Mike Cornstubble
A Strategic Infrastructure Professional: Instantiating Ideas About Infrastructure, Into Ideal Infrastructure

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My name is Mike and I *love* infrastructure. I have been extremely fortunate to have experienced some awesome adventures in technology. Now, I'm looking for the next engineering expedition.

My pulse is measured in bitrate. Sleep is an optional (and boring) activity. I am an experienced, driven and gifted technology professional with a demonstrated history of success delivering technology to challenging areas. Skilled in Systems Architecture, Infrastructure Design, Technology Operations, I've had the opportunity to work with businesses of all sizes across the gamut of markets. I am a tough, competent, and strong information technology professional with years of experience, master's level education, multiple technical certifications, patented ideas, experience working in some of the largest facilities across the country, experience working in the toughest environments, and most importantly an absolute addiction to *knowing more.* I have the drive, and gumption to achieve the best, on teams made of the best. I am absolutely ACK'ing at the bit to work with you!

I have been eating, sleeping, breathing, and loving technology since I can remember. I absolutely know I can make a deeply positive addition to what you all do. I love to collaborate, create, communicate, and build. Please never hesitate to contact me.

I promise you will not regret it.

Experience

Edovo – June 2013 – Present, Multiple Key Roles, Chicago, IL

Edovo seeks to help everyone connected to incarceration build better lives. We do this by deploying dedicated, secured, hardened IP networks, that provide services to our directly manufactured Edovo Tablet's, as well as other IoT devices. Our Edovo Tablets connect incarcerated individuals via our secure networks, to our private cloud, where we deliver educational courses, vocational training, behavior therapy, and community engagement opportunities.

Edovo was founded in 2013. I was fortunate to be full-time employee #2 at Edovo, as our Director of Infrastructure. Being an early hire required flexibility in role, and variation of value. As an early hire and our Director of Infrastructure, I directly built, drove, and scaled our infrastructure architecture, technical sales process, and infrastructure operations processes.

I have had the opportunity to lead the strategic building of business growth, teams, training, process, products, capital, sales and sustainability. I have been instrumental in

multiple rounds of capital raises (10M), strategic sales planning, guiding all resales and sales engineering opportunities, responding to Government RFP's, and presenting our product offering as the 'technology face' of Edovo.

Edovo acquired Legacy Inmate Communications in June 2018. This merger added telephony, inmate communications, and community communications to our overall platform. This was a hallmark event, expanding our business from 50 people, in one Chicago based office, to 175+ people, spread between two major offices in Los Angeles, CA and Chicago, IL, and another 50+ regional based individuals. Post-merger, Edovo is now able to offer nationwide telephone and video services on our Edovo Dedicated Devices. This acquisition triggered exciting technical and organizational challenges, and changes.

This acquisition also came with the infrastructure and operations responsibility for 20+ years of Legacy Inmate Communication's existing infrastructure and client footprint. Overnight, our business tripled in size, so did our infrastructure, and thus my focus. Instead of continuing to drive three major areas (arch, sales, and ops) as a Director, I chose to focus deeply on modernizing and sustaining our businesses infrastructure, with a smaller, tightly knit, highly skilled team, as our Principal Infrastructure Engineer. This role drove me back into my core excellence and is driving Edovo through this merger into cloud native applications and infrastructure harmony.

Edovo – Principal Infrastructure Engineer, January 2018 – Present, Chicago IL

As the Principal Infrastructure Engineer, I am directly responsible for architecting, building, guiding, and executing strictly the infrastructure technology vision for Edovo. This includes all things cloud, datacenter, backbone, and on-premise. My focused direction is provided directly to our CTO, our development teams, and product teams, and is executed by myself and a small group of highly skilled engineers under my technical direction.

I am currently deeply involved in the complete ecosystem of infrastructure architecture, service delivery, service automation, and support. Over the past months we have moved 80% of workloads directly from on-premise, legacy systems into Amazon Web Services, converted legacy backbone infrastructure to Arista equipment, and began rolling automation across the *new* holistic organization…with much more to come.

Myself and my team spend the week innovating and instantiating new ideas, deploying in toughest prisons and jails, creating connectivity behind bars, transporting bits to secure applications, and managing all crisis, incident, and investigative response. This comprises the infrastructure backbone that delivers our platforms opportunities to multiple tens of thousands of people that are connected to the incarceration system.

