Lauro Arnoldo Salazar

Senior Cloud & Systems Engineer

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As a solution-focused leader with over a decade of expertise in managing and optimizing critical applications and network infrastructures, I excel in mission-critical environments. My career is defined by my ability to drive continuous improvement, foster collaboration, and implement innovative technologies. I specialize in the strategic deployment and troubleshooting of hosted solutions, with deep expertise in cloud infrastructure. My strong technical foundation is complemented by excellent communication skills, enabling effective collaboration with both internal teams and external partners. I am adept at transforming organizational inefficiencies into streamlined, technology-driven operations, consistently delivering high-impact solutions that meet both immediate and long-term goals.

Technical Proficiencies

Programming & Scripting:	Terraform, Ansible, Python, Bash, PowerShell, SQL, C#, NET, JavaScript, APIs
Cloud & Virtualization:	Kubernetes, Rancher, VMware, Microsoft Azure, AWS, Google Cloud, Cisco UCS, Dell PowerEdge, HP ProLiant, F5 BIG-IP Load Balancers, NetApp, HP Nimble, Hyper-V
Networking & Infrastructure:	DNS, DHCP, TCP/IP, VPC, Subnetting, Load Balancing, Application Firewalls, Azure CDN
Tools & Platforms:	JIRA, Github, Gitlab, Jenkins, Octopus Deploy, Logic Monitor, Elastic Cloud, Prometheus, Zabbix, Veeam, Splunk, ELK, Grafana, HashiCorp Vault, Active Directory, MSSQL Server, MySQL, Wireshark, Nmap, LDAP, SSH, Rapid7 InsightVM, Nessus

Career Experience

Alchemy Technology Group, Remote   **October 2024 – Present**
   Senior DevOps Engineer | Application Development

Artisight, Remote   **April 2024 – September 2024**
   Senior DevOps Engineer | Engineering

Streamlined and automated operations for Artisight's Smart Hospital Platform, focusing on Cloud Operations and Linux server management to guarantee high availability and scalability across client data centers. Managed, supported, and troubleshot containerized applications while spearheading the initial planning and execution of migrating from Docker Swarm to Kubernetes clusters, aiming to bolster platform resilience and prepare for future scalability. Employed Infrastructure-as-Code tools like Terraform and Ansible for deployment management, complemented by Python and BASH scripting for process automation. Led the deployment of new lab environments to bolster software development efficiency and quality. Manage on-premises VMware cluster environments, Linux systems, and public cloud AWS accounts - handling tasks such as administrating IAM roles, EC2 instances, S3 buckets, EKS clusters, and Virtual Private Clouds, while improving infrastructure reliability through observability and logging enhancements using Grafana and Elastic Search Cloud.

- Led early-stage infrastructure modernization efforts by designing and planning the migration from Docker Swarm to Kubernetes, focusing on improving platform scalability and reliability. Developed on-premise proof-of-concept Kubernetes clusters and AWS EKS resources to validate the migration strategy and ensure smooth deployment.
- Accelerated project timelines significantly by swiftly adapting to and proficiently managing client deployments, resulting in timely application upgrades and bug fixes.
- Streamlined development processes by automating deployment workflows with GitHub Actions, enhancing release cycle efficiency.
- Developed a customized product rebuild in VMware OVF format for a client project, enabling seamless deployments.
- Developed a temporary solution using AWS Certificate Manager to monitor TLS certificates at client sites, ensuring proactive expiration notifications and maintaining system security.
- Participated in on-call duty 24/7 rotation.

Edgio, Remote   August 2023 – March 2024
Infrastructure Systems Architect | Technical Services, Media Content Delivery

Directed the development of private cloud Kubernetes infrastructure, standardizing Cloud Operations and overseeing Kubernetes clusters across international data centers. Designed traffic optimization solutions to manage multiple Tbps capacity, focusing on live streaming media delivery. Led automation initiatives and implemented advanced monitoring systems to improve live streaming services. Played a key role in optimizing media delivery performance for high-profile events by leveraging data science solutions.

- Led the creation of a Python-based automation tool, improving CDN traffic management by ASN, resulting in increased data efficiency and revenue growth.
- Performed real-time analysis on container application logs to extract critical metrics, leading to enhanced streaming performance.
- Designed and deployed monitoring and alerting protocols with Zabbix, Observe, PagerDuty, and in-house custom solutions for rapid infrastructure issue resolution.
- Created custom dashboards with Kentik for detailed network traffic analysis, providing insights to optimize performance.
- Conducted research and implemented operating system optimizations within Kubernetes environments to boost live streaming capabilities.
- Supported events such as Thursday Night Football 2023 and Super Bowl 2024, among others.

