution
Basic Router Configuration
IPv4 Addressing
IPv6 Addressing
ICMP
Transport Layer
Application Layer
Network Security Fundamentals
Build a Small Network

#### CCNA v7 Course #2

Basic Device Configuration		
Switching Concepts		
VLANs		
Inter-VLAN Routing		
STP		
Etherchannel		
DHCPv4		
SLAAC and DHCPv6 Concepts		
FHRP Concepts		
LAN Security Conce	pts	
Switch Security Con	figuration	
WLAN Concepts		
WLAN Configuratio	<mark>n</mark>	
Routing Concepts		
IP Static Routing		
Troubleshoot Static	and Default	
Routes		

#### CCNA v7 Course #3

Single-Area OSPFv2 Concepts
Single-Area OSPFv2
Configuration
WAN Concepts
Network Security Concepts
ACL Concepts
ACLs for IPv4 Configuration
NAT for IPv4
VPN and IPsec Concepts
QoS Concepts
Network Management
Network Design
Network Troubleshooting
Network Virtualization
Network Automation



## New CCNA 7.0 Removed topics

- IPv6 Routing
- EIGRP
- OSPFv3
- PSPF Multi Area
- BGP
- PPPoE

- IPv6 ACL
- SPAN
- DMVPN
- Multi VLANS
- Switch Stacking
- Password Recovery

CCNA 7.0 Recommended Lab Bundle (2nd draft

S&S)

(2) 4221 - Configure and verify static routing and OSPFv2 single area

\*3-router configurations for OSPF presented in PT



(2) 2960 Switches - Configure and verify EtherChannel, VLANs, etc.

\*3-switch configurations for RSTP or EtherChannel presented in PT



- (1) Server
- (1) Generic Wireless Router Create a wireless LAN
- \* WLC GUI configuration in PT and Interactive Activity



Various types of wireless and wired end devices

## CCNA Instructor Qualification Mapping

CCNA R&S v6 Course Qualification(s)	CCNA v7 Qualification Earned	Materials to Review*
CCNA 1 (Intro to Networks)	CCNA 1	No additional
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials)	CCNA 1 CCNA 2	CCNA2 v7
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials) CCNA 3 (Scaling Networks)	CCNA 1 CCNA 2 CCNA 3	CCNA3 v7 + Bridging Course
CCNA 1 (Intro to Networks) CCNA 2 (Routing & Switching Essentials) CCNA 3 (Scaling Networks) CCNA 4 (Connecting Networks)	CCNA 1 CCNA 2 CCNA 3	Bridging Course

<sup>\*</sup>Self-enroll in the IPD Week class at <a href="http://cs.co/ipd20">http://cs.co/ipd20</a>

## CCNA v7 Migration Guidance (draft)

Pre-Nov 2019

Dec+2019

Continue with CCNAv6

Academy Offering	Scenario	Recommendation	
Teach CCNA 1 & 2 Only	Start teaching 1 or 2	<ol> <li>Switch to CCNA v7</li> <li>If not possible or need to stay aligned with CCENT, continue with CCNA v6</li> </ol>	
Teach CCNA 1-4	Start teaching 1 or 2	<ol> <li>Switch to CCNA v7</li> <li>If not possible or need to stay aligned with CCENT, continue with CCNA v6</li> </ol>	
	Start teaching 3 or 4	<ol> <li>Switch to CCNA 3 v7 + Bridging course</li> <li>If not possible, continue with CCNA v6 + Bridging course</li> </ol>	

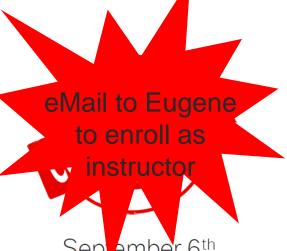
### CCNA 7.0 - First Look

- Early visibility of content modules for partners and instructor trainers
- Content in pre-release format, not in final fully assembled or packaged format
- Help with transition and planning
- Learn Engineering review site will allow preview of new GUI environment
- Phased availability beginning with new content modules
- Initial batch (7 new modules) posted week of 9/23, then continuing through GA

CCNA v7 Course #2	CCN
Basic Device Configuration Switching Concepts	Single-Are
VLANs	Configura
Inter-VLAN Routing	WAN Con
STP	Network S
Etherchannel DHCPv4	ACL Conce
SLAAC and DHCPv6 Concepts	ACLs for II
FHRP Concepts	NAT for IF
LAN Security Concepts	VPN and I
Switch Security Configuration	QoS Conc
WLAN Concepts	Network I
WLAN Configuration	Network I
Routing Concepts	Network 1
IP Static Routing	
Troubleshoot Static and Default	Network \
Routes	Network /

CCNA v7 Course #3
Single-Area OSPFv2 Concepts
Single-Area OSPFv2
Configuration
WAN Concepts
Network Security Concepts
ACL Concepts
ACLs for IPv4 Configuration
NAT for IPv4
VPN and IPsec Concepts
QoS Concepts
Network Management
Network Design
Network Troubleshooting
Network Virtualization
Network Automation

New/significantly changed content



September 6<sup>th</sup>

CCNA 7.0 GTM Training Course #1

> Online course for field & partners

On NetAcad com, All GFO & Partners will be enrolled.

