

## **Richard Threadgill**

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**Summary:** 20 years experience covering the entire lifecycle of online service delivery and operations, network engineering, systems administration, software product development, software engineering, and product, program, and project management. I am experienced dealing with customer technical teams and management, and working with executives to plan and achieve business and technical objectives.

### **Key Experience:**

- Network Architect focused on application security and scalability, delivering networks that meet provider class scale and reliability requirements, and securing business-critical assets such as operational networks for financial services firms
- Led the deployment of the hosting environment for a Fortune 500 commerce facility supporting 280 million transactions / yr with a single day peak of more than 20 million transactions
- Architected and led deployment for VoIP network interconnect to support Verizon land-line directory assistance, handling 2 million calls per day from 2004 to 2009, using a multipoint 600 Mbps wide-area network based on ATT MPLS services
- Supported five nines production network serving more than 2 billion calls per year, delivering very low network latency, near-real-time application behavior, and extremely fast failover
- Designed and deployed LAN and WAN IP networks for business-critical web services and hardware/software engineering environments, including multi-provider networks for multiply-peered corporate Internet connections. Deployed T1, ISDN, 56k, DS3, and OC-12 WANs using direct circuits, frame relay, and MPLS-based interconnections
- Hands-on experience as a Unix systems programmer, porting and refining proprietary and open-source software for corporate and integration into shipping commercial software

### **Key Skills:**

- Networking Hardware: Cisco (IOS 10.x – 12.x and CatOS 5.x and 9.x) router and switch families, Juniper routers, Netscreen firewalls and VPN gateways, NetApp Filers, Netscaler proxy caches
- Networking Software: Sendmail, Postfix, Qmail, Legato Networker, Checkpoint Firewall-1, Apache, bind, named
- Protocols: SMTP, SNMP, NFS, DHCP, HTML, XML, HTTP, DNS, NIS/YP, SSL, RIP, BGP, IPSec, VoIP
- Operating Systems: Unix including Linux, Solaris, and BSD, MacOS 7.x – X
- Programming: C, ksh/sh/csh (shell), TCL and Perl, including CGI and UNIX Systems Programming
- Host and Network Security: Firewall and VPN design and implementation, Application and Network Analysis, Architecture, Implementation.

### **Publications and Presentations:**

- “Tellme Configuration Management Automation”, Microsoft Operations Engineering Newsletter, April 2008
- “Network Configuration Management Strategies BOF”, USENIX Security 2002
- “Real-World Techniques for Automating the Configuration of Network Devices”, NANOG, Spring 2002
- “Easy Management”, USENIX ;login, June 2001

### **Education:**

#### **Oregon State University, 1985 - 1986**

Pursued accelerated dual B.S./B.A. program in Computer Science and Political Science. Achieved Senior standing and completed concentrations in Operating Systems, Languages, and Graphics.

Network Engineer, Senior Operations Engineer

**September 2003 – May 2009: Tellme Networks, a Microsoft subsidiary**

*Tellme Networks provides automated voice services to major enterprises and telecommunications carriers, delivered using redundant, highly available data centers, connected to the Internet and to the public switched telephone network, and serves over 2 billion callers per year. Tellme customers are connected to the Tellme Voice Application Network by a private wide area network and by Internet-based IPSec VPNs*

- Defined and delivered first deployment of private wide area network customer connectivity
- Defined and directed first customer deployment of Managed VPN service offering
- Led technology refresh evaluation and deployment, replacing existing Alteon and NetCache infrastructure with Netscaler and Bluecoat hardware
- Redesigned customer network connection process to reduce cost and time required to provision new customers
- Developed strategies for increasing data center availability and connectivity reliability. Defined standard network configurations and templates for routing and VPN devices
- Worked with customer networking teams to migrate production VPNs to new Tellme data centers
- Worked with customer networking teams to provision VPN connections between client data centers and the Tellme network
- Supported Juniper, NetCache, and Netscreen hardware, working with vendors to troubleshoot and resolve hardware performance and protocol implementation issues
- Resolved network performance, latency, and reliability issues for existing customers

