Cloud-native order management bolsters service agility and enables an online self-service customer experience

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Communications service providers (CSPs) are undergoing significant digital transformation journeys in order to increase business and service agility. They believe that their digital transformations will enable them to rapidly innovate, launch and monetise new services, embrace a lean operating model and deliver consistent and superior digital experiences to consumers and enterprises. The adoption of cloud-native software and microservices-based architecture across network, operations and business IT functions is at the heart of these transformations; cloud-native software provides the foundational capabilities that will allow CSPs to realise the high levels of platform flexibility and agility that are so critical to achieving some of the goals mentioned above. In this article, we discuss the key pressure points that have led to the increased demand for cloud-native order management and comment on the release of Oracle's cloud-native order and service management (OSM) solution.[1]

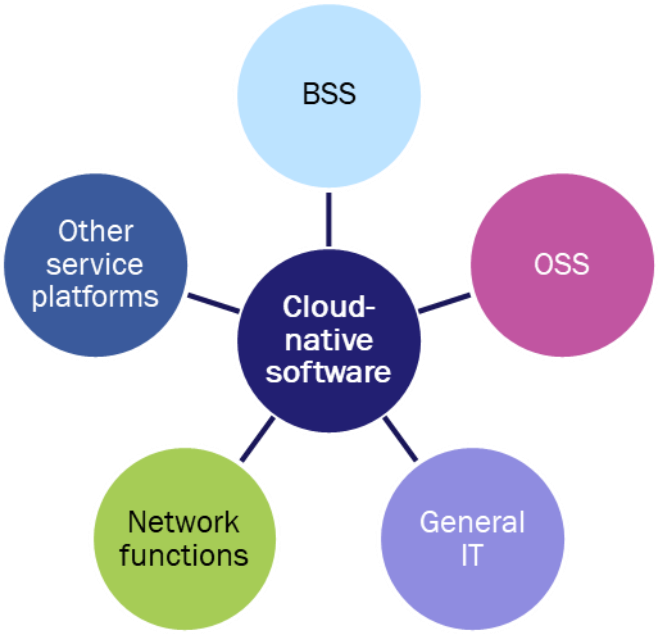
Cloud-native software is increasingly being used for CSP technology functions

Cloud-native software is built to be deployed in cloud environments, by definition, and it uses a combination of new-generation software development capabilities (such as containers, orchestration, microservices and DevOps/CI/CD processes) to achieve agility and scale. CSPs are at various stages in terms of the adoption of cloud-native software within their technology functions (Figure 1).

- The 5G standalone core is being developed using cloud-native software, commonly known as container network functions (CNFs).
- Online and cloud-native systems are increasingly being used for front-office customer engagement and billing and revenue management, respectively. This allows CSPs to quickly introduce real-time self-service experiences and monetise new services.
- Other non-business-critical general IT functions are already being rearchitected and migrated to public cloud environments such as AWS, Azure, Google Cloud Platform, IBM Cloud and Oracle Cloud Infrastructure.
- Back-office operational systems, such as network orchestration and assurance systems, are evolving in line with network cloudification.

[1] Analysys Mason includes customer order management software in its customer engagement (CE) segment, and service order management software in its service design and orchestration (SDO) segment. For more information, see Analysys Mason's Customer engagement: worldwide market shares 2019 and Service design and orchestration: worldwide market shares 2019.

Figure 1: Uses of cloud-native software



Source: Analysys Mason, 2020

Order management is the critical backbone for service delivery operations

Customer and service order management enables CSPs to translate and provision a customer's service requirements onto the network. Traditionally, this capability has been used to decompose and provision complex service requirements for mobile, residential broadband and fixed IP/Ethernet networks, but it is now increasingly being used for virtual network services. Consequently, the automation of complex provisioning tasks has become a critical business function in order to reduce time to revenue generation. However, the digital transformation imperatives and the new 5G service opportunities are placing new expectations on this automation software.

Cloud-native order management addresses four key pressure points for CSPs

There are four key pressure points for CSPs that can be addressed by migrating to cloud-native customer and service order management.

- **The need to deliver a true end-to-end online self-service experience.** One of the prime objectives of many CSPs' digital transformations is to achieve competitive differentiation in the highly commoditised communications services market. Delivering real-time digital experiences is critical for this. As such, many CSPs have worked to rejuvenate their digital engagement channels in order to provide high levels of customer flexibility and control; for example, customers can choose when they want to interact and can order new services and/or modify existing services such as data plans. The COVID-19 pandemic has further accelerated the take-up of self-service channels such as online portals and mobile apps, but this has placed unforeseen pressures on customer and service order management systems, which have been designed for

offline order processing and lack the ability to support the real-time, fully automated self-service experience that customers now expect. Furthermore, the monolithic nature of the software makes it harder to roll out quick upgrades to incorporate 'online' features and align with self-service customer engagement systems.

- **The need for service agility in the 5G era.** CSPs are preparing to offer new, yet-to-be-conceived digital services that take advantage of 5G's capabilities and edge computing to deliver next-generation enterprise connectivity based on ultra-reliable, low-latency communication (uRLLC) and massive machine-type communication (mMTC) technologies. Service agility is critical for this. Furthermore, CSPs expect to offer these services in an on-demand fashion in much the same way the cloud players offer on-demand infrastructure, platforms and software-as-a-service.

- **The need to support a multi-cloud strategy.** CSPs increasingly expect to run their business systems in a multi-cloud environment using their own private clouds in combination with AWS, Azure, Google Cloud Platform, IBM Cloud and Oracle Cloud Infrastructure. They also expect to be able to support IT and AI/ML workloads. AT&T, BT, Telstra and Vodafone have all announced strategic partnerships with hyperscalers to accelerate their IT transformations. Software developed using container technology and microservices architecture is highly portable and cloud-agnostic, meaning that CSPs can deploy and operate it across a multi-cloud environment.

- **The need to attract and retain top IT talent.** CSPs are executing a wide-ranging 'people transformation' strategy alongside their migration towards cloud-native software. Reskilling existing staff and hiring new talent with cloud-native software skills is a key pillar of this strategy. The competition for cloud and software talent is intense and CSPs are up against hyperscalers and digital-native companies. CSPs are working on the core assumption that any software that is developed in-house and/or externally procured from vendor partners must be developed using cloud-native software development techniques, and this enables them to attract and retain top IT talent.

Vendor solution brief: Oracle cloud-native OSM solution

Oracle's launch of its cloud-native OSM option aligns with CSPs' digital and IT transformation goals. The solution bolsters the critical service delivery backbone with cloud-native credentials and supports real-time order processing, elastic scaling of operations, agile service introduction, reduced maintenance windows and multi-cloud deployment options. The cloud-native OSM solution enables CSPs to rapidly launch, provision and operate existing and new 5G services, as well as deliver a true online self-service experience.

This article was commissioned by Oracle. Analysys Mason does not endorse any of the vendor's products or services.