Course #2 Coming in October

### **CCNA 7.0 Go To Market Training** Course #1

#### Course #1 Table of Contents

As noted, this is the first of two courses. The table of contents for this course is below. Course #2 table of contents can be found on the next page.

#### 1. Unleashing the Full Capabilities of the New Network

Learn what the new network is and how Cisco certifications are changing.

#### 2. Improving Networking Academy Offerings

Get the details on the planned changes to Academy offerings including CCNA, CCNP, CCNA Security, & CCNA CyberOps,

#### 3. Early Look: The New CCNA 7.0

Dive deeper into the improvements currently under development for the CCNA 7.0 Offering.

#### 4. Regional Perspectives

Hear from the Networking Academy Regional Managers about the opportunities they see in their regions.

#### 5. Transition Planning for Partners

Tools and resources, and suggested ways of using them to communicate and prepare academies and instructors.

#### 5. Schedule & Resources

Keep up to date on the key dates for transition and learn about resources currently available and coming.



#### Includes messages from:

- · Laura Quintana
- Piotr Pluta
- Regional Managers



## http://cs.co/netacadccna7

### New Courses and Certifications for 2020

#### Available Resources

#### Available Now

NetAcad FAQ and Scope and Sequence, are organized by language folders below:

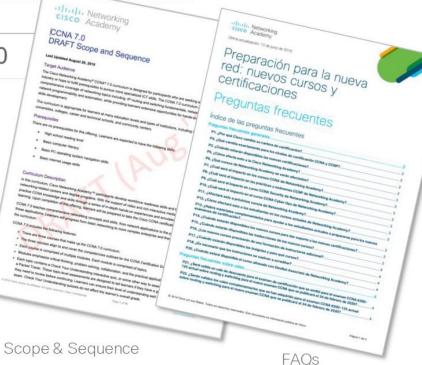
| English | 中文 | Français | Portuguese-Brazilian | русский | Español

#### Additional Documents

- FAQ: Cisco New Certifications
- NetAcad Product Team Overview Video & PPT

#### Communication Updates

- Jul 17: NetAcad.com Platform Releases and latest Translation Resources Available
- . Jul 1: CCENT Exam Deadline Extended for NetAcad Students to Jul 2020; Draft Scope and Sequence; and
- Jun 26: Business as Usual plus CCNA Cybersecurity Operations remains aligned to Certification
  - · Consistently updated
  - · Links to all resources



new landing page on NetAcad.com <a href="https://www.netacad.com/group/resources/launch">https://www.netacad.com/group/resources/launch</a>

### Curriculum Description



### Lab Equipment Requirements



### CCNA v7.0 Curriculum Outline



 General availability for all instructors August 27 on NetAcad.com



CCNA 7.0 DRAFT Scope and Sequence

### Last Updated August 28, 2019

Target Audience

The Cisco Networking Academy® CCNA® 7.0 curriculum is designed for participants who a The Cisco Networking Academy\* CCNA\* 7.0 curriculum is designed for participants who all a seeking associate-level jobs in the ICT industry or hope to fulfill prerequisites to pursue more specialized ICT skills. The CCNA 7.0 curriculum provides an integrated and academy of academy and academy academy academy and academy acade industry or hope to futtil prerequisites to pursue more speciatized ICT skills. The CCNA 7.0 curriculum provides an integrated and comprehensive coverage of networking logics including: IP routing and switching fundamentals, network security and services, and comprehensive coverage of networking topics including: IP routing and switching fundamentals, network security and services, and network programmability and automation, while providing learners extensive opportunities for hands-on practical experience and career

The curriculum is appropriate for learners at many education levels and types of institutions, including high schools, secondary schools,

There are no prerequisites for this offering. Learners are expected to have the following skills:

- Basic PC operating system navigation skills Basic internet usage skills

### Curriculum Description

In this curriculum, Cisco Networking Academy in participants develop workforce readiness skills and build a foundation for success in In this curriculum, Cisco Networking Academy \*\* participants develop workforce readiness skills and build a foundation for success in networking-related Careers and degree programs. With the support of video and rich interactive media, participants feam, apply and networking-related careers and degree programs. With the support or video and rich interactive media, paracipants learn, apply and paracipants learning l Practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities to learning. Upon completion of this offering, learners will be prepared to take the Cisco CCNA certification exam. CCNA 7.0 feaches comprehensive networking concepts and skills, from network applications to the protocols and services provided to the protocols and services provided to a service of the protocols and services provided to the protocols and the protocols and services provided to the protocols and services provided to the protocols and the protocols and the protocols and the protocols are protocols and the protocols are provided to the protocols are protocols and the protocols are protocols and the protocols are protocols are protocols and the protocols are protocols are protocols are protocols and the protocols are protocols ar

CCNA 7.0 teaches comprehensive networking concepts and skills, from network applications to the protocols and services provided to the complex enterprise and sheoretical networking models later in CCNA 7.0 includes the following features:

- There are three courses that make up the CCNA 7.0 curriculum.
- The three courses align to and cover the competencies outlined for the CCNA Certification Exam (200-301). Modules emphasize critical thinking, problem solving, collaboration, and the practical application of akills.

- Package Thomas engineering processing summary processing common times are processed representations of the foliable at the foliable and t Each topic contains a Check Your Understanding interactive quiz, or some other way to assess understanding, such as a lab or a packet Tracer. These topic-level assessments are designed to tell learners if they have a good grasp of the topic content, or if a Packet Tracer. These topic-level assessments are designed to let learners if they have a good grasp of the topic content, or they need to review before continuing. Learners can ensure their level of understanding well before taking a graded quiz or © 2019 Cisco and/or its attitutes. All rights reserved. Cisco Confidential

## New CCNAv7. Topic delivered in May 2019

### CCNA 7 – Technical Sessions



Topic	Session	Recording	Presentation
	Getting to know Cisco DNA Center		
Network Automation  Wireless	Puppet, Chef and Ansible		
	REST API and JSON Encoded Data	•	
	SDN an Open Source Demo	•	
	WLAN Fundamentals	•	
	Wireless Security		





## NetAcad IPD Week September 23-27, 2019



### IPD Week Course Enrollment Link http://cs.co/IPD20

### CISCO

### 49 IPD sessions:

- 12 English
- 37 localized

### 18 languages

#### Focus of the week:

- CCNAv7 Tech.
   Topics such as
   Network Security, LAN
   Security, Virtualization,
   Cloud Computing
- New CCNA Certification
- IT Essentials v7

### Want to Learn More about CCNA v7?

### 1. IPD Week Course http://cs.co/IPD20

2. Select

English Program Updates [Check the agenda]

3. Register

[Clieck the agenua]				
	Program Update Special Session 1 - CCNA v7	Date: 25 September Time: 3:00 p.m. UTC 4:00 pm London, 8:00 am San Francisco, 7:00 pm Abu Dhabi, Muscat 11:00 pm Singapore	Greg Cote & Nilay Ghoghari	Register
ved.	Program Update Special Session 2 - CCNA v7	Date: 26 September Time: 3:30 a.m. UTC 4:30 am London, 8:30 pm San Francisco (25 September), 7:30 am Abu Dhabi, Muscat 11:30 am Singapore	Greg Cote & Nilay Ghoghari	Register

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23 - 27 September 2019 9 - 13 December 2019

17 - 21 February 2020 11 - 15 May 2020



## Neue Zertifikate

# Cisco's new certification suite – neue Zertifikate Cisco Certifications - ab 24. Februar 2020

**Associate Level** 

Specialist Level

Professional Level

**Expert Level** 

Networking Engineers









Software Developers









### Zertifikatswechsel

**Entry** 

<u>Associate</u>

**Professional** 

Expert

No Certification credential



CCNP R&S

CCNP Cloud
Streamlined to 5
CTechnology tracks:

Enterprise
Security
CCDData Center
Collaboration
CCNService Provider
CCNP Service Provide

CCIE Collaboration

CCStreamlined to 5
Technology tracks:
CCDEEnterprise
CCIE Security
Data Center
CCIE Gollaboration
Service Provider
CCIE Service Provider
CCIE Wireless

! Kursmaterialien des CCNA v6 bleiben mindestens bis 31.12.2021 weiter verfügbar!

## Zertifikatsumstellung

Announcement

June 10, 2019



February 24, 2020



ab 31.07.2020 gibt es keir CCFNT-Zertifikat mehr

CCENT: 31.07.2020

Letzte Zertifikatsprüfung CCNA v6: 23.02.2020

ab 24.02.2020 nur noch Zertifikatsprüfung CCNA Version 7

! Kursmaterialien des CCNA v6 bleiben mindestens bis 31.12.2021 weiter verfügbar!

