

Case study  
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**Case study**

# NETLINE 1st independent MVNA in Chile



JSC INGENIUM

[www.jscingenium.com](http://www.jscingenium.com)



## Netline operates the first independent MVNA platform in Chile

### Challenge

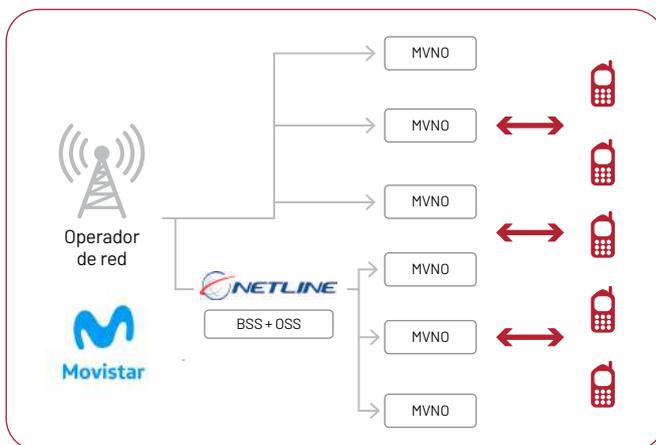
**NETLINE** Holding Inc. a Chilean company with over 15 years experience in the telecommunications market with presence in Chile, Peru and the United States. It has a multidisciplinary team of over 360 people and offers broadband, applications, IT Administration and Telephony services to over 80,000 clients.

In October 2012, NETLINE began to offer services nationwide, such as the first independent **MVNA platform** -Mobile Virtual Network Aggregator- in Chile, with the aim of stimulating the market and offering an alternative in terms of time, cost and services to brands interested in operating as MVNOs - Mobile Virtual Network

Operators in potential niche segments.

With more than 16.5 million people, Chile has about 22.5 million mobile lines representing a mobile penetration of 135%, despite which, the Chilean telecommunications market stands out for its regulatory framework that has been in place since 2005 promoting competition and seeks to protect the interests of consumers: The perfect breeding ground for deploying new projects in this sector. Currently there are five network operators - Claro, Entel, Movistar, Nextel and VTR and two virtual operators GTD/Telsur and Virgin Mobile all operating nationwide.

### Solution



**NETLINE** selected JSC Ingenium for the deployment of its MVNA technology: **Ingenium Core R3 + BSS**, which will allow it to operate as a Full MVNO with its own HLR and enable it to offer mobile telephony services to brands interested in operating as Virtual operators, managing each brand independently, managing their own SIMs and all the information of their customers.

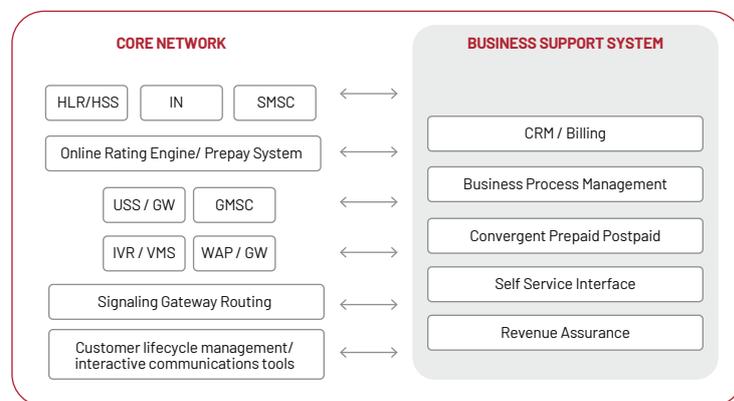


In order to offer the mobile phone service, and so that it could be managed entirely, from and by NETLINE, and in turn transfer this management to the different Virtual Operators that function from their Platform, the implementation of the **integrated MVNA Core Network and BSS solution by JSC Ingenium** was required as well as the respective interfaces: self-management with BSS and with third parties (top-up entities,

SMS and VOICE carriers, call centers etc).

