

## Iskratel Voice Modernisation

# A Seamless Migration from NGN to IMS

### Why Iskratel?

SI3000 CS allows seamless migration from NGN to IMS architecture just with software reconfiguration.

### Key factors of Iskratel approach:

- An evolutionary concept (investment protection)
- The possibility of hosting NGN and IMS at the same time – Amphibian
- The migration of subscribers by simply changing the database

For the extension of NGN functionality to the IMS architecture level, a software reconfiguration of SI3000 CS (NGN) is needed only. This way an SI3000 CS (IMS) is established, which can realize all functions of session control and information transfer in the core of NGN / IMS network.

Communication between SI3000 CS (IMS Core), a database (stored in the HSS) and a charging system is carried out via DIAMETER protocol. In the upstream direction the SI3000 CS (IMS Core) supports SIP / ISC interface, which provides the ability to establish connections with the application servers based on the SIP protocol.

### ISKRATEL APPROACH

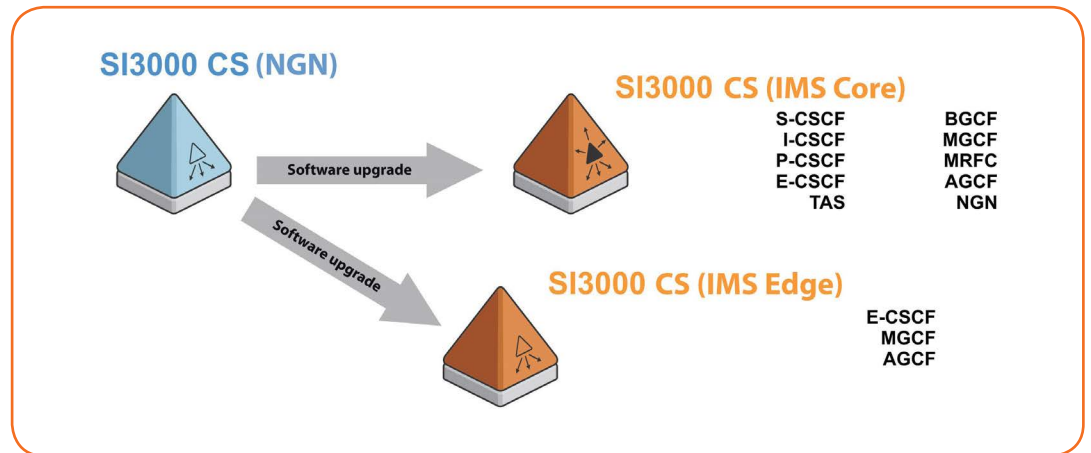
As the main idea of migration it is proposed a modernization of the existing call servers SI3000 CS, which are located at the centers of provinces, into the IMS entities of I / S / E-CSCF, and BGCF, that are the basis of the distributed architecture of IMS core, as well as AGCF and MGCF, since they are connected to a local customer base and to TDM network. A function P-CSCF may be

implemented as a part of SI3000 CS (IMS Core), or on SBC platform.

For all servers that are located at the level of district centers, it is proposed, that they be upgraded to the AGCF, MGCF and E-CSCF functions. This configuration is referred to as SI3000 CS (IMS Edge). It ensures both a registration of subscribers into the IMS network and connectivity to legacy networks at the local level.

### MIGRATION OF SUBSCRIBERS

The proposed strategy of migration to the IMS architecture suggests the possibility of operating the network element SI3000 CS in two modes - NGN mode and IMS mode. However, users that remain under the control of NGN should be able to continue to use all of the NGN services. Members (both NGN and TDM) who move under the control of IMS core use IMS services provided by the IMS core and IMS application servers that are accessed through a local element S-CSCF. S-CSCF together with the E-CSCF which is responsible for providing connections to the special services (e.g. emergency call).



### IMS Core:

- Integrates all IMS control functions

### IMS Edge:

- Integration of existing TDM networks into IMS
- Reduced protocol complexity
- Lower total cost of ownership (TCO)

Migration of subscribers can be performed either as a group transfer or as an individual transfer. After creating a subscriber in a HSS and ENUM a shifting is provided by a corresponding administration via graphical user interface of SI3000 MNS.

The IMS elements S/I-CSCF generates CDR records that can be used in analogy with the NGN. For communication with IMS charging platforms the SI3000 CS (IMS Core) supports standardized Ro and Rf interfaces.

### MIGRATION OF SERVICES

While migrating to IMS architecture the subscribers of SI3000 CS (IMS Core) can retain all subscriber services that they have today under the existing NGN network architecture. SI3000 CS (IMS Core) in a function of IMS node contains an IMS application server, applied as Telephony Application Server (TAS), ensuring support of the supplementary and PSTN / ISDN services.

*An important advantage of call server SI3000 CS is the ability to simultaneously operate in two modes - NGN and IMS, which means that with a single network element SI3000 CS both a NGN functionality and IMS functions are provided. It is not needed to change or add any new hardware.*