Jeffrey Walker

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Summary

- Active Top Secret and SCI eligible clearance (T5 investigation completed).
- Platform Engineering Leader specializing in enterprise-scale developer platforms, deployment automation, and infrastructure operations for federal agencies and Fortune 500 companies. Experience building self-service infrastructure capabilities that balance developer productivity with security controls.
- Infrastructure Architect focused on establishing reliable deployment pipelines, service platforms, and automated operations for mission-critical applications. Track record of improving development workflows while maintaining security and compliance requirements across regulated environments.
- Technical Leader experienced in building and managing platform engineering teams that enable development velocity through infrastructure automation, standardized tooling, and documented practices. Strong background in implementing DevOps capabilities that support both engineering teams and operational stability.

Professional Experience

James Jeffries, LLC
Principal Consultant | Enterprise Cloud Architecture
February 2024 - Present
James Jeffries is a enterprise architecture development consultancy, providing fast, efficient, and high-quality solutions for small to medium-sized projects.

- Developed grant management workflow for federal health agency using Salesforce platform and document automation. Implemented accessibility features to meet WCAG 2.1 AA requirements. Enhanced document processing efficiency through automated validation, reducing typical processing time from 6 hours to 3 hours.
- Supported enterprise architecture implementation for federal research division, aligning with NIST 800-53 Rev 5 framework. Enhanced security monitoring through SIEM integration and vulnerability management program. Streamlined ATO process through improved documentation and security control automation.
- Implemented data integration solution for genomics research using MuleSoft platform and healthcare interoperability standards. Managed research data exchange with appropriate security controls and access management. Reduced manual data processing effort through automated workflows while maintaining data quality requirements.
- Supported modernization of research program delivery using Azure DevOps and agile practices. Enhanced deployment pipelines with security and compliance validation for FISMA/HIPAA requirements. Improved release reliability while reducing typical deployment windows from 1 week to 3 days.

McKinsey & Company
Enterprise Cloud Architect | Platform Engineering & Applications
August 2021 - February 2024
Global management consulting firm serving Fortune 500 companies and government agencies with over 30,000 employees across 65+ countries.

- Implemented data warehouse solution for regional banks using AWS analytics services and data lake architecture. Established ETL pipelines with monitoring, processing approximately 50GB of daily transaction data. Improved typical query performance from minutes to seconds and reduced infrastructure provisioning time from 3 weeks to 1 week through automation.
- Managed platform engineering initiative for investment firm, leading team of engineers across US/EU locations. Established infrastructure-as-code practices using Terraform and automated security scanning. Improved developer onboarding experience while maintaining 85% deployment success rate across environments.
- Built transaction processing platform on GCP using event-driven architecture and cloud-native security controls. Supported average daily volume of 500K transactions with 99.9% availability for core services. Streamlined compliance processes through automated controls and documentation.
- Enhanced trading integration platform for investment firm using enterprise integration patterns and multi-region deployment. Connected critical trading systems through event-driven architecture, supporting daily trading operations. Improved post-trade reconciliation efficiency through standardized validation workflows.

U.S. Department of State - Contractor at Acuity Inc.
Subject Matter Expert | Solution Architect
October 2020 - August 2021
The U.S. Department of State is the federal executive department responsible for the international relations of the United States. It operates in over 270 diplomatic locations worldwide, employs over 13,000 employees in the foreign service, 11,000 civil service employees, and 45,000 local employees.

- Designed hybrid cloud architecture for diplomatic posts using AWS and Azure services with hub-spoke networking model. Implemented dedicated connections and acceleration services to improve application performance within bandwidth constraints. Enhanced data governance using cloud-native classification tools to support GDPR requirements.

- Developed security framework aligned with FedRAMP Moderate requirements using cloud security platforms and identity management solutions. Implemented centralized security monitoring for mission systems through SIEM integration. Improved security posture through automated controls and reduced manual remediation workload by approximately 30%.
- Supported cloud transformation initiative (3,000+ users) using ServiceNow for service management and infrastructure-as-code practices. Enhanced provisioning workflows and implemented resource management policies, reducing typical infrastructure delivery time from 4 weeks to 2 weeks while optimizing cloud spending.
- Established multi-region disaster recovery capabilities using cloud-native health monitoring and traffic management. Implemented semi-automated failover procedures with monitoring dashboards, improving recovery time objectives from 12 hours to 6 hours for designated critical systems.

Deloitte Consulting
Manager | Senior Cloud Architect
October 2018 - October 2020
Deloitte Consulting is a global professional services firm that provides consulting, financial advisory, risk management, audit, and tax services to clients in various industries.

- Led migration of manufacturing applications to AWS for automotive client, implementing infrastructure-as-code using Terraform. Established Transit Gateway networking and automated scaling policies, improving average application performance by 8% while reducing infrastructure costs by approximately $400K annually through resource optimization.
- Designed container platform based on EKS for federal healthcare agency's research division. Implemented GitOps deployment workflows and container security scanning to meet FedRAMP Moderate requirements. Enabled bi-weekly releases for non-critical systems while maintaining monthly cadence for core applications, reducing failed deployments by 25%.
- Modernized integration architecture for regional bank using API gateway and event streaming patterns. Consolidated legacy point-to-point interfaces into domain-aligned APIs, reducing integration complexity and cutting maintenance overhead by approximately $150K annually through standardization and automation.
- Implemented Heroku Enterprise environment for wealth management platform, focusing on security and compliance requirements. Enhanced monitoring and alerting capabilities, achieving 99.5% availability for critical services. Improved deployment reliability through automated testing and rollback procedures, reducing typical deployment windows from 24 to 8 hours.