Milestones achieved at Edovo as Principal Infrastructure Engineer:
- Awarded a United States patent on the overall System and Method of the Edovo technology offering

- Directly driving us into an all AWS hosted application framework, using EC2, VPC, Redshift, RDS, ElastiCache, ELB, S3, Glacier, Storage Gateway, EFS, and Transit Gateway with Direct Connection into a Private backbone.
- Designed and implemented a hybrid cloud architecture directly connecting Edovo to Amazon Web Services in two regions (US-East 2, and US-West-1) with redundant 10Gb connections and BGP with BFD to our private peering points in 350 E Cermak in Chicago and SV-5 in San Jose
- Brokered, procured, and implemented private LTE and cross-connection with Verizon Wireless
- Architecting and implementing our internal VMware Private Cloud
- Scaling and implementing hosting of fundamental network services – DNS, DHCP, RADIUS, NTP, etc.
- Scaled managed firewall operations across our infrastructure with Fortinet Fortigate solutions and custom log aggregation.
- Architecting, procuring, configuring, deploying, and scaling our Wide Area Network Backbone from 350 E Cermak in Chicago to SV-5 in San Jose, consisting of multiple datacenters, Arista and Cisco routers, private dark fiber, leased MPLS, multiple VPN concentrators, and SD-WAN orchestration, BGP peering with trusted entities, cross connection to private networks and secured facilities including governmental entities.
- Architected, Designed and deployed a private CDN network across the country at over 100 sites made of custom x86 hardware, Solid State Storage, 10Gb networking alongside Ubuntu and Nginx, managed by Ansible. This served 1080p HD media objects in jails and prisons to tens of thousands of users a day, making us the only HD native provider
- Architected the on-prison-premise technology stack with enterprise components, leveraging Cisco routers and switches, Ruckus Wireless, and Fortinet Firewalls.
- Scaling the product and technology through architecting infrastructure, sales engineering and managing service operations, from absolute 0, to 100,000 daily served customers, 200 customer locations over 22 states, and over 30,000 IP addressed devices and managed endpoints.
- Refreshed our primary on-premise datacenter location with Cisco Nexus, Nimble Storage, and all new SuperMicro Blade Server's
- Creating custom automation for existing legacy infrastructure
- Centralizing all infrastructure and application logging via SumoLogic
- Establishing, testing, and maintaining business continuity, disaster recovery, and failover / failure procedures.
- Continuing to boldly explore new infrastructure technologies and improvements throughout our organization

Edovo – Director of Infrastructure, June 2013 – December 2018, Chicago IL

As Director of Infrastructure, I have created, designed, and executed the infrastructure vision that is currently providing all communications connectivity, hosting infrastructure, data security, and business continuity for our business, as well as all of the business processes and support departments that operationally keep us online. This infrastructure effort was started in 2013 with just myself, a backpack, a laptop, and the confidence of

my CEO and Board, that scaled into multiple teams, across multiple offices, in multiple time-zones.

It's been an amazing adventure!

Milestones achieved at Edovo as Director of Infrastructure:
- Founding, developing, and implementing the infrastructure vision of Edovo
- Raising 10M capital over several rounds directly alongside our CEO
- Guiding all Sales Engineering from Day 0 including presenting our vision to and winning bids from federal entities, large State Governments, and the largest counties in the United States. Successfully closing 20M in revenue, and multi-year contractual agreements. I have sold all of our largest clients and am always brought in to 'close' large revenue opportunities.
- Guiding all Solutions Architecture and Design. I've designed solutions for everyone from Federal ADX Supermax Prison (where the UNA Bomber is), to Cook County Jail, to Santa Ana Police Dept.
- Primarily technically guiding and deploying our cloud, datacenter, and on-site infrastructure, including Rackspace, VMware, AWS, and Azure cloud hosting, metal co-location multiple large-scale datacenters, carrier peering, on site bandwidth connectivity, on site installation and construction services, and on-site technical turn-up.
- Racking up hundreds of thousands of frequent flyer miles traveling to customer sites, ensuring the best of customer success
- Directly architecting, building and implementing out network backbone, and services from Layer 1 through Layer 7
- Directly scaling hosting of critical network services such as DNS, DHCP, NTP and RADIUS
- Creating and implementing security and information assurance best policies and practices
- Implemented 802.11a/b/g/n/ac networks across the hardest jails and prisons with Ruckus Wireless and Software Defined Network Controllers
- Managed and scaled bandwidth procurement and installation
- Managed and scaled construction services and installations across our customer facilities
- Created and scaled operational processes to support the infrastructure we deployed
- Creating, documenting, scaling, and maintaining the multiple security solutions from firmware signing, on device endpoint security, MDM, wireless security, network transport security, encryption, information assurance, and information availability.
- Recruiting and hiring the first Edovo Infrastructure teams and employees
- Mentored staff from Day 0 to IT Hero
- Scaling the technical vision into processes and teams comprising of Network Operations, Security Operations, and Datacenter Operations located in two offices spanning across Chicago, IL and Los Angeles, CA.
- Driving team performance and professional advancement, leading to overall staff retainership and growth of our people and intellectual capital

