Cisco Certification Skills Matrix



Architect:

Specialist:

Can support complex

networks of global

Whatever skills you need, IT networking professionals with Cisco Certifications have more to offer. Use this matrix to help evaluate candidates and make the perfect hire. Search by experience level or by technology area to see the applicable Cisco Certifications that your new hire should have.

Experience Level:

Click on the boxes below for more detailed descriptions of competency.

| Entry: Basic network support.Associate: Basic competency for installation and support of medium- sized networks and networking solutions.Professional: Advanced or journeyman knowledge of networks and networking solutions. | Expert: Expert-level experience with implementation and troubleshooting of complex converged networks. | Experienced with core networking knowledge and technologies. | organizations and is able to translate business strategies into evolutionary technical strategies. | |
|--|--|---|--|--|
|--|--|---|--|--|

TECHNOLOGY FOCUS:

Click on an icon below for specific technology focus requirements.





Technology Focus: Data Center

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification | |
|--------------|---|---|--|--|
| Associate | Data Center Network Administrator | Years of experience: 1-3 Foundational knowledge of installing, configuring, and maintaining data centers. | Cisco Certified Network Associate Data Center (CCNA Data Center) | |
| Professional | Presales Engineer Design Engineer Implementation Engineer Support Engineer | Years of experience: 3-5 Knowledge of designing, implementing, and troubleshooting data centers and all their components. | Cisco Certified Network Professional Data Center (CCNP Data Center) | |
| Expert | Business Services Architect Technology Architect Design Engineer Implementation Engineer Support Engineer | Years of experience: 7+ Knowledge of implementing and troubleshooting complex data center networks. Candidates will have the knowledge and skills required to independently design, implement, operate, monitor, and troubleshoot complex data center networks. | Cisco Certified Internetwork Expert Data Center (CCIE Data Center) | |
| Specialist | Server Virtualization Design/ Presales Engineer Server Virtualization Implementation/Support/Field Engineer Network Virtualization and Unified I/O Design/Presales Engineer Network Virtualization and Unified I/O Implementation/ Support/Field Engineer Data Center Network Infrastructure Design/ Presales Engineer Data Center Network Infrastructure Implementation/ Support/Field Engineer | Years of experience: 1-3 In-depth competencies in unified computing design and support, and unified fabric design and support. | Data Center Unified Computing Cisco Data Center Unified Computing Design Specialist Cisco Data Center Unified Computing Support Specialist Data Center Unified Fabric Cisco Data Center Unified Fabric Design Specialist Cisco Data Center Unified Fabric Data Center Applications Services Design Specialist Data Center Applications Services Support Specialist | |



Technology Focus: Design

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|---|--|--|
| Associate | Network Design Engineer Network Design Technician Support Technician | Years of experience: 1-3 Ability to design network infrastructures and services. | Cisco Certified Design Associate (CCDA) |
| Professional | Senior Network Design Engineer Senior Analyst Principal Systems Engineer | Years of experience: 3-5 Advanced knowledge of intelligent network design concepts and principles. Ability to discuss, design, and develop advanced addressing and routing, security, data center, and IP multicast complex architectures with VPN and wireless domains. | Cisco Certified Design Professional (CCDP) |
| Expert | Expert-Level Network Design Engineer Expert-Level Network Lead for IT Infrastructure Team Expert-Level Network Lead for Architecture Team | Years of experience: 7+ Network design skills and the ability to analyze design requirements based on real-world business scenarios. Candidates can use this information to develop, implement, validate, and optimize network designs. | Cisco Certified Design Expert (CCDE Design Expert) |
| Architect | Senior Network Infrastructure Architect working with top business and technical stakeholders | Years of experience: 10+ Architectural expertise of network designers and architects who support increasingly complex networks. Effectively translate complex business strategies into infrastructure requirements, and clearly communicate and advocate a proposed architecture. | Cisco Certified Architect (CCAr) |