JSC Ingenium deployed its MVNA technology: BSS and Core Network –Ingenium CORE R3- to provide an integrated solution both on a technical and business level and that is fully scalable in turn allowing NETLINE to be able to operate several Virtual operators and also fully independent.

### Ingenium MVNA Technology:



**CORE R3** provides a highly flexible Core Network, able to adapt to the proposed interconnection environment, on one hand by the Host Operator-Movistar Chile, and by NETLINE as well as the possible requirements of the different Virtual operators.

**CORE R3** includes a real-time billing engine **-FIREWATCH-** capable of charging both prepaid and post-paid customers, and capable of applying the trade policies defined by the business areas of the different Virtual operators, so that commercial-marketing teams of the different brands can define their

own trade deals entirely independent, without the need of technical expertise and with a greatly reduced time to market.

The BSS solution by JSC Ingenium provides **business vision and abstracts the complexity of the Network management**. In this way, the different NETLINE and Virtual operator management teams that share the platform can focus on the business aspects (campaigns, promotions, billing, plans, etc.) **without the risk of affecting the network but taking full advantage of its power**.

### Core Network System

Ingenium CORE R3 is built based on **Ingenium Application Engine that supports the functions of all the deployed elements of the Network:** HLR, IN, Online Rating Engine, Convergent Billing System, GGSN,

SMSC and USSD GW etc. The main advantages include: its high level of efficiency, its ability to integrate multiple services on a single platform, and high availability for creating Carrier Grade infrastructures.

### CORE R3 Features:

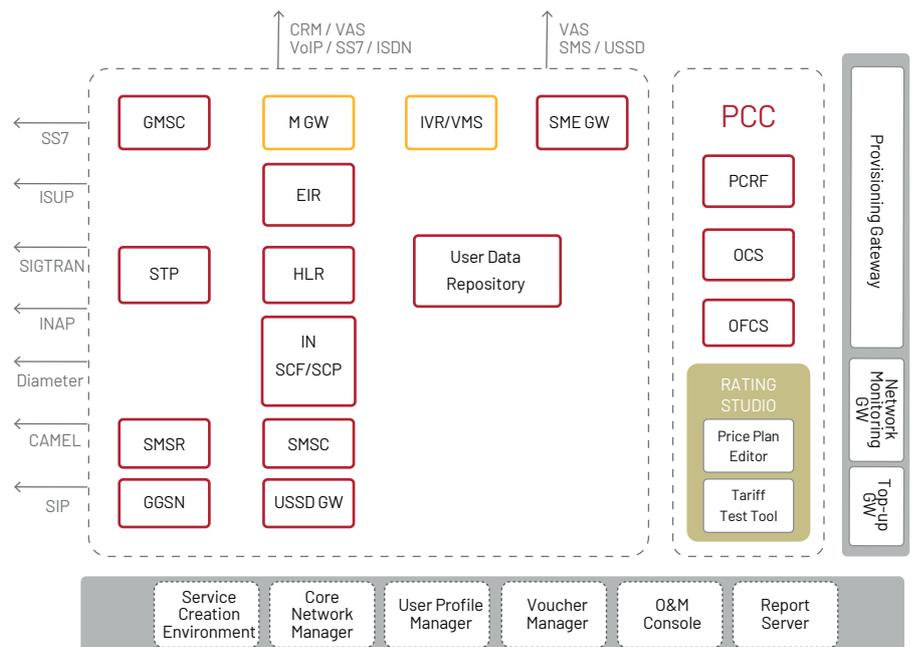
**FIREWATCH:** It is the engine of policy enforcement and real-time billing, developed entirely by JSC Ingenium, for any type of service: calls, SMS, Internet access, TV, prepaid and postpaid customers.

Its most important features include: authorization and validation (ensuring that it cannot provide any service without having previously confirmed that the customer can afford it),

consumption control, billing and forced disconnection.

Among its main features it provides:

- Extensibility: in pricing plans, the billing system, on Rating Pack bundled offers o
- Independence: separating technical concepts from business concepts.



