

IT Specialist IT Specialist IT Specialist - City of Higginsville Municipality Higginsville, MO Secure a challenging position in network engineering utilizing my skillset with a path for growth. Work Experience IT Specialist City of Higginsville Municipality - Higginsville, MO March 2018 to Present

Designed and implemented IP scheme one flat layer 2 network to layer 3 collapsed core design using Cisco 3850's. Implemented core access and distribution layers. Designed 10GB throughput of city MAN private fiber ring throughout all city municipal buildings/departments. Configured QoS throughout city network for upcoming VOIP migration from POTS lines to VOIP PBX with SIP trunking. Designed and implemented secondary redundant data center. Migration from Dell SonicWALL firewalls to redundant Cisco Firepower ASA-X models. Implemented Cisco Firepower IPS/IDS. Project included moving Higginsville Police department to new building, ran/terminated 10gb cat6a, spliced private fiber, worked with ISP to install DIA fiber, Cisco 3850's and Cisco ASA 5525-X's. Implemented Nessus security device for vulnerability scanning. Installed and configured quad redundant power sources via UPS, city power, DC battery bank, and generator. Designed and implemented ESXi hosts and vMotion network. Migrated external DNS, migration of city VPN connections to surrounding city's along with Lafayette county Sheriffs. Configured security network for secure communication from Higginsville Police to FBI secret service allowing secret service software for law enforcement activities. Designed and implemented migration from consumer class cable internet connection to business class DIA fiber with SLA from ISP. Migration to Cisco 4331 ISR routers on edge from layer 2 vlan unmanaged switch to ISP. Migration from OSPF to EIGRP. Used IP SLA/GLBP to manage redundant internet connections as well as EIGRP from core to firewalls. Designed and implemented city-wide wireless network using Unifi equipment. Blanketed City with wireless coverage from city water tower's using Unifi Sector antenna WAP's. Installed backhaul WAP's with access WAPs on Street light poles throughout city to provide public and city private network access. Installed Unifi WAPs in city vehicles providing vehicles constant network access for emergency Missouri One locates and other emergency services. Provided revue opportunity for city to deliver low cost affordable internet access to public. Migration from physical server hardware to virtual chassis based using vSphere ESXi hosts with huge cost savings on

hardware and license renewal maintenance. Migration from attached storage to spinning disk/flash-based EMC VNX5300 SAN. Migration from Windows server 2008 to Linux Debian based servers to provide cost savings on Microsoft licenses. Utilized Docker and Ansible environment for city servers providing huge time savings. Designed and implemented out of band security camera network using Exacqvision software, installed and configured Samsung camera's at City Hall, EMS, Police, Parks, and City Lake. Motion detection and footage archival/retrieval published to internet for city officials and other publicly elected personal. Migration from Microsoft server 2008 domain to 2016. Brought domain level security, utilized group policies, DNS, DHCP, RADIUS, logon scripts, wrote Powershell/Python scripts/ to automate daily activates providing time savings opportunities. Designed and implemented backup solution utilizing Veeam to provide backups of all city servers, vSphere environment, and user endpoints. Installed tape backup at secondary data center with open source Bacula software solution for redundant offsite backups. Created thorough network documentation via Microsoft Visio which included physical and logical diagrams, IPAM spreadsheets, and other various documents. Provided analysis and reporting to city officials. Provided training and knowledge transfer to other departments Sr. Network Engineer Freightquote - Kansas City, MO March 2015 to January 2018 Administered and supported redundant data centers consisting of dual Cisco Nexus 7009's for core/distribution. Cisco Nexus 5000's for SAN. Redundant Cisco ISR 1001's for WAN. Cisco ASA 5520's firewalls. Twenty-plus Cisco 4510's access switches. Multiple Cisco 3900's voice gateways. NetScout, Cisco Prime, Live Action, and Solarwinds Orion software. Administered and supported over 300 WAN locations internationally. Administered Cisco Unified Communications platform on UCS environment. CUCM, Unity, UCCX, ELM, CUPS for over 1200 employees. Administered physical/virtual F5 LTM's load balancers. Administered wireless network utilizing redundant Cisco 4404 WLC, and over 100 WAP's. Administered VMware environment. Collaborated with system engineers to provide backup and distribution of workload. vSphere 6.X. Windows, Linux environment (Redhat). Utilized tools such as Docker and Ansible. Designed and implemented Cisco 5545-X firewalls migrating from older 5520's. Implemented inline Snort firepower IPS/IDS. Designed and implemented Cisco CUBE.

