**Samson Wong**

9 Jarman Place steelerwong2005@hotmail.com

Bridgewater, NJ 08807 H: (908)203-1656 C: (908) 992–8079

**Network Ownership Mentality:** strive tocontinuously improve network stability, visibility, & performance

**Network Infrastructure supported**: Stock Exchange connectivity, Internet DMZ, MPLS core, Packet Capture

**DevOp Approach:** Write Python/Bash scripts to detect early anomaly before they become production issue

**-** Software development cycle: Go thru code review, Pylint, collaborate with others & store code at GitHub

- Automation (Just Started) - Setup Ansible to ease the deployment of Internet / Exchange / CE routers

**Operationalize New Features / Bug Fixes** – Document detailed procedure steps on how to support new features/new type of alert tickets. Automate procedures using in house tools and YAML

**Prototype new Network technology, Research & Design New Solutions**

**-** Identify business need, collaborate to Design, lead & test POC, to deploy solution – Full Cycle.

**Application Performance Support:**

- Tcpdump/wireshark to troubleshoot application slowness or disconnect issue due to packet drops (due to congestion / microburst), or OS level TCP setting.

**Automation**: Python, Java, C, Bash Shell, MySQL, NETCONF/REST API/RESTCONF, YANG, YAML, JSON, Linux

**Platforms**: Cisco Nexus 56xx, 36180, ISR G1/2; Arista 7150/7280, Juniper MX 480/960, Riverbed, Corvil

**Certification**: **CCNP Certified**. **CCIE** Written. **Juniper JNCIA, JNCIS, JNCIP-SP** written

**Education:**

2019 Fall *M.S Computer Science –* ***John Hopkins University (In progress: Computer Design, Java)***

1993 – 1995 M.S. Telecommunication – **University of Pittsburgh** **GPA 3.9**

1990 – 1993 B.S. Industrial Engineering – **University of Wisconsin, Madison**

**Honors**: Dean’s list. Scholarship granted by University of Pittsburgh

**Detailed Working Experience:**

Nov 2013 – Present **Network Site Reliability Engineer (NSRE)** – Bloomberg NYC, NY

**Infrastructure Design and Support include:  
*Cloud Engineering (AWS, Azure)*** Lead person for any escalation issues on AWS, Azure in network operation team. Provision, setup monitoring tools and alert rules, troubleshoot; and operationalize (provide guideline) the support of cloud application, so level 3 representative have procedure to follow.  ***Stock Exchange***: Setup Corvil to detect Sequence Gaps, FIX base application RTT performance and statistics  
 **\*** Design / implement reliable infrastructure to Exchange. Third level escalation support

***Internet DMZ***: h/w migration, s/w upgrade, monitoring tools (1000i, Grafana), alert, capacity Planning  
***MPLS Backbone***: Support / Troubleshoot MPLS/LDP/RSVP VRF setup, WAN QoS /Drop monitor

\* Collaborate to optimizing network setup to minimize network convergence time (BFD, CFM, and QoS)

**Coding / Script Projects**: Daily auto checks on CE devices (Arista) Static NAT TCAM utilization. When below certain percent, email alert and Remedy ticket generation.

\* Daily auto discovery of companywide public IP configured across various Internet routers/FW  
\* Bash script to detect Exchange connectivity packet loss, report packet loss in syslog, detect MTU issue

\* Automate Nonstandard Exchange Configuration: As each stock exchange has its own slightly different connectivity requirement, deploy Ansible template with different variables to support auto configuration

\* Python program making REST API call to ThousandEyes to Analyze whether company owned public subnets are seen advertised to Internet via multiple ISP circuits

**Application Performance Troubleshoot and recommendation**\* Packet capture & analyze, recommend TCP parameter tuning (SACK, Send/Receive Buffer)

**POC Projects that make Positive impact to Application Stability,** **Simplify Operation**

\* Maintain Trading FIX Session connection despite network outage (BFD/NAT) - no trade orders are lost.   
\* POC VXLAN to deliver Exchange multicast across L3 MPLS backbone where multicast is not supported

\* Test and Deploy new monitoring Tap aggregation platform: Arista 7150 & 7280   
\* Recommend, test, deploy Arista 7150 as Exchange Facing Router: LANZ buffer monitor, h/w timestamp  
\* Responsible to research & test next generation Exchange Facing CE routers base on multicast requirement such as (S,G) Expiry timer, IGMP behavior, multicast boundary, Querier behavior, router performance (RFC2544) and feature using Spirent base on various packet sizes and IMIX.

\* Introduce Ethernet OAM (CFM) for Sub-sec failure detection on all Backbone WAN Circuits.

**\*** SD-WAN / AWS: Explore SD-WAN how It compliment current MPLS.

April 2013 – Nov 2013 **Senior Network Engineer** – Options-IT NYC, NY

\* Heavily involved in low latency network design/implementation, along with daily network support.

\* Co-Design and roll out new low latency architecture involving L3 Arista 7150, 7124, along with 6500

That connects to global Stock exchanges (NASDAQ, NYSE, CBOE, LSE), Brokers

\* Troubleshoot Market data gaps, retransmission issues, using wireshark

June 2012 – April 2013 **Network Implementation Engineer** – VTB Capital Investment Bank NYC, NY

\* **Implement & design dynamic MPLS failover to maximize WAN up time**

Peering to 2 ISP using eBGP, tagging prefix with community. Use local pref, iBGP to choose primary ISP.

Setup IP SLA , using its result as input to EEM script which inserts actions to perform auto failover.

\*  **IP SLA project**  : Configure IP SLA to detect ‘split brain’ scenario where

control plane route update received while Data plane traffic is black holed in ISP network.

Configure IP SLA to confirm Service Provider SLA requirement such as latency & packet loss are meet.

Nov 2008 – June 2012 **Lead Network Engineer** – IntraLinks NYC, NY

\* Lead role in strategic planning, architecture, and high level design & implement network initiatives

\* Set standards and architecture for all aspects of global network standard, ensure system and application

are deployed securely and adhere to security and compliance policy (SOX, PCI and other Audit req)

\* **Architect & design Dual MPLS**: Also implement redundant MPLS across 9 global sites, redistribute eBGP to core, with Juniper Firewall in between protecting untrusted hosting site from trusted.

\* **Deploy and maintain Corporate Wireless**: Cisco 5508. Guest Login for clients, & HREAP for remote offices

\* **Architect Bluecoat Proxy**: Rollout of SG900, AV on Transparent mode for Window and Mac clients

Nov 2007 – Nov 2008  **Network Engineer** – RedCats USA NYC, NY

\* **Proficient with Load Balancing:** experience with CDN (Akamai), setup F5 w/ 2 arm config, behind FWSM

Nov 2006 – Nov 2007  **Network Engineer** – Netzero / Juno - ISP Fort Lee, NJ

**\* Network Implementation & Support**: implement routing/firewall/F5 changes. Rotation off hours support

Dec 2005 – Nov 2006 **Telecom Expert** – TTI Telecom Hoboken, NJ

**\* Network Implementation:**  Configure network - ATM PVC to MGX 8950, FX card for T1 setup , OSPF/PNNI

Dec 2000 – Dec 2005  **Network Test Engineer** – Telcordia Piscataway, NJ

**\* SONET Testing:** Design circuit (T3/OC-N), Sonet (UPSR/BLSR) configuration. Write, execute test plans

Sept 98 – Dec 2000 **Software Engineer** – AT & T Lab Florham Park, NJ

**\* HP Openview**:write test plan and design QA network to test script that correlate network failures

July 97 – Sept 98 **Testing Engineer** – Lucent Technologies Middletown, NJ

\* **Network management**: test applications that collect & analyze SONET alarm/circuit/configuration data.

Apr 95- May 97 **Unix Solaris Administrator/Oracle DBA** – Alpha & Omega Pittsburgh, PA

\* Program in C, Oracle SQL Form,schema creation, writes shell script to automate DB update via Sqlnet.