

Principal Engineer | Architect | Technology Leader & Innovator

Full stack solutions engineer with a passion for problem solving and creating efficiencies in technology products and processes. Broad experience and deep expertise in software and infrastructure engineering. Builds scalable, business-critical, and resilient high-performance solutions in tandem with lasting professional relationships. Recognized as a leader and awarded as an innovator.

Focus Areas

- **Application Development**
- **Infrastructure Engineering and Automation**
- **Monitoring & Observability**
- **SRE**
- **Private & Public Cloud**
- **DevOps**
- **Product Management**
- **ITSM**

Technology Summary

Systems Infrastructure: Windows, Linux, Load Balancing, Network Automation and Fundamentals/DDI, Storage, Active Directory, VMware vSphere

Client/Server: .NET (C#), WCF, WPF, MVVM, SOA

Web: ASP.NET, MVC, SOAP and RESTful services

Database: Microsoft SQL Server, PostgreSQL, MySQL, MongoDB, InfluxDB, Prometheus

Scripting: PowerShell, Python

Cloud / Datacenter Ops: vRealize/Aria Suite, Kubernetes, Rancher, Azure, AWS, Google Cloud, SaltStack, Packer, Docker, Helm, Splunk, Grafana Stack, Telegraf, OpenTelemetry

Experience

U.S. Bank, Chicago, IL

08/2021 – Present

Vice President – Lead Engineer

IaaS Product Manager/Lead Engineer. Principal architect and lead engineer for six development, observability, automation, and infrastructure teams totaling 60+ engineers.

- As Technical Product Manager and Lead Engineer, built private cloud/IaaS capability in alignment with strategic goals and drove engineering for net-new enterprise product.
- Unified multiple management and observability services into a single cohesive enterprise product.
- Authored, published, and obtained Enterprise Architecture adoption of bank-wide observability-related specifications that extend existing industry standards.
- Key advisor to divisional CTOs, on strategic observability initiatives and technical implementation plans.
- Developed observability-related tooling that eliminated administrative toil and reduced cost by >10%.
- Standardized and simplified application teams' development and deployment practices by introducing tools such as Devcontainers, common linters, and others.
- Led migration of multiple applications from running standalone or in Docker Compose to Kubernetes using Helm; trained multiple engineering teams in the related tooling.
- Mentor engineers on advanced concepts such as database eventual consistency, CAP Theorem, and Infrastructure as Code principles. Primary mentor to rotational engineers/interns.

Charles Schwab / optionsXpress, Chicago, IL

06/2006 – 04/2021

Principal Engineer, 09/2018 - 04/2021

Technical and strategic lead on design and implementation of Schwab's second-generation internal IaaS product. Led cross-functional team of developers and systems engineers to build and support IaaS solution.

- Led all aspects of IaaS implementation which resulted in transitioning a small percentage of virtual server builds executed automatically to greater than 90% built automatically, with >10,000 VMs provisioned via self-service for a dramatic cost savings.
- Primary designer of all significant aspects of end-to-end IaaS solution using custom UI/REST API, vRealize Automation (vRA), and other custom solutions.
- Personally designed and implemented the first "blaze the trail" iteration of SaltStack configuration management toolset.
- Advised senior leadership, including CIO and CTO, on IaaS-related capabilities and strategy.
- Guided application teams on design, operations, and adoption of IaaS and IaC practices and principles, as well as modern deployment strategies such as Blue/Green, Phoenix, etc.
- Instructed and assisted platform/OS teams in automation of source image builds to enable better adoption of IaaS and eliminate toil associated with currency/patching of frequently released applications.
- **CEO Award – 2019**

Senior Systems Design Engineer, 10/2011 – 09/2018

Systems Engineer, 06/2006 – 10/2011

Built custom infrastructure and business monitoring and administration application suite used for 10+ years. Developed back-office tools to automate and streamline manual processes. Senior member of team that implemented an Infrastructure as a Service product.

- Greatly enhanced production availability and engineer productivity with continuously evolving custom tool set.
- Synthesized multiple monitoring approaches into a single cohesive product, including the creation of white- and black-box monitoring, metrics collection, and specifying and polling of golden signals.
- Created a large tools suite that improved processes across the organization, including systems administration, monitoring, compliance, and trading.
- Developed applications and reporting that substantially improved efficiencies in Trade Execution Desk operations and reduced errors and risk.
- Built tools that automated critical back-office processes.
- Enhanced / extended multiple existing tools and created new scripts and applications that automated infrastructure provisioning and management.
- **Most Innovative Employee Award – 2011**

Additional Relevant Experience

- **ABN AMRO Services Company / IBM Global Services**, Chicago, IL
- **Giant Step Productions**, Chicago, IL

Certifications

Azure Fundamentals/AZ-900, 2022
Lean IT Association Foundation, 2018

Personal Interests

Home Labbing
Home Automation
3D Printing
Sailing