**Tommy Ming**

**Summary**

* Solutions-driven professional offering 20+ years of success installing and maintaining high performance IT communications systems supporting mission critical enterprise and military operations.
* Well-equipped with a solid background spanning a full range of IT operations, systems administration, network infrastructure, voice communications and security.
* Proven expertise in diagnosing and resolving complex hardware, software and networking issues, ensuring responsive 24/7 functionality and support for thousands of users across multiple locations.
* Organized, take-charge professional with exceptional follow-through abilities and detail orientation, able to plan and execute projects from conception to conclusion in fast-paced, high stress environments.

**Technical Background**

* Zscaler Zero Trust
* Azure Architecture
* Cisco ACI
* Palo Alto Firewalls
* Data Center Design
* GCP Architecture
* MPLS VRF Routing
* AWS Architecture
* Cisco Nexus vPC
* AWS Networking
* Cisco Viptella SDWAN
* F5 Load Balancer

**Education**

* Master of Arts, Homeland Security, GPA: 3.97 American Military University, Charles Town, WV
* Bachelor of Science, Information Technology, GPA. 3.74 University of Massachusetts, Lowell, MA

**Certifications**

* CCIE Security #54145 Cisco Certified Internetwork Expert
* CCNP Data Center: Cisco Certified Network Professional Data Center
* CCNP Security: Cisco Certified Networking Professional Security
* CCSE: Check Point Security Expert
* AWS Solutions Architect Professional
* AWS Solutions Architect Associate
* F5 Certified BIG-IP Administrator
* PCNSE: Palo Alto Certified Network Security Engineer

**Professional Experience**

**SOUTHWEST AIRLINES Mar 2024 - Present**

**Network Cloud Architect (Remote)**

* Design and deploy AWS multi-TGW routing between US and Europe regions
* Design redundant AWS Direct-Connects advertising BGP routes between multiple regions
* Provide design options for AWS Direct-Connect Gateway consolidation between US and Europe regions
* Design Cisco NDFC (Nexus Dashboard Fabric Controller) for new data center and develop migration plan
* Build NDFC build runbook, IP scheme, cutsheet for deployment of NDFC with VXLAN
* Create NDFC leaf/spine topology for the migration and deployment with multiple layers
* Build AWS inbound traffic solution for web server applications with Palo Alto VM-series firewalls
* Design and deploy AWS east/west security VPC with transit gateway routing for AWS multi-account
* Create Route53 public DNS records for web application and integrate with gateway load balancer

