Tim Osburn

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EXPERIENCE

EQUINIX | Senior Network Engineer
Oct 2018 – present | Maple Valley, WA

Under the Equinix umbrella: { *Oct 2018 – March 2020*
Network Engineer at Packet Host, Inc.
Packet Host, Inc. sold to Equinix for $355m

- Responsible for deployment and ongoing support of all network infrastructure including DNS, system logging, network automation, templating, standards compliance, core and edge routers, firewalls, switches, DWDM systems, and other related network infrastructure & software. Working alongside other teams to provide support for network issues.

M2OS LLC | Owner
Jan 2001 – present | Maple Valley, WA

- As owner and chief technician of m2os, I provide high-level Unix, Network and VoIP consulting services to many companies throughout the Northwest (USA) including: Aptimus, ColoCenters, The Mead Group, Alaska Communications System (ACS), The State of Alaska, Mt. Rainier National Park, Virtual Spectator, City of Federal Way, Tegris Corporation, Fisher Communications/KOMO4, Zama, Cortland Communications, James G. Murphy, 4ADream, StreamGuys, MillerLaine Properties, Threshold Communications, Inc., i3D.Net, CityNetwork (This is something I do when I am not working full-time)

WINDSTREAM COMMUNICATIONS | Senior Network Consultant
Aug 2017 – Oct 2018 | Maple Valley, WA

- Windstream is an enterprise carrier with a nationwide 100GE+ backbone across America utilizing a mix of Juniper, Cisco & Nokia devices. Their services include carrier class internet, fixed wireless, voice, IPTV, owning their own transport, and last mile residential services. I currently work in IP Engineering where I have many rolls that I work in. Some of which are integrating acquired networks, network standards review & compliancy, creating and reviewing change procedures/requests, network security & access, core routing work, router upgrades, occasional router/circuit turn-ups & grooms, and working with various SDN technologies. Additionally, I serve on a rotating schedule as the tier 4 engineer responsible for driving all IP Network escalations to their conclusion.

RAKUTEN | Senior Network & Design Engineer
Sept 2016 – July 2017 | Tokyo, Japan

- Based at the Rakuten HQ in Tokyo, Japan, I worked in the network design & operations team to help implemented new technologies. Projects include upgrading ASR9k's, working to help plan and implement IPv6, swap out the existing DCI fabric path and implement PBB-EVPN over MPLS/MP-BGP.

THRESHOLD COMMUNICATIONS | Director of Engineering, R&D
Dec 2006 – July 2015 | Bellevue, WA

- Threshold is a registered CLEC, VoIP & Internet Service Provider. We provide SIP & Network solutions to our customers.
- Built from scratch/opensource software providing Voice, Data & Internet, providing routing solutions & migrated multiple AS networks, provide homegrown PBX solutions.
- Created and designed multi-homed networked datacenters in Seattle & Phoenix, providing full VoIP & ISP services ranging from DSL, T1s up to GigE and higher Circuits, MoE, MPLS, microwave solutions, network design for clients and more.

CLASSMATES ONLINE | Senior Network Engineer
April 2004 – Nov 2006 | Renton, WA

- Classmates Online is now a subsidiary of United Online. As the senior network engineer I oversaw, maintained, and implemented changes across the network in two datacenters. The Core network includes hardware from Cisco, F5 and SUN. Analyzed BGP links and balanced traffic across links, monitored all traffic and IDS systems to ensure network integrity.
- Configured Cisco switches, routers PIX's, F5 Network load balancers. Designed, setup, and implemented test environments for corporate development of applications. Implemented system wide graphs and logging for all network devices. Rotated on call with other member of the engineering team for all network devices & unix systems.

PACKETWEST COMMUNICATIONS | Senior Network Engineer, CTO
July 2003 – Dec 2004 | Federal Way, WA

- Packetwest Communication was a Voice over Internet Protocol (VoIP) company based out of Federal Way with a datacenter in Seattle, WA, providing low cost telephone service to both medium sized businesses to single end users.
- Packetwest Communications offered a wide variety of services which include conferencing, voice mail, call forwarding, transferring, specialized custom billing and number transportability.
- Provided phone service to companies both in and outside of the USA. Responsibilities included network design for both corporate and customer locations, traffic QOS & priority mapping, system setup and installation, configurations of all corporate and customer dial plans, as well as system kernel turning and application tuning. Provided problem resolution to issues and researched alternative and new technologies.