■ JSC Ingenium LTE & IMS network elements    ■ 3rd party integrated solutions

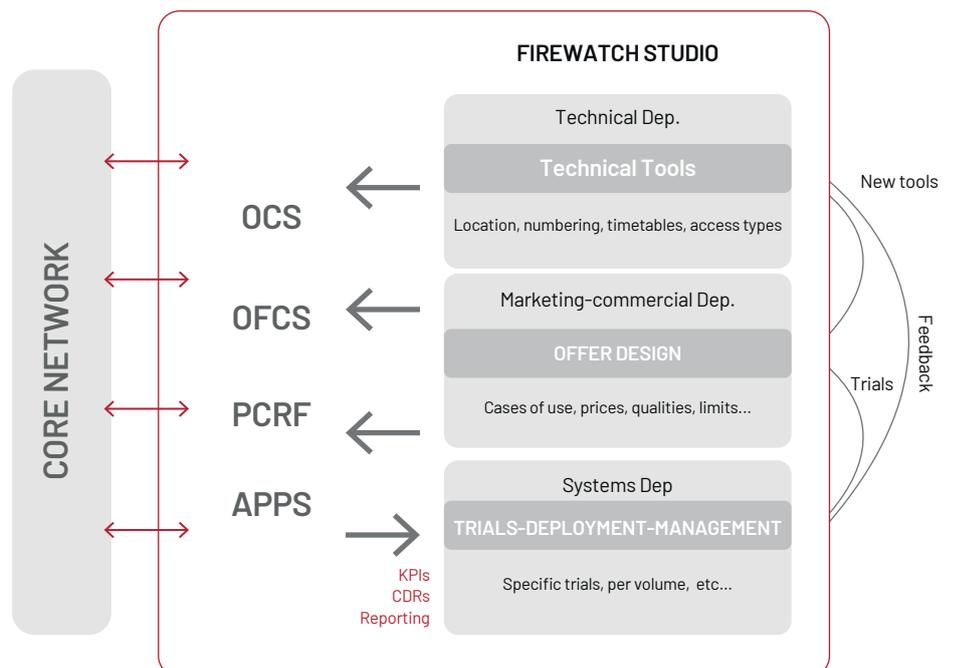


- **Security:** ensuring that it cannot provide any service without having previously confirmed that the customer can afford it.
- **Extended functionality:** controlling the services may define "stoppers".
- **Hierarchy:** defining, based on the Global Pricing Plan, different pricing plans, many of which will be smaller deals, creating more complete and attractive offers.
- **Online Rating Engine supported standards:**
  - DIAMETER Gy, Gx
  - RADIUS
- Capacity to act as **PCEF**
  - Policy Charging Enforcement Function processing orders from ORE
  - Online Rating Engine-
- Applying calls management criteria from information extracted from different network nodes and services.
- It is a powerful mechanism of **EXTENSIBILITY** to deploy advanced services.
- Customer oriented routing applications.
- **Availability of VOICE over IP technology.** NETLINE incorporates the capacity to manage VOICE over IP from Media Servers on its own CORE.

**IN:**

- **Multi Protocol, Multi Vendor** on a single Platform for deploying in several Network environments.

**Availability of VOICE over IP technology:** NETLINE incorporates the capacity to manage VOICE over IP from Media Servers on its own CORE.



## BSS System

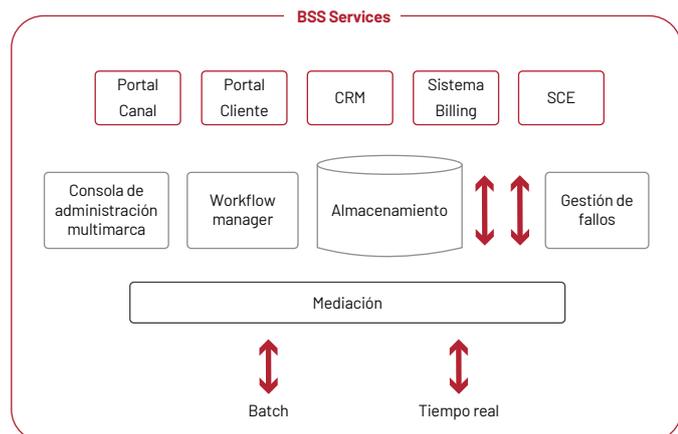
Olt offers a comprehensive system for customer management, from interactive communication tools, to real-time management of user characteristics in the network, and interaction with the channel.

