

## **Transformational Applications of Private LTE & 5G for the Secure Modern Network**

*By Greg Frasca, Digital Solutions Consultant and Cody Harris, Director of Digital Architectures, Aspire Technology Partners*

### **Problem Statement**

In today's modern network, user engagement and data transfer happen at the edge. This includes the internet of things (IoT), mobile applications, remote patient monitoring devices, distribution line-workflow automation, and smart cities with municipalities leveraging data from connected roadway sensors and utility sub-stations. In fact, the edge of the enterprise is beginning to form a data-centric, decision-making framework for business, supporting more connected assets and delivering increasing amounts of business-critical data. While Gartner estimates that approximately 10% of today's enterprise-generated data is created and processed outside traditional centralized data centers or clouds, by 2025 the researcher predicts that number will reach 75%.\*

### **Working at the edge of the enterprise**

To take advantage of what the edge can offer, your organization must be ready to connect, collect and consume that data. However, the edge has often created "digital blind spots" within the overall network due to lack of visibility and management capabilities. Whether your organization is connecting sensors to properly automate your smart building or deploying a remote piece of equipment, different edge use cases have varying technology needs. Typically, these environments are deployed in isolation, resulting in a fragmented network architecture, increased security vulnerabilities, and isolated data. As your organization accelerates its digital transformation, you will need a way to simplify management and security across your network and all your edge devices. The solution is a purpose-built, Private LTE/5G Network Architecture that opens new possibilities and increases visibility into your network's digital blind spots.

## What a Private LTE/5G network can do for your operations

An automated, software-defined Private LTE (PLTE) 5G network enables your organization to deploy new services at the edge and throughout your network that are cost-efficient, simplified, and trustworthy. You can enhance your users' quality of experience, obtain cost management, and manage traffic optimization all through your PLTE network architecture. A PLTE network architecture allows your organization to provide converged, ubiquitous network services and scale with routers for fronthaul, mid-haul and backhaul.

## Benefits of a Private LTE / 5G Network Architecture

The convergence of 5G, traditional wireless IT and operational technology (OT), coupled with an increasing diversity of critical mobile IoT applications, are driving new Private Cellular Networks offering many benefits to your enterprise, including:

- Enabling Network-Scheduled client access with network slicing.
- Providing interference-resistant qualities using licensed and managed wireless frequencies, such as CBRS.
- Delivering 5-10 times greater coverage indoor and outdoor with always-on data encryption and increased power management.
- Offering the ability to own your Private Network without costly carrier contracts.
- Developing commercial environment connectivity that complements but does not replace traditional Wi-Fi. In fact, PLTE will give Wi-Fi some breathing room for many vertical uses.
- Maximizing operational efficiencies and realize new levels of productivity.
- Securely enabling anything and everything across your network requiring connectivity.
- Obtaining direct control over wireless coverage, location and quality.

## Cody Harris

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*Cody leads presales support for the Aspire Digital Architectures Practice comprising Enterprise Networks, Data Center, and Security. In his role, Cody is responsible for ensuring the overall quality and consistency of solutions planning and design across the Digital Architectures portfolio. During his 14-year tenure with Aspire, Cody's experience has included wireless and security presales engineering, implementation, and most recently serving as Practice Lead for Aspire Managed Services. He graduated from the University of Scranton with a B.S. in Mathematics.*



## Aspire's PLTE & 5G Capabilities Powered by Cisco

Leveraging Cisco's router portfolio, which is the broadest on the market, Aspire is able to deliver reliable connectivity to any IoT edge enterprise application and run connected operations securely and at scale. This includes the ability to future-proof your network through a portfolio of access technologies like Wi-Fi 6, 5G, 4G, Private LTE, FirstNet and Wi-SUN.

Cisco is launching three new Catalyst 5G Industrial Routers capable of securely connecting mobile and fixed assets, plus an IoT Gateway Series for providing essential indoor or outdoor connectivity at mass scale. Aspire, powered by Cisco technology, can deliver your enterprise comprehensive connectivity options with built-in, end-to-end security and visibility into operational environments.

### Want to Learn More?

Let us help your organization meet the demands of today's digital workplace. [Talk to a consultant](#) to customize a Private LTE/5G Network solution today.

### References

*Gartner, What Edge Computing Means for Infrastructure and Operations Leaders, <https://www.gartner.com/smarterwithgartner/what-edge-computing-means-for-infrastructure-and-operations-leaders/>*

## Gregory Frasca

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*Gregory is a seasoned leader, entrepreneur, and technology expert with over 25 years of experience. At Aspire he provides a wide array of digital tools sets for the enterprise including, Private LTE/CBRS Wireless Solutions, Managed Cyber Network Security, SD-WAN, IOT, IT Network Design and Deployment, Design, Build and Remote Management. He holds an MBA from the Tuck School of Business at Dartmouth College.*



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