

Howard Powell

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PROFESSIONAL SUMMARY

Results-driven IT leader with 20+ years of experience spanning enterprise infrastructure, research computing, high-performance computing, network architecture, and IT operations. Proven track record building and leading high-performing technical teams, managing distributed multi-site environments, and aligning IT strategy with organizational objectives. Hands-on technical depth across virtualization, storage architecture, network segmentation, infrastructure automation, and security — actively maintained through a production-grade home lab environment running ZFS/iSCSI SAN, VMware ESXi, OpenBSD HA firewalls, VLAN-segmented networking, Active Directory, and Ansible-managed server infrastructure. Experienced in cybersecurity governance (NIST 800-171), cloud platforms (Azure, Digital Ocean, Google Workspace), and delivering reliable, scalable infrastructure for data-intensive environments. Currently serving as IT Director and Project Manager for the Virginia Renaissance Faire — administering a TicketSpice ticketing platform supporting 3,000–4,000 guests per day, administering Google Workspace for Nonprofits, and leading a major site relocation project. Adept at communicating across technical and non-technical stakeholder audiences and building cultures of accountability and continuous improvement.

CORE COMPETENCIES

Infrastructure & Virtualization: VMware ESXi, iSCSI SAN, ZFS, Active Directory, Windows Server 2022, DNS, DHCP

Network Architecture: LAN/WAN, VLANs, Switching/Routing, OpenBSD Firewalls, Brocade, IPv6, HA Failover Design

Automation & DevOps: Ansible, Python, Bash/Shell Scripting, GitLab, Infrastructure as Code

Cloud & Hybrid Platforms: Microsoft Azure, Digital Ocean, Google Workspace for Nonprofits, Hybrid Cloud Architecture

Storage & Filesystems: ZFS, Btrfs, ReFS, iSCSI, Enterprise Storage Design, Backup & Recovery

Security & Compliance: NIST 800-171, Risk-Based VLAN Segmentation, OpenBSD, Firewall Policy, Security Assessments

Monitoring & Observability: Grafana, InfluxDB, Nagios, SolarWinds, Time-Series Metrics, Dashboard Design

ITSM & Ticketing: Remedy, Jira Service Management, Incident Lifecycle Management

Scientific & HPC Computing: Beowulf Clusters, HPC Architecture, Research Infrastructure, GPU-Accelerated Systems

Team & Vendor Leadership: Direct Reports, IT Consultants, Vendor SLA Management, Team Development & Mentoring

Emerging Technology: Artificial Intelligence (AI), Responsible AI Adoption, AI-Assisted Operations

Executive Development: CIO Leadership Academy (SUNY SAIL Institute)

PROFESSIONAL EXPERIENCE

IT Consultant

March 2024 – October 2024

Lighthouse Instruments | Charlottesville, VA

- Engaged as transition consultant following tenure as IT Director; provided continuity of IT operations while the organization recruited and onboarded a replacement.
- Managed endpoint fleet and server infrastructure including VMware ESXi virtualization, cloud platforms, and on-premises systems — ensuring zero disruption to business operations during leadership transition.
- Served as knowledge transfer resource, documenting systems, processes, and configurations to support the incoming IT Director.

Director of Information Technology

2021 – 2024

Lighthouse Instruments | Charlottesville, VA

- Served as sole IT executive with full ownership of enterprise infrastructure strategy, operations, and security — including physical servers, VMware ESXi virtualization, Azure and Digital Ocean cloud platforms, and distributed client endpoints across multiple sites.
- Directed incident lifecycle management including detection, escalation, resolution, and post-incident review; developed operational runbooks to reduce MTTR and prevent recurrence.
- Managed direct reports, IT consultants, and third-party vendors; established SLA accountability frameworks and held providers to measurable performance commitments.
- Led IT budget planning, capital investment decisions, and hardware asset lifecycle management across the full technology portfolio.
- Maintained security update cadences, backup strategies, and compliance posture aligned with organizational risk tolerance.

