



# InvigorateX

## A HP-UX / Linux Solution Overview



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Software Systems

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## Solution Overview

Designed for the intensive demands of a fully convergent service provider environment, InvigorateX consists of Interact's industry-leading charging and administration software and globally proven HP OpenCall/OpenView platforms. This complete, integrated package includes real-time rating, account and subscriber management and call control capabilities, providing the power and control to reduce both time to market and time to revenue for advanced next generation products and services.

## Interact Components

Interact software performs real-time rating and charging, as well as comprehensive subscriber management.

Based on the philosophy of absolute convergence, Interact's subscriber management and tariff tools reflect that of service neutrality. This simply means that whether a transaction is voice or data-based, prepaid or postpaid, Invigorate real-time rating and management mechanisms are designed to efficiently perform explicit operator-defined instructions. This enables service providers to have free reign over their network's creative possibilities in today's and tomorrow's communication environment.

Key Advantages of Interact elements:

- Convergent, Simultaneous Charging
  - Voice, Data, Video
  - Prepaid, Postpaid, Hybrid
  - Wireless and Wireline
- Improved Customer Experience
  - VXML, with customer appropriate voice promptNotifications/alerts can be provided through email, IVR, SMS, USSD
- Support for Multiple Business Models, including:
  - MVNOs
  - Triple play, quadruple play
  - Upcoming and evolving business models
- Marketplace Differentiation
  - Service packaging
  - Tools that enable acute differentiation from competitors in areas such as service

## HP Components

HP OpenCall Service Access Controller (OCSAC) provides an operator with comprehensive call control for ANSI-41, GSM and 3G networks, while also accommodating full prepaid/postpaid convergence. Full integration into Interact's real-time charging software enables the OCSAC to feed an operator's existing/future postpaid system information on service usage the instant it happens.

HP OpenView Internet Usage Manager (IUM) acts as the mediation platform for Invigorate, executing normalization of network usage data for Interact's real-time rating software.

Key features of HP components:

- Linear Scalability
- Unparalleled Data Integrity
- 99.999%+ Availability
- Fluid Service Creation Environment
- Fully distributed RISC based transaction processing
- Standards-based open interfaces

## Invigorate Solution Advantages

### Quickly optimize revenue based on subscriber profiles and services

As new services become popular and established services become commodities, Invigorate will be a crucial tool for service providers wanting to administer profitable tariffs and instantly respond to changing market dynamics. Possessing an infinitely configurable rate management system, Invigorate enables service providers to experiment with different service value concepts including, but not limited to:

- Service Invocation Pay per use vs. Subscription
- Time of day: Lunch hour vs. Happy hour
- Time-line: Live vs. Archived Footage
- Relationship/Affiliation: Family vs. Soccer Club
- QoS: Premium vs. Economy
- Location: Office vs. Coffee Shop
- Usage: Minutes vs. Packets
- Asynchronous Flows: Upstream vs. Downstream

Criteria may be combined to create entirely new pricing structures. Discounts, promotions, bundles and bolt-ons can also be constructed to stimulate the uptake of related products and services. Because competitive pressures demand the ability to introduce new features into the market before competitors, Invigorate has been designed for rapid integration and application turnover.

### A complete rating and billing environment

Invigorate is an integrated real-time, end-to-end billing solution that includes all front and back office functionality necessary for a full deployment. Real-time rating, account management and call control capabilities are included, as well as provisions for subscriber self-management. Deployable as a single service provider solution, Invigorate is flexible enough to allow a service provider to function as a service bureau and support any number of MVNOs.

### Modern, standards-based modular architecture