Migration from h.323 gateways to sip trunks via CUBE. Provided cost savings via reducing expensive PRI circuits and call routing (no long distance interoffice). Designed and implemented new WAN sites. Ordered and configured equipment, shipped to site, worked with Blackbox for onsite installation. Responsible for interfacing with carriers to design and install WAN circuits. Access switch upgrade - Designed and implemented Cisco 4510+r switches, replacing the end-of-life Cisco 4510-r's. Also replaced outdated 3750's stacks. Project allowed cost savings via SMARTnet consolidation. WAN equipment and circuit upgrade project. Worked with carriers (level 3, at&t, CenturyLink, Verizon) to design and migrate older circuits to layer 2 ethernet circuits. Designed and implemented replacement of older routers to Cisco 4331 ISR routers at over 150 locations across the US and Canada. Provided annual cost savings by eliminating expensive older circuits and consolidating to two main carriers. Designed and implemented Cisco NAM modules in Nexus core switches. Provided real time deep packet inspection of traffic. Provided reporting data between network and application teams. Allowed troubleshooting collaboration between teams. Ability to gather and present analytical data of traffic flow to management. Redesign and implementation of QoS infrastructure to integrate Cisco and Avaya VOIP. Correctly marking traffic, reducing jitter, and prioritizing packets via service policies. Implemented full network environment logging to collective Redhat SYSLOG and displayed real time performance to teams. Responsible for ensuring all systems were backed up nightly. Designed and implemented Cisco ACS servers to provide tacacs authentication. Migrated system-wide authentication from RADIUS to TACACS over 300 sites internationally. Sr. Network Engineer eScreen - Overland Park, KS October 2013 to March 2015

Designed, configured, and implemented a new redundant VPLS WAN infrastructure utilizing new Cisco 1900, 2900, 3900 & 4451X routers. Designed failover with redundant Carriers (ATT & Level3)

Created and maintained detailed network documentation of existing architecture and future revisions. Crafted thorough and in-depth Visio diagrams of complete network architecture, including both physical and logical flows. Every endpoint/IP. Assisted senior network engineer on all and any tasks. Collaborated with other teams with design, configuration, and implementation deploying an Avaya VoIP phone system. Provided support and knowledge transfer among teams. Designed,

configured and implemented SIP trunks for voice data. Assisted infrastructure team network requests within vSphere Designed and implemented QoS policies for LAN/WAN. Designed, implemented, and administered Riverbed Steelhead, Cascade, and Shark in data center. Implemented Steelheads at over 100 WAN locations throughout US. This provided WAN optimization allowing cost savings on bandwidth. Implemented WCCP throughout network for further optimization. Administered large network and data center consisting of dual Nexus 7K's (multiple VDC's), Nexus 2K's, Nexus 3K for dedicated iSCSI traffic, Nexus 9K's, 3750's, 6509's, 6504's, 7603 routers, F5 Load Balancers, Riverbed Steelheads (WAN Opt), Riverbed Cascade, IronPort Web Appliance, Cisco ASA's (5520-X, 5510) with FirePower, Palo Alto Firewalls (5050's) Administered WAN infrastructure containing over 100 circuits. Work with carriers to troubleshoot downtime, jitter, SLA bandwidths. Provided support to end users. Administered wireless network containing over 100 WAPs utilizing a mixture of systems depending upon location. Cisco, Meraki, Xirrus, and Aruba. Over Implemented new security policies and procedures. Ran vulnerability scans against LAN, WAN and internet facing. Provided detailed analysis and reporting amongst teams and management. Researched and implemented mitigation strategies for vulnerabilities. Network Administrator Multiservice - Overland Park, KS July 2013 to October 2013 Configuration and management of Cisco wireless network - Cisco WLC 5508 - Over 30 Cisco 1252 access points Configuration and management of Cisco security devices - Various ASA 55xx models - Cisco FWSM modules Configuration and management of F5 BIG-IP devices - LTM 3600 pairs Core upgrade project - Design and implement upgrade path for various 6513 core switches - Utilize Cisco Nexus models Provide ongoing day to day support - Document network topology and changes - Work various network tickets - Troubleshoot performance issues, outages - Interface with network architect on projects path for various 6513 core switches - Utilize Cisco Nexus models Provide ongoing day to day support - Document network topology and changes - Work various network tickets - Troubleshoot performance issues, outages - Interface with network architect on projects Sr. Network Engineer UMB Financial Corporation - Kansas City, MO November 2011 to June 2013 Cisco Unified Communications Upgrade - Upgrade CUCM, UCCX, Unity from 7.1.2 to