- Directly managing the company infrastructure budget, including capital procurement and operational expenses
- Managing and driving all technical service delivery, incident response, crisis response, and special security assignments
- Completing compliance initiative's leading to operating under NIST, SOC2 Type II, and FedRAMP Standards.
- Creating procurement standards and processes for infrastructure equipment
- Managing domestic and international infrastructure vendors
- Managing partnerships with domestic VAR's and distributors such as CDW, WAV, Tech Data, Ruckus Wireless, Cisco, Arista, Juniper, and Fortinet
- Brokering international partnerships with large manufactures like Samsung and Google for custom hardware and firmware.

Edovo acquired Legacy Inmate Communications in June 2018, triggering exciting technological and organizational change.

XTRACOM – Executive Technology Advisor, January 2015 – December 2017, Chicago IL

As Executive Technology Advisor I led and executed the initial infrastructure vision for XTRACOM during its initial founding, then trained staff, scaled skills within that staff, and transitioned mission critical responsibilities over its early phases of business. XTRACOM is a UCaaS company offering core communications services include SIP Trunking, Hosted PBX, Bandwidth, Managed Wi-Fi, and Managed IT Services for the business community.

My direction guided, drove and led XTRACOM operations in several of the largest datacenters and co-locations in the country, including 350 E Cermak in Chicago. My strategies allowed the company to most efficiently leverage industry leading vendor-based solutions from Cisco UCS, VMware vSphere, BroadSoft, while also automating and monitoring them with open source tools. This allowed us as a business to maintain the industry status-quo from a presence, equipment, and compatibility perspective, while embracing the bleeding edge of the IT industry -- treating our infrastructure as a resource pool that can be audited, automated, and managed at scale.

These items were driven through my direction to provide a low-overhead, structured, technical environment, using a small, specific set of solutions and tools, that internal staff can efficiently manage. My guidance translated this tight technical vision into a focused technical training regimen for XTRACOM, mentoring them to a point of self-sufficiency.

Milestones achieved at XTRACOM:
- Raised Strategic Capital alongside the CEO
- Architected, price negotiated, procured, and deployed XTRACOM's VMware Private cloud, using vSphere, vSAN, and vCenter
- Built and centralized all logging and events organization wide via ElasticSearch and Kibana allowing the business to drive data decided outcomes. This information allowed the business to track usage trends, identify up-sell opportunities, and identity opportunities for operational efficiency.

- Delivered CRM and support processes leveraging Salesforce.com, Desk.com, Slack, and Solarwinds to comprise a complete customer support and relations management offering.
- Brokered all bandwidth procurement exchanges and established successful carrier peering and resales partnerships with tier 1 providers like ATT, Level 3, Zayo and XO.

XTRACOM was acquired by S-NET Communications in early 2018.

Totally-Tek! Inc. – Founder, October 2011 – December 2014

Founded in 2011 by myself and two close colleagues Totally-Tek! Inc. was a professional IT services provider. We specialized in designing and implementing secure networks and data infrastructure in the industrial, and enterprise spaces. As a founder and executive, I was dedicated to providing the best technical consultancy and implementation to Totally-Tek! Inc. clients, as well as building and maintaining strategic, operational and financial direction of the business.

We scaled this from nothing to several hundred thousand dollars in revenue, with only three employees. Our projects involved creating a highly available, high throughput, highly resilient, highly secure wired and wireless networks for industrial and manufacturing environments.

Our clients included large scale machining companies needing connectivity on CNC and other manufacturing machines, large scale manufacturing outfits needing connectivity to SCADA, Sensors, HVAC, and security systems, as well as high volume warehousing and refrigerated storage needing totally redundant wireless connectivity for automated machines and warehouse robots.

Milestones achieved at Totally-Tek!:
- Establishing and managing a S Corporation in the State of Illinois
- 500,000sq Ft Mesh Wireless Deployment, securitization, and resilience testing in -10 Degree Refrigerated Warehousing in Boca Raton, FL. for robotic forklifts and industrial warehouse picking operations. (1B business, Fortune 100 Client)
- 250,000sq Ft Full Infrastructure Deployment in Danville, IL for a large-scale fiberglass manufacture including total network, server, and storage rebuild, and securitization of PLC Devices. (100M Business, Fortune 500 Client)
- Complete critical incident response followed by connectivity and security overhaul for a CNC Miller in Champaign, IL. Called in to manage and recover a Cyrptolocker infection that halted the business. Recovered all data by brokering an exchange with the attacker, followed by a complete and total security overhaul of the entire business (10M Company, Privately Owned)
- Creating the very first remotely managed and secured, CDN based, closed network, encrypted IP TV over CATV system in Cook County Jail for Edovo.

