

BRIAN JARRETT

Senior Systems Engineer

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PROFESSIONAL SUMMARY

Highly analytical engineering professional with a 30-year foundation in complex system validation, data integrity, and autonomous technology adaptation. Proven track record of entering unfamiliar technical ecosystems, rapidly mastering complex architectures, and becoming a Subject Matter Expert (SME) for the organization's technology stack. Expert in diagnosing legacy infrastructure, verifying data quality at the source to prevent the propagation of bad data and ensure the integrity of the final output, and architecting robust ETL pipelines that merge disparate inputs into high-integrity sources of truth. An objective, narrative-free troubleshooter who translates intricate system data into actionable executive metrics, applying pragmatic innovation—including targeted AI/LLM workflows—strictly where it maximizes operational value.

CATEGORIZED SKILL MATRIX

Data Engineering & Analysis

- **Python Stack:** Pandas, NumPy, Flask, SQLAlchemy, XLSWriter, Openpyxl.
- **Data Integrity:** ETL Pipeline Engineering & Data Validation, Data Normalization.
- **Databases:** PostgreSQL, MySQL, Redis, MongoDB.

Cloud & Systems Infrastructure

- **Compute & Networking:** Cisco UCS Servers, Cisco Fabric Interconnect, High-Availability Clusters, Ceph (Storage).
- **Virtualization:** OpenStack, VMware vSphere, KVM, Proxmox.
- **Automation:** Ansible, CI/CD (Jenkins, Gerrit, GitHub Actions), Bash/Python Scripting, SaltStack.
- **Identity & Security:** FreeIPA/LDAP, RBAC/HBAC, FedRAMP Compliance, Qualys Security Intelligence.

Leadership & Methodology

- **Ecosystem Mastery:** Rapid Technical Adaptation, SME Leadership, Technical Mentoring.
- **Problem Solving:** Root Cause Analysis (RCA), Complex System Validation & QA Testing, Monitoring
- **Community:** **FIRST Robotics Mentor** Teaching electronics, programming, and methodical troubleshooting and systems design.

PROFESSIONAL EXPERIENCE

Cisco | Cloud Engineering Technical Leader

AUG 2019 - PRESENT (REMOTE)

Managed FedRAMP operations for critical infrastructure for the Webex for Government (FedRAMP) platform. Responsible for driving technical strategy, mentoring engineering teams, and building automated tooling to enhance security posture and operational efficiency.

- **Data Platform Engineering:** Engineered a mission-critical vulnerability management platform using **Python (Pandas/SQLAlchemy)** and **PostgreSQL**. Built custom ETL pipelines to ingest and synchronize data from the **Jira API**, providing leadership with high-fidelity dashboards for severity tracking and SLA compliance. Integrated data with **Tableau** to enable executive-level visibility into remediation progress.
- **Security & Compliance Automation:** Developed automated reporting tools using the **Qualys API** to extract compliance metrics. Engineered Python scripts to parse raw **STIG XCCDF (XML)** data and map it to compliance results, enabling the automated generation of audit-ready STIG checklists. This bridge filled critical gaps in vendor-provided reporting and streamlined federal audit preparation.
- **Inventory Analytics:** Leveraged **Pandas** for large-scale data manipulation, merging disparate inventory reports and datasets into actionable operational insights. Transformed manual Excel-based tracking into automated trend analysis for monthly reporting.
- **Technical Leadership:** Served as the primary technical lead for the Webex for Government identity stack. Mentored engineering teams in methodical troubleshooting and provided senior-level escalation for complex Root Cause Analysis (RCA), ensuring high availability of federal services.
- **Skills:** Python (Pandas, SQLAlchemy), PostgreSQL, Jira/Qualys APIs, ETL Pipelines, Tableau, Ansible, RHEL/Ubuntu, Cisco UCS, STIG Compliance, FedRAMP.

Cisco Systems | Cloud Engineer - Webex

JAN 2017 - AUG 2019 (REMOTE)

Managed and optimized mission-critical compute infrastructure for Webex Commercial and FedRAMP environments. Collaborated with Networking and Storage teams to ensure high availability and security of global services.