8.6.2 - Migration from physical to Cisco UCS platform - Mirror system at DR for hot standby Call Center Upgrade and Migration - Migrate from Managed Contact center to integrate with UCM/UCCX - Utilized 3945's SIP gateways/Proxy for SIP trunking - Worked with providers to port and route numbers Design and implement core infrastructure refresh upgrade Project - Utilized Cisco Nexus Equipment 7k,5k,2k various models - Build out of 40gig backbone Nexus Core Data Center - Utilized VDC's to consolidate existing networks/hardware Install and configure Cisco VCS-C/VCS-E /TMS - EX60/90 endpoints - QoS using AF41 as DSCP value, WAN packet shaping - Utilized for Video Banking and Telepresence for Executives Managed F5 BIG-IP devices - LTM, GTM, EM from 3600 up to 8900, running 11.3 - Configured all virtual servers/pools/nodes - SSL acceleration/offloading Operational support of Core, LAN, WAN, MAN campus networks - Adds/moves/changes - Managed MPLS network with multiple VRF's using BGP redistributed into OSPF - Managed high available and redundant core network consisting of Cisco Nexus 7010's, 5596, and 2248's - Work upper level tickets/On call support - Work with other MIS teams assisting with projects/general help - Ensure network documentation is up to date - Supported over 113 branches in 5 states and over 350 ATM's Provided support and mentoring to network technicians, administrators - Assisted team with all Lights On tasks - On call 24/7 support rotation to multiple teams as well as assisting admin/engineers with any/all issues Network Administrator Unified Government of Wyandotte County - Kansas City, KS January 2008 to November 2011 Implementation and managing Cisco DWDM fiber topology - Ensure connectivity of 10gb layer 3 fiber ring throughout city - Maintain physical/logical separation using various wavelengths for increased security - Paved way for bringing Google Fiber to KCK. Worked with Google to engineer solution providing gigabit internet at low cost to Wyandotte CO. Redesign current IP scheme to isolate networks and reduce broadcast domains - Implemented VLANs across network - Implement OSPF/EIGRP for dynamic IP routing - Redistribute static routing into route table - Route summarization to minimize hops - Configure separate VTP domains per Layer 3 connection - Prune unnecessary VLAN's from trunk connections Management of Cisco Fabric channel SAN - Utilized Cisco MDS 9124 and 9140 fabric switches Implementation/administration of Cisco

wireless network - Wireless network for Data and Voice with seamless rollover - Administered over 50 WAPs - Administration of Cisco Wireless LAN Controller and Wireless Control System - Conducted penetration testing for wireless vulnerabilities. Administer over 20 WAN locations throughout county - Worked with carriers to troubleshoot circuit issues - Maintain QoS for network voice traffic Administer Core network and distribution layer devices - Collapsed core of quad Cisco 6509 switches - Over 200 access switches across MAN Management of Cisco ASA Firewalls - Site-to-site VPN's for local government and state agencies - Utilize clientless SSL VPN for end users - Adds/Moves/Changes ACLs/NATs - Configure Access rules for multiple networks - Manage Cisco IPS module (ASA-SSM-20) - Assess threats, risks, and vulnerabilities from emerging security issues Manage Cisco Unified Communications VOIP Platform - Callmanager 4.2 - Upgraded to Unified Communications Manager 7.X - Cisco Unity Voicemail - Cisco Unified Contact Center Express including agents - Reworking of various scripts/prompts Network Administrator West Suburban Bank - Lombard, IL July 2006 to January 2008 Administer daily operations of network (CiscoWorks/Cisco MARS/WhatsUpGold). - Ensure connectivity to all other branches - Answering technical inquiries; advising on upgrade and expansion strategies - Monitor and control network infrastructure performance in the areas of response, throughput and availability. Along with traffic analysis, forecasting and provisioning - Report system outages with cause analysis and recommend solutions and improvements - Worked on team of 3 other network administrators and one architect - Document network layout and changes (Visio) - Ensure enforcement of IT policy (sniffing traffic, emails, downloads) Administration of Cisco CallManager / Unity VOIP / IPCC solution for over 36 locations - System admin for Cisco IP Contact Center - Implemented and administrated corporate IP telephony - Add/change new or existing users in CallManager and Unity Core Layer 3 Switch Upgrade / Opt-E-Man Rollout - Responsible for installing and configuring Cisco Catalyst 6513 w/ no downtime - Implementation of VLAN structure for entire network - Created ACL's as per need basis - Integration of core switch with Unisys Mainframe - Opt-e-Man circuit upgrade/hardware replacement rollout consisted of replacing all old Cisco 2600 series routers/2900 switches with Cisco 2800 series routers acting as voice gateways for each branch.

