Kevin P. McFadden
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Kevin McFadden is a subject matter expert in business architecture and government vertical solutions supporting Cisco Systems US Federal Solutions Team. During his twenty-two-year tenure with Cisco, he has performed strategic and innovative roles in support of key programs for the departments of dense, homeland security, justice, and treasury focusing on enterprise, tactical, public safety, first responder, and law enforcement missions. A veteran of the communications and software development field, he has more than twenty-eight years of real-world experience that enables him to act as trusted advisor to many of Cisco's customers and industry partners.

In the following programs, he has represented Cisco as a lead engineer and/or senior solution architect:

- **Under Secretary of Defense Research & Engineer / 5G to Next G Initiative** – The object of this program is to rapidly field scalable, resilient, and secure 5G network solutions to accelerate implementation of advanced wireless communications with mission use cases. The program spans from exploratory work to early 5G-enabled prototypes, to advanced application prototypes and full-scale implementations that are enabled by 5G technology. As Cisco's US Public Sector theater 5G chief architecture, McFadden is leading cross functional team to support this and other federal government initiatives, growing Cisco market presence and ecosystem of partner led solutions.

- **U.S. National Public Safety Broadband Network / FirstNet** – This initiative is moving public safety, law enforcement, and homeland security capabilities into the 21st century by enabling responders to utilize mobile broadband technologies for voice, video, and data communications. McFadden is leading Cisco's solutions development through direct customer and partner interaction in mission environments. As the project manager and chief architect for Cisco, McFadden deployed the first U.S. band 14 operational LTE network and broadband applications at the 2012 Republican National Convention (RNC). The experience gained through the RNC and similar deployments have enabled McFadden to consult on many levels for how broadband services and technologies can enhance mission critical solutions.

- **U.S. Department of Homeland Security Tactical Communications** – The DHS TACCOM initiative is a broad program designed to modernize the legacy communications capabilities through DHS. Throughout his tenure at Cisco, McFadden has focused his attention on the technologies and challenges faced by federal law enforcement. As a principal architect for Cisco's solutions in this area, McFadden has provided many widely adopted solutions that have extended the life of many DHS component infrastructures and offered significant increases in reliability, resilience, and cost savings. These solutions also have enhanced the operational capabilities by extending legacy radio systems over IP networks and introduced new options for end-user devices and use cases.

- **U.S. Department of Homeland Security Secure Borders Initiative (SBI)** – A key initiative for federal law enforcement is the government's ability to protect and defend the U.S. border. In this program, McFadden developed relationships with government and system integrator personnel to design and deploy the communications and electronic surveillance systems in SBInet along the southwestern border. McFadden provided architectural guidance from the program's inception, linking existing systems with new capabilities in the harsh and difficult environments found along the U.S. border. At the mission edge, these solutions had to be rugged and adaptive to address the size, weight, and power requirements for fixed and mobile assets. The resulting system

conveyed critical real-time video, telemetry, and sensor data used to formulate a common operating picture for command and control.

- **U.S. Department of Homeland Security One Network (OneNet)** – Prior to the inception of the DHS, McFadden worked with many of the component agency infrastructures, most notably, the U.S. Customs Service as part of the Treasury network. After September 11, 2001, he worked closely with the component representatives to develop the day 0 and 1 strategies for information sharing. Since then, McFadden authored the DHS OneNet Vision and Recommendation white paper, which helped to align and provide strategic direction for the DHS OneNet. McFadden was an active member of several key steering groups within DHS including the Infrastructure Transformation Office and the Network Stewardship Working Group.

- **U.S. Department of Justice Unified Telecommunication Network (JUTNet)** – McFadden was Cisco's senior solutions architect for the initial JUTNet solution. As an architect, McFadden provided subject matter guidance to the DoJ and the prime contractor for overall network design, deployment, and integration with the legacy Justice Consolidated Network. He provided these capabilities based on his historical knowledge of the existing environment, key relationships within the Justice Management Division, and experience in implementing large-scale, secure communications for the federal government.