Technology Focus: Routing and Switching

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|---|--|---|
| Entry | Entry-Level Network Engineer Help Desk Network Administrator | Years of experience: 0-2 Manage a small, enterprise branch network. | Cisco Certified Entry Networking Technician (CCENT) |
| Associate | Network Specialist Network Administrator Network Support Engineer | Years of experience: 1-3 Ability to install, monitor and troubleshoot network infrastructure products. | Cisco Certified Network Associate Routing and Switching (CCNA Routing and Switching) |
| Professional | Network Engineer System Engineer Network Support Specialist Network Administrator Network Consultant System Integrator | Years of experience: 3-5 Manage complex networks working with core technologies, optimizing infrastructure and keep applications secure and performing efficiently. | Cisco Certified Network Professional Routing and Switching (CCNP Routing and Switching) |
| Expert | Senior Network Engineer | Years of experience: 7+ Skills to implement and troubleshoot complex converged networks. | Cisco Certified Internetwork Expert Routing and Switching (CCIE Routing and Switching) |



Technology Focus: Security

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|--|--|---|
| Associate | Network Security Specialist Security Administrator Network Security Support Engineer | Years of experience: 1-3 Ability to develop a security infrastructure, recognize threats and vulnerabilities to networks, and mitigate security threats. | Cisco Certified Network Associate Security (CCNA Security) |
| Professional | Network Security Engineer | Years of experience: 3-5 Ability to choose, deploy, support, and troubleshoot firewalls, VPNs, and IDS/IPS solutions for their networking environments. | Cisco Certified Network Professional Security (CCNP Security) |
| Expert | Network Security Engineer | Years of experience: 7+ Ability to implement, maintain, and support extensive network security solutions using the latest Security products and best practices. | Cisco Certified Internetwork Expert Security (CCIE Security) |
| Specialist | Security Engineer, Consultant, and Architect Network Security Engineer Channel Partner | Years of experience: 1-3 Knowledge of real-world best practices of network security engineering. | Cisco ASA Cisco Firewall Security Cisco IOS Security Cisco IPS Cisco Network Administration Control Cisco VPN Security |



Technology Focus: Service Provider

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|---|---|---|
| Associate | Service Provider Network Engineer Service Provider Network and Support Technician Service Provider System Engineer, Field Engineer Service Provider Network Designer, Planner, Implementer, Optimizer, and Support Personnel | Years of experience: 1-3 Knowledge of Service Provider industry core networking technologies and trends, and the ability to configure and implement baseline Service Provider Next-Generation networks. | Cisco Certified Network Associate Service Provider (CCNA SP) |
| Professional | Service Provider Network Engineer Channel Partner Sales Engineer Channel Partner Field Engineer Service Provider System Engineer Service Provider Network Specialist | Years of experience: 3-5 Knowledge required to deliver a scalable carrier-grade infrastructure capable of rapid expansion to support ongoing new managed services offerings and other customer requirements. | Cisco Certified Network Professional Service Provider (CCNP SP) |
| Expert | Service Provider Network Engineers Senior Service Provider Networking Professional | Years of experience: 7+ Knowledge of IP core, aggregation/edge, and remote access technologies, Layer 2 and 3 VPNs, plus managed services traversing an IP core network. Skills to configure, build, troubleshoot, and optimize a complex highly available Service Provider IP NGN core infrastructure. | Cisco Certified Internetwork Expert Service Provider (CCIE Service Provider) |



Technology Focus: Video

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|------------|---|---|---|
| Associate | AV Installer Video Technician Video Administrator Video Media Operator | Years of experience: 1-3 Knowledge to deploy video end-points, set-up new users, and operate networked video solutions. | Cisco Certified Network Associate Video (CCNA Video) |
| Specialist | AV Professionals Voice Specialists Networking Engineers | Years of experience: 1-3 Knowledge of configuring and deploying video endpoints, setting up new user accounts, supporting and troubleshooting video applications. Knowledge of designing, implementing and supporting integrated voice, video and web collaboration in a converged network. | Cisco Video Network Specialist Cisco Rich Media Communications Specialist Cisco TelePresence Solutions Specialist |