Technical Director of Research Computing & HPC

2016 – 2021

Colgate University | Hamilton, NY

- Founded and led a new Research Computing support organization from scratch — defining service scope, staffing model, HPC infrastructure architecture, and operational processes; grew the function into a fully operational department serving faculty and graduate researchers.
- Oversaw HPC infrastructure supporting data-intensive academic research workflows; evaluated and aligned internal and external compute resources with evolving researcher requirements.
- Developed and maintained KPI frameworks and budget projections for research computing infrastructure; delivered regular reporting to university leadership and executive stakeholders.
- Partnered with faculty researchers, graduate students, and cross-functional IT teams to translate scientific computing requirements into reliable, scalable infrastructure solutions.
- Co-chaired the Campus Information Security Matrix Team and led a formal NIST 800-171 security assessment of Research Computing — identifying compliance gaps and driving remediation.
- Built staff capabilities through mentoring, structured training programs, and technical leadership, fostering a culture of continuous improvement and operational accountability.

System Administrator

2012 – 2016

Lighthouse Instruments | Charlottesville, VA | Amsterdam, NL

- Designed and maintained enterprise network and IT infrastructure across two international offices, ensuring consistent uptime, performance, and security in a distributed multi-site environment.
- Managed network switches, routers, servers, and storage; maintained topology documentation and coordinated with vendors for capacity planning and infrastructure upgrades.

System Administrator

2012

MusicToday | Charlottesville, VA

- Reverse-engineered a LAMP-based ticketing platform with zero downtime after all documentation and credentials had been lost — demonstrating rapid incident diagnosis and problem resolution under extreme operational pressure.

Unix Systems & Network Administrator

2002 – 2012

Astronomy Department, University of Virginia | Charlottesville, VA

- Provided Tier 3 network engineering and HPC support to an active astronomical research department for over a decade, supporting the data-intensive scientific workflows of faculty, researchers, and graduate students.
- Managed enterprise Unix environments, HPC clusters, network infrastructure, and research storage platforms — ensuring high availability and performance for mission-critical scientific computing.

VOLUNTEER EXPERIENCE

IT Director & Project Manager

2024 – Present

Virginia Renaissance Faire | Culpeper, VA

Serve as full IT director and project manager for a nonprofit public event organization operating weekend events drawing 3,000–4,000 guests per day, coordinating 100+ vendors and a staff of 20 volunteers:

- Leading site relocation project — managing permitting, purchasing, vendor coordination, and development of a new Faire property in Culpeper, VA, replacing the previous Lake Anna Winery location.

- Serve as system administrator for the organization's TicketSpice ticketing platform — managing event configuration, ticket sales, refund processing, and customer service at scale across multi-day weekend events drawing 3,000–4,000 guests per day.
- Deployed and administer Google Workspace for Nonprofits for the organization — managing accounts, email, shared drives, and collaboration infrastructure for staff and volunteers.
- Serve as the most senior IT resource for the organization — providing technical guidance, platform administration, and recommendations to organizational leadership; all major IT decisions are made by the General Manager based on technical input and recommendations provided.

INDEPENDENT INFRASTRUCTURE & DEVELOPMENT (2024 – PRESENT)

Actively maintain a production-grade home lab environment (~30 devices) that serves as a platform for ongoing technical development across infrastructure, automation, networking, and security:

- Storage & Virtualization: ZFS-based SAN exported via iSCSI to dual VMware ESXi hosts; enterprise-grade storage architecture with snapshot and recovery capabilities.
- Network Architecture: Dual OpenBSD edge firewalls in HA failover configuration; Brocade physical core router; VLAN-segmented subnets (server, client, guest, IoT) with inter-VLAN traffic policies based on formal risk assessments of each device class.
- Core Infrastructure Services: Dual Windows Server 2022 Active Directory domain controllers; self-hosted DNS, DHCP, and supporting infrastructure services.
- Monitoring & Observability: Grafana dashboards with InfluxDB/SQL backend for real-time metrics collection and visualization across network devices and systems; Python scripts for custom monitoring and automation workflows.
- Automation & DevOps: Ansible playbooks managing all server infrastructure; GitLab repository for version-controlled scripts and configuration management; Python for system automation and complex operational workflows.

EDUCATION & PROFESSIONAL DEVELOPMENT

CIO Leadership Academy
B.A., Astronomy

SUNY SAIL Institute
University of Virginia

PUBLICATIONS & PRESENTATIONS

- Powell, H. (2011). How to Build a Beowulf HPC System Using the Fedora LiveCD Project. Linux Journal, Issue 208.
- Powell, H. (2012). ZFS and Btrfs: A Quick Introduction to Modern Filesystems. Linux Journal, Issue 218.
- Powell, H. (2017). Next-gen Filesystems Overview: ZFS, BtrFS, and ReFS. NYSERNet Conference, Syracuse, NY.