



## CONTEXT AND BUSINESS CHALLENGES

Generally, the mobile subscription is provisioned in the network well before the SIM card reaches a dealer or retail outlet so that new prepaid subscription works immediately once it is sold.

This SIM pre-provisioning process locks unused number resources (IMSI, MSISDN) and network resources which generates unnecessary license costs for HLR, BSS, OSS systems, as well as waste of numbering resources.

The MNO/MVNE numbering plan is generally organized geographically which makes forecasting and SIM card distribution a difficult task.

With IoT adding millions of additional connected devices, the need for a strategy to optimize number resource management is crucial.

## DESCRIPTION

Oasis' EOS Number Management is a solution for MNOs to optimize the use of IMSI/MSISDN resources and reduce the number of inactive

subscriptions on the network.

Inactive subscribers are stored into a temporary database, and are provisioned on the HLR only when they access to the network for the first time (just-in-time provisioning).

The high level provisioning flow is the following:

- When a new SIM card accesses the network for the first time, the authentication request is routed to EOS Number Management solution server.
- The solution server handles this first authentication and generates a real-time provisioning to the HLR.
- The solution server sends a re-configuration command to the SIM card to access the operator's network.
- The SIM card restarts an authentication with a new IMSI to the HLR, and completes this first authentication.
- Subsequent authentication requests are directly handled by the HLR as the SIM has already been provisioned.

- EOS Number Management solution is based on a server installed in the MNO's premise and connected to the SS7 network, and an application installed on the SIM card for handling the reconfiguration process.

## BENEFITS

- The business model is based on direct and indirect cost savings relative to inactive SIMs and network resources. A typical return on investment is in the range of 6 months depending on volumes.
- Just-in-time provisioning reduces BSS, OSS and HLR license costs. Only active IMSIs are provisioned in the HLR, optimizing usage rate of HLR positions.
- There is also savings in inventory costs and logistics as the supply chain is optimized.
- Operator can up-sell and cross-sell during initial connection, such as golden numbers or other value added services which can be pushed based on subscriber location, device model, or other information collected.