National Institutes of Health - Contractor at Medical, Science, & Computing/Digicon Corporation
Cloud Architect
July 2014 - October 2018
The National Institutes of Health (NIH) is the primary agency of the United States government responsible for biomedical and public health research. It employs over 20,000 people and has 27 institutes and centers located in Bethesda, Maryland.

- Built genomics analysis platform using AWS EC2 clusters and EBS/S3 storage (100TB), implementing BWA/GATK pipelines for research workloads. Enhanced DNA sequence processing efficiency through Grid Engine job scheduling, improving typical processing time from 21 to 8 days while maintaining data integrity.
- Designed HIPAA-compliant research infrastructure using AWS security controls and IAM roles for protected health information (PHI) storage. Implemented role-based access control with federated authentication, reducing average data access provisioning time from 5 days to 1 day while ensuring compliance requirements.
- Collaborated with clinical research teams to standardize data collection using REDCap electronic data capture system. Implemented automated validation workflows, reducing manual data review efforts by 30% and improving data completeness rates from 80% to 95%.
- Optimized research computing costs using EC2 Spot instances for non-time-critical workloads. Implemented automated job scheduling and instance management, reducing monthly compute costs by approximately $8K while maintaining research throughput requirements.

Nasa - National Aeronautics and Space Administration - Contractor at Adnet Systems Inc
Systems Architect
December 2012 – June 2014
NASA is an independent agency of the U.S. federal government responsible for the civilian space program, aeronautics research, and space research. The agency has approximately 17,000 employees with facilities and field centers located across the United States.

- Built HPC cluster using EC2 compute-optimized instances for parallel MPI processing across ground stations. Processed solar wind telemetry data through Sun Grid Engine scheduling, improving processing throughput by 15% while maintaining data integrity requirements.
- Implemented space weather modeling pipeline using GPU-accelerated computing for parallel workloads. Optimized model runtime from 6 to 4 hours, supporting timely analysis of solar event data.
- Established FedRAMP High security controls through system monitoring and PIV-based authentication. Enabled secure system access for research teams across centers while meeting NIST 800-53 requirements.
- Led migration to AWS GovCloud environment using automation scripts and CI/CD pipelines. Achieved 99.5% system availability and reduced infrastructure costs by approximately $80K annually through optimized resource utilization.

Six Red Marbles
Systems Administrator
May 2009 – June 2012
Six Red Marbles is an education technology and publishing services company providing digital learning solutions and content development.

- Led infrastructure modernization supporting 50+ concurrent authors, implementing automated backup solutions that improved system availability to 99.5% and reduced content publishing time by 40%.
- Designed centralized monitoring system across 3 development environments that reduced incident response time from 45 to 15 minutes.
- Established automated provisioning system supporting 25+ developers that reduced environment setup time from 2 days to 2 hours and eliminated configuration drift.

Technical Skills

Infrastructure Technologies
- Enterprise Storage: Block, file, and object storage systems, software-defined storage, hyperconverged infrastructure
- Storage Networking: Fibre Channel SANs, iSCSI, NAS, multi-site topologies, fabric management
- Storage Protocols: FC, iSCSI, NFS, SMB, NVMe/NVMe-oF
- Cloud Platforms: AWS (Commercial, GovCloud), Azure (Commercial, Stack), Google Cloud Platform
- Virtualization: VMware vSphere, KVM, Docker, Kubernetes (EKS, AKS, GKE)
- Operating Systems: Linux (Red Hat, Ubuntu), Windows Server

MLOps & Data Engineering
- ML Platforms: Kubeflow, MLflow, SageMaker
- Feature Stores: Feast, Redis, Amazon Feature Store
- Model Management: Model versioning, A/B testing, monitoring
- Data Pipelines: Apache Airflow, Argo Workflows
- Distributed Training: Horovod, PyTorch DDP
- Model Serving: TensorFlow Serving, Triton Inference Server
- Experiment Tracking: Weights & Biases, TensorBoard
- GPU Infrastructure: NVIDIA GPU operators, device plugins

Data Protection & Availability
- Replication: Synchronous and asynchronous, consistency groups, snapshot management
- High Availability: Stretched clusters, automated failover, metro clustering
- Disaster Recovery: Multi-site replication, recovery orchestration, business continuity
- Backup & Archive: Enterprise backup solutions, long-term retention, compliance archival
- Data Security: At-rest encryption, in-flight encryption, key management

Infrastructure Management
- Automation: Infrastructure as Code (Terraform, CloudFormation, Ansible)
- Monitoring: Performance analytics, capacity planning, predictive analysis
- Configuration: Host connectivity, multipathing, volume management
- Orchestration: Kubernetes operators, custom automation frameworks

Development & CI/CD
- Languages: Python, Bash, PowerShell
- Build Tools: Bazel, Gradle, Make, Maven
- CI/CD: GitHub Actions, GitLab CI/CD, Jenkins pipelines
- Testing: Selenium, JUnit, PyTest, automated test frameworks
- APIs: REST, GraphQL, OpenAPI
- Integration: Event-driven architectures, message queues, API gateways
- Version Control: Git, GitLab, GitHub Enterprise

Security & Compliance
- Frameworks: FedRAMP High/Moderate, FISMA, HIPAA
- Security Controls: Zero Trust Architecture, IAM, encryption
- Access Management: Role-based access, privileged access management
- Monitoring: SIEM integration, security analytics, compliance reporting
- Standards: NIST 800-53, NIST Cybersecurity Framework

Documentation & Process
- Technical Documentation: Design specs, runbooks, knowledge base
- Enterprise Architecture: TOGAF
- Process Frameworks: Agile/SAFe, ITIL v4, DevSecOps, GitOps