



SOLUTION BRIEF

MAVENIR PRIVATE NETWORKS

5G is transforming the way data is collected, processed, and used. The three 5G technology pillars of enhanced mobile broadband, massive Internet of Things (IoT) and ultra-reliable low latency, coupled with an access to licensed or shared spectrum, are driving exciting and innovative new uses of private 5G networks for enterprises.

Digital transformation is accelerating the need for advanced network technology. Enterprises want to take advantage of the reliable high performance and low latency of 5G networks. Mission critical data and network access must be secured and not impacted by outages in public networks. This need is driving the rise of private networks.

A private network, isolated and unconnected from the public internet, provides a way to share data safely and independently. As companies connect to their “members only” network, more access points are available for a company to share information easily and securely.

Why Private Networks?

Private 5G networks put you in control of your data, removing dependencies on mobile operators. Private cellular networks offer the benefits of:

> **Guaranteed coverage**

- Remove reliance on coverage from a shared public network, which is typically provided as coverage from the outside in.
- Stand up a private network in areas where public networks may not be able to economically serve, such as rural, industrial, utility, and other remote and underserved areas.

> **Increased control**

- Achieve end-to-end security with increased control of network resources, including resource utilization and traffic prioritization.
- Keep mission-critical information on-premises.

> **Enhanced quality of service**

- Avoid reliance on potentially congested macro networks.
- Dynamically alter the cellular radio frequency (RF) environment to maintain quality of service. Schedule quality of service for the right device at the right time.



- Dedicated spectrum avoids risk of interference from unexpected signal sources.

> **Improved reliability**

- Maintain responsibility for network uptime.
- Enable handovers between cells to transition through building with no dropping.

> **Lower cost**

- Reduce costs through end-to-end, software-based agile network platforms that run on commercial off-the-shelf (COTS) hardware or public clouds.

Enabling Innovative Use Cases

From enabling business communication to optimizing performance for modern industrial applications, the future lies in the power of 5G private networks and the connectivity, automation, and innovation they bring.

Traditional enterprise deployments include connecting office buildings, optimizing performance for Industry 4.0 applications, enabling Smart Cities, and tracking critical assets in healthcare.

Non-traditional deployment examples include connecting the unconnected in remote areas such as mining or rural areas, enabling communication by air and by sea, and supporting mission-critical communications for security.

Why Mavenir Private Networks?

Mavenir's Private Networks solution offers flexible deployment options to enterprises of any size through prepackaged off the shelf solutions or custom solutions to meet any deployment need.

Flexible deployment options combine 3GPP 5G standardization compliancy and web-scale cloud-native architecture to enable Mavenir to deliver best-in-class private network solution with lowest TCO. Mavenir's Private Network solution is designed to be extensible, allowing future network evolution and support of new use cases offering many tangible benefits, including (see figure 1):

- An Open RAN and standardized architecture as opposed to the traditional closed hardware-based RAN with a choice of radios to suit different deployment needs, including CBRS certified radios. Multiple deployment topologies both on-prem and public cloud delivered through a Network-as-a-Hosted Service (NWaaS)-enabled model.
- The smallest end-to-end footprint solution – Access, Edge, and Core – offering a low TCO
- End-to-end distributed cloud-powered capabilities, featuring a Kubernetes-based containerized architecture for all network elements to lower costs, enable faster on-boarding, and ensure reliability.



- In-a-box integrated solutions allow enterprises to take ownership and control over all network components on-prem, without reliance on external data centers.
- Fully automated deployment and management, enabling management of the entire private network through a single pane of glass view, including Zero-Touch Provisioning.
- Support for the enablement of a broad eco-system for devices and applications for industry, enterprise, and consumer via SaaS model

By taking an **open architecture-based approach**, Mavenir enables larger and broader ecosystems that foster collaboration to unlock the true potential of private networks.



Figure 1: Mavenir's Private Network Solution Value Proposition

With Mavenir Private Networks, enterprises, industries, and service providers can:

- > **Move data faster and more reliably.**
 - Process at the edge - analyze business data in real time to increase the efficiency of business processes, predict faults before they occur, and reduce downtime.
 - Removing wired systems enables infrastructure mobility, allowing rapid reconfiguration as business demands change.
 - Enabling mobility in the workforce.
- > **Gain greater control** over deployment, security, equipment, and device choices.
- > **Enable highly targeted indoor/outdoor coverage and remove bottlenecks** due to insufficient awareness of data, people, or assets.
- > **Use cloud-native principles of on-demand computing** to scale up and down based on network demands.
- > **Achieve reliability** in use cases not supported by Wi-Fi.
- > **Adopt the principles of continuous innovation and continuous development (CI/CD)** to implement a private network little by little rather than as a major overhaul.
- > **Deploy edge compute capabilities** to allow low-latency applications.



