metaswitch

A Microsoft Company

Private Enterprise 5G and LTE

with Metaswitch Fusion Core™

- AI automation and IoT are transforming industries
- Innovative enterprise wireless strategies are required
- Private 5G or LTE delivers a robust and scalable solution
- Multi-access edge compute enables low latency services
- Requires 100% containerized CNFs with K8s orchestration
- Must be easily deployed, maintained & monetized by MSPs

Industry 4.0 is transforming every vertical with smart and connected autonomous systems powered by massive distributed computing capable of applying deep machine learning algorithms to huge amounts of data. From immense distribution centers to the bustling ports processing a growing number of shipping containers stocking those warehouses; these modern enterprise operations are progressively depending on artificial intelligence (AI) automation using granular analytics from a plethora of sensors to meet the cost models and production levels expected by today's consumers.

These advancements also promise to directly improve the quality of life for those individual consumers, with live media streams at sporting events, enhanced in-store shopping experiences and ad hoc public safety networks.

With potentially hundreds of thousands of critical sensors and control points packed into large areas filled with unforgiving structural elements - debilitating to generic wireless technologies - LTE and modern 5G RF implementations are increasingly finding a home in these environments.

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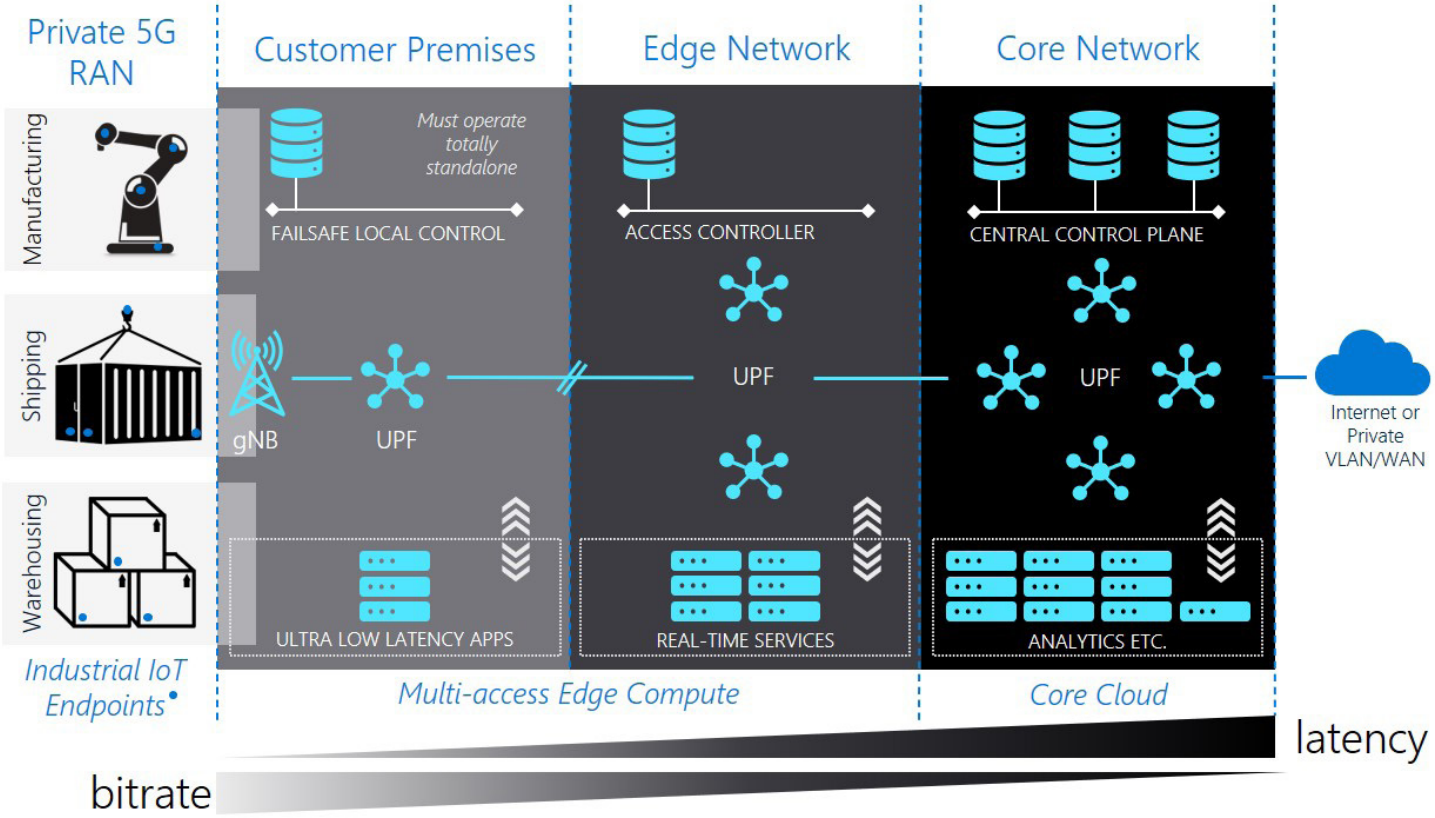
Employing high-powered shared, licensed or lightly licensed Citizens Broadband Radio Service (CBRS) spectrum, these trusted commercial technologies can deliver a highly reliably and scalable alternative to Wi-Fi. Private LTE or 5G provides the security, performance, low latency, quality of service and management federations preferred by businesses and their Managed Service Providers (MSPs).