- **Identity & Access Management:** Architected and deployed a **High-Availability (HA) FreeIPA cluster** to replace a legacy 389ds environment. Automated VM deployment in **OpenStack** using **Ansible**, enabling centralized RBAC and HBAC for 2,000+ Linux/Windows servers and infrastructure devices across multiple datacenters.
- **Infrastructure Operations:** Managed large-scale compute services using **vSphere** on **Cisco UCS** hardware. Administered critical infrastructure including bastion hosts, LDAP/FTP servers, and antivirus solutions, ensuring consistent service delivery.
- **Vulnerability Management:** Led remediation efforts for compute services in highly regulated environments. Researched and implemented security patches, advised engineering teams on remediation strategies, and managed **Qualys** vulnerability scanners to maintain compliance.
- **Skills:** Ansible, FreeIPA, OpenStack, vSphere, Cisco UCS, RHEL/CentOS, Windows Server, RBAC/HBAC, Qualys, FedRAMP Compliance.

Select Group @ Cisco | Cloud DevOps/QA Engineer (Contract)

FEB 2016 - JAN 2017 (REMOTE)

Provided specialized DevOps and QA engineering support for Cisco's OpenStack-based Public Cloud (InterCloud Services). Focused on performance optimization, automated configuration management, and stability engineering for large-scale cloud deployments.

- **Performance Optimization:** Identified and removed redundant nova-scheduler filters, reducing instance scheduling time for 700 nodes from 20 seconds to 5 seconds—a **75% improvement** in orchestration speed.
- **Infrastructure-as-Code at Scale:** Engineered and executed **Ansible** playbooks to manage complex bare-metal configurations through Lights Out Management (LOM) interfaces and automated cron jobs across hundreds of production servers simultaneously.
- **Cloud Infrastructure Evaluation:** Stood up **RHUI (Red Hat Update Infrastructure)** and **Proxmox** clusters for Proof of Concept (PoC) assessments to determine viability for integration with Cisco InterCloud Services.
- **Stability Engineering:** Diagnosed and resolved a critical race condition involving cloudbase-init on Windows 2008/2012 images within **OpenStack**, eliminating intermittent reboots during initial instance setup.
- **Cloud QA & Orchestration:** Managed global test cycles for Compute and Heat components during major cloud upgrades. Developed **Python** and **Bash** scripts coupled with Ansible to perform comprehensive orchestration tests.
- **Skills:** OpenStack (Nova, Heat, Neutron, Glance), Ansible, Python, Bash, RHUI, Proxmox, Linux/Windows Administration, Performance Tuning, Cloud QA.

Australian Laboratory Services | Senior Systems Administrator

SEP 2014 - JAN 2016 (GRAND JUNCTION, CO)

Managed, modernized, and optimized critical enterprise storage, virtualization, database, and network infrastructure. Engineered high-availability storage clusters, automated server provisioning, and implemented comprehensive monitoring and backup solutions to ensure data integrity, maximum uptime, and enhanced performance.

- **Storage & Virtualization:** Engineered an Ubuntu-based **Ceph cluster** for **VMWare ESXi** hosts, benchmarking iSCSI vs. RBD performance to optimize block storage access for virtual machines. Leveraged **Ceph RBD snapshots** to manage testing of automated database schema and data conversion, enabling a major production database upgrade with zero errors.
- **Infrastructure Automation:** Implemented **SaltStack** to manage Linux VMs and automate the configuration and rapid provisioning of new **Ceph** nodes and virtual machine resources, significantly reducing deployment overhead.
- **Database & Data Integrity:** Wrote custom **Python (SQLAlchemy)** verification scripts to check for missing SQL foreign keys and ensure data integrity during a major migration. Configured replication and onsite/offsite backups of the production **MySQL** database using **LVM snapshots** and **rsync**.
- **System Stability & Monitoring:** Installed **Observium** for performance graphing and integrated proactive checks into **Nagios** to properly monitor production and development systems. Tuned VM configurations and software packages, decreasing service restarts from weekly to quarterly.
- **Network & Systems Engineering:** Methodically troubleshooted and resolved a complex routing issue where **Asterisk** calls cut out at the top of the hour, identifying a gateway misconfiguration routing traffic to a VPN tunnel overloaded with backup traffic. Doubled internet bandwidth by replacing an overloaded gateway with appropriate hardware.
- **Skills:** Ubuntu/CentOS, Windows Server, VMWare ESXi, Hyper-V, Ceph RBD, iSCSI, NFS, LVM, SaltStack, Python, SQLAlchemy, Nagios, Observium, NewRelic, MySQL, OpenVPN, StrongSwan, Cisco Routers & Switches,

HP Switches, Sophos UTM, VLANs, VPN Routing, SELinux, iptables, firewallD, MongoDB, Redis, Fongality Asterisk, IIS 8, OpenFiler, Active Directory.

Garfield County School District 16 | Senior Systems/Network Administrator **OCT 2002 - JUN 2014 (PARACHUTE, CO)**

Managed and modernized the district-wide enterprise network, systems, and core educational platform infrastructure. Led high-impact IT modernization projects, automated administrative processes, and engineered cost-effective systems that dramatically reduced operational costs and IT support overhead.

