Why Evolution Of Subscriber Data Management Is Critical For 5G

As 5G comes to fruition, subscriber data management or SDM will evolve and will be more important than ever for mobile operators. We examine the current state of SDM and look at how a virtualized 5G future will be shaped by Cloud Data Management.

Subscriber Data Management: The here and now

2617. That's how many times it is estimated that the average phone user engages with their device per day. Mobile subscribers interact with the network over multiple services, and session data related to these interactions is captured on the network. This rich set of information is invaluable. It is also of great interest to, among others, OTT service providers for use in enhancing user experience and offering personalized services.

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There is however a catch! Thanks to the organic evolution of mobile networks over the years, this subscriber information is not easy to get to. For operators, their networks have traditionally been their main focus – maintaining them, upgrading them and delivering the best possible service to subscribers. Data management was something of an afterthought.

As network services change, the quantity of subscriber data multiplied and became fragmented and siloed. This made data analytics arduous, if not impossible. To unlock the insights of their subscriber data, mobile operators needed to become more customer-centric and the first step is their data management model. Subscriber data management enables operators to consolidate data and give them a 360-degree view of their customers. Having the data in one place enables operators to roll out innovative services and improves the overall service delivered to operators.

A recent report by ABI Research has highlighted the following use cases.

Identity management – Security is a central focus on any network and SDM enables operators to authenticate subscribers and securely share the identity with applications for service continuity. And unless operators can guarantee secure identity management, they can't monetize data or participate meaningfully in the OTT ecosystem.

Targeted services and promotions – SDM gives operators unprecedented insight into their subscribers' mobile usage and preferences. Unlocking the insights held in the data enables operators to increase revenue streams through the creation of new services and plans or through better targeting of existing plans.

Improved customer service – SDM delivers a centralized view of user profiles across all layers – all of the time. It opens up a world of possibilities for service provisioning for both OSS and BSS. IoT and 5G – SDM facilitates the management of billions of connected devices cost-effectively and with minimal latency thanks to its distributed architecture. Ensuring a robust SDM system is in place will soon become a pre-requisite for 5G.

Why SDM Must Evolve To CDM

Originally, subscriber data management provided the foundation for a subscriber and application-focused database. 5G is changing all that with service-based architectures. Operators now require a cloud database that treats every subscriber and network function as a service. That is because with 5G, operators will be faced with 'stateless' clouds – services that do not store data from one session to the next but instead rely on common external data management.

Operators require Cloud Data Management (CDM) that treats every subscriber and network function as a service. CDM will provide the data layer which stores not only the fast-changing state, but other information required by applications such as subscriptions, policy and configuration data. CDM can replicate data as required, so it eases the creation of 5G slices and stateless core services and delivers data at the edge for performance-sensitive, ultra-reliable low latency applications.

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