

## **Thomas D. Franken**

Master of Science, Information Science Technology. Master of Business Administration  
AWS Solutions Architect & DevOps Professional

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### **PROFESSIONAL SUMMARY:**

Senior IT / Virtualization / AWS / Scripting. Strong education. Extensive current skillset including Machine Learning and Infrastructure Engineering.

### **EDUCATION:**

George Washington University: Master of Science, Information Science Technology.  
University of Oregon: Master of Business Administration.

### **CERTIFICATES and TRAINING:**

#### **Current:** AWS:

Professional: Solutions Architect, DevOps

Specialties: Big Data, Security, Advanced Networking

Microsoft Professional Programs:

Artificial Intelligence

Big Data (includes "Azure HDInsight Big Data Analyst")

#### **Historic:** MCSE, CNE, SonicWall

### **PROFESSIONAL ACTIVITIES:**

Technical Editor for PackIT Publishing (<https://www.packtpub.com/>)

"Getting started with Citrix XenDesktop 7.x" (2014).

"PowerCLI Essentials" (2016).

Kaggle Machine Learning Competitor

### **CLEARANCE:**

Public Trust, Census Bureau; Interim Secret.

### **WORK HISTORY SUMMARY:**

#### Federal Contracts:

Dec 2019 – Present. US Patent and Trademark. AWS Operations Engineer

May 2019 – Dec 2019. US Patent and Trademark. Senior Identity Management Engineer

Nov 2017 – July 2019. US Census Bureau. Senior Active Directory/AWS/O365 Engineer

Sept 2017 – Jan 2018. US Patent and Trademark. Senior AWS/Windows Engineer

Nov 2014 – Aug 2017. Federal Reserve Board. Senior Windows Engineer

Dec 2010 – Feb 2015. Securities and Exchange Commission and Federal Trade Commission.

Senior Windows and VMWare Engineer. Operations Manager.

#### Educational Institutions:

Feb 2002 – Present. University of Denver, Strum College of Law. Network Administrator

Sept 2007 - Oct 2010. George Washington University. Windows System Administrator

#### Other:

Oct 2010 – Nov 2010. WMATA. Contract Management

Aug 2006 - Sept 2007. Washington DC (Contract). Senior Server Engineer.

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### WORK HISTORY DETAIL:

**DEC 2019 – PRESENT.** Various Contracting Companies. Federal Contract; US Patent and Trademarks Office.

**AWS Operations Engineer.** Work with Application owners and developers to host applications on AWS platform. Extensive use of CloudFormation, Lambda (Python), and AWS CLI for reporting, automating administration, and reducing costs. Specific achievements and responsibilities include:

1. Developed process to review multiple accounts from a single source. The process is used heavily for monitoring and reporting.
2. Developed and manage centralized Simple Email Service.
3. Work with Engineering team to deploy resources using AWS CDK.
4. Maintain STIG compliant Windows Images and assist users with issues on Windows instances.
5. Assist in wide variety of troubleshooting.
6. Develop AWS solutions using AWS CDK and GitLab.

**May 2019 – Dec 2019.** Varcon. Federal Contract; US Patent and Trademarks Office.

**Senior Identity Management Engineer.** Part of Operations and Maintenance team responsible for maintaining functionality of Identity Management infrastructure including Oracle “Role-Based Identity Management” (RBAC), Active Directory, and Microsoft Identity Manager (MIM). Identity Management (particularly RBAC) is integrated into internal and external applications. We work closely with development and integration teams to ensure 24x7 uptime, non-disruptive updates, acceptable performance, and required features are available.

**Nov 2017 – Aug 2019.** Leidos \ Artech Information Systems. Federal Contract; US Census Bureau.

**Senior Active Directory/AWS/O365 Infrastructure Engineer.** Member of Identity Management and Server Infrastructure teams. Identity management is focused on integrating the Active Directories from Census, the Technical Integrator, and Microsoft Azure. Working on processes to support onboarding 500K users as the 2020 Census kicks off. The server infrastructure team supports several thousand servers – physical, on-prem virtual, and AWS. Most new server infrastructure is deployed on AWS using CloudFormation templates. My focus was converting monolithic templates into stacked templates, and implementing cloud services to replace virtual instances.

