

نام دوره: متخصص ارشد مسیریاب های سیسکو

CCNP(Cisco Certified Network Professional)

مشخصات دوره	تعداد ساعت: ۱۲۰	پیش نیاز: گذراندن دوره CCNA	تعداد ترم: ۳
مخاطبین دوره	متخصصین شبکه- علاقه مندان به سیسکو		
شرح دوره	<p>مدرک Cisco Certified Network professional - CCNP از سری مدارک سطح متخصص ، در رابطه با مهارت فنی در نصب و تنظیمات و راه بری شبکه های LAN و WAN میباشد که نشانگر دانش و مهارت پیشرفته فرد در زمینه شبکه می باشد . با اخذ این مدرک ، یک متخصص شبکه دارای توانایی نصب ، راه اندازی و عیب یابی شبکه های محلی و شبکه های وسیع LAN و WAN جهت مجموعه های بزرگ با تعداد ۱۰۰ تا بیش از ۵۰۰ نود می باشد . مباحث این دوره بر روی مواردی همچون امنیت ، شبکه های متمرکز ، کیفیت سرویس یا quality of service ، virtual private networks VPN و تکنولوژیهای broadband تاکید دارد.</p>		
آنچه در این دوره می آموزیم:	<p>پیاده سازی پروتکل های OSPF و EIGRP</p> <p>پیاده سازی و بیکر بندی پروتکل BGP</p> <p>آشنایی با مفاهیم Policy Base Routing</p> <p>پیاده سازی پروتکل IP V6 Tunneling Protocol</p> <p>پیاده سازی پروتکل های سوئیچینگ شبکه از قبیل WLAN, STP, MST , WTP, Ether channel</p> <p>پیاده سازی ساختار های سوئیچینگ چند لایه</p> <p>ایجاد خطاپذیری در ساختار های سوئیچینگ</p> <p>پیاده سازی پروتکل های امنیتی در ساختار سوئیچینگ</p> <p>آشنایی با پروتکل های ارتباطی شبکه های LAN و WLAN</p> <p>آشنایی با مفاهیم ابتدایی IP تلفنی</p> <p>آشنایی با مبانی خطایابی شبکه</p> <p>بررسی خطاهای محتمل در پروتکل های سوئیچینگ</p> <p>بررسی خطاهای محتمل در پروتکل های Routing</p>		
ترم های دوره	<p>642-902 :CCNP - Implementing Cisco IP Routing (ROUTE)</p> <p>642-813: CCNP - Implementing Cisco IP Switched Networks (SWITCH)</p> <p>642-832:CCNP- Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)</p>		

642-902 :CCNP - Implementing Cisco IP Routing (ROUTE)

Implement an EIGRP based solution, given a network design and a set of requirements

- Determine network resources needed for implementing EIGRP in a network
- Create an EIGRP implementation plan
- Create an EIGRP verification plan
- Configure EIGRP routing
- Verify an EIGRP solution was implemented properly using show and debug commands
- Document the verification results for an EIGRP implementation

Implement a multi-area OSPF Network, given a network design and a set of requirements

- Determine network resources needed for implementing OSPF on a network
- Create an OSPF implementation plan
- Create an OSPF verification plan, Configure OSPF routing
- Verify OSPF solution was implemented properly using show and debug commands
- Document the verification results for an OSPF implementation plan

Implement an eBGP based solution, given a network design and a set of requirements

- Determine network resources needed for implementing eBGP on a network
- Create an eBGP implementation plan
- Create an eBGP verification plan, Configure eBGP routing
- Verify eBGP solution was implemented properly using show and debug commands
- Document verification results for an eBGP implementation plan

Implement an IPv6 based solution, given a network design and a set of requirements

- Determine network resources needed for implementing IPv6 on a network
- Create an IPv6 implementation plan
- Create an IPv6 verification plan , Configure IPv6 routing
- Configure IPv6 interoperation with IPv4
- Verify IPv6 solution was implemented properly using show and debug commands
- Document verification results for an IPv6 implementation plan

Implement an IPv4 or IPv6 based redistribution solution, given a network design and a set of requirements