- **Federal Bureau of Investigation's Trilogy Program** – McFadden leveraged his experience with the disparate and multiple mission-specific infrastructures within the FBI to develop the converged and consolidated FBI Trilogy network. Trilogy is one of the most sophisticated IP networks in existence within the U.S. Federal Government and supports 14+ secure enclaves that vary by classification, user group, and mission. He was a key participant within a core team of engineers that designed and deployed Trilogy to support real-time applications such as voice-over-IP and video teleconferencing, along with legacy case management and intelligence systems.

McFadden is a member of Cisco's Public Sector Vertical where he is the lead architect for multi-billion dollar US government initiatives in the areas of public safety, law enforcement, border and perimeter security, unified mission communications and information sharing, and highly mobile rapidly deployable communication systems. These programs represent major investment by the U.S. government to enhance mission voice, video, and data communications by integrating existing land mobile radio system with mobile broadband cellular technologies such as LTE. These programs are revolutionize tactical communications and dramatically enhancing government field capabilities. McFadden leverages his historical knowledge of the agencies, his understanding of the technologies, and his skills to develop innovative solutions to drive the evolution of these important programs.

McFadden is a subject matter expert for Cisco in the areas of tactical communications and land mobile radio systems. He has successfully developed integration and interoperable strategies for legacy Motorola and similar radio incumbent systems found throughout U.S. federal, state, and local governments. He has developed next generation IP-based solutions using commercial off the shelf hardware and software along with next generation wireless technologies such as LTE to extend the life, reach, and capabilities of these legacy systems. These solutions include integration with APCO P25 systems, introduction of smart multifunction devices, transport of legacy proprietary protocols, and expanding network reach for solutions such as voting, over the over rekeying, over the air programming, and extending console systems beyond their normal limitations.

In the past twelve years, McFadden has focused his skills in emergency preparedness, response, and recovery capabilities. In this endeavor, McFadden meets regularly with federal, state, and local government representatives to understand their challenges and apply IP-based solutions to address their mission-critical needs. He has held lead roles in exercises such as Strong Angel, Collation Warrior Interoperability Demonstration, NSSE Integration at major venues such the Super Bowl and National Conventions, and various state and local events in Florida, Michigan, Indiana, Texas, Arizona, and

California. He also was a first-in responder following the 2005 Katrina Hurricane, 2010 Haiti Earthquake, and 2017 Hurricanes that affected the Gulf Coast States and Puerto Rico. During these activities, McFadden demonstrated innovative solutions for government restoration, humanitarian aid, infrastructure reconstitution, and pandemic/disaster response. McFadden is an active member of Cisco's Disaster Incident Response Team, FCC licensed amateur radio operator, and holds certifications for Incident Command Systems through FEMA's National Incident Management System (NIMS).

McFadden has published a variety of white papers and writing related to public safety and emergency communications. His content is featured in the Cisco Press book **IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things**. In chapter 15 of this book, McFadden outlines how IoT has influenced and will continue to evolve in public safety solutions. McFadden is also a perennial speaker on subjects related to government infrastructure and mission critical communications at trade show events such as APCO, IACP, IWCE, NENA, AFCEA, and CiscoLive.

Prior to joining Cisco, McFadden was a technical consultant and systems engineer, working with many organizations within the financial, entertainment, and communications arenas to design and implement communications systems. He began his career as a software programmer developing a nationwide network for the Child Support Enforcement Network (CSENet), an inter-state information sharing program sponsored by the U.S. Department of Health and Human Services. As his career developed, McFadden moved into communications engineering and assisted in migrating several commercial and government organizations from legacy X.25 and SNA networks to TCP/IP-based systems.

McFadden earned a Bachelor of Sciences degree in Electrical Engineering from Virginia Polytechnic Institute and State University (Virginia Tech). He achieved the status of Cisco Certified Internetworking Expert (CCIE) in 1997 and currently holds high-level clearances with the U.S. Department of Defense and Department of Homeland Security.