**Sept 2017 – Jan 2018.** Information International Associates. Federal Contract; US Patent and Trademarks Office.

**Senior AWS/Windows Engineer.** Work with development team on Amazon Web Services big-data application deployment. Responsible for developing and deploying Amazon Machine Images in accordance with the USPTO’s requirements and creating CloudFormation templates for single instances and entire deployment. Assisted with developing the application design to ensure performance and security by incorporating Load Balancing, Security Groups, S3, and CloudWatch. Worked with AWS infrastructure team to deploy additional VPCs for testing and development.

**Nov 2014 – Aug 2017.** Advanced Digital Systems. Federal Contract; Federal Reserve Board.

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**Senior Windows Server Engineer.** Assist in Virtual Server Migration project and other ad-hoc projects requiring PowerShell and PowerCLI scripts. Improved configuration management process to eliminate outages caused by misconfigured servers. Migration process includes running multiple scripts to prepare and execute migration process and troubleshooting problems with the scripts and/or migration. Additional scripts include changing vNICs, increasing drive sizes, monitoring vSphere infrastructure, and normalizing database output.

### **Configuration Management –**

1. Worked with SCCM and WSUS for patch deployment and configuration management.
2. Developed custom scripts for installation of non-standard windows patches such as .Net Java updates.

### **Big Data –**

1. Project to analyze several million records from environmental monitoring devices installed in data closets and data centers. Extract raw data, scan data to isolate relevant records, calculate statistics on resulting dataset, identify devices with highest variances, create charts for reports to facility management.
2. Project to manipulate report output to “normalize” data for further reporting. Save many hours of planned data reentry.

### **PowerShell/PowerCLI (VMWare 6) –**

1. Used PowerShell and .NET assemblies for the Big Data projects.
2. Wrote and modified PowerCLI scripts to update VM hardware versions, vNIC configurations, and virtual hard drives. Scripts gathered data, shut down VMs if needed, made modifications, and updated the VMs with data gathered in the first step.
3. Assisted in modifying 1,600 line PowerCLI script to migrate VMs between datacenters.

### **Application Support –**

1. Work with SQL administrators to find and advise on space issues when their databases and log files run out of control.
2. First line of support for several monitoring tools (SolarWinds, Splunk, HP OneView). Resolve issues with hardware, Windows, and/or applications and advise system administrators of outliers. Also create custom reports from monitoring tools to support my projects.

**Dec 2010 – Feb, 2015.** URS Federal Services. Contract. Securities and Exchange Commission and Federal Trade Commission

(August, 2012 – Feb., 2015) URS Federal Services direct employee; Dec 2010 – August 2012. Apex solutions. Fairfax, VA. Subcontractor to Lockheed Martin/Apptis/URS.)

URS/Apptis and Apex solutions. Contract to support FTC and SEC.

**Senior Windows (2008/2012) and VMWare (ESX 5.5, vCloud Director) engineer.** Led several teams and projects during transition periods (Endpoint technologies with McAfee ePO, Citrix VDI, Development). Redesigned and ran patch process (BigFix, SCCM). Served as Operations Manager at FTC.

### **Operations Manager –**

1. Led effort to apply Security Technical Implementation Guidelines (DISA STIGs) across multiple technologies at FTC.
2. Oversaw efforts to resolve complex and/or lingering issues.
3. Took control of specific technological areas in the absence of specific technicians (Citrix VDI project, development environment, End-Point technologies team (including MacAfee Endpoint Policy Orchestrator).

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4. Part of the hiring team to fill the technical vacancies.

### **Patching compliance –**

1. Developed and implemented process to allow patching of 200+ servers in one night with one person instead of 75 servers with three people.
2. Developed and implemented process to patch entire environment in seven days instead of 30 days.

### **Active Directory –**

1. Maintained A/D and GPOs. Particular effort was spent with GPOs for the Citrix VDI given the blending of users with laptops and VDI provisioned desktops and the requirements to meet all STIG settings.

### **Virtualization –**

1. Developed and migrated from VMWare 4.x to VMWare 5.5 environment.
2. Developed and implemented vCloud Director. Worked with storage and networking to set up process to replicate certain production machines to isolated virtual networks for real-world testing.

### **Scripting –**

1. Assisted with several ad-hoc projects to control encryption and transfer of data to various outside vendors and/or partners.
2. Scripted the process to verify servers were functioning as expected after patching which allowed the seven-day patch cycle.

