

## Mark David Barrera

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Phoenix Area Only

### BACKGROUND AND SKILLSET

Cisco Certified Nexus NX-OS and Catalyst IOS network engineer with 12 years of network implementation, operation, optimization, and monitoring experience. Offers hands-on experience, and formal network training including Cisco CCNA and CCNP and F5 load balancer education. Proven management and collaboration skills. Enjoys day-to-day tasks such as inventory, config archival, IP allotment, drawings, change control. Enjoys complex project and technical challenges, and mentoring.

### DEGREES and EDUCATION

Official Cisco Certifications: CCENT (93% score). CCNA (93% score). CCNP Routing Switching (in progress).  
CCNA ICND1 Interconnecting Cisco Networking Devices Part 1. Interface Technical Training, Phoenix. Instructor Jeremy Cioara.  
CCNA ICND2 Interconnecting Cisco Networking Devices Part 2. Interface Technical Training, Phoenix. Instructor Mike Storm.  
CCNP ROUTE Implementing IP Routing. Interface Technical Training, Phoenix. Instructor Jeremy Cioara.  
CCNP SWITCH Implementing IP Switching. Interface Technical Training, Phoenix. Instructor Jeremy Cioara.  
CCNP TSHOOT Maintaining and Troubleshooting IP Networks. Interface Technical Training, Phoenix. Instructor Jeremy Cioara.  
F5 BIG-IP LTM Essentials approved course. Accuvant, Scottsdale. F5 University from F5 Corporation online university.  
Bachelor of Science in Electrical Engineering. Arizona State University Fulton College of Engineering, Tempe, Arizona.

### SKILLS and EXPERTISE

L2 – VLAN. STP RSTP PVRST PortFast EtherChannel. Frame Relay. MPLS. CDP DTP VTP. HDLC PPP. PAgP LACP. UDLC.  
L3 – IP: ARP DHCP DNS ICMP IGMP. IP Multicast: Routing. RPF. Auto-RP. PIM dense and sparse modes. IGMP snooping.  
L3 – Interior Routing: EIGRP OSPF RIP iBGP. Exterior Routing: eBGP. First Hop: GLBP HSRP VRRP. Tunneling: MPLS.  
Security L2 – Private VLAN. PAACL. VACL. Cisco STP toolkit: BPDUFilter BPDUGuard LoopGuard RootGuard UplinkFast.  
Security L3 – ACL. NAT PAT. AAA RADIUS TACACS. DHCP snooping. Dynamic ARP Inspection (DAI). IP Source Guard.  
QoS – Traffic classification and marking. Trust boundaries. Layer 2 CoS, Frame Relay DE. Layer 3 AutoQoS, DSCP, ToS.  
Management – SSH. Telnet. Out-Of-Band. Debug. SNMP configuration. Syslog configuration. SolarWinds Orion. WireShark.  
Documentation – Cut sheets. Visio network diagrams. IP address control and management. Security control and scaling.

### PROFESSIONAL EXPERIENCE

- |  |   |
|--|---|
| <b>Network Engineer Consultant</b><br><b>Superior Network Solutions, LLC</b>   | <b>Phoenix</b><br><b>Feb 14 – present</b> |
| Founded my network consulting and equipment corporation. Licensed in Phoenix area. Rated A+ by the Better Business Bureau.<br>Responsible for home, business, estate network design and implementation. National remote and Phoenix onsite projects.       |   |
| <b>Senior Cisco Data Center Network Engineer</b><br><b>Expedia</b>   | <b>Chandler</b><br><b>Oct 13 – Feb 14</b> |
| Converted from consultant to staff. Catalyst to Nexus upgrade migration for two Expedia data centers located in the Phoenix area.<br>Responsible for Cisco Nexus implementation, and general maintenance of Cisco Catalyst and Nexus switches and routers. |   |
| <b>Lead Cisco Network Engineer</b><br><b>US Foods</b>  | <b>Phoenix</b><br><b>May 13 – Jul 13</b>  |
| Contract for Lead Engineer for a Catalyst 4500 (IOS 12.2, Sup 4) to 4500E (IOS 15.2, Sup 7E) core upgrade for US Foods.<br>Took a US Foods warehouse offline and back up with zero interruption to warehouse employees and warehouse customers.            |   |
| <b>Cisco CCNP Network Student</b><br><b>Cisco Certifications</b>   | <b>Phoenix</b><br><b>Feb 13 – May 13</b>  |
| Renewed my CCENT (April 93%) and CCNA (May 93%). Preparing for my Cisco CCNP ROUTE, SWITCH, and TSHOOT tests.  |   |
| <b>Senior Cisco Data Center Network Engineer</b><br><b>Dignity Health</b>  | <b>Phoenix</b><br><b>Nov 12 – Jan 13</b>  |
| Completed documentation contract: Cisco ASA 5585, 5550 firewalls. F5 6900 LTM load balancers. Fortinet 200B, 80C VPNs.   |   |

