

Reduce latency, increase security and enable new applications

Private MEC may be the choice when security, control and low latency are paramount.



Mobile edge computing (MEC) is a decentralized extension of the larger cloud computing topology. MEC is a technology that moves computing and related resources onto cloud servers that are as close as possible to where data is generated and consumed, managing data locally whenever possible and only exchanging data with remote data centers when necessary.

New cutting-edge applications that rely on low latency require a new type of compute platform that a traditional cloud environment cannot support. MEC provides that platform but also provides other inherent benefits, such as increased security, reduced battery drain on devices and reduced backhaul expenses. Because it's an extension of the cloud service provider's platform, users also have access to the same tools they have become accustomed to using.

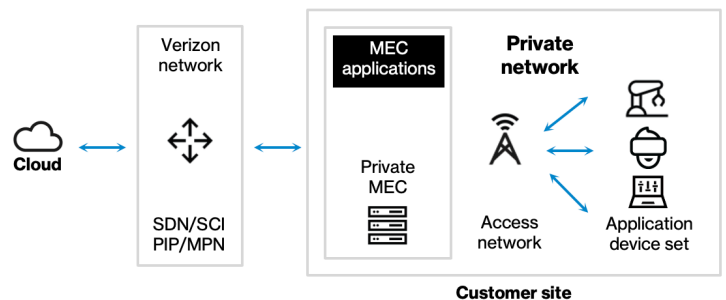
In general, public MEC solutions are well suited for organizations that need broad geographic cloud-computing coverage, or those that must be accessible to the public. Think automotive applications where cars are moving city to city or an immersive experience for spectators at a sports stadium. The public MEC can substantially reduce latency and lag over the traditional cloud-computing architecture.

Conversely, a private MEC is deployed on the customer's premises and consists of a private onsite 5G/LTE radio access network (RAN) combined with a private onsite edge computing infrastructure. With a private MEC, you have control over the entire compute and communications stack. Your wireless on-premises devices—cameras, sensors or other devices—are connected by a private 5G or LTE network, over which you have full management control. Similar to public MEC, the private MEC is an extension of the service provider's platform, providing clients with a familiar and consistent experience.

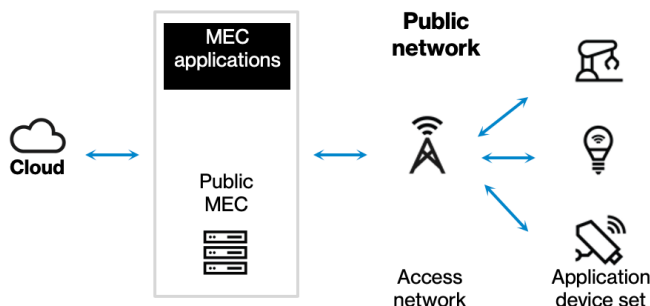
Public vs private MEC

Public and private MEC solutions are related technologies and provide many similar benefits, plus some unique to each. However, they have very different deployment architectures.

Public MEC puts cloud computing resources at the edge of a public cellular network, closer to where businesses and developers can use them. Cellular-enabled devices can connect to the MEC over the public 5G or LTE network and consume its application services.



SDN – Software-defined network
SCI – Secure Cloud Interconnect
PIP – Private IP
MPN – Mobile private network



With a private MEC, data security and sovereignty are enhanced since data is collected, stored and processed on premises, not in the public network. Also, the connection to your existing data center can be tightly integrated through a software-defined WAN (SD WAN), Secure Cloud Interconnect (SCI) or other Verizon IP connectivity service, providing end-to-end security. And because you can custom-design your network and applications to your exact specifications, latency can be driven to extremely low levels, below that of a public MEC. Because it's a fully managed service, overall network performance can be better controlled to support the most critical and latency sensitive applications.

Some examples of solutions suited to a private MEC include computer vision applications for near real time situational awareness, intelligent logistics, robotics and automated guided vehicle (AGV) management, and predictive maintenance.

A hybrid approach

Not all data or applications require that level of security or latency. It's easy to envision a hybrid approach, where some on-premises devices and applications run on a public MEC and others on a private MEC, with access to an SD WAN managed by an application orchestrator. That way, an enterprise can secure its most important data while optimizing network value.

An orchestrated hybrid approach can therefore distribute workloads dynamically across public or private MEC sites over the SD WAN. This maintains some of the flexibility benefits of a public MEC infrastructure while maintaining the control of a private network.

Learn more:

To further explore what private MEC can do for your enterprise, contact your Verizon Government Account Manager or call 844.825.8389.