Founder

**April 1998 – March 2003: Ponte Communications**

*Ponte developed Network Control Center, automated configuration management software for networking equipment. NCC supports wide area networks with thousands of devices under management, and is deployed by major telecommunications providers and financial services companies*

- Identified and closed first two customers, raised angel and venture investments
- Defined product requirements through first three commercial releases
- Identified and documented requirements for Ponte software
- Senior Sales Engineer for key customer accounts
- Developed product demonstrations and customer presentations
- Worked with Engineering to drive key product features to delivery
- Worked with CTO and Marketing to create marketing and sales technical collateral
- Responsible for internal IT and corporate network security
- Evangelized secure application development strategies to software engineering team
- Company representative to IETF (IPSec Policy working group) and DSLForum.
- Analyzed market and competition
- Interviewed and evaluated technical candidates
- Developed and delivered investor presentations
- Designed and installed networking test lab to demonstrate automated reconfiguration of networking devices. Developed router, etc, configurations to demonstrate the automated activation of high-level network services, including VPN, routing, and packet filtering. Developed automation harness to demonstrate application scalability and performance
- Led code walk-throughs and bug scrubs to ensure product quality
- Software maintenance of Perl-based application components
- Development and modification of TCL-based device automation code

Development Manager

**September 1996 – March 1998: McAfee Associates, Network Associates**

*McAfee is the number one provider of antivirus software in the world. Delivered WebShield, and WebShield SMTP, applications performing transparent virus scanning and filtering of network traffic for HTTP, FTP, and SMTP protocol families. Delivered WebWall firewall with integrated virus scanning*

- Shipped world's first Linux-based commercial software
- Designed and architected world's first transparent application-level gateway for virus-scanning
- Delivered first product six months after project inception
- Ran beta test program for WebShield application, handling customer issues and working with Engineering team to ensure that all customer visible issues were resolved
- Researched, evaluated, and selected proxy servers to be integrated into WebShield product line
- Recruited and managed software engineering teams from product inception through delivery

Consultant

**September 1995 – August 1996: Internet Profiles, Inktomi, Network Computing Devices, Auspex, Altro Solutions, US Postal Service, Supertex, McAfee Associates**

- Built computing and security infrastructures for customer-facing web presences supporting hundreds of thousands of end-users in 7x24 environments
- Deployed secure international VPN for inter- and intra-company communications
- Built firewall and security infrastructures for high visibility, public-facing web sites, including the HotBot search engine and McAfee Associates
- Prepared and delivered courses on security and network administration
- Managed DNS and Sendmail-based electronic mail systems

System and Network Administrator

**January 1994 – August 1995: Apple Computer**

*Apple Business Systems developed Apple Server computer products, A/UX and AIX on PowerPC hardware, and Macintosh Application Environment, software that emulated the Macintosh on SunOS and HP-UX*

- Provided direct end-user support to 150 ASIC hardware designers and Unix Kernel engineers
- Responsible for encrypted WAN links to Apple business partners
- Managed aux.apple.com DNS domain

Contractor

**August 1993 – November 1993: Sun Microsystems, Aspect Telecommunications**

- Specified and deployed network backup systems
- Supported software development and corporate Unix users

Network Architect

**January 1992 – July 1993: Apple Computer**

*Supported five hardware engineering teams developing the first generation of Apple's Power Macintosh computers*

- Responsible for direct user support of 100 hardware engineers
- Designed and implemented heterogeneous computing environment for CAD & OS development teams across a hardware base of Sun, Solbourne, Mips, HP, RS/6000 and SGI workstations
- Environment provided centralized email, home directories, and automated network backups with user-driven file recovery
- Provided expert support to Apple internal systems administration groups
- Installed and maintained GNU software (Emacs, gcc, gdb, g++) and other open source tools
- Ported Perl to the Apple Cray [UNICOS]