Branch switches upgrade consisted of 3560/3750(layer3) PoE switches Responsible for implementing, managing, configuring, and troubleshooting Cisco gears - Ensure compatibility and stability of new equipment - Provide technical leadership and guidance and Cisco equipment - Process configuration, routing and feature change requests as needed including major network infrastructure changes and updates Cisco NAC testing, installation, and management of Cisco NAC appliance - Rolled out NAC at remote location to conduct testing and stability - Implementation of NAC corporate wide to enforce WSB's security policy compliance - Integration with TriGeo network security appliance, giving us immediate alerts and the ability for active response to stop attacks Network Administrator DeVry Inc - Oakbrook Terrace, IL March 2005 to July 2006 Worked alongside 6 network engineers and 2 network architects. Configure, install and upgrade Cisco equipment throughout the enterprise network - Setup VTP domains - Configuring VLAN's, different interfaces, DHCP - Specific port configuration including Spanning-Tree and other various commands Connecting new equipment to the network by patching them to access-layer switches with both fiber and copper patch cables Maintaining UPS's by inspecting power load, temperature and other system variables through SNMP and Telnet. Replacing batteries and recalibrating as necessary Install and configure Cisco VOIP equipment w/ Cisco Call Manager and Unity Voicemail Fulfill various helpdesk tickets on a daily basis Documenting all arriving and current inventory w/ model, serial, and location Replaced Nokia Firewalls and Cisco routers with Cisco's 2821 ISR routers in DeVry's "Equipment and Cost Consolidation Project" for reduction in maintenance and management costs saving the enterprise upwards of \$250,000 annually - Migrated "old" configuration to new router/firewall - Created custom ACL's on a per location basis - Worked with local staff to coordinate installation Education Bachelors of Science in Network and Communications Management DeVry University - Chicago, IL June 2006 Skills Bgp, Catalyst, Cisco, Ciscoworks, Dwdm, Eigrp, Juniper, Mpls, Netscout, Network protocols, Optimization, Orion, Ospf, Ds3, T3, Dns, Nagios, Opnet, Solarwinds, Avaya, It Specialist, Network Support, Information Technology, Help Desk, Desktop Support, Computer Repair Certifications/Licenses CCENT CCNA Routing and Switching Additional Information Core Competencies Network Equipment - Cisco

Nexus 9000,7000,5000,2000,1000v NxOS - Cisco 2900,3500,3700, ,4500,6500 Catalyst/IOS switches - Cisco 1600,1700,2600,2800,2900,3800,3900, 4000 routers/ISR - Datacenter Cisco UCS Hardware - Security Appliances (Cisco ASA-X, ACS, Palo Alto, Sonicwall, IPS/IDS, Firepower - Wireless infrastructure (Cisco, Aruba, Meraki, Xirrus, Unifi) - Juniper J-series, M-series routers, EX series switches - HP Switches, Avaya switches - Load Balancers - F5 BIG-IP LTM 3600-8900, F5 BIG-IP GTM - WAN Optimization - Riverbed Steelheads, Cascade, Shark Network Management - Ciscoworks suite, Cisco Prime suite, Cisco MARS, Cisco NAC - Live Action - OPNET - SolarWinds Orion Network Performance Monitor - Infoblox DNS and NetMRI - Netscout nGenius, taps and probes - Raritan Console devices - Open Source Software (MRTG/Bacula/Nagios/RANCID/Cacti/Kibana) Network Protocols and topologies - Ethernet,OC3,DS3,T3/1,ISDN,PRI/BRI - VTP,CDP,L2TP,STP/RSTP+/MSTP,802.11,PPP,ISL,HDLC,DWDM - MPLS,VPLS BGP/iBGP,OSPF,EIGRP,OTV,HSRP,VRRP,IPSec,NAT/PAT - MGCP,H.323,T.38,SIP,RTP,QoS Voice Over IP / Video Conferencing - Cisco Callmanager, Unified Communications Manager - Cisco IPCC/UCCX, Custom scripting - Cisco Unity/Unity Connection - SIP Trunking, SIP Proxy, Cisco CUBE - Cisco TelePresence Management Suite - Cisco VCS-C/E

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