Myself and our Founders were 'acqui-hired' by Edovo in 2014 after architecting, designing, building and executing Edovo's first customer deployment in Chicago IL.

Caterpillar Inc. - IT Analyst III, August 2012 – September 2013, Peoria IL

Recruited directly into Caterpillars top research division to drive innovation in machine to machine communication, IoT, and connected work-site security as an IT Analyst III for Caterpillar Inc. Product Development and Global Technology, Enterprise and Automation Systems Division.

I served as the data communications expert inside the research division, providing systems integration, networking, and security expertise to multiple research projects. These systems included on-machine M2M networks and IoT devices, installed on some of the largest mining machines in the world - the D11T Track-Type Tractor and 797 Series Haul Truck.

I was responsible for designing, engineering, analyzing and implementing managed communications technologies including wired and wireless mediums such as gigabit ethernet, TDM communications, 802.11 wireless, WiMAX and LTE. I was directly responsible for the design, prototyping, engineering stewardship, and engineering leadership necessary to develop these new innovative ideas, and test them, in the field, in the Powder River Basin in Wyoming at the Black Thunder Coal Mine, alongside a pinnacle company client in one of the busiest, and most demanding coal mines in the United States.

My acumen brought an IT security and services mentality to a coal and diesel, iron and fire, kind of industry. The systems myself and the team built were some of the first examples of secure, large machine interconnectivity and automation. Together, we built systems of integrated IoT sensors on D11T Tractors, networked existing Engine Control Modules via CANBUS, leveraged GPIO on new Linux Machine Management Modules, designed and deployed Wide Area, Wireless Local Area, Radio Area, and Vehicle Area networks, that completely automated and robotized the surface coal mining process.

Milestones achieved at Caterpillar Inc.:
- First engineer to virtualize a Caterpillar ECM on x86 hardware
- Developed communications systems integrating Wifi, LTE, and RFID, allowing us to fully remotely control a D11T Bulldozer remotely, from over 1000 miles away, with a PlayStation controller.
- Created Caterpillars first 'on-machine' penetration testing tools that ran on hardened embedded x86 computers, attached to the wiring harnesses of Caterpillar Compact Tracked Loaders to rigorously test the securitization of our proprietary control modules.

Pavlov Media – Network Operations Engineer, February 2010 – August 2012, Champaign IL

While operating within Pavlov Media NOC I provided Network Operations support on a nation-wide service provider on multiple networks/sites. My responsibilities included trouble ticket creation and resolution, device configuration and maintenance, as well as structured troubleshooting on data and video systems. The team and I ensured proper

response and triage of network incidents, and also executed deployments of new customer sites, co-locations, and network services.

Our Networks supported consisted of Campus design edge sites, with a national backbone. Campus design edge sites consisted of switched Ethernet, with 250-500 Access Points in full or partial mesh designs on both 2.4Ghz and 5Ghz bands. All access points were managed by WAP controller solutions. Backbone connectivity consisted of 10 gigabit Ethernet, SONET, and gigabit wired and wireless links. Wireless backbone connections were made with point-to-point, or point-to-multipoint links using, 24Ghz, 60Ghz, and 80Ghz radios. Routing for these networks was primarily based on OSPF and BGP, with some RIPv2 across VPN tunnel networks.

I directly contributed to the design, procurement, process and deployment greenfield colocations in Indianapolis, IN, Champaign, IL and NYC, NY. This involved specification, procurement, engineering, and installation to production of a Cisco 7600 environment, peering multiple carriers, BGP routing, and integration into daily NOC operations. This co-location instantiated new peering partnerships, and physical co-location, of technologies from Netflix, Valve, and Google. I was directly responsible for interacting with the Network Operations Centers of those respective businesses and integration of their cache / presence offering into our backbone.

I specifically excelled at being the bridge between our NOC and other business units. I differentiated myself from others by being able to guide and assist other support and sales departments when appropriate. I was the youngest in the group, but quickly grew into managing site deployments, and managing the department interactions between NOC and the Project Management Office.

