PLATFORM FOR NUMBER TRANSLATION AND BUSINESS VOICE VPN

With three main objectives in mind, CreaLog has developed its Service Manager for Number Translation and Voice VPN:

- Enable network operators and other communications service providers (CSP) to find new revenues and support new business models.
- Supply CSPs with the technology needed to introduce new applications and services as quickly as possible.
- Supply CSPs with technology that reduces the cost of developing, integrating and operating new applications.

All number translation services (number portability, service numbers, etc.) are realized on CreaLog's Service Delivery Platform (SDP7) integrating applications like MRF, IVR, Cloud Contact Center, Call Recording and Virtual Office/PBX to name just a few. The sophisticated CreaLog CDG Service Creation Environment (SCE) and the browser-based Service Designer round off the solution. New features and services can thus be swiftly developed in the shortest possible time.

Requirements and definitions for service delivery platforms (SDP) vary. For a particular CSP the technical scope depends on both which systems already exist and which business objectives the CSP has in mind. Therefore, we use a comprehensive technical architecture to deliver our CreaLog SDP7 platform, that can be efficiently built upon over time. Different types of applications and associated business models demand a reliable service creation and service execution environment so the architecture satisfies the need to maximize reusability of components in different setups.

Our pre-integrated solutions for the IMS SDP have been developed in customer projects or in CreaLog laboratories to meet specific business drivers and market demands. They form an essential part to complement the basic NTS and Voice VPN functions.

Using the SDP7 framework CreaLog designs, implements and operates a unique solution for any particular operator. It offers flexible service creation and fast business process integration and with time includes more and more components as soon as a business justification exists.

FLEXIBLE APPROACH

The CreaLog SDP7 Platform fully meets the requirements of a flexible approach as a fixed product approach to SDP definition and delivery is no longer appropriate. We believe Service Delivery Platforms need to support the development and operation of a wide range of end-user services, and business models.

SERVICE MIGRATION

Whilst Telcos are rolling out their IMS networks, many vendors just say no when it comes to preserving and enhancing your legacy services and mission-critical applications. But we at CreaLog are ready to help and understand how to migrate and transform all of your services including INAP and CAMEL!
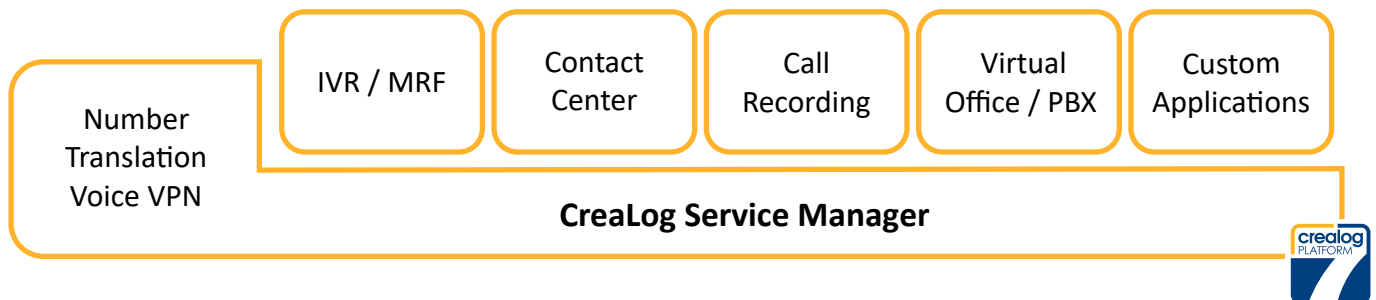
The CreaLog IMS architecture comprises a set of building blocks, including:

- The CreaLog Platform as Service Execution Environment (SEE): providing the runtime environments for services and applications.
- CreaLog CDG as Service Creation Environment (SCE): providing the necessary toolsets (graphical and browser-based) to build applications and services.
- OSS/BSS interface: providing the components for the seamless integration into the OSS/BSS environment of the communications service provider.
- The SOA environment: including the Service Orchestration, Registry and Governance for the business integration through Web Services and service interface adapters.

We have developed, and maintain, a set of pre-integrated solutions. These solutions address individual network operator business needs in specific service categories.

OPEN FRAMEWORK FOR APPLICATIONS

The following picture shows typical and important examples of our pre-integrated solutions: IVR/MRF, Cloud Contact Center, Call Recording (Mobile/Fixnet), Virtual Office/PBX, and custom applications.