Technology Focus: Voice/Collaboration

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|--|---|--|
| Associate | Voice Technologies Administrator | Years of experience: 1-3 Knowledge of VoIP technologies such as IP PBX, IP telephony, handset, call control, and voicemail solutions. | Cisco Certified Network Associate Voice (CCNA Voice) |
| Professional | Voice Engineer Voice Manager UC Voice Engineer Voice Solutions Engineer | Years of experience: 3-5 Robust set of skills in implementing, operating, configuring, and troubleshooting a converged IP network Ability to manage quality of service (QoS), gateways, gatekeepers, IP phones, voice applications, and utilities. | Cisco Certified Network Professional Voice (CCNP Voice) |
| Expert | | Years of experience: 7+ Capable of building and configuring complex end-to-end telephony networks, troubleshooting and resolving VolP-related problems and ensuring QoS using in-depth understanding of Layer 2 and 3 network infrastructure. Skills to help companies accelerate business processes, increase productivity, and speed innovation. | Cisco Certified Internetwork Expert Collaboration (CCIE Collaboration) |
| Specialist | Voice Engineer Voice Manager UC Voice Engineer | Years of experience: 1-3 Knowledge of designing, installing and configuring Cisco Unified Presence Release 6.0. Knowledge of installing, configuring, operating, and maintaining a Cisco Unity 4.0 system in both stand-alone voice mail and unified messaging environments. Knowledge of installing, configuring, operating, and maintaining a Cisco Unity Connection 8.x system. | Cisco Unified Presence Specialist Cisco Unity Design Specialist Cisco Unity Support Specialist |



Technology Focus: Wireless

| | Job Roles | Proven Professional Competence | Applicable Cisco Certification |
|--------------|---|---|---|
| Associate | Network Engineer Network Administrator Network Manager System Engineer Network Designer Project Manager Program Manager Sales and Marketing | Years of experience: 1-3 Ability to configure, monitor, and troubleshoot basic tasks of a Cisco WLAN in SMB and Enterprise networks. | Cisco Certified Network Associate Wireless (CCNA Wireless) |
| Professional | Wireless Lan Specialist Wireless Network Engineer Wireless Test Engineer Wireless Network Administrator Wireless Network Manager Mid-Level Wireless Support Engineer Project Manager Network Designer Program Managers Sales and Marketing | Years of experience: 3 -5 Ability to design, implement, secure, and operate wireless networks and mobility infrastructures. Skills to assess and translate network business requirements into technical specifications resulting in successful installations. | Cisco Certified Network Professional Wireless (CCNP Wireless) |
| Expert | WLAN Engineer and Senior Networking Professional | Years of experience: 7+ Wireless expertise and the ability to demonstrate broad theoretical knowledge of wireless networking and an understanding of wireless LAN technologies. | Cisco Certified Internetwork Expert Wireless (CCIE Wireless) |

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|---------------------------|---|--------------|--------|------------|-----------|--|--|
| Entry | Associate | Professional | Expert | Specialist | Architect | | |

Experience Level: Entry

With up to 2 years of experience, these job seekers with CCENT certification are ideal employees for basic network support.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|-----------------------|--|---|
| Routing and Switching | These candidates are certified to have the routing and switching knowledge they need to manage a small, enterprise branch network. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Entry Networking Technician (CCENT) |

At this certification level, professionals gain knowledge about topics in Routing and Switching technologies that are pre-requisites for subsequent certifications.

| View by Technology View by Experience Level HOME < 11 > | | | | | |
|---|-----------|--------------|--------|------------|-----------|
| Entry | Associate | Professional | Expert | Specialist | Architect |