Edgio, Remote   November 2022 – August 2023
Senior Solutions Engineer | Technical Services, Media Content Delivery

At Edgio, I collaborated with client teams to solve complex technical challenges, improve CDN configurations, and optimize streaming performance. I developed automated solutions using Python, Shell scripting, and Infrastructure-as-Code, integrating with Edgio's APIs to streamline operations. Additionally, I provided expert guidance on network protocols while leveraging data science to improve Video-On-Demand and live streaming metrics like bitrate, latency, and error rates.

- Collaborated closely with client technical teams to analyze complex business and technical challenges, delivering tailored solutions that not only met their objectives but also strengthened client relationships, driving business growth.
- Architected, developed, and maintained automated solutions integrating with Edgio's APIs, utilizing Python, Shell, Infrastructure-as-Code methodologies, and DevOps practices to ensure consistent and streamlined client configurations across a complex CDN infrastructure.
- Diagnosed and resolved critical client issues at global Points of Presence, addressing network and server infrastructure problems and providing expert support for CDN configuration.
- Developed advanced data science and monitoring solutions to assess and enhance client experiences with Video-On-Demand and live streaming content, focusing on critical metrics such as bitrate, latency, time to first byte, buffer rate, error rate, and more.
- Engineered a Netflix replica within our infrastructure, creating a client-like environment to evaluate DASH, HLS, Live, and SMOOTH streaming playback while gathering comprehensive statistical data for performance optimization.
- Leveraged a centralized SQL-based logging system to analyze and review network traffic data, identifying opportunities for enhancements and ensuring the health and efficiency of the CDN, particularly for large-scale Video-On-Demand and Live Streaming content.
- Provided expert technical guidance and mentorship to both clients and internal teams, sharing deep knowledge of CDN infrastructure, networking protocols, Linux Operating Systems, Web Servers, Caching technology, and Serverless computing concepts.

Accruent, Austin, Texas   March 2022 – October 2022
DevOps Engineer II | Platform Operations, Engineering

Enhanced enterprise infrastructure and applications to ensure optimal reliability and scalability by driving collaboration between Engineering and Cloud Operations teams. Spearheaded the development and continuous improvement of product release automation across private data centers and public cloud platforms such as Azure, AWS, and GCP, including customer-facing production environments. Built and maintained robust CI/CD pipelines using Jenkins, TeamCity, Octopus Deploy, and Proget, applying the same rigor to internal tools as to production-level products. Led efforts to modernize legacy systems, streamlining workflows and automation, which contributed to increased system uptime and customer satisfaction.

- Continued to maintain and enhance the QA team's Azure Kubernetes cluster, providing ongoing support and ensuring smooth operations.
- Empowered Infrastructure Cloud Operations teams through the development of Terraform and Ansible scripts, enabling self-service capabilities and more efficient resource management.

- Played a pivotal role in migrating from self-hosted Octopus Deploy to Octopus Cloud, reducing administrative overhead and future licensing costs.
- Collaborated closely with software architects and developers to establish standards and best practices, resulting in significant time and resource savings.
- Streamlined build agents through containerization, reducing the overhead of maintaining diverse operating systems.
- Fostered cross-functional collaboration to promote DevOps principles, ensuring consistency and efficiency across software development and infrastructure processes, ultimately improving customer satisfaction.

Accruent, Austin, Texas   **March 2019 – February 2022**
Infrastructure Systems Engineer II | Cloud Operations, Infrastructure

Deliver technical solutions, results, and improvement of the overall health of data center operations in close coordination with Cloud Operations, Engineering DevOps, Security, and stakeholders. Design, develop, support, and maintain the organization's systems infrastructure, including the implementation of hardware and software. Research, evaluate and stay ahead of emerging tools, techniques, and technologies in a fast-paced, results-oriented, and ever-changing environment. Shape the strategic roadmap for deployment and troubleshooting of hosted solutions. Leverage core competencies in cloud environments hosting Accruent solutions in Azure, Google Cloud, and AWS.

