Lauro Arnoldo Salazar

Cloud Engineer

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As a solution-focused leader with extensive experience 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, .NET, JavaScript, APIs
Cloud & Virtualization:	VMware, Kubernetes, 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

Career Experience

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

Advanced Artisight's Smart Hospital Platform by automating tasks, optimizing processes, and overseeing Cloud Operations and DevOps. Ensured high availability and scalability through Linux server fleet management at client data centers, while administering and troubleshooting containerized applications.

- My rapid adaptation and proficiency in managing client deployments have significantly accelerated project time-lines, ensuring timely application upgrades and bug fixes, even within the first few months of my tenure. Additionally, I participated in the modernization of our infrastructure migrating from Docker Swarm to Kubernetes clusters, an ongoing initiative aimed at significantly enhancing the platform's scalability and reliability.
- Utilized Infrastructure-as-Code tools like Terraform and Ansible to manage Docker Swarm deployments, as well as scripting in Python and BASH. Also administered Elastic Cloud for centralized logging and metrics collection.
- Administered and migrated GitLab and GitHub CI/CD pipelines, as well as automating deployment work-flows with GitHub Actions to streamline development processes and improve release cycle efficiency.
- In my efforts to support our development teams, I have successfully deployed new lab environments that facilitate continuous integration and testing, contributing to the overall efficiency and quality of our software development processes.
- Furthermore, I led the rebuilding of our product for a special client project, delivering it in a VMware OVF format to enable seamless automated deployment as a single appliance instance.
- My expertise extends to administering both on-premises VMware development environments, Linux Systems, and AWS development accounts, where I manage IAM roles,EC2 instances, S3 buckets, and EKS clusters. I have also driven significant improvements in our monitoring systems, particularly by enhancing Grafana observability, which has substantially increased the reliability of our infrastructure.
- Developed a temporary solution using BASH scripting, AWS CLI, and AWS Certificate Manager to track TLS certificates at client sites, ensuring timely expiration notifications.
- Through my strategic contributions and technical leadership, I have consistently delivered solutions that streamline operations at client data centers, ensuring the smooth operation of our platform and the ongoing success of Artisight's mission to revolutionize patient care.

Edgio, Remote **August 2023 – March 2024**

Infrastructure Systems Engineer | Technical Services, Media Content Delivery

Transitioned into a specialized role akin to a Systems Architect to enhance the private cloud Kubernetes infrastructure supporting a major customer's live streaming services at Edgio. I was tasked with leading the development of tailored solutions within the Technical Services Engineering team, focusing on optimizing traffic flows exceeding multiple Tbps by leveraging my expertise in Data Center Operations, Kubernetes, Media Delivery, and Software Development.

I was primarily responsible for standardizing Cloud Operations, managing Kubernetes clusters across global locations, leading automation initiatives, and implementing robust monitoring systems. Additionally, I played a crucial role in optimizing media delivery performance through data science solutions and oversaw live event coverage for high-profile events like Thursday Night Football 2023 and Super Bowl 2024. Key accomplishments include:

- Led the creation of a Python-based automation tool that optimized CDN traffic management by ASN, significantly enhancing data handling efficiency and driving revenue growth.
- Performed real-time data science analysis on container application logs, extracting critical metrics such as average bitrate, buffer rates, error rates, audio latency, session statistics, device operating systems, and traffic ASN, to improve streaming performance.
- Designed and implemented comprehensive monitoring and alerting protocols using tools like Zabbix, Observe, PagerDuty, and custom in-house solutions, ensuring rapid response to infrastructure issues.
- Developed custom dashboards with Kentik for in-depth analysis of network traffic distribution patterns, providing actionable insights to optimize performance.
- Researched and executed operating system optimizations for Kubernetes environments, significantly enhancing live streaming capabilities.

Edgio, Remote **November 2022 – August 2023**

Advanced 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.
- Diagnosed and resolved critical client issues at global Points of Presence, addressing network and server infrastructure problems and providing expert support for CDN configuration.
- 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.
- 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.
- Provided expert technical guidance and mentorship to both clients and internal teams, sharing deep knowledge of CDN infrastructure, IP, DNS, HTTP, TCP/UDP, Anycast, CARP protocols, *nix Operating Systems, Web Servers, Caching technology, and Serverless computing concepts.
- 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.

Accruent, Austin, Texas **March 2022 – October 2022**

DevOps Engineer II | Platform Operations, Engineering

DevOps at Accruent helps bridge the gap between Engineering and Cloud Operations by fostering relationships and collaboration alongside the organization to continuously improve enterprise-level infrastructure and applications for reliability and scalability. Likewise, it drives enthusiasm and promotes adoption of the principals and philosophy of the DevOps methodology across all teams. Play a key role in ensuring system and application uptime and reduction of bugs; all to ultimately increase customer satisfaction in our Products.

- Develop and continually improve product release automation for applications spanning multiple private data centers and public cloud environments, primarily MS Azure, and AWS, GCP, including customer-facing production environments.
- Building and maintaining the CI/CD pipelines for Accruent's software applications. Maintaining tools such as Jenkins, Teamcity, Octopus Deploy, and Proget. Promote the expectation that internal tooling be treated as Production level products themselves. Modernizing build agents to reduce the footprint of OS we need to maintain by using containers.
- Enabling self-service capabilities for Infrastructure Cloud Operations teams by creating Terraform and Ansible scripts for creating resources in MS Azure, such as new subscriptions, new network-peerings linked to firewalled infrastructure in different regions, Kubernetes services, domain controllers, and other simpler Azure services.
- Migrating self-hosted Octopus Deploy to Octopus Cloud, resulting in potential future monetary savings in administrative time and licensing different instances.
- Enable application and deployment monitoring automation to detect and correct issues, bottlenecks, and performance problems.
- Partner with software architects and developers to create standards and best practices that save the organization time and money.
- Investigating legacy systems to optimize automation and modernize workflows.

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.

- Pioneered in upgrading F5 Load Balancers across seven geographical data centers resulting in responding to critical security incidents on time. Defined standards as well as architected and delivered HA production systems, resolved vulnerabilities, improved configurations, and researched automation initiatives such as using Terraform or Ansible to create objects, as well as training Network Engineers on this process.
- 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.
- 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.
- 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+).
- Developed an Identity Management solution to manage Accruent's diverse and differing Active Directory domains, which resulted in enhancing the overall security posture in the employee account lifecycle.
- Advancing DevOps principles and kaizen in software engineering conventions to reduce waste in CI/CD pipelines and coder's time (writing tickets and speaking to Cloud Ops) with an aim to improve the software development experience.
- 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%.

- 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. 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 UT Brownsville.
- 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 the efforts to implement High Availability solutions for UTRGV's web services and internal business systems.
- Improved critical services' monitoring and logging for infrastructure at UT Brownsville through the deployment of Splunk and other monitoring systems - providing immediate notifications of data center health and application issues.
- Delivered remarkable contributions in the consolidation of the information technology systems of UT Brownsville and UT Pan American into UT Rio Grande Valley.
- 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.

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
  (Formerly University of Texas at Brownsville)

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

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

References

- Available upon request