- **Systems Integration & Automation:** Developed a custom **Flask (SQLAlchemy)** web application that synchronized the centralized Student Information System (SIS) with **Active Directory** and **Google Apps**. Built self-service password reset and status tools for teachers, resulting in a **97% reduction in recurring support calls** to the helpdesk.
- **Enterprise Modernization & Development:** Spearheaded the replacement of a legacy, fragmented student information system with a web-based, centralized platform, eliminating manual data syncing between schools. Streamlined state compliance reporting by developing custom **PHP** generation scripts interfacing with the **PostgreSQL** database.
- **Infrastructure & Systems Virtualization:** Designed and administered virtualized host environments using **Citrix XenServer** and **VirtualBox** to run critical Windows Server 2008 and Ubuntu Linux servers. Supervised low-voltage cabling and hardware installation contractors for new facilities to ensure strict specification compliance.
- **Network Engineering:** Engineered a high-speed WAN connection between district buildings using **Ruckus wireless bridges**, increasing bandwidth by **6,500%** (1.5Mbps to 100+ Mbps) with zero ongoing monthly service costs. Managed core networking infrastructure including **Cisco Routers, Switches, PIX Firewalls**, and **Smoothwall** web filters.
- **Unified Communications & End-User Compute:** Deployed **Cisco CallManager** and **Cisco Unity** voice systems district-wide. Architected a centralized desktop computing solution using **Windows Terminal Servers** and **HP Thin Clients** for 6 computer labs, saving the district over **\$60,000** in capital expenditure and simplifying end-user support.
- **Skills:** Python, Flask, SQLAlchemy, PHP, PostgreSQL, Ubuntu, Windows Terminal Server, Windows AD, Citrix XenServer, VirtualBox, Cisco CallManager/Unity, Cisco Routers & Switches, PIX, Ruckus Wireless Bridges/APs, HP Thin Clients, Google Apps, Smoothwall, Active Directory.

Foundational Experience

1991 - 2002

Established a lifelong technical foundation by developing a deep, low-level understanding of hardware, networking, and software systems. By learning systems from the ground up to test complex software, capture and monitor network traffic, and build networks and servers, developed a rigorous methodology for root-cause analysis, system diagnostics, and performance optimization at every layer of the stack. * **Sales Engineering & Systems Integration:** Tested **ImageCast** software integrations with systems management suites including **SMS, CA Unicenter**, and **Desktop DNA**. Defined customer software requirements, submitted feature change requests, and conducted technical product demonstrations and training for enterprise clients such as **HP, Target**, and **NEC**. Helped answer technical questions at trade shows. * **Technical Services & Test Lab Management:** Merged and managed QA testing with the technical support department. Designed test cases, executed testing plans, and managed the lab's **Windows** and **Linux** servers and test networks. Redesigned, built out, and managed the company's network, labs, and server infrastructure following a corporate split. * **Software QA & Testing Leadership:** Promoted from contractor to QA Lead, managing all testing operations for **ImageCast** and **DrivePro** products. Structured software testing workflows by implementing the company's first bug-tracking system, drafting comprehensive test plans, and maintaining lab hardware and network infrastructure. * **Training & Team Optimization:** Boosted support staff effectiveness and QA productivity by

rotating tech support personnel through active lab testing scenarios. Trained technicians on networking topologies, testing methodologies, and product architecture to improve time-to-resolution for support issues. *

Hardware Assembly & Diagnostics: Built custom computers, performed component-level hardware and peripheral repairs, and conducted software troubleshooting. Developed quotes for client builds and mastered motherboard/component compatibility. * **Airborne Radar & Electronics Engineering (US Air Force):** Served as an Airborne Warning and Control Radar Journeyman (AWACS), repairing high-power microwave systems, high-voltage circuits, and analog/digital electronics. * **Skills:** Analog & Digital Electronics, Circuit Analysis, System Diagnostics (Binary/Hex), VMS/PC Architecture, Disk Cloning (ImageCast, DrivePro), Software QA & Test Automation, Bug-Tracking Systems, Network Design, Windows/Linux Lab Administration, Technical Training, Requirements Engineering, Systems Management (SMS, CA Unicenter, Desktop DNA).

EDUCATION & CERTIFICATIONS

- **Regis University:** C Programming/Unix courses
- **Community College of the Air Force:** Avionics/Electronics Technician - RADAR Specialist (AWACS)
- **Colorado School of Mines:** 2 Years (Electrical Engineering/Physics focus)