ARTURO ESTEVA CASTILLO

- **Location:** Denver, Colorado.
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PROFESSIONAL SUMMARY

"Systems Engineer with experience in designing, implementing, and operating cloud solutions, with a professional background in the telecommunications sector. I combine skills in software development, automation, and infrastructure management to build efficient, scalable, and secure cloud environments that integrate with modern network architectures. I am currently pursuing a Master's degree in Data Science, which expands my ability to work with data analysis, modeling, and processing in advanced technological environments."

CORE COMPETENCIES

- Data Cleaning & ML: Python, Colab, PyCharm, Juniper (Pandas, Numpy, MatPlotlib, Seaborn, Sklearn)
- Data Visualization: Power BI, Tableau
- AWS Networking & Cloud Services: VPC, subnets public/private, route tables, Internet/NAT Gateway, VPN, Transit Gateway, Route 53, EC2, ELB/ALB/NLB, Auto Scaling, arquitecturas Multi-AZ, EBS/EFS, RDS, Kubernetes (Pods, ReplicaSets, Services)
- Databases Relational & No Relational: (SQL Workbetch, SQL server, DynamoDB, MongoDB)
- Automation (Python, Linux, Shell Scripting)
- Network Design, Integration & Optimization: WAN, LAN, OSI Model, Tcp/Ip, WIFI, Wireshark tool.
- Observability & Monitoring: Grafana, Zabbix, Prometheus, DataDog, CloudWatch, AWS Health dashboard, Cloud Trail
- End-to-End (E2E) Network Testing & Validation
- Network Function Virtualization (NFV): (AWS VPC, VMware)
- Containerization & Cloud: Docker, Kubernetes, AWS (VPC, EFS, RDS, Lambda, CloudWatch, EBS, ELB)
- IP Network Design, Routing & Switching (BGP, OSPF, VLAN)
- Security: IPsec, Firewalls, AAA
- Cross-Domain Collaboration (DevOps, RAN, Wireless, NOC, NE)
- Technical Documentation & Process Improvement
- Root Cause Analysis (RCA), On-Call.
- Strong Analytical, Communication & Problem-Solving Skills
- 4G/5G RAN Network Architecture (EPC & 5GC)
- Leadership, Team Mentoring & Project Coordination

WORK EXPERIENCE

System Engineer II | DISH WIRELESS Denver, Colorado.

Apri 2023 – Dec 2025

- I automated and operated monitoring platforms for 5G infrastructure working with Prometheus and Grafana, integrating metrics from network nodes, virtualized functions, microservices, and critical telecom Environment.
- Collaborated with Engineering, Operations, and vendor support teams to improve 5G network observability, integrating metrics and KPIs through Docker, Kubernetes, Datadog, and Grafana APIs.
- I managed cluster capacity and health by configuring health checks (liveness/readiness probes), Horizontal Pod Autoscaler (HPA), and optimizing CPU and memory usage in containerized services.
- Provided mentorship to NOC tier teams by delivering technical training, creating MOPs, and standardizing monitoring, incident response, and escalation processes in production.
- Implemented version controlled YAML files for infrastructure, monitoring dashboards, and CI/CD pipelines, enabling traceable changes, quick rollbacks, and standardized configurations across NOC and engineering teams.

- I operated services on AWS (VPCs, ELB, EC2, IAM, S3, CloudWatch, Lambda, VPC, NAT, ELB, ALV, AWS IaC, DynamoDB, Lambda, Multi-AZ, EBS/EFS, RDS, Kubernetes clusters around 24k pods to support monitoring flows, operational information storage, alarms, and the execution of serverless functions for scheduled tasks.
- I operated a 24/7 NOC for 5G networks, setting up dashboards in Grafana and Datadog to visualize critical KPIs (throughput, latency, handover failures, cell availability) and trigger early alerts in the event of service degradation.
- Performed monitoring integrations using the Docker Engine API, the Kubernetes API Server, and Grafana HTTP API to collect container/pod metrics and automate the creation of dashboards and alerts in 5G environments.
- I used AWS APIs to automate auditing tasks, log retrieval, resource management, and operational report generation stored in S3 and monitored through CloudWatch.
- I developed automation tools in Python for KPI analysis, configuration validation, log parsing, event correlation, and network function status verification on OSS/NOC platforms.
- I administered and monitored Kubernetes clusters, managing nodes, pods, deployments, services, ingress, ConfigMaps, Secrets, and network policies to support workloads associated with RAN and Core services for 5G.
- I validate and troubleshoot virtualized clusters on VMware (vCenter/ESXi) and Dell iDRAC servers in Linux environments, ensuring the stability and availability of VNFs/CNFs, vRAN, vCU/vDU, and highly critical telecom systems.
- Executed feature validation testing for key services such as Registration, Authentication, VoNR, VoWiFi, Data Sessions, Network Slicing and QoS. Performed PCAP capture, protocol analysis, defect documentation, and root cause analysis (RCA) to enhance service quality and network performance.

Senior Wireless Engineer | AT&T USA – Walnut Creek, California.