GLOBAL CROSSING | Senior Network Engineer
April 2001 – April 2002 | Federal Way, WA

- Worked remotely supporting their office located in Phoenix, AZ. Helped design and implement router changes across global network of over 525 core routers and switches. Hardware included Cisco, Juniper and Unisphere routers and Cisco switches. Analyzed BGP, OSPF/ISIS and MPLS network tables to find and resolve routing problems.
- Part of the special IPv6 design team, created and tested IPv6s network within Global Crossing global network. Setup graphing tools to analyze the IPv6 network utilization and performance. Setup all IPv6 BGP sessions and routing rules/maps with customers.
- Did random security audits on all core routers and switches to ensure network integrity. Created customized route-maps for specialized customers. Provided Tier 3 support for network group and rotated 'on call' with the rest of the company's Sr. Network Engineers. Setup the security on the global crossing route-views router. Designed the logging level metrics for all routers and switches. Acted as primary Unix administrator for our group's management SUN box, hosting all our tools and backups.
- Attended the Juniper MPLS/VPN/BGP class in Tempe, AZ as well as the GBLX Engineer design meeting in Ann Arbor, MI.

FREEINTERNET.COM | Lead Senior Network Engineer
Nov 1999 – Nov 2000 | Federal Way, WA

- Located in Federal Way, Washington. Managed and designed all aspects of the FreeI network, both internal and external.
- Worked with Cisco vendors to acquire appropriate equipment based on performance needs. Setup and installed monitoring systems for network notifications of outages and network performance. Documented entire network with both maps and graphs and setup network wide access policies. Maintained OSPF configurations and set metrics for best performance and traffic flows. Setup cflowd reporting system, created and maintained all network routing maps for all BGP sessions based on that system. Network included over 20 pops and dozens of DS3's throughout Northern America and supported over 3 million dial-up users. Held regular training classes to teach staff at the Network Center about the network setup and how to troubleshoot issues and answer all network questions in both the NOC and executive board meetings. Setup all the security for the company for both internal and external network access. Worked with local and Federal law enforcement when needed and directed so by the FBI. Did wiring for routers and T1/DS3 links.
- Attended the Cisco sponsored BGP 4 class in Kirkland, WA.

ADVANCED RADIO TELECOM | Senior Unix/Network Engineer
March 1999 – Sept 1999 | Bellevue, WA

- Performed Sun System administration, system security, and internal network security. Setup Solaris based applications and converted email systems over to new infrastructure (Netscape mail server to qmail). On call for various aspects of their SUN High Performance Computing network clusters. Setup and maintained raid hardware.

MINDSPRING/SPRYNET | Senior Unix/Network Engineer
Jun 1995 – March 1999 | Seattle, WA

- Started out as a Novell LAN admin but quickly moved into the operations center for Sun system administration. Setup and configured email systems, web servers, IRC servers, ftp & gopher servers. Provided Tier 3 support for the call center on special projects. Setup security for all Unix machines (over 75 Sun systems) and did regular audits of all machines.
- Wrote scripts in Perl and various shells. Setup internal and external Unix based communications servers.
- Designed and implemented network center backup solutions using DLT tape library storage devices. Documented security policies and enforced regulations. Conducted pro-active security sweeps of complete organization.
- Worked with local and federal law enforcement when needed and directed so by the FBI. Worked with configuring Cisco and Foundry routers, switches and wiring of T1 circuits.
- Attended World Talk X.500 email system class in San Jose, California, Mitel PBX System classes in San Jose, California and Sun Administration classes in Kirkland, Washington.

SKILLS

NETWORKING

Hardware

Cisco IOS & XR (Switching & Routing) • Juniper M, EX & QFX Series • Adtran (Switching & Routing) • MikroTik • Siklu • Aironet

Protocols & Technology

IPv4/IPv6 • BGP • OSPF • IS-IS • EIGRP • MPLS-TE • VRFs • VPLS/L2VPNv3/EVPN • VXLAN • 802.1Q/ISL • Etherchannel • VTP • HSRP • NAT • ACLs • MLPPP • QoS/DiffServ • Cflowd • ASN & IP Mgmt • Circuit Load Balancing • Working with ARIN
Installation of T1/D3/Sonet • DSX, Ethernet, Serial Wiring • DSU/CSU • Frame-Relay • DSL • Multiplexers • Fiber
Microwave networking 2.4, 5 & 74 Ghz • RF Antenna theory • 802.11 a/b/g/n/ac • licensed / unlicensed setups.
Application load balancing with NetScaler & F5 • Various firewalls • NetBox

VOICE OVER IP (VOIP)

