**Professional Biography**

**Mike Cairns**

Innovative Lead Information Technology Architect with excellent technical skills and over 24 years of strong results in various technologies including, data center, Unified Communication, and call center environments. Repeated demonstration of ability to provide technical solutions to resolve highly complex business problems. Professional who thrives on challenges and is passionate for all areas of technology. Well-developed technical skills include:

**Cloud Technologies**

***AWS****:* EC2, VPC, IAM, IoT Core, Lambda, API GW, Lifecycle Manager, CloudFormation, Commit, Build, Amazon Connect, Lex
***Azure****:* IoT Hub, IoT Central, Resource Groups, Virtual Machines, Cosmos, API
***Google Cloud***: Firebase Functions, DialogFlow, Assistant API, Google Maps API
***IBM Cloud***: VMWare VSphere, Virtual Machines
***AT&T Cloud***: AT&T Control Center, Flow, DataFlow
***VMWare:*** vSphere, ESXi

 **Contact Center Technologies**

***ACD/PBX/Voicemail****:* Avaya Communication Manger, Avaya Session Manager, Avaya CMS, Avaya Operational Analyst, Aspect ACD, Avaya Intuity Audix, Microsoft Unified Messaging, Lync/Skype for Business, Cisco Call Manager, Aspect UIP, Cisco Hosted Cloud Solutions (HCS), Amazon Connect Call Center, Asterisk
***CTI****:* Avaya MAPD/AES, CTConnect, Cisco CTIOS/CTI, Genesys Framework, Aspect
***Cisco ICM/UCCE****:* Scripting, Configuration, Routing Design, Installation, Troubleshooting, Call Tracing, SQL Database Schema, Automation
***WFM****:* Aspect eWFM, BluePumpkin(Witness), IEX
***Call Monitoring****:* Witness call monitoring, Envision Click2Coach, Verint VAM, Verint Intellilink, Nice
***IVR****:* Syntellect IVR, Avaya Conversant, Cisco CVP, Tellme, Nuance Hosted, Edify
***VOIP****:* Avaya CLAN, Avaya Media Processor, ACME Packet SBC, Avaya Session Manager, Cisco Call Manager, Inter-Tel VOIP Gateways, Cisco Voice Gateway, Cisco Voice Portal, Avaya IP Agent, Cisco/Avaya IP phones, SIP, SIP Trunking, H323, Sonus GSX/PSX/SGX VOIP platform, Asterisk, Cisco CDW, ITP, Five9, Webtext
**Mobility:** SS7 Tracing/Protocol analysis (AcceSS7), CDR troubleshooting/trending, Push to Talk (PTT), SMS chat, Webtext, AT&T Control Center, SIP Protocol Analysis
**Reporting**: Avaya CMS/OA, Cisco HDS/AWDB, CUIC, Aceyus Reporting Platform, eGain
**Contact Center Cloud Technologies**: Amazon Connect, Lambda, Alexa, Microsoft Azure, Google Cloud Voice Services, Tellme IVR, Nuance Cloud IVR, Cisco Hosted Cloud Services
**Bots**: DialogFlow, Amazon Lex, Facebook, Motion.ai, Webtext, eGain, Alexa
**IoT**: Zwave, Zigbee, MQTT, NodeRed, Canbus, AT&T M2X/Flow, LinkLabs, Samsung Smartthings, IFTT, ESP8266, mbed, FRDM-K64F, Arduino, Lora, Azure Sphere, Cradlepoint, Sierra Wireless, Option CloudGate, Pepwave
**Other**: 3d Printing, Private/Public Blockchains, Bitcoin, Ethereum, Solana

**Programming/Scripting Exposure**

Web Technologies: HTML, JavaScript/NodeJS, ASP, PHP, CSS, SOAP/REST Web Services
Programming Languages: Visual Basic, VBA, C#, Java, JavaScript, NodeRed, Python, Android, Objective-C (iOS)
Scripting Languages: Linux/Unix shell scripting, Bath files, Perl, awk
Orchestration: Adva Orchestator, NodeRed, Cisco Enterprise Orchestration, AT&T Flow, Microsoft Flow, HP Operations Orchestration, cron