The main components include:

- CRM
- Customized portals by brands. Allows the customer to launch a new brand and manage it independently.
  - Self-care
  - PoS
  - Logistics distributors
- Billing system to process CDRs/EDRs
- Service Creation Environment system (SCE) to interact with the user, integrated with the CRM and promotions systems.
- Work flow manager
- Alarm manager
- Multi-brand administration console

The functional areas covered are:

- Product definition
- Inventory management
- Functions to interact with end customer
- Reports
- Mediation
- Bill finishing
- NP management
- Interfaces at PoS
- Interfaces at logistics distributors
- Interfaces at Scoring companies
- Incident management
- Mediation layer for external applications
- Fraud management
- Network nucleus provisioning



## Technology:

### Dialogic

**A)** Signalling Interface Unit with SS7 HDP cards that supply the physical interfaces for interconnections with all Operators.

**B)** Low Layer Protocol Stacks in charge of all routing mechanisms, redundancy, Network management etc.

**C)** Media GW –IMG 1010–. It provides:

- flexibility to incorporate lowcost links with organisations such as CRMs, companies that require interconnection etc.
- increased flexibility in the Operator's offer: that may incorporate additional interconnections with external entities via SIP, such as CRMs.

companies that want to offer telephony services with a direct interconnection, etc.

**D)** Vision VX 1000. Provides flexibility primarily in the development of voice, audio and video applications, plus the ability to offer these applications both in conventional TDM technology and SIP technology, etc

### Advantages:

The main **advantages of MVNA technology** by JSC Ingenium according to:

**A)** NETLINE:

- Total control of customers through own HLR, which enables own SIMs to be offered
- Isolation from Host operator network, which makes it easier to make new developments on the MVNA network without affecting the Host network, or requiring specific developments on the network and thereby avoiding delays.
- Flexibility in the creation of brands and specific pricing plans.
- Flexibility in creating new services to end customers, which may be available to brands with a reduced "time to market".
- Flexibility in service management.

- Scalability to meet the increased capacity needed to serve different brands.

- Cost effective:

- a) solutions built from a low entry level and with a high scalable capacity.
- b) use of general hardware for a critical mission.

**B)** VIRTUAL OPERATORS:

- Services and billing totally aimed by target market segment of virtual operator.
- Large capacity to manage both operating and billing exceptions, accommodating very different market environments.
- Large capacity to evolve pricing plans allowing very low response times regarding initiatives of competitors.
- Flexibility in the management to prepare individual billing plans, design promotional campaigns, vouchers etc.

### Result

In mid-December 2012, three months after its commercial launch NETLINE is operating two MVNOs, one with its own brand NETLINE,

which provides IP services to companies and another GT aimed at the Christian population segment living in Chile.



## NETLINE

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## JSC Ingenium

JSC is the division of Grupo Ingenium Telecom specializing in the development and implementation of elements for Mobile Networks. JSC Ingenium provides all the "core" elements required for Mobile Virtual Operators and together with its partners as well as all management and billing elements thus providing complete solutions. The majority of these elements have been developed by JSC Ingenium on a common communications platform.

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## Dialogic

Dialogic Corporation is a leading provider of open systems platforms to both the Enterprise and Service Provider Markets. Dialogic's platforms enable converged communications, allowing service providers, content, and applications using multimedia processing and signaling technologies.

Headquartered in Montreal, Canada, Dialogic and its subsidiaries have over twenty offices worldwide, providing local presence, and support to serve its customers around the globe. Dialogic's research and development centers are located in Parsippany, New Jersey; Buffalo, New York; London, England; Dublin, Ireland; and Stuttgart, Germany as well as Montreal.

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