Extensive Asterisk support since 2001, Ver 0.98 - current • OpenSIPs • SwitchVox • NetSapiens
Phone support Cisco/LinkSys, Polycom, Aastra, Grandstream • Call Routing, IVRs and all features within a PBX • RTP/SIP QoS
AGI/scripting • PostgreSQL & MySQL support • Integration with Telcordia dbs, LCADS, LERG, Customized area code maps
Creation of PHP interfaces to interact with PostgreSQL databases • Least Cost Call Routing
Channelbanks • POTs/T1/PRI Cards • Analog and Digital devices • AudioCodes Gateways • Adtran Gateways
SIP Packet tracing and debugging

OPERATING SYSTEMS

Linux • FreeBSD • Solaris/SunOS • OSX • NT/Windows/XP • XEN • KVM • VMWare
Performance tuning • Security Monitoring • RAID setup & monitoring • Encryption Software OpenSSL, SSH, PGP/GPG
All popular flavors of Linux in both 32 and 64 bit platform and multicore/CPUs • Setup kickstart systems • IPTables • SELinux
Software and hardware RAID solutions and monitoring • Installation of most OpenSource software • Compiling software

PROGRAMMING

Shell • Perl • PHP • Python3 • Basic • PostgreSQL • MySQL • HTML • CGI • LaTeX • 6502 Assembly • C / C++ • VHDL

APPLICATIONS

Server setup/working/debugging knowledge

DNS/BIND • FTP • TFTP • DHCP • Web Servers • SMTP/Mail w/DB Modules • IMAP/SSL/POP3 • NTP • NFS
SSH/Telnet • RSYNC/RLOGIN • SNMP/MIBs • IRC & XMPP • SIP/RTP/SDP • Syslog Servers w/db • OpenVPN • RWhois
Designed, implemented and documented backup systems • Installation of X Windowing environments • tinc (OpenWRT)
Nagios with customized polling scripts • Setup network/server monitoring systems • MRTG/RRDtool • Cacti • RANCID
Instructional and procedural documentation creation using LaTeX, MS Word/Excel, WikiMedia & VI. Synology NAS
Keeping technical data up to date with diagrams (Visio & OmniGraffle), wrote documentation and HOW-TO procedures.

PROFESSIONAL TRAINING

DIGIUM SWITCHVOX | Online training 2011-2014

Digium Certified Asterisk Integrators • Asterisk Admin (dCAA) • Sales Professional (dCSP) • Sales Engineer (dCSE)
Switchvox Support Engineer (dSSE) • Switchvox Sales Engineer

DEPT OF INTERIOR | Online Security training 2009

Required computer security online course for employees and volunteers who deal with PII data.

JUNIPER VPN/MPLS/BGP | Tempe, AZ 2001

One week class with teacher Doug Marschte including how to setup MPLS/VPN using BGP on Juniper routers

CISCO BGP | Kirkland, WA 2000

One week class with teacher Larry Mobley on specific aspects of BGP with Cisco routers. This was a class I obtained when working at FreeInternet.Com and was a refresher class.

NETWORK APPLIANCE | Atlanta, GA 1999

One week class with NetApp teacher over how to setup and fix the NetApp RAID systems and maintain them.

WORLD TALK | San Jose, CA 1998

One week class going over the World Talk X.500 Email system

SUN CERTIFICATION CLASSES | Sun Certification Classes

Three, one week classes on Sun System Administration

PERSONAL PROJECTS

HamWAN
Local group of like minded people using high speed microwave over Amateur radio spectrum in NW Washington utilizing
dynamic routing & public address space. Using low cost MikroTik devices & 5 Ghz microwave dishs.
http://www.hamwan.org/

U.S. Department of the Interior - Volunteer for National Park Service
Volunteer at Mt. Rainier & North Cascades supporting their Wilderness Permit System (UNIX/PHP/MySQL)
Back country trail patrolling • Hiking

Field Programmable Gate Array (FPGA)
Teaching myself FPGA Programming using the VHDL language.
Xilinx Spartan-3 FPGA - XC3S400 & Xilinx Artix-7 FPGA - XC7A35T

Amateur Radio
Extra Class HAM Radio FCC License holder W7XS
ARRL Extra Class Accredited Volunteer Examiner (VEC)
Wrote the Western Washington Amateur Relay Association (WWARA) frequency allocation program in PHP & PostgreSQL

Technology related community meetings
NANOG • ARIN • SIX • PostgreSQL meetings • Local network and computer related trade shows

Microcontrollers
Writing control software in C & C++ for the ESP8266 & ESP32 Espressif MicroControllers

Programming
Writing software in C, C++ & Python3 in my spare time to better learn the language and to improve work processes.
GitHub: https://github.com/osburn

GNU Privacy Guard
gpg –keyserver keys.gnupg.net –recv-keys 0xBB29A64E
My GPG key fingerprint = C97A 3831 18C4 7CC6 9852 CF09 86DD 21FA BB29 A64E