**Feb, 2002 - Present.** Sturm College of Law. Denver, CO (Currently on part-time, remote status)

**Network Administrator.** Support full range of IT infrastructure including Windows 2008/2012, VMWare, Hyper-V, O365, SAN (iSCSI, Fiber), networking (Enterasys, Cisco), hardware (Dell, HP, blades), Windows enterprise software (Exchange 2007/2010, SQL 2008, clustering, Active Directory), and TCP/IP (DHCP, DNS, VPN).

### **Data Center Migration –**

1. Lead migration of Law School datacenter to a new building.
  - a. Worked with building engineers to design datacenter to include cooling, electrical phasing, rack placement, and backup power.
  - b. Worked with architects to design workspaces surrounding the datacenter.
  - c. Worked with campus network team on IP scheme and Cisco configuration
  - d. Worked with move contractors to disassemble, pack, transport, unpack, and reassemble equipment.

### **O365 –**

1. Assist in managing O365 deployment. Manage the federation; create script for accounts; troubleshoot issues.
2. Manage and perform compliance searches for legal holds and deleting phishing attempts.
3. Data engineer for multiple tenant consolidation.

### **Active Directory –**

1. Design, implement, and administer Microsoft Active Directory from NT migration through 2012R2. Worked with Main Campus to stand up a single forest with multiple domains.
2. Set up and maintain Federation with O365 for cloud services.
3. Consolidating multiple domains into a single domain with multiple OU's.

### **Networking –**

1. Support all TCP/IP services including DNS, WINS, and DHCP.

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2. Designed and Support Enterysys network with 3,500 wired ports based on N7 core.
3. Support Wireless network with 80 access points.

### **Virtualization –**

1. VMWare through 4.x
2. HyperV 2012R2. Migrated VMWare VMs to HyperV.

### **Microsoft Applications Support –**

1. SQL servers through 2008.
2. SharePoint through 2010 (Now migrated to O365).
3. Exchange through 2010 (Now migrated to O365).
4. Windows clustering technologies through 2012R2 to support HyperV.

### **Storage –**

1. EMC fiber channel with Brocade switches.
2. EqualLogic iSCSI isolated via vLANs. All iSCSI connections are to initiators on servers. Clients use file sharing on the servers to access the data on the volumes.

### **Disaster Recovery –**

1. Certain data and VM data files are replicated to an EqualLogic SAN located in a separate datacenter on campus but on a separate power grid.
2. Built-in backup tools are used for SQL and A/D to store backup data on volume replicated to the alternative datacenter thereby saving the cost of backup tools.

**Nov., 2010 – Dec 2010.** Advanced Digital Systems. Fairfax, VA

Contract to support WMATA

Assisted effort to get a NOC tool implementation back on track.

### **Contract Management –**

1. Reviewed contract and project management documentation to identify inconsistencies. Pointed out the inconsistencies to manager.
2. Gained an understanding of a difference in the expectations of management and engineers, and facilitated opening communication paths between managers and engineers.

**Sept, 2007 - Feb, 2008** Gilindo Consulting (contract-to-hire)

**Feb, 2008 – Oct, 2010.** George Washington University, Washington, D.C.

**Windows System Administrator.** Design, implement, and administer Microsoft Active Directory based network infrastructure and servers in accordance with the mission of School of Engineering and Applied Sciences (SEAS). Manage a team of 3-4 technicians and indirectly hire and supervise 12-15 lab techs. Responsible for developing policies, implementing security, monitoring performance, and tracking availability of Windows based services. Work with virtualization technologies (VMware, VDI, Thinapps, servers, and SAN). Developed VDI comparison of VMWare View with ThinApps and Citrix XenDesktop with XenApp. Work with UNIX administrator to integrate technologies.

**August, 2006 - Sept, 2007.** Compass Solutions. Washington DC

**Senior Server Engineer.** Provide server support for District of Columbia as a contractor. Assist in installing, configuring and troubleshooting Windows servers. Assist in planning server consolidations and migrations. Maintain accurate inventory in data center. Provide 24/7 support on an on-call rotation.

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**Feb., 2002 - Present.** Network Administrator. Sturm College of Law. Denver, CO  
(See above)

**Pre-2002.** Various positions supporting Windows, Novell, and applications.