Experience Level: Associate

With 1-3 years of experience and the applicable Cisco Certifications below, these more advanced candidates are great hires for jobs that require them to install and support medium-sized networks and networking solutions.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|-----------------------|--|--|
| Data Center | Foundational knowledge of installing, configuring, and maintaining data centers. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Data Center (CCNA Data Center) |
| Design | Ability to design network infrastructures and services. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Design Associate (CCDA) |
| Routing and Switching | Ability to install, monitor and troubleshoot network infrastructure products. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Routing and Switching (CCNA Routing and Switching) |
| Security | Knowledge on developing a security infrastructure, recognizing threats and vulnerabilities to networks, and mitigating security threats. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Security (CCNA Security) |
| Services Provider | Knowledge of Service Provider industry core networking technologies and trends, and the ability to configure and implement baseline Service Provider Next-Generation networks. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Service Provider (CCNA SP) |
| Video | Knowledge to deploy video end-points, set-up new users, and operate networked video solutions. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Video (CCNA Video) |
| Voice/Collaboration | Knowledge of VoIP technologies such as IP PBX, IP telephony, handset, call control, and voicemail solutions. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Voice (CCNA Voice) |
| Wireless | The ability to configure, monitor, and troubleshoot basic tasks of a Cisco WLAN in SMB and Enterprise networks. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Associate Wireless (CCNA Wireless) |

| View by Technology View by Experience Level HOM | | | | HOME < 12 > | |
|---|-----------|--------------|--------|-------------|-----------|
| Entry | Associate | Professional | Expert | Specialist | Architect |

Experience Level: Professional

With 3-5 years of experience and the applicable Cisco Certifications below, these IT professionals can provide your company with advanced or journeyman knowledge of networks and networking solutions.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|-----------------------|---|---|
| Data Center | Knowledge of designing, implementing, and troubleshooting data centers and all their components. Click <u>here</u> to view appropriate Job Roles. | Cisco Certifed Network Professional Data Center (CCNP Data Center) |
| Design | Knowledge of intelligent network design concepts and principles. Ability to discuss, design, and develop advanced addressing and routing, security, data center, and IP multicast complex architectures with VPN and wireless domains. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Design Professional (CCDP) |
| Routing and Switching | Knowledge on managing complex networks working with core technologies, optimizing infrastructure and keeping applications secure and performing efficiently. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Professional Routing and Switching (CCNP Routing and Switching) |
| Security | Knowledge on how to choose, deploy, support, and troubleshoot firewalls, VPNs, and IDS/IPS solutions for their networking environments. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Professional Security (CCNP Security) |
| Services Provider | Knowledge on how to deliver a scalable carrier-grade infrastructure capable of rapid expansion to support ongoing new managed services offerings and other customer requirements. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Professional Service Provider (CCNP SP) |
| Voice/Collaboration | Robust set of skills in implementing, operating, configuring, and troubleshooting a converged IP network. Knowledge on how to manage quality of service (QoS), gateways, gatekeepers, IP phones, voice applications, and utilities. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Professional Voice (CCNP Voice) |
| Wireless | Ability to design, implement, secure and operate wireless networks and mobility infrastructures. Knowledge on assessing and translating network business requirements into technical specifications resulting in successful installations. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Network Professional Wireless (CCNP Wireless) |

| View by Technology View by Experience Level H | | | | | HOME < 13 > |
|---|-----------|--------------|--------|------------|-------------|
| Entry | Associate | Professional | Expert | Specialist | Architect |