**Recent Key Accomplishments**

**AT&T Consulting:**

**Virtual Secure Sensor Redesign –** Managed Services had a managed security offering that wasn’t performing to its potential and had low margins and high costs. Redesigned the managed service to use standardized hardware, images, cloud, and created processes to improve the speed of delivery of devices and services to customer from an average of 6 months to deliver hardware to 2 weeks to ship devices and 4 weeks to work with the customer to update their systems, which quickly improved the popularity of the service. Once the major time hurdles were overcome, further improvements were made to the process to remove the pre-staging of hardware and this allowed direct ship to customer within 5 days instead of the previous 6 month lead time. This also reduced the operational costs of the service as it required fewer manhours to build and less travel and vendor costs as well. Our hardware and install cost dropped by nearly 80% and continue to drop as tweaks to the process are made.

**Managed Sphere Guardian –** Designed and built out an IoT managed service and support center around the AT&T Guardian Sphere devices. Used Azure IoT Central for the frontend, Azure Data Explorer for real-time data, and Azure Blob Storage for historical data and for analytics. Built and tested prototypes side by side with customers from various verticals in retail, hospitality, and food services.

**Cloud Migration Lead –** Lead a cloud migration from IBM SoftLayer to AWS**.** In 3 months, was able to migrate over 15 customers from a VMWare infrastructure that was having daily hardware failures to a new AWS infrastructure that was only 25% the cost of the previous infrastructure and improved the design of the applications during the transition to improve customer experience. This included creating a customer portal using AWS managed services such as Route53, Application Load Balancers, Cognito and EC2 application servers to deliver a better customer experience.

**Oil and Gas Managed IoT Solution –** An oil and gas customer came to us with the need to better monitor their oil and gas operations and equipment. Designed a system that monitors the state of IoT gateways in remote locations with limited cellular coverage. Had to think about how to monitor devices that we only online during limited hours of the day. Built out integration tools to allow for capture of MQTT data from IoT devices and consume it into AWS Kinesis Firehose, then to S3, Glue, Athena, then AWS Quicksight for visualization.

**Pizza Tracker IoT Solution -** New Pizza Chain customer wanted us to test out a new IoT sensor to monitor pizza temperature as it was delivered. Quickly designed a scalable architecture using Infrastructure as Code that allowed us to have a working prototype in just a single day.

**Worldwide Layer 2 Network Lab –** Our IoT developers and sales teams were struggling to collaborate due to geographically diverse team that spanned the globe. Designed and implemented a global L2 network using Raspberry Pi’s as gateways between IoT devices to allow communication between vendors and home labs around the world during pandemic home quarantine labs. This allowed us to save thousands of dollars in shipping of devices and travel expenses.

**IoT Staff Alert Managed Service -** Took an IoT hospitality prototype from proof of concept to a full enterprise solution design in under 90 days and was able to have a full production managed AT&T service that scaled to allow for multiple hospitality customers and will scale to over 6500 hotels. Implemented using DevOps practices such as Infrastructure as Code, microservices architecture, and AT&T now provides this to customers as a software as a service offering.

**Pop-up Call Center Design** – Designed a way to quickly stand up a call center using Amazon Connect Call Center. This design included putting together a managed service that AT&T can quickly stand up for customers and have all of the call center tools that they are accustomed to for short term call centers such as in pandemic responses, elections, local events, and other short term call center needs.

**Winner of AT&T Diamond Club Sales Award –** Lead many designs and implementations that qualified me to win the elite Diamond Club Sales Award. This award is only awarded to a few select people from AT&T that contribute the most to the bottom line by helping AT&T to meet margin and sales goals.

**Winner of AT&T IoT Games** – Designed, implemented, and presented an IoT solution in IoT games that uses AT&T products plus some open source projects to monitor and react in real-time to HVAC systems that are poorly performing and even remediate some issues using managed IoT relays to correct know issues.

**Winner of Avaya Engage** **Hackathon** – Designed, prototyped, and presented a non-profit chatbot that connects those in need of food with food surplus. It was called “Feed the Hungry with Foodbot” and was scheduled to be implemented by Google and Avaya at the Phoenix foodbank.

**Winner of Enterprise Connect Hackathon** – Designed, prototyped, and presented a COVID19 Chatbot called, “COVID19 Home School Helper”. This hack was designed to be used by parents and teachers and was a tool that used various chatbot and API’s to automate school emails to be filtered and added to a Google Calendar by a voice command or by sending an email to the chatbot. The kids then received reminders to login to the classrooms for virtual meetings and acted as a virtual school bell while at home quarantined from COVID19.