Number Translation Voice VPN	IVR / MRF	Contact Center	Call Recording	Virtual Office / PBX	Custom Applications

CreaLog Service Manager

crealog PLATFORM

NETWORK IVR AND MRF

Network IVR and MRF is the most widely used pre-integrated solution as the close integration with the NTS offers compelling benefits for orchestration, charging and administration through a unified GUI for both the services and the number plans.

The CreaLog IVR/MRF supports user input via touchpad (DTMF) as well as state-of-the-art speech recognition and supports all relevant standards including VXML, MSML, and MRCP. Typical use cases, apart from simple MRF functions (e.g. alert tones for users, tariff announcements), range from number synchronization, network-based on-hold queues and pre-qualification dialogs, up to prepaid card top-up and many even more sophisticated solutions. The necessary prompts for the dialogs are either uploaded as sound files, or generated by the text-to-speech resources, which generate speech output from typed text.

CONTACT CENTER FOR CORPORATE CUSTOMERS

The CreaLog Contact Center Solution offers you a proven, professional Automated Call Distribution (ACD) - at an attractive price that helps saving budget for you and your customers. It opens up great opportunities for Communication Service Providers to approach their corporate clients with a compelling value proposition and offers great scaling flexibility.

MOBILE AND FIXNET RECORDING (VOICE / SMS / MMS)

Failing to record mobile or fixnet client conversations may put your customers' business at risk by giving them little recourse in the event of a client dispute. A record of calls allows both client and company to accurately recall the conversation – improving dispute resolution, increasing client confidence, and reducing risk. Whether client communication happens in the service center, office or on the move, the MiFID II compliant CreaLog Call Recording will suit the needs of your customers.

TELCO REQUIREMENTS

Network operators have widely different requirements, but they share the need for a compelling plan that will transform the current service delivery environment into one that matches their business strategy. That plan will reflect the current network and IT environment, the market position and services strategy, the partner strategy and the budget.

VIRTUAL OFFICE / PBX

Telco customers demand enhanced features for their fixed and mobile phones. Our virtualized network-based PBX features are best-of-breed. All relevant standards for IMS/VoLTE like HD Voice, AMR, etc. are supported. The easy-to-use administration interface allows your customers to configure handling and routing of all incoming business calls creating a true Virtual Office. Administrating hunt groups and direct routing, switchboards with queuing and call pick-up groups has never been easier. Prompts, blacklists, and privacy management round off the solution. CreaLog Fixed Mobile Convergent Voice Services cover all these and many more features. They are easy to integrate into any Telco network and made available through standard API.
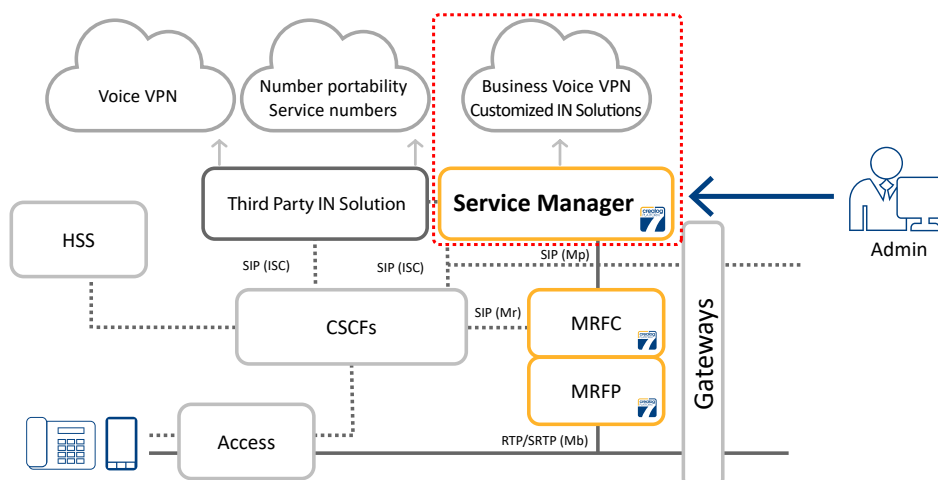
SAMPLE INTEGRATION OPTIONS

Three integration examples for Telco networks:

CreaLog solutions with MRFC and MRFP as core components
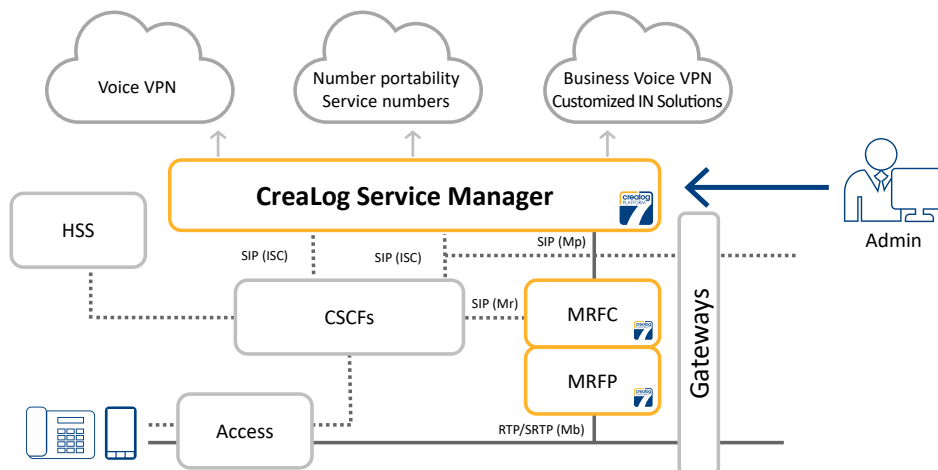
Third Party IN enhancement with CreaLog solutions for Business Voice VPN and Customized IN solutions plus MRFC and MRFP
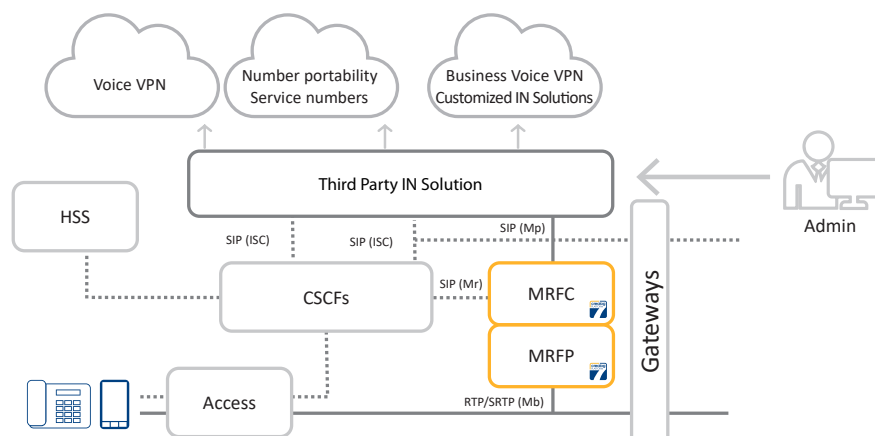

CRITICAL CHALLENGES

Our architecture addresses critical challenges faced when technologies and visions are brought into real life operation in a Telco environment. It enables communications service providers to setup a comprehensive solution for number translation and Business Voice VPN combined with a service delivery environment supporting our pre-integrated applications and using an evolutionary deployment approach.

FROM TDM AND NGN, TO IMS AND VOLTE

Many service providers used our solutions for intelligent network and VAS migration to IMS and VoLTE/5G. Our solutions migrated switched and other legacy networks by cross connecting and orchestrating VAS over the numerous network technologies. Through the use of state-of-the-art virtualization technology, we are now ready to help CSP to migrate data and multimedia services into their cloud infrastructure.

CreaLog MRFC and MRFP as starting points for a step-by-step approach towards an existing Third Party IN replacement

GENERAL SDP SOFTWARE MODULES

Our solutions feature the following modules for service execution:

- Application Servers for the business logic of your services
- (INAP, CAP, MAP, SIP) Gateways for the integration into your legacy and IMS networks triggering SCE services and starting services hosted on external application servers or SCPs from within a service
- API Servers to
  - supply functionalities as Web Services (SOAP and REST)
  - supply provisioning and configuration functions to CRM and other systems as Web Services
  - supply functionalities for Apps built with the integrated Visual CreaLog SCE
- Service Registrar (Server) to monitor incoming calls against the priorities and access criteria of applications in order to trigger the correct application
- In-Memory Database to store selected data for optimized performance
- Operation & Maintenance components and NOC integration via SNMP

VIRTUALIZATION

For CSPs with own data centers, our virtualized platform is 100% hardware agnostic, which significantly reduces OPEX and CAPEX, by allowing to exploit existing digital assets. Additionally, the time to market for capacity expansions is considerably reduced by the easily scalable software-only architecture.

On the basis of VMWare or KVM/OpenStack, all CreaLog SDP7 components, including Media Servers, Application Servers, Web Servers, and Databases, are available virtualized. Additionally, we provide virtualized network functionality (VNF) including interfaces towards management and organization (MANO) and the virtualization layer in the KVM hypervisor.

ISO 9001, ISO 14001
Certified Integrated
Management System
for Quality and Environment

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