

RICHARD Hay

SYSTEMS ENGINEER

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OBJECTIVE

To continue to explore new challenges in the networking field, work at top telecommunications companies to further advance as a Field Support Engineer, and continue to explore new technologies relevant to IP convergence.

EDUCATION

Bachelors Degree in Geography - Texas A&M University
1 Year Graduate School - University of Maryland

CERTIFICATIONS

JNCIS	-	Juniper Networks Certified Internet Specialist
CCNA	-	Certified Cisco Network Associate
NNCSS	-	Nortel Networks Certified Support Specialist
CNA	-	Certified Novell Administrator (v4.11)
MCSE	-	Microsoft Certified Systems Engineer (NT 4.0)

AWARDS

Ixia Newcomer of the Year (2004)
Ixia Special Recognition Award (2006)

PUBLICATIONS

Computer Magazine, IEEE Computer Society, August 2000
"Comparing POS and ATM Interfaces"
<http://www.computer.org>

WORK EXPERIENCE

Regional Support Engineer for Ixia in Texas. Support accounts include Cisco Desktop Business Switching unit EVDT Group and support for Cisco contract manufacturer Solectron operations. Technical support and onsite assistance is provided for at&t labs, Cingular, Dell, HP Houston, 3com (Tipping Point), Mirage Networks, Texas A&M Internet II research lab, Agere Systems (IPSec Crypto Chip Testing), and Wayport. (5/06 - present).

Federal Support Engineer for Ixia. Supported United States Federal Government customers nationwide and overseas. Developed test plans for IPv6 performance testing and protocol emulation. Supported Joint Interoperability Test Command (East and West), NATO Combined Endeavor Exercise in Baumholder Germany, DISA GBS and GIG-BE projects, Navy SPAWAR, Viasat, L3, various contracting companies, Interoperability Test Lab at the University of New Hampshire, M.I.T. Lincoln Labs (IPv6 system development), wireless testing, TCP acceleration testing over Satellite, VoIP, failover, and Quality of Service. Also worked on projects testing Firewall, IDS, IPS, and Encryption systems. (2/04 - 5/06).

Senior Systems Engineer for Superlative Technologies. Tested and evaluated 802.11b wireless ethernet solutions and developed an expertise in RF antennas and topologies through real world deployments. One of two development engineers on a patent pending field wireless encryption system. Lead engineer for managed VPN solutions to the local carrier market and encrypted wireless deployments to US Military installations in Europe and for Army logistics. (10/01 - 2/04)

Systems Engineer for Spirent Communications. Onsite support of the SmartBits 200, 600, 2000, and 6000 chassis as well as the AdTech AX/4000 test equipment. Testbeds include using T1 FR, DS-3 FR, ATM T1, ATM25, DS-3 ATM, OC-3 ATM, OC-12 ATM, POS OC-3 / OC-12 / OC-48 / OC-192, and 10/100/1000 Mbps 802.3 Ethernet for a variety of carriers and network device vendors in the DC area. Also supported are a wide variety of Network equipment manufacturers (NEMS) of the cutting edge devices for ATM, Optical IP Routers, CPE devices, Frame-Relay Switches, and Ethernet Layer3 Switches. (3/00 – 10/01)

Information Systems Engineer for the Technica Corporation in Herndon, VA, working as an onsite consultant at Sprint Communications in Reston in a

network research testing laboratory. Work included hardware testing and assessments from test plan development to execution to final deliverables. Layer 2 Switches, Layer 3 Routers, and VPN Concentrators were the primary devices that needed to be tested. (6/99 - 3/00)

RELATED SKILLS

Experienced with configuring and testing Juniper M Series Routers, Cisco 7513, Cisco 12000 Series Routers, Cisco 2500, Cisco 2600, Cisco 3600, Cisco 4500, Lucent/Ascend CBX 500 ATM Switches, Alcatel/Newbridge ATM Switches, Marconi/Fore ASX 200 BX, Avici TSR, and Nortel Passport Frame Relay/ATM Switches.

Thoroughly familiar with IP Routing Protocols. This includes BGP4 configuration, architecture, and troubleshooting. Also setting up OSPF Areas, Level 1/Level 2 IS-IS Topologies, EIGRP, RIP, Static routing, black hole routing, and advanced IP topology logic.

Experience Testing Juniper Netscreen 5400 Firewall, Nokia IP2255, Checkpoint Firewall-1, McAfee IPS, and Cisco PIX & FWSM Firewall.

Direct practical experience with a wide variety of WAN technologies and the specifics involved with the topology issues for deployment. These include; PPPoE Aggregation for DSL services, wireless ATM OC-3 up to 2 mile distances, Cable Modem CMTS aggregation boxes, CPE routers and switches, Layer3 switches, Frame-Relay and ATM switches, testing performance and conformance on the Industry standard high end core routers, and testing DWDM gear for wavelength integrity.

8 years of experience with network testing of very diverse situations. Layer1 BERT Testing to validate DWDM Frequency division and wireless performance in rainstorms. Layer2 ATM and Frame Relay performance testing and signaling conformance verification (IMA, FRF8, SVC). Layer3 IP performance testing and route protocol conformance verification. Layer4 TCP Firewall testing. VPN testing and finding the limits of encrypt/decrypt engines for security.

Assisted in Test plan development and execution of NIC vendors and forwarding performance of server systems for large manufacturers.

Practical experience with Ixia Power over Ethernet test solutions coupled with external electrical scopes for analyzing waveforms. Power over Ethernet uses electrical current and standardized pulses to ‘signal’ the level of power draw required from the provisioning switch.

Having worked for Ixia & Spirent as a field support engineer provided frequent exposure to cutting edge R&D labs at a variety of Network Equipment Manufacturers, Chipset developers, Service Providers, and Enterprise and Government end users.

Frequent use of Unix bash shell scripts & expect scripts to configure networking devices, build complex and large configurations, and facilitate the test topology required for a given test case to be assessed.

Firewall assessments include extensive testing of Juniper Netscreen 5400 Series, Cisco FWSM modules, Cisco PIX Firewalls, Nokia IP2255, & HP Security Platforms running Checkpoint Firewall-1.

REFERENCES

Available upon request