- Create a redistribution implementation plan based upon the results from a redistribution analysis
- Create a redistribution verification plan
- Configure a redistribution solution
- Verify that a redistribution was implemented
- Document results of a redistribution implementation and verification plan
- Identify the differences between implementing an IPv4 and IPv6 redistribution solution

Implement Layer 3 Path Control Solution

- Create a Layer 3 path control implementation plan based upon the results of the redistribution analysis
- Create a Layer 3 path control verification plan
- Configure Layer 3 path control
- Verify that a Layer 3 path control was implemented

Document results of a Layer 3 path control implementation and verification plan
Implement basic teleworker and branch services
Describe broadband technologies
Configure basic broadband connections
Describe basic VPN technologies
Configure GRE
Describe branch access technologies

642-813: CCNP - Implementing Cisco IP Switched Networks (SWITCH)

Implement VLAN based solution, given a network design and a set of requirements

Determine network resources needed for implementing a VLAN based solution on a network
Create a VLAN based implementation plan
Create a VLAN based verification plan
Configure switch-to-switch connectivity for the VLAN based solution
Configure loop prevention for the VLAN based solution
Configure Access Ports for the VLAN based solution
Verify the VLAN based solution was implemented properly using show and debug commands
Document the verification after implementing a VLAN solution

Implement a Security Extension of a Layer 2 solution, given a network design and a set of requirements

Determine network resources needed for implementing a Security solution
Create a implementation plan for the Security solution
Create a verification plan for the Security solution
Configure port security features
Configure general switch security features
Configure private VLANs
Configure VACL and PACL
Verify the Security based solution was implemented properly using show and debug commands
Document the verification results after implementing a Security solution

Implement Switch based Layer 3 services, given a network design and a set of requirements

Determine network resources needed for implementing a Switch based Layer 3 solution
Create an implementation plan for the Switch based Layer 3 solution
Create a verification plan for the Switch based Layer 3 solution
Configure routing interfaces
Configure Layer 3 Security
Verify the Switch based Layer 3 solution was implemented properly using show and debug commands
Document the verification results after implementing a Switch based Layer 3 solution

Prepare infrastructure to support advanced services

Implement a Wireless Extension of a Layer 2 solution
Implement a VoIP support solution
Implement video support solution

Implement High Availability, given a network design and a set of requirements

- Determine network resources needed for implementing High Availability on a network
- Create a High Availability implementation plan
- Create a High Availability verification plan
- Implement first hop redundancy protocols
- Implement switch supervisor redundancy
- Verify High Availability solution was implemented properly using show and debug commands
- Document results of High Availability implementation and verification

642-832:CCNP- Troubleshooting and Maintaining Cisco IP Networks (TSHOOT)

Maintain and monitor network performance

- Develop a plan to monitor and manage a network
- Perform network monitoring using IOS tools
- Perform routine IOS device maintenance
- Isolate sub-optimal internetwork operation at the correctly defined OSI Model layer

Troubleshoot Multi Protocol system networks

- Troubleshoot EIGRP
- Troubleshoot OSPF
- Troubleshoot eBGP
- Troubleshoot routing redistribution solution
- Troubleshoot a DHCP client and server solution
- Troubleshoot NAT
- Troubleshoot first hop redundancy protocols
- Troubleshoot IPv6 routing
- Troubleshoot IPv6 and IPv4 interoperability
- Troubleshoot switch-to-switch connectivity for the VLAN based solution
- Troubleshoot loop prevention for the VLAN based solution
- Troubleshoot Access Ports for the VLAN based solution
- Troubleshoot private VLANS
- Troubleshoot port security
- Troubleshoot general switch security
- Troubleshoot VACLs and PACLs
- Troubleshoot switch virtual interfaces (SVIs)
- Troubleshoot switch supervisor redundancy
- Troubleshoot switch support of advanced services (i.e., Wireless, VOIP and Video)
- Troubleshoot a VoIP support solution
- Troubleshoot a video support solution
- Troubleshoot Layer 3 Security
- Troubleshoot issues related to ACLs used to secure access to Cisco routers
- Troubleshoot configuration issues related to accessing the AAA server for authentication purposes
- Troubleshoot security issues related to IOS services (i.e.,finger, NTP, HTTP, FTP, RCP etc.)