**Lead Cisco Data Center Network Engineer  
Hewlett Packard at American Express**

**Phoenix  
Apr 11 – Oct 12**

Completed 18 month network consulting project. Contract was extended twice. Averaged 7 days per week. 800 overtime hours. Lead engineer and implementer for the access layer for the AMEX Phoenix, Minneapolis, and Greensboro data centers. The AMEX access layer consists of: Nexus NX-OS Core and Distribution 7010, 7018. Nexus Access 2232, 2248, 5548, 5596. Cisco Catalyst IOS implementation, operation, optimization: Cisco Catalyst 6K 6509. 4K 4510, 4948. 3K 3560, 3750. 2K 2960. Management: Network engineer for the implementation of HP Network Node Manager i (NNMi) for all three AMEX data centers. Servers. IBM z10 mainframes. Dell 2950, 6850, R610. EMC VNX-7500. HP DL380, DL585. IBM Power 590, 780. Sun M5000. Server operating systems. Linux: AIX, Redhat, Solaris, SUSE, z/OS. UNIX: Solaris. Virtual: VMware ESX. Windows: Server. Server Load Balancers: F5 BIG-IP 6900 Local Traffic Manager (LTM). Certified F5 BIG-IP LTM Essentials course at Accuvant.

**Cisco CCNP Network Student  
Interface Technical Training**

**Phoenix  
Oct 10 – Apr 11**

Attended the onsite Cisco Learning Partner ROUTE, SWITCH, and TSHOOT network configuration and operation classes. The three CCNP courses were each five days long for a total of 150 hours of advanced CCNP routing and switching training. ROUTE: Enterprise planning. EIGRP solutions. OSPF multi-area solutions. BGP solutions. Route redistribution. Path control. SWITCH: Enterprise planning. Spanning tree planning. Inter-VLAN routing. HSRP, VRRP, GLBP. Security. VOIP. Wireless. TSHOOT: Enterprise maintenance processes. Troubleshooting processes. Troubleshoot Layer 1, Layer 2, Layer 3, security.

**Senior Cisco Data Center Network Engineer  
Limelight Networks**

**Tempe  
Feb 09 – Sep 10**

Completed 21 month network consulting project. Consulting contract was renewed thirteen times. Averaged 7 days per week. Limelight Networks operates the world's second largest content delivery network (CDN) and offers a scalable platform. Role 1: Network Engineer. Verification and documentation of the configuration and operation of routers, switches, servers. Analyzed and solved trouble ticket configuration and operational documentation issues in collaboration with lead engineers. Used monitoring tools such as RANCID, Subversion, MRTG, and Keynote to verify correct operation and identify problems. Role 2: MediaWiki Network. Hands on configuration and operation of a pool of virtual Linux hosts for the MediaWiki servers. Sole creator of the 23 CDN design and operation documents (1600 pages) for the custom Microsoft CDN created by Limelight. Sole creator of 200 Limelight CDN documents for network architects, system engineers, operations engineers, and the NOC. Documentation: Router, switch, firewall, server, virtual server configuration. Monitoring, DNS, load balancing, high availability. Cisco 7206, 2800 router. Cisco ASA 5550. MRV LD1600L. Brocade XMR 16000 router, LS 648 switch. HP 5308, 2824 switch. Servers: Dell, HP, IBM. Linux OS: Debian, Gentoo, Redhat, SUSE. UNIX OS: FreeBSD, Solaris. Windows OS: Windows Server.

**Cisco CCNA Network Student  
Interface Technical Training**

**Phoenix  
Mar 08 – Apr 08**

Concurrent with below Cenveo position. Attended Cisco ICND1 and ICND2 classes. Obtained CCENT and CCNA certifications. The two onsite CCNA courses were each five days long for a total of 100 hours of advanced CCNA routing and switching training. ICND1: TCP/IP and OSI reference models. Switching and routing theory and implementation. DHCP. LAN. VPN. WAN. WLAN. ICND2: STP and RSTP. EIGRP. OSPF. Access Control List (ACL). NAT and PAT. IPv4 and IPv6 address management. WAN.

**Senior Network Engineer  
eTelecare Global Solutions**

**Scottsdale  
May 07 – Jul 07**

Concurrent with below Cenveo position. Completed contract for Payment Card Industry (PCI) global network security audit. Role 1: Network Engineer. Hands on configuration and operation for the Microsoft SharePoint servers for PCI documents. Role 2: Network Documenter. Documented the global network including Cisco routers, switches, firewalls, and F5 load balancers. Created the Network Policies and Procedures security documents for the Payment Card Industry (PCI) audit which was passed.

**Senior Cisco Network Engineer  
Cenveo at Freescale Semiconductor**

**Chandler  
Oct 05 – Feb 09**

Initial engineering consultant contract. Converted to full time engineering staff. Moved to Limelight when Cenveo left Arizona. Cenveo Corporation performed business services onsite for the multiple Freescale Semiconductor campuses located in the USA. Sole Network Engineer. Hands on daily configuration and operation for the Cisco network within the Freescale network. Configuration and management: Cisco 2960 switches and 2800 ISR routers. Microsoft Windows Server. Microsoft Windows