**HHSC Complex Call Center Integration -** Coordinated a complex office move for state workers. Designed and executed multiple UCCE 10.5 upgrades with virtually no down time for clients. Completed a complex cloud IVR project that integrated with both HCS cloud call center and a premise based Avaya system.

**USAA:** 2016 - 2015 - Won the “Hammer Challenge” of applying the right “tool” to a business need. Awarded First Place in Code as ICE for creating a new two factor authentication method for IVR. Submitted multiple provisional patents for new inventions. Winner of USAA Innovation award in 2010, 2011, 2012, 2013, and 2015 for stepping outside of areas of expertise to innovate other parts of the business. SSCA SIP Certification earned in 2013. Designed an international 15,000 agent UCCE with precision routing and SIP trunking with no dial plan overlap.

**T-Mobile USA:** Nominated for Pinnacle Award in first year working at the company because of innovation in the call centers.

**Employment History**

**AT&T Consulting**, Austin, TX

***Sr Consultant*** **2016 – Current**

**Lead Cloud Architect**

 Leads a team of Engineers and Architects that designs, implements, and supports the Consulting Custom Managed Services hosted tools that enable our managed services for IoT, Managed Security, Managed Network Operations, and Call Center. Recently migrated all infrastructure from IBM Cloud to AWS Cloud and continues to optimize costs and capabilities. Led technical remediation of SOC2 audit findings and implemented and improved processes for cost reduction and better orchestration and automation to allow a small agile group to manage a large and complicated hosted AWS environment in support of our clients.

Lead CCMS Technical Architect on design, implementation, and support of the Marriot Staff Alert Solution. This solution was able to be quickly duplicated and replicated at other customers such as Hilton, Hyatt, IHG, Wyndham and others.

Created an extensive lab for testing new IoT and security products and to make our team agile an able to adapt to customer requirements quickly by testing out our solutions prior to implementations.

**Senior Call Center Consultant**

Designed complicated Avaya and Cisco HCS cloud solutions that utilize IVR in the cloud, AT&T VPN, and SIP header modification to pass data from the Cisco HCS IVR to the Avaya IVR. Planned and executed multiple UCCE 10.5 upgrades for multiple clients. Coordinated multiple call center office moves of varying sizes that included planning, testing, and turn-up. Responding to multiple RFP’s, SoW’s, and various other client and vendor related documentation. Researched new contact center technologies and worked with various business units inside and out of AT&T.

**USAA,** San Antonio, TX

***Lead Research Engineer*** **2014 – 2016**

Lead multiple research initiatives to discover new ways of applying technology to business problems. Worked with architecture and other teams to find ways to solve complex problems in the fields of contact center communication, SMS, artificial intelligence, machine learning, IVR systems, Internet of Things (IoT), Amazon Web Services, Amazon Alexa, Blockchain/Bitcoin, and other key technologies needed to solve problems under different business areas. Presented updates and research findings to executives on a regular basis, attended industry conferences to keep up with the trends, and documented via network diagrams, white papers, patent documentation and wiki articles.

***Lead/Senior Network Engineer – Contact Center*** **2007 – 2014**

**Cisco ICM/UCCE:** Worked with Cisco and project team to implement ICM into the environment without disturbing the existing infrastructure for agents or for the members. Lead the technical team to a Genesys/ICM co-exist solution that would be seamless to the member and agents. Designed and scripted custom solutions to provide the best customer service. Installed all ICM components in a lab and did extensive testing between Genesys and ICM to perfect the passing of CTI data to the agent desktop. Built out a complex ICM 9.0 UCCE environment that integrated with multiple custom SIP implementations, as well as multiple vendor solutions. Acted as subject matter expert for all ICM/UCCE integrations including, but not limited to: Avaya Communications Manager, Aspect UIP, Lync, Cisco Call Manger, Tellme, Nuance, CVP, Verint, Cisco Call Manager, Knowlagent, and IEX.