Whether you use a 5G or LTE Radio Access Network (RAN), latency is the new currency today's cutting-edge networks, so implementing a multi-access edge compute (MEC) cloud infrastructure can pay dividends. Featuring flexible RAN connectivity options, seamless interworking with public or private cloud platforms such as Microsoft's Azure Stack Edge and employing just a handful of CPU Cores, Metaswitch's Fusion Core is the most comprehensive and easiest solution for deploying Private mobile networks.

With compute capabilities at the customer premise, latencies of less than 5ms can be achieved. Carrier edge and core compute clouds, enabled by Azure or any other enterprise cloud infrastructure, can extend Private LTE or 5G implementations with managed real-time services and analytics applications. These may require less bandwidth and greater mobility but can still operate effectively with moderate packet latencies or round-trip delays.

While a hybrid public/private cloud strategy can dramatically simplify the process, deploying a distributed compute architecture and mobile infrastructure is extremely complex.



Delivering low latency services using Private 5G radio networks and Microsoft Azure Stack Edge or other edge cloud infrastructures.

Managed Service Providers (MPSs) are well positioned to help enterprises of all sizes implement, manage and maintain their private LTE or 5G network.

As recognized pioneers in cloudification, Metaswitch has a deep understanding of what it takes to deliver cloud network functions (CNFs) with superior performance, scalability and resiliency. This requires expertise in the areas of microservices development platforms and design patterns, highly distributed state maintenance, advanced data plane acceleration plus modern orchestration models. This is particularly critical when developing 5G core components, which will be some of the first network elements to be exclusively deployed in public, private or hybrid multiservice edge compute (MEC) clouds.

Metaswitch Fusion Core comprises four key 5G technical areas: The user plane, control plane, service-based architecture and management. Each individual function has been carefully architected to exceed the stringent demands that will be placed on them and can be instantiated within compute clouds with diverse virtual machine, container and serverless architectures that span from large centralized data centers to small edge application delivery locations.

Steering that traffic towards network slices with localized applications and services or remote compute resources requires intelligent packet processing capabilities within the MEC. Metaswitch Fusion Core User Plane Function (UPF) includes the most powerful 100% cloud native packet processing engine available. Supporting up to 40Gbps IMIX data flows on just four CPU Cores, our UPF is the only 5G core component optimized for smaller footprint customer premise and highly distributed computing environments.

Recognizing that current migration options are convoluted or incomplete, the Metaswitch Fusion Core solution includes unique control and user plane interworking functionality designed to ease the transition from 4G to 5G while eliminating the huge costs associated with operating dual-core networks.

With a high degree of automation and low total cost of ownership, only Metaswitch Fusion Core affords MSPs the ability to match the technical requirements of their customers while attaining their own business goals.