5G Future Forum

Multi-access Edge Computing Services Integration
Abstract

As 5G continues to grow in reach and accessibility around the world, the 5G Future Forum (5GFF) is collaborating to develop guidelines and specifications to enable global adoption of interoperable Multi-Access Edge Compute (MEC) products and services. The Forum's founding members are América Móvil, KT Corp, Rogers, Telstra, Verizon, and Vodafone, covering key regions across the world, including the Americas, Asia-Pacific, and Europe. Together, we are working to make it easier to discover, deploy, manage, and orchestrate applications and services on MEC environments at the network edges. The result will enable Telecommunications Service Providers (TSPs) and Cloud Service Providers (CSPs) to work together to deliver efficient and innovative services to end customers.

The introduction of 5G and MEC will transform the way services are being delivered to customers by bringing powerful compute capability to the edge of a TSP network through public and private marketplaces. Bringing the computing power closer to users allows for the data generated to be processed locally, unlocking a wealth of potential for new and enhanced enterprise and consumer applications that require faster response times, greater resilience, enhanced privacy and a better customer experience for the next wave of customer use cases. To tap into this potential, developers should be able to use the tools and dashboards from a variety of CSPs.

The 5GFF MEC Computing Services Integration specification provides a framework for physical integration of MEC and security, service enablement and service integration. The result is a standardized integration of CSP infrastructure into TSP networks and sites. This allows for worldwide consistency and scalability in how TSP and CSP infrastructure is deployed and managed within a TSP's network to fully maximize the benefits of 5G and MEC, providing the foundation for a continuum of computing resources from cloud to edge.

Physical Integration and Security
TSPs' network edge locations vary substantially in terms of footprint, physical access and supporting services, such as power and cooling. The physical integration and security framework establishes how CSPs may integrate their cloud infrastructure directly into TSP's network edge sites effectively and sustainably across the lifecycle of the infrastructure.

The framework also addresses how to integrate CSP's physical infrastructure providing guidance on a) power and cooling envelopes of the architecture, b) deployment and infrastructure characteristics, c) rack space and secured access mechanisms and d) connectivity. This guidance provides the foundation for consistent, scalable and manageable deployments across various TSPs.

Service Enablement and Integration
Service integration exposes and composes new 5G and MEC features into a set of capabilities that enable and serve both TSP and CSP platforms and their respective customers. This allows application developers to take advantage of the new capabilities of 5G and MEC to enhance the capability of existing applications and develop new innovative applications previously not possible. An orchestration layer leverages this service exposure to provide dynamic workload placement across the cloud-to-edge continuum.

Service integration is the key to unlock flexibility and transform the way both TSP and CSP platform services are provided to customers. It leverages the transformational capabilities of 5G and MEC, bringing together the respective technology differentiators and market leading capabilities of CSPs and TSPs.

The service enablement and integration framework provides a unified integration guideline to ensure interoperability between CSP and TSP platform services. The framework covers aspects such as: a) connectivity, b) communication flows, c) service exposure, d) resiliency, e) security and data management processes, and f) operational/lifecycle management and customer care definition processes.

Requesting a copy of the Specification

At present, this abstract has been published to provide a summary of the sections in the Services Multi-access Edge Computing Services Integration Specification drafted by 5GFF. The draft Specification is currently a working draft and available to existing 5GFF members. A process for non-members to request access to these documents will be published in the upcoming months.