**Cisco Enterprise Orchestration (previously Tidal):** Automated the deployment of a 18,000 agent call center from an aging Avaya platform to Cisco UCCE by taking an approach of collect data, test, and deploy. This made the success rate of each agent move from about 50% success rate with 100 agents per deployment to 99% success rate with 1000 agents per deployment.

**Avaya CMS/OA**: On call support of all Avaya related call center products. Application owner of the Avaya CMS and OA platform and all peripherals that connected to it. Examples include IEX and ICM.

**Aspect UIP:** Worked with the vendor to build a custom Aspect and ICM integration that allowed Aspect agents to integrate with our Cisco based call center.

**Aceyus:** Built out a custom Aceyus platform for Call Center Reporting and proactive monitoring that allowed us to act on trends in the call center before a problem occurred.  **Cisco Interaction Manager (CIM):** Helped build out and maintain multi-channel contact center technologies including click2call, click2chat, and click2video solutions.

**Microsoft Unified Messaging:** Assisted and supported the integration of Unified Messaging with Avaya, Cisco, and Lync phones.

**SIP Trunking:** Worked with multiple SIP vendors to test and implement inbound and outbound SIP trunking and helped to design a solution that allowed a failback to TDM and still maintain CTI data to the agents.

**T-Mobile USA,** Bothell, WA

***Telecom Specialist III – ICM Lead*****2006 – 2007**

**Cisco ICM:** Responsibilities included implementation, maintenance, troubleshooting, and management of all Customer Services call routing projects. Lead the ICM support team by guiding my peers to the proper troubleshooting paths and acted as the final level of support before involving the vendors. Communicated with various telecom vendors, service partners, and outsource providers for support of our call center infrastructure. Worked with the design team to implement and test new applications and scripts in the ICM design and production environments. Supported many ICM projects including the following: HDS SAN migration, 611 Bypass, Siebel CRM, ICM 7.0 upgrade, ICM/Avaya AES migration, DST, and various routing changes.

**Cisco CVP:** Acted as the lead implementer for the “611 Bypass” project pilot, which allowed the company to bypass the LD carrier for customer service calls and save the company millions of dollars in LD and Take-Back and Transfer fees. Created custom reporting based on ICM that allowed the business to see the impact of the pilot.

**Cisco CTI:** Worked with the desktop support and various vendors to deliver a CRM solution and a custom screen pop application for call center agents.

**K-force(Contract for AT&T),** Bothell, WA **2006**

***Network Engineer IV(IP Telephony Operations)***

**Kodiak Push to Talk(PTT):** Provided leadership to third level engineers on customer issues and network issues and outages. Maintained the national Push to talk platform for a user base of close to a million users. Scheduled, created, and performed MOP’s for all equipment adds/upgrades and changes. Processed work orders from the cellular engineering groups.
**Sonus(VOIP):** Provisioned all PTT CIC/Trunks, add/remove standard routes, NPA/NXX, trace calls based on CDR data.

**Alltel,** Bellevue,WA **2001 – 2006**

***Sr. Telecom Analyst – ICM (Alltel)***

**CISCO ICM (GEOTEL)**:Added CTI connection redundancy by redesigning the routing network. Configured ICM to connect to CMS and MAPD connections. Developed custom scripting on CMS ACD reporting servers to allow connections to multiple ICM PG’s to transition Western Wireless to Alltel call routing while retaining HA CMS redundancy across geographic distances. Scripted and configured various changes in two ICM environments.

***Call Center Support Specialist (Western Wireless)***

**CISCO ICM (GEOTEL)**: Designed new routing scripts, administered existing scripts, and maintained all aspects of ICM and ACD routing. Maintained SQL tables and databases. Added indexes and tables, and imported custom data. Provided database schema support for Cradle to Grave project by outlining table and column link strategies to write queries. Created and scheduled daily export of historical data for third party vendor to contact callers for surveys. Administered time of day scripts for call center operations and holidays. Created and administered custom variables to enhance historical reporting capabilities. Administered connectivity and communications between ICM and Syntellect IVR, Avaya PBX, Avaya MAPD and Avaya CMS.

**CISCO CTI OS**: Maintained connectivity between ICM CTIOS and Witness Workforce management tool, Envision quality assurance platform and Visual Basic application providing Screen Pop and Data Pop. Maintained Visual Basic code for thin-client desktop application on a Citrix environment.