Mavenir’s end-to-end, cloud-native, open architecture approach to private networks connects people and things through scalable, zero-touch, and multi-generational platforms, with on-premises, cloud-deployed, and cloud-hosted options (Figure 2).

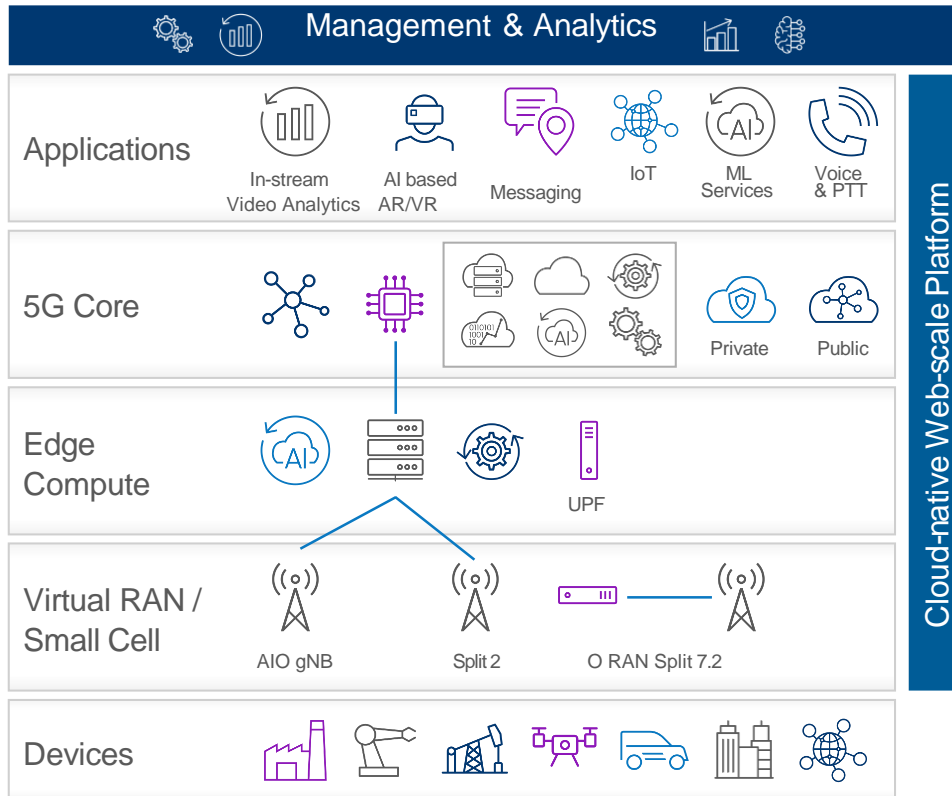


Figure 2: Mavenir’s End-to-End Private Networks for Industries and Enterprises

Mavenir’s Private Network Components

Mavenir’s **Open RAN & small cell radio units** provide 5G radio access for outdoor, indoor, enterprise, and neutral host environments to address coverage needs for any private network deployment. The solution features a range of 5G standalone (SA) products cater to specific geographies and applications.

Mavenir’s cloud-native **Converged Packet Core**, based on Mavenir’s web-scale container platform, gives enterprises the flexibility to deploy cellular networks on their existing on-prem or cloud data center infrastructure. 5G Service-Based Architecture (SBA) allows instant scaling of compute, storage, and network functions as the demands on your network evolve.

An ecosystem of **Applications** caters to all use cases, allowing enterprises to gain insights from data to improve business decisions. Edge computing and ultra-reliable low latency unlock new enablers, such as VR/AR and haptic feedback for remote expert inspection and maintenance, and new forms of entertainment.



Mavenir's **Centralized Management System** offers a single plane of glass for all network management and analytics needs:

- Core and RAN monitoring
- Live traffic information and performance monitoring
- Fault monitoring and alarm notifications

In addition, Zero-Touch Provisioning simplifies the radio deployment, allowing the radios to autonomously connect to the network and retrieve their configuration.

For More Information

Learn more about [Mavenir Private Networks](#).

About Mavenir

Mavenir is building the future of networks and pioneering advanced technology, focusing on the vision of a single, software-based automated network that runs on any cloud. As the industry's only end-to-end, cloud-native network software provider, Mavenir is transforming the way the world connects, accelerating software network transformation for 250+ Communications Service Providers in over 120 countries, which serve more than 50% of the world's subscribers.

For more on Mavenir Solutions please visit our website at www.mavenir.com