Dec 2018 – Feb 2023

- I performed testing, validation, and troubleshooting of 4G LTE and 5G small cell services using Linux environments for log analysis, process verification, end-to-end connectivity, and service stability in the lab and in the field.
- I diagnosed incidents by applying the fundamentals of the OSI and TCP/IP models, separating problems by layer (physical, link, network, transport, application) to identify whether the fault was in RF, backhaul, routing, DNS, ports, or applications.
- I ensured proper WAN/LAN connectivity by reviewing switch and router configurations, VLANs, trunk/access ports, IP addressing, gateways, and static/dynamic routes, validating connectivity with tools such as ping, traceroute, tcpdump, and netstat on Linux systems.
- I troubleshot LAN/WAN issues involving ACLs, firewalls, NAT, VPN tunnels, QoS policies, and routing protocols, coordinating with transport teams to resolve packet loss, high latency, and asymmetric routing problems across backbone and access networks.
- I developed automation scripts in Python and Bash to analyze network KPIs (throughput, latency, loss, errors), process and clean logs from multiple sources, and validate active services, ports, and routing reachability across LAN/WAN segments.
- I generated automatic reports for engineering and operations, reducing manual analysis time and standardizing incident diagnosis for RAN, Wi-Fi, and core/WAN events.
- I used Wireshark, RADCOM, and EXFO in combination with Linux tools to capture and analyze traffic, identify retransmissions, jitter, incomplete handshakes, signaling failures, and congestion patterns in layers 2/3/4.
- I managed and validated clusters in Kubernetes and OpenShift on Rocky Linux, checking the status of master and worker nodes, pods, services, internal DNS, network policies, and resource consumption, ensuring network connectivity between namespaces and external WAN services.
- I worked with Wi-Fi standards including IEEE 802.11n, 802.11ac, and 802.11ax during validation of access points and indoor coverage systems.
- I was involved in Wi-Fi AAA testing and troubleshooting of Core Access and Mobility functions, ensuring seamless user authentication, session continuity, and policy enforcement across integrated RAN, Wi-Fi, and IP core networks.
- Script development: Developed and implemented automation scripts with Python, Bash, PowerShell, and Linux tools to support provisioning, configuration checks, and network health validation.
- I collaborated with the RF team in the lab to perform 4G, Wi-Fi, and 5G testing, evaluating antenna and radio performance under controlled conditions, including TDD MIMO antenna integrations for 4G and 5G systems, correlating RF performance with LAN/WAN transport quality.

Deployment Management | Ericsson Mexico – Azcapotzalco, CDMX.

Feb 2014 – Feb 2018

- Deployment and integration of 3G/4G sites—four wireless projects deployed in the US and North America, testing base stations and small cells in stadiums, commercial buildings, and electrical substations, improving indoor coverage and network capacity in GSM, WCDMA, and LTE technologies over carrier WAN and enterprise LAN environments.
- Integration, performance analysis, and end-to-end integration of new base stations (NodeB/eNodeB), synchronizing and debugging RNC–NodeB and MME–eNodeB connections, including verification of backhaul links (MPLS, microwave, fiber), routing, VLANs, and IP addressing to ensure stable transport for 3G/4G services.
- Performed detailed RAN KPI analysis (accessibility, retainability, mobility, call drop rate, handover success rate, throughput, congestion, and paging performance), correlating performance counters with drive-test logs and call traces to identify coverage holes, interference, and transport issues.
- Performed call-trace and signaling-trace analysis (S1, Iu, Gb, Gn interfaces) to troubleshoot attach failures, call setup problems, handover issues, and session drops, reviewing messaging flows, timers, and cause codes to pinpoint faults in RAN, core, or transport layers.
- Management and monitoring in Ericsson ENM/OSS performing health checks, troubleshooting, and verification of RAN network status using Ericsson ENM and OSS platforms, including the creation and validation of RET scripts for antennas (Argus, Kathrein, Andrew) and configuration of names via CCU to standardize site parameters and associated LAN/WAN connectivity.
- Collaborated with field engineers in validating and resolving faults in coaxial ports, amplifiers, and multiplexers, while also checking switch/router ports, PoE, and VLAN assignment, mitigating dB losses and LAN-side misconfigurations to ensure optimal RF and IP performance in 3G/4G and associated Wi-Fi environments.
- Performed software updates on WCDMA and LTE nodes, as well as license installation and validation, ensuring compatibility and proper operation after each change, validating post-upgrade KPIs, alarms, and transport reachability (routing, gateways, and O&M IPs) across the WAN.
- Linux administration and automation: used Linux-based tools (moshell, bash, CLI) for base station management and automation, developing custom scripts for eNB using HTML, JavaScript, Shell, and PHP to streamline configuration checks, log/trace collection, KPI extraction, and connectivity validation across LAN/WAN management networks.

CERTIFICATES

- **Databricks Fundamentals** – ID de credencial: 161477591
- **AWS Cloud Practitioner** – ID: a0c1bf2e-b528-4c3f-868f-44c838609400
- **Microsoft Azure Fundamentals (AZ-900)**, julio de 2025 – ID:0362c088-bac7-4132-b6d5-89f9f5e53461
- **Amazon ECS, KodeKloud** – April 2025 – ID: aa5966b6-cb81-4c45-bb81-c02a73b40f44
- **GitLab CI/CD** – ID: 37918776-ce6a-4588-8b4b-da4222ab08ea
- **Virtual Machines VMware** – Dish Wireless
- N**etwork Virtualization** Mavenir & Samsung
- **Cisco CCNA (Expired):** Feb 2016 a Dec 2018
- **Grafana Loki:** ID 4ef9bf57-ed3c-47ce-8621-94b9a767e618
- **Agentic AI Fundamentals:** Architectures, Frameworks, and Applications
- **Google Gemini:** Get Started with Google’s AI Assistant

EDUCATION

- **Bachelor Degree of System Engineer | Mathematical Physicist**
  Instituto Tecnologico de Oaxaca (Istmo)
  2008 - 2013

- **Master Degree Data Science | Big Data**
  Universidad Autonoma De Guadalajara (UAG)
  2025 - Present

LANGUAGES

- **English:** Full Professional
- **Spanish**: Native