Milestones achieved at Pavlov Media:
- Design and deployment of new co-location in Indianapolis, IN
- Leading Deployments of 100+ new customer sites (1000 beds, 5000 endpoints per site)
- Integrating new peering partnerships (Netflix Open Connect, Steam by Valve, Google Global Cache, Akamai)

Education

Penn State University
Master of Science, Engineering and Industrial Management

University of Illinois
Bachelor of Arts, Liberal Arts and Sciences, Minor in Philosophy

Current Technical Certification:

Amazon Web Services Certified Cloud Practitioner: AWS Verification F2V5VW9CLBQ1QQWY

Amazon Web Services Certified Solutions Architect - Associate: AWS Verification ES0SVS31L2V1QNW5

Cisco CCNA Routing and Switching Certified – Cisco Verification #: *CSCO11904668*

Cisco CCENT Certified – Cisco Verification #: *CSCO11904668*

Lifetime and Expired Technical Certification:

Brocade Accredited Campus Networking Specialist – Brocade Verification #: *WSPZ8VGCKFQ410ND*

Brocade Accredited Ethernet Fabric Specialist – Brocade Verification #: *R24M3Q4CCJVE1YBR*

Brocade Accredited Internetworking Specialist – Brocade Verification #: *3PQPJWGK1FF1YP68*

Certified Wireless Networking Professional CWTS Certified – CWNP ID#: *CWNP801145*

CompTIA A+ (2009) Certified – CompTIA Verification #: *7RC41SQJGLBQ2TL3*

CompTIA A+ CE Certified – CompTIA Verification #: *M76YR8L2QGFQSX68*

CompTIA Network+ (2009) Certified – CompTIA Verification #: *71PZTXVBCC445DZ2*

CompTIA Network+ CE Certified – CompTIA Verification #: *3G6QQZLK53Q2VT0*

CompTIA Security+ CE Certified – CompTIA Verification #: *0MZ6RY0KYL14C140*

CompTIA CDIA+ Certified – CompTIA Verification #: *MRT10K5KVLBE5FN8*

Juniper JNCIA-JUNOS Certified – Juniper Verification #: *JPR178297*

Mikrotik Certified Network Administrator – Mikrotik Verification #: *1205NA023*

Mikrotik Certified Wireless Engineer – Mikrotik Verification #: *1205WE016*

Mikrotik Certified Routing Engineer – Mikrotik Verification #: *1205RE013*

Mikrotik Certified Traffic Control Engineer – Mikrotik Verification #: *1205TCE009*

VMware Certified Associate, Datacenter Virtualization - VMW-01183554X-00363024

VMware Certified Sales Professional - VMW-01183554X-00363024

Professional Certification:

MSHA Part 48 Surface Coal Miner, Surface Metal and Non-Metal Miner

Six Sigma Yellow Belt – Accredited by the Aveta Business Institute and The Council for Six Sigma Certification

Patents

DEVICE, SYSTEM AND METHOD FOR PROVIDING INCENTIVES INCLUDING TECHNOLOGY USE AND TECHNOLOGY-BASED WORK: U.S. Non-Provisional Patent Application No. 15/135,097, Filing Date: April 21, 2016, Allowance Date: March 7, 2019, Final Grant Date: Est. June 2019

Awards and Publicity

Microsoft Design Award, November 2014 - For innovative work on Edovo's Incentivized Learning Management System

BizTech Magazine, 'What it Takes to Bring Education Behind Bars', December 2014 – Featured for work on Edovo's connectivity platform (https://biztechmagazine.com/article/2014/12/what-it-takes-bring-education-behind-bars)

Public Speaking

WAV Partner Conference, August 2018 – Speaker, Panelist, Discussion Leader

CIO Strategy Meeting, August 2017 – Speaker, Discussion Group Leader, Conference Facilitator

Corrections Technology Association of America, May 2017 – Keynote Speaker, Technical Instructor, Discussion Group Leader

Samsung KNOX National Conference, February 2017 – Keynote Speaker, Discussion Group Panelist

Samsung National Sales Conference, January 2017 – Keynote Speaker, Discussion Group Panelist

CIO Strategy Meeting, August 2016 – Speaker, Discussion Group Leader, Conference Facilitator

Volunteer Activity

Home Maintenance Coordinator, Empty Tomb Inc. May 2010 – Dec 2010

Mission Coordinator, Navajo Evangelical Mission, June 2008, August 2009

Volunteer, Appalachia Service Project, June 2007, June 2006, June 2005

Volunteer, Rocky Boy Cree-Chippewa Reservation, July 2003, August 2004

Closing Remarks

Thank you so much for taking the time to read through my experiences, skills, and qualifications. If you've made it this far, you hopefully see my potential. I am absolutely certain that I can add significant impact in this role. Thanks so much again for drilling through the pages and hearing my story. Please do not hesitate to contact me. Again, I promise I'm your guy.

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