Experience Level: Expert

With 7+ years of experience and the applicable Cisco Certifications below, these IT experts provide the expertise to implement and troubleshoot complex converged networks.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|-----------------------|--|--|
| Data Center | Knowledge of implementing and troubleshooting complex data center networks. Skills to independently design, implement, operate, monitor, and troubleshoot complex data center networks. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Internetwork Expert Data Center (CCIE Data Center) |
| Design | Network design skills and the ability to analyze design requirements based on real-world business scenarios. Candidates can use this information to develop, implement, validate, and optimize network designs. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Design Expert (CCDE Design Expert) |
| Routing and Switching | Skills to implement and troubleshoot complex converged networks. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Internetwork Expert Routing and Switching (CCIE Routing and Switching) |
| Security | Ability to implement, maintain, and support extensive network security solutions using the latest Security products and best practices. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Internetwork Expert Security (CCIE Security) |
| Services Provider | Knowledge of IP core, aggregation/edge, and remote access technologies, Layer 2 and 3 VPNs, plus managed services traversing an IP core network. Skills to configure, build, troubleshoot, and optimize a complex highly available Service Provider IP NGN core infrastructure. Click here to view appropriate Job Roles. | Cisco Certified Internetwork Expert Service Provider (CCIE Service Provider) |
| Voice/Collaboration | Building and configuring complex end-to-end telephony networks, troubleshooting and resolving VoIP-related problems and ensuring QoS using in-depth understanding of Layer 2 and 3 network infrastructure. Candidates will possess the skills to help companies accelerate business processes, increase productivity, and speed innovation. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Internetwork Expert Collaboration (CCIE Collaboration) |
| Wireless | Wireless expertise and the ability to demonstrate broad theoretical knowledge of wireless networking and an understanding of wireless LAN technologies. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Internetwork Expert Wireless (CCIE Wireless) |

| View by Technology View by Experience Level | | | | | HOME < 14 > |
|---|-----------|--------------|--------|------------|-------------|
| Entry | Associate | Professional | Expert | Specialist | Architect |

Experience Level: Specialist

With 1-3 years of experience and specialist-level Cisco Certifications, these advanced network professionals offer in-depth core networking knowledge in specific technologies.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|---------------|---|---|
| Data Center | Proven, in-depth competencies in unified computing design and support, and unified fabric design and support. Click <u>here</u> to view appropriate Job Roles. | Data Center Unified Computing Cisco Data Center Unified Computing Design Specialist Cisco Data Center Unified Computing Support Specialist Data Center Unified Fabric Design Specialist Cisco Data Center Unified Fabric Design Specialist Cisco Data Center Unified Fabric Data Center Application Services Data Center Application Services Support Specialist |
| Security | Proven knowledge of real-world best practices of network security engineering. Click <u>here</u> to view appropriate Job Roles. | Cisco ASA Cisco Firewall Security Cisco IOS Security Cisco IPS Cisco Network Administration Control Cisco VPN Security |
| Collaboration | Proven knowledge of designing, installing and configuring Cisco Unity Connection 8.x system or Cisco Unified Presence Release 6.0, or Cisco Unity 4.0 system in both stand-alone voice mail and unified messaging environments. Click <u>here</u> to view appropriate Job Roles. | Cisco Unified Presence Specialist Cisco Unity Design Specialist Cisco Unity Support Specialist |
| Video | Proven knowledge of configuring and deploying video endpoints, setting up new user accounts, supporting and troubleshooting video applications. Click <u>here</u> to view appropriate Job Roles. | Cisco Video Network Specialist Cisco Rich Media Communications Specialist Cisco TelePresence Solutions Specialist |

Specialist-level certifications are currently available in both Data Center, Security, Collaboration, and Video technology areas.

| View by Technology View by Experience Level | | | | | HOME < 15 |
|---|-----------|--------------|--------|------------|-----------|
| Entry | Associate | Professional | Expert | Specialist | Architect |

Experience Level: Architect

With 10+ years of experience and a CCAr certification, these professionals are equipped to support the complex networks of global organizations and are able to translate business strategies into evolutionary technical strategies.

| Technology | Proven Professional Competence | Applicable Cisco Certification |
|------------|---|----------------------------------|
| Design | Architectural expertise of network designers and architects who support increasingly complex networks. Effectively translate complex business strategies into infrastructure requirements, and clearly communicate and advocate a proposed architecture. Click <u>here</u> to view appropriate Job Roles. | Cisco Certified Architect (CCAr) |

The CCAr certifies the highest level of expertise in network design, using a wide range of advanced networking technologies.



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