- Led the migration of the QA team's critical internal tools from the private cloud's Rancher environment to Kubernetes on AKS. This was the initial blueprint for the company's Kubernetes deployment strategy.
- Spearheading best practices for Kubernetes' cluster configuration and security practices across the company by being involved in cross-departmental efforts to ascertain Accruent's next CI/CD strategy.
- Positioned the company within the top 10-20% of security rankings by increasing the BitSight rating score by 13% (from 690 to 780) within six months, reducing security incident risks by 25%. Increasing our security rating is directly correlated to preventing breaches and hardening applications. This project involved evaluating and working with Engineering to correct issues with web application headers, SSL, legacy site redirects, DNS clean up, among other things, across all Accruent products.
- Played a key role in the implementation and disabling of TLS 1.0/1.1 and applied secure ciphers across all hosted applications. Increased nearly all products from an SSL Labs scoring of (F) to an (A+).
- Led F5 Load Balancer upgrades across seven global data centers, ensuring timely response to critical security incidents. Defined standards, architected and delivered HA production systems, resolved vulnerabilities, improved configurations, and explored automation with Terraform and Ansible. Trained Network Engineers on these processes.
- Developed an Identity Management solution to streamline and secure employee account lifecycles across various Active Directory domains.
- Automated repetitive tasks using Ansible, Terraform, PowerShell, BASH and other scripting languages.
- Resolved severities for any Accruent product by troubleshooting issues in F5 load balancers, servers and networks.
- Implemented best practices to improve resiliency, best practice standards, network security, efficiency, and uptime - spanning across geographical data centers encompassing technologies such as CISCO UCS, HP Nimble, and NetApp Storage, dense VMware virtual environments, and multiple pairs of F5 Load Balancers.
- Primary responsible party for the Austin data center, as well as participating in 24/7 on-call rotations.

University of Texas Rio Grande Valley, Brownsville, Texas   **December 2013 – February 2019**
Infrastructure Systems Engineer II | IT, Data Center Services

Spearheaded the management and execution of systems engineering processes for the Data Center Services department at a public research university with nearly 30,000 students. Delivered expert-level configuration support, resolved production issues with a 100% success rate, and conducted root cause analysis to prevent future incidents. Administered F5 BIG-IP Load Balancers across two campuses and served as the subject matter expert for a 40-node IBM iDataPlex High-Performance Computing system. Developed multiple web applications, including the MyAccount tool, enhancing account management efficiency by over 30%.

- Recognized for exceptional performance and promoted to the role of (Data Center) Infrastructure Systems Engineer II following the merger of UT Brownsville and UT Pan American to form The University of Texas Rio Grande Valley in 2015.
- Governed overall aspects of virtual infrastructure in a mission-critical environment, with a key focus on supporting VMware and Hyper-V infrastructure running on Cisco, Dell, and HP servers; coordinated and executed backup, replication, and recovery services for critical systems, and participated in 24/7 on-call rotations.
- Single handedly deployed more than 16 vendor applications per year as business requirements arose and procurements materialized, from hardware or virtual server deployment, to load balancing configurations, to software configuration.

- Fostered a state-of-the-art infrastructure environment through the adoption of cloud services such as Microsoft Azure to deploy storage systems, virtual machines, and a variety of applications in UTRGV.
- Developed internal tooling to facilitate daily tasks for the Data Center Services team.
- Praised for developing an innovative tool that automated provisioning of new student email accounts in Active Directory and Microsoft Office 365, exponentially improving the efficiency of account setup.
- Improved the functionality of Service Desk, a utility to aid in internal administrative functions relating to identity management.
- Led implementation of High Availability solutions for web services and internal business systems, enhancing system reliability and uptime.
- Enhanced critical service monitoring and logging by deploying Splunk and other systems, enabling proactive management of data center health.
- Consolidated technology systems during the formation of The University of Texas Rio Grande Valley.

Additional Experience

- Research Scientist, University of Texas Rio Grande Valley – Center for Gravitational Wave Astronomy
- Graduate Teaching Assistant, University of Texas Rio Grande Valley – Computer and Information Sciences
- Research Assistant, University of Texas Rio Grande Valley – Computer and Information Sciences
- Web Designer, University of Texas Rio Grande Valley – Physics & Astronomy
- Teaching Assistant, University of Texas Rio Grande Valley – Computer and Information Sciences

Education

Master of Science in Computer Science, University of Texas Rio Grande Valley
Bachelor of Science in Computer Science, University of Texas Rio Grande Valley
(Formerly University of Texas at Brownsville)

Professional Development

- ITIL Foundations Certificate in IT Service Management (No. GR750207515LS).
- LIGO Scientific Collaboration member, 2013.
- Administering F5 BIG-IP Load Balancer Trainings.
- Microsoft Official Courses: Upgrading Your Skills to Windows Server 2016 (20743)
- Configuring Advanced Windows Server 2012 Services (M20412).
- Red Hat System Administration I and II (RH199, RH134) and Red Hat Linux Diagnostics and Troubleshooting (RH342)
- Customer Service Satisfaction, Fred Pryor.