**AVAYA PBX**: (S8700) Maintained and administered all Call Center objects and properties on the ACD, including skills, vectors and VDNs. Performed analysis and troubleshooting for all other PBX functions including management of dial plan, UDP tables, AAR tables, ARS tables, trunk groups, signaling groups, DS1s, COR, COS, holiday tables, etc.

**AVAYA CENTREVU SUPERVISOR**: Administered users and permissions. Edited and added custom reports. Maintained reports and scripts for display board server connectivity. Performed historical queries and analysis for call volume abnormalities.

**SYMON DISPLAY BOARDS**: Rebuilt unsupported version of application when server malfunctioned. Performed upgrade and rebuild to new version of software. Maintained hardware and messaging functions. Supported users with DeskView and administered licenses.

**ENVISION CALL MONITORING**: Implemented Envision Click2Coach servers at all call centers. Troubleshot CTI a Envision application configuration on the server side.

***Telecom/Datacom Analyst (Western Wireless)***

**AVAYA PBX**: (S8700) Maintained and administered all Call Center objects and properties on the ACD, including skills, vectors and VDNs. Performed analysis and troubleshooting for all other PBX functions including management of dial plan, UDP tables, AAR tables, ARS tables, trunk groups, signaling groups, DS1s, COR, COS, holiday tables, etc.

**CISCO DATA PRODUCTS**: Supported all layer 1-4 devices including cabling, hubs, switches(Catalyst), routers, and firewalls(Pix).

**Sykes Enterprises,** Manhattan, KS **1998 – 2001**
***Telecom Administrator/Systems Administration*AVAYA Conversant IVR**: Built and maintained Voice IVR menu designed to answer frequently asked questions. Acted as account manager by providing IVR reporting and trunking for billing directly back to customer.

**AVAYA DEFINITY G3r**: Performed all aspects of call center management including Agents, Splits (Hunt Groups), Skills, Vectoring, VDNs, Best Services Routing (BSR), Expert Agent Selection (EAS), Automatic Call Distribution (ACD), Computer Telephone Integration (CTI). Performed standard PBX engineering tasks including management of dial plan, UDP tables, AAR tables, ARS tables, trunk groups, signaling groups, DS1s, COR, COS, holiday tables, etc.

**AVAYA CENTREVU SUPERVISOR/TERMINAL**: Provided Call Center Managers/Supervisors with real time/ historical/integrated reports; assisted users with custom reports; maintained dictionary. Maintained connection to Cisco ICM(Geotel at the time); backed up CMS daily data.

**SERVERS**: Avaya CentreVu CMS; The Nice family of call recorders, Nice Universe, Nice Advantage, Nice Logger; Avaya CentreVu Explorer; Avaya CTI; Provided support in all aspects of Telephony services, Call Center management and Integrated Voice Response services for multi-site call center, including AT&T RouteIt! design, AT&T Interactive Advantage reporting.

**EDUCATION**

AS Cloud County Community College, Concordia, KS - Member of Phi Theta Kappa Honor Society, Majored in Computer Programming, Graduated with 4.0 GPA

Attended Kansas State University, Salina, KS – completed courses in Algorithmic Design, Operating Systems, Commercial Software Analysis, Visual Basic Programming

 University of Phoenix Online, - Completed classes toward Network Communications degree

**Extensive Technical Training Includes Certificates for completing the following**:

* AWS Architect Associate Class
* AWS DevOps Class
* AWS SysOps Class
* AWS Developer Class
* Amazon Connect Call Center Training Class
* Avaya Engage
* Introduction to Docker Class
* Advanced Docker Class
* Enterprise Connect
* AWS ReInvent
* Azure DevOps
* Cisco Network Academy Semester 1-5
* Cisco ICM/NAM Product and Administration
* Cisco ICM/IPCC Advanced Scripting
* Cisco Call Manager Training
* Cisco Voice Portal Implementation
* Cisco Voice Portal Development
* UNIX essentials training
* Cisco-live 2008, 2009, 2011 training
* Breakwater Firewall Administration
* Avaya System Administration
* Avaya Call Manager Admin
* Sonus Product Training
* Java programming training 1-2
* Avaya Session Manager Training
* ACME Packet SBC Training
* Wireshark Training
* SSCA SIP Certified
* AT&T Flow/M2X
* Introduction to Python