**TRUIST BANK Oct 2019 – Mar 2024**

**Network Cloud Architect (Remote)**

* Design and deploy Azure Express Routes, Hub VNETS, Multi-Subscription Palo Alto VM-Series Firewalls
* Deploy GCP shared VPC and deployed resources across multiple host projects for DEV applications
* Support AWS and Azure cloud environments for Prod and Test environments across multi-tenant architecture
* Design and deploy new applications in Okta with Dev teams to support new app deployments
* Create application load balancers in AWS, Azure and GCP for cross region load balancing
* Build Cisco Umbrella DNS Security and Data Loss Protection (DLP) policies to provide security protection
* Deploy AWS S3 buckets with security permissions across multi-tenant architecture to support production
* Support Zscaler security policies and integrate with Azure and AWS security architecture
* Build out new AWS EC2 instances with Sail Point AMIs with sandbox and production environments
* Integrate Cisco Meraki and Cisco AnyConnect VPN with Azure AD SAML authentication
* Design and deploy MDF with Cisco Meraki core switching, firewalls and server access switches
* Build cloud infrastructure with Terraform as Infrastructure as Code with GitLab for Azure, AWS, GCP, OCI
* Design and deploy Cisco Umbrella Zero Trust Architecture with Cisco Secure Client for remote users
* Design AWS cloud security to AWS ECS native containers to meet container security requirements
* Develop GCP cloud environments using Terraform automation and GitHub repositories
* Design and implement AWS Cloud Architecture Solutions and Transit Gateway
* Perform F5 BIG-IP LTM and GTM migrations for hardware refresh
* Design and implement Palo Alto virtual firewalls in AWS cloud environment with Transit Gateway
* Support Cisco ACI Fabric and Multi-Site with design, build and troubleshoot
* Design and implement F5 virtual edition load balancers in AWS and GCP cloud environments
* Deploy F5 ASM across multiple load balancing tiers to provide application security for a variety of attacks
* Create AWS CloudFormation automation templates for the deployment of new VPC environments
* Create Terraform scripts for the deployment of standardized config for GCP environments
* Build multiple VPC with transit gateway within AWS as a PoC and perform as team lead
* Design and implement AWS Network Firewall for Ingress, Egress and Inspection VPCs
* Manage and deploy firewall rules for Palo Alto Firewalls using Panorama
* Automate entire AWS VPC environment using CloudFormation YAML code
* Design and build Zscaler security policy for ZIA with zero trust and cloud firewall
* Design and configure Cisco Viptella SDWAN for multiple sites with zero touch provisioning
* Designed and implemented ACI fabric for primary data center in Fairfax, VA
* Migration of Cisco Nexus 7018 distribution switches to Nexus 56128 and DWDM/optical networking
* Designed and implemented Cisco Viptella SDWAN for US Army at Ft Huachuca
* Designed and implemented Multi-VRF environment for tenants with OSPF routing
* Design Cisco ACI APIC with tenants, VRF, EPGs, Bridge Domains, policies and complete buildout
* Migrate legacy enterprise infrastructure to Cisco ACI Layer 2 Fabric
* Designed WAN Edge and Collapsed Core Greenfield Design for FCC’s New HQ Building
* Created Core Switch Migration Plans to migrate from legacy Nexus 7000 to new Nexus 9000
* Design EIGRP and OSPF Routed Access with VRF-Lite for isolated networks
* Develop network automation using Python and Postman for Cisco ACI deployments
* Migrate entire network infrastructure for DC Hospital to new Cisco hardware from WAN to Access
* Lead customer facing design working sessions via WebEx to develop network solutions
* Team Lead for $40 million strategic account and provided network solutions for DC hospital chain

**IHG – INTERCONTINENTAL HOTEL GROUP Aug 2017 – Oct 2019**

**Performing as Senior Network Engineer and Team Lead to support global network engineering**

**Network Architect – (Remote)**

* Designed Cisco ACI network across three major data centers located in Sterling, San Jose and Shanghai
* Created ACI Implementation Plans for VxLAN migrations
* Deployed Cisco ACI spine/leaf architecture with Nexus 93180 leafs, Nexus 9504 spines, APIC cluster
* Configured Cisco ACI APIC with tenants, VRF, EPGs, Bridge Domains, policies and complete buildout
* Entire Site Upgrade of Network Infrastructure for Dubai and Toronto Corporate Office
* Implementation of WAN Aggregation Data Center with VRF-Lite and eBGP in Dallas, TX
* Design and Configure DMVPN cloud with 17 spokes for Dubai office
* Performed as Network Architect on Agile/Scrum Teams for large scale / long term projects
* Design and configure Check Point Firewall OSPF network architecture
* Performed as Team Lead for Dubai and Toronto projects and created new implementation plan resulting in culture change for project implementations
* Designed and implemented AWS transit gateway and egress intenet VPC cloud networking environment
* Deployed GCP VPN IKEv2 tunnels to on-prem resources for intranet applications

**PEARSON, U.K. Mar 2017 – Aug 2017**

**Performing as Senior Network Engineer to support global infrastructure and Pearson’s primary datacenter. Team Lead for F5 load balancer migration.**

**Network Architect (Remote)**

* Part of Cisco CCIE team to migrate Pearson’s Flagship Data Center in Boston, MA from legacy cage to future cage to support growth and network refresh of infrastructure.

**Notable Projects:**

* Implementation of 6 x Cisco ASR 1001-X and 4 x Cisco ASR 1004 routers
* Implementation of 2 x F5 7255v vCMP load balancers
* Migrated 6500 Catalyst core switches to Nexus 9508 core switches
* Migrated all network devices from data center cage A to data center cage B
* Migrated 2 legacy F5 load balancer clusters to new F5 7255v cluster with virtualized contexts
* Design advanced routing including MPLS, eBGP, iBGP full mesh and OSPF
* Network review DDoS and IDS security architecture
* Created multi-phase migration plan to migrate production traffic to new data center cage

**SCIENTIFIC GAMES, Atlanta, Georgia Sept 2014 – Mar 2017**

**Performing as Senior Network Engineer in Network Design and Implementation Team.**

**Senior Network Engineer**

* Design and implement high performance data center solutions for supporting production lottery systems located in QTS Data Center, Atlanta, GA. Delivered highly resilient Nexus environment for core switching infrastructure, while increasing bandwidth through Active/Active Fabric vPCs to support high volume of web servers.

**Notable Projects:**

* Design and implement Cisco ASA 5525-X with FirePOWER for Canadian Lottery at primary and backup DCs.
* Design and implement Cisco ASA 5545-X with FirePOWER for primary datacenter
* Implementation of Cisco Nexus 56128P, Nexus 3172P, ASA 5555-X and F5 BIP-IP 4000S
* Designed Backup Data Center for Minnesota Lottery to include production backhaul and DMZ networks
* Team Lead for F5 load balancer migration of 30+ VIPs to include network architecture
* Design 40G Virtual Port-Channels (vPC) on Nexus 5596s and Nexus 2248s on multiple rows in new cage
* Implementation of 2 x Cisco ASA 5585-X's with Cisco Advanced Services Team
* Implementation of 2 x Cisco Nexus 5596 switches with Production Network Team
* Configure F5 BIG-IP 4200 Load Balancers, licensing, SSL certs, VIPs, network config, config sync and failover
* Create F5 BIG-IP Load Balancer support documentation for network team to utilize for future operations
* Design network architecture diagrams for new cage at QTS Data Center for Nexus and ASA environment
* Migrate 6 x Cisco 2921 routers from old cage to new cage utilizing failover and implementation plans
* Design Multi-VRF BGP MPLS routing to support multiple lottery jurisdictions across primary and backup data centers

**U.S. ARMY NATIONAL GUARD, Afghanistan / Iraq / Florida / Georgia, USA Jun 1995 – Jun 2016**

Fulfilled multiple progressive roles throughout distinguished military career, serving as Officer-in-Charge and Project Manager for IT Department and technical military operations involving U.S. Army communications, maintenance, and engineer missions during Operation Iraqi Freedom and Operation Enduring Freedom.

**Captain | Engineer Officer**

Planned and executed installation, administration, and maintenance of IT and Cisco network systems, Windows Server 2008, hardware and equipment supporting up to 1000 users and major military/DoD operations in Microsoft Enterprise environment. Provided decisive leadership and direction for 30 contractors comprised of IT staff, remote fielding team, and logistics.

**Key Successes:**

* Executive Officer for Combat Engineer line company performing convoy security in MRAPs to support Operation Iraqi Freedom
* Lead Engineering Officer for installation of network infrastructure, Cisco phones and workstations in 10k Warehouse, Bagram Airfield, Afghanistan
* Took lead role in numerous projects, aggressively meeting project milestones, tight deadlines, and budget constraints. Consistently achieved implementation deliverables, effectively negotiating through technical challenges and often disparate priorities of large and diverse stakeholder communities.
* Executed secure encrypted communications as Squad Leader for 653rd Signal and XO for 2-198th Combat Engineer utilizing military SATCOM, TROPO, SINGARS, MTS communication systems.
* Deployment to Joint Base Balad, Iraq – 2009 to 2010
* Deployment to Bagram Air Field, Afghanistan - 2011
* Performed as Company Commander, Executive Officer, Engineer Operations Officer, Engineer Plans Officer
* Performed as Battle Captain, Joint Operations Center for Republican National Convention, Tampa, FL
* Graduated from Engineer Officer Basic Course (EOBC) and Maneuver Captains Career Course (MCCC)
* Received over 30 coins from Commanding Officers for outstanding performance
* Received MSM medal from excellence performance during Operation Iraqi Freedom in 2010
* Received Army Commendation Medal from excellence performance during Operation Enduring Freedom in Afghanistan in 2011
* Retired as Captain after 21 years of service