



TM Forum Ghost in the Shell Catalyst: Multi-Operator 5G Network Slicing for Medical Care

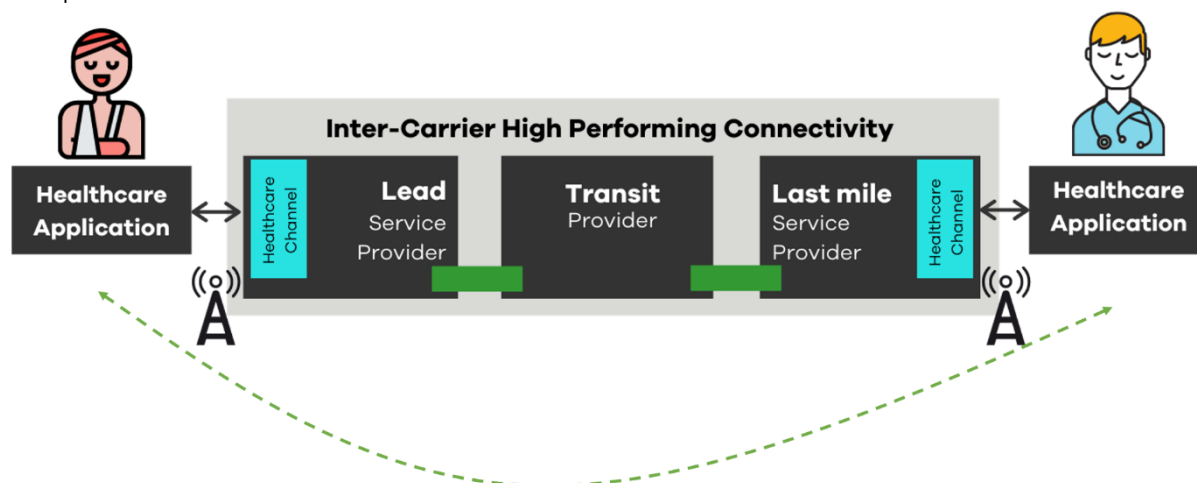
The TM Forum Skynet Catalyst, presented in 2019, showcased 5G-enabled multi-operator orchestrated end-to-end hybrid services. The use case chosen for this specific demonstration was the fully remote health care service with focus on epidemic management. The catalyst showed how remote medical care services including drone-based inspection, remote diagnostics, image analytics and, potentially, remote robotic surgery are to improve how crisis situations (like natural disasters or epidemic outbreaks) are managed. Ghost in the Shell is the next iteration of this award-winning catalyst.

Continuing the work from previous years, we partnered with Chunghwa Telecom, NTT, Orange, Telecom Italia Mobile, Sparkle, CAE, University of Milan, University of Paris-Diderot, Laerdal, PCCW, Ericsson, EXFO and IOTA. The main objective was to enable a diverse ecosystem of partners (including multiple operators from different geographies) to seamlessly provide end-to-end hybrid services. Collaboration with medical Universities located in Europe and Asia, as well as with leading healthcare equipment vendors, allowed the team to focus on use cases related to medical simulation, AI or VR.

An important aspect, newly introduced to the project, was the network assurance. Basing on external social information at the time of epidemic or natural disaster, network assurance allows to prioritize and secure mission critical traffic. Another aspect we decided to expand in Ghost in the Shell was the inter-carrier fulfillment and settlement that enabled operational automation and dynamic scalability of network resources.

The Catalyst expanded our previous work of mapping the components in TM Forum's ODA (Open Digital Architecture) using Open APIs. The business scenario was designed in CurateFx and proposed a model to support, for example, the remote management of medical mannequins.

Amartus played a key role in demonstrating a solution that could not only set up the required network connectivity but also provide the real-time inter-carrier charging and settlement. Our extensive knowledge of MEF APIs also allowed us to provide consulting for the project's LSO component.





About Amartus

Amartus is a leading innovator in intra & inter-provider automation and orchestration systems and related expert services. The company was established in 2003 by leading experts from the field of network management and networking with and a global customer base of leading network and cloud providers and vendors. The company is industry-recognized as a leading innovator in network transformation, underpinned by network orchestration and automation. Amartus is an active contributor to leading industry bodies, such as MEF, TM Forum, and CBAN. For more information, visit www.amartus.com.

About nBrace

nBrace is an industry standard inter-provider service automation solution that enables rapid partnering and on-demand negotiation of inter-provider information and communication technology (ICT) services in near/real-time opening immediate access to a global ecosystem of automated partner providers using the latest industry standards. General availability of the tool was announced mid-June of 2020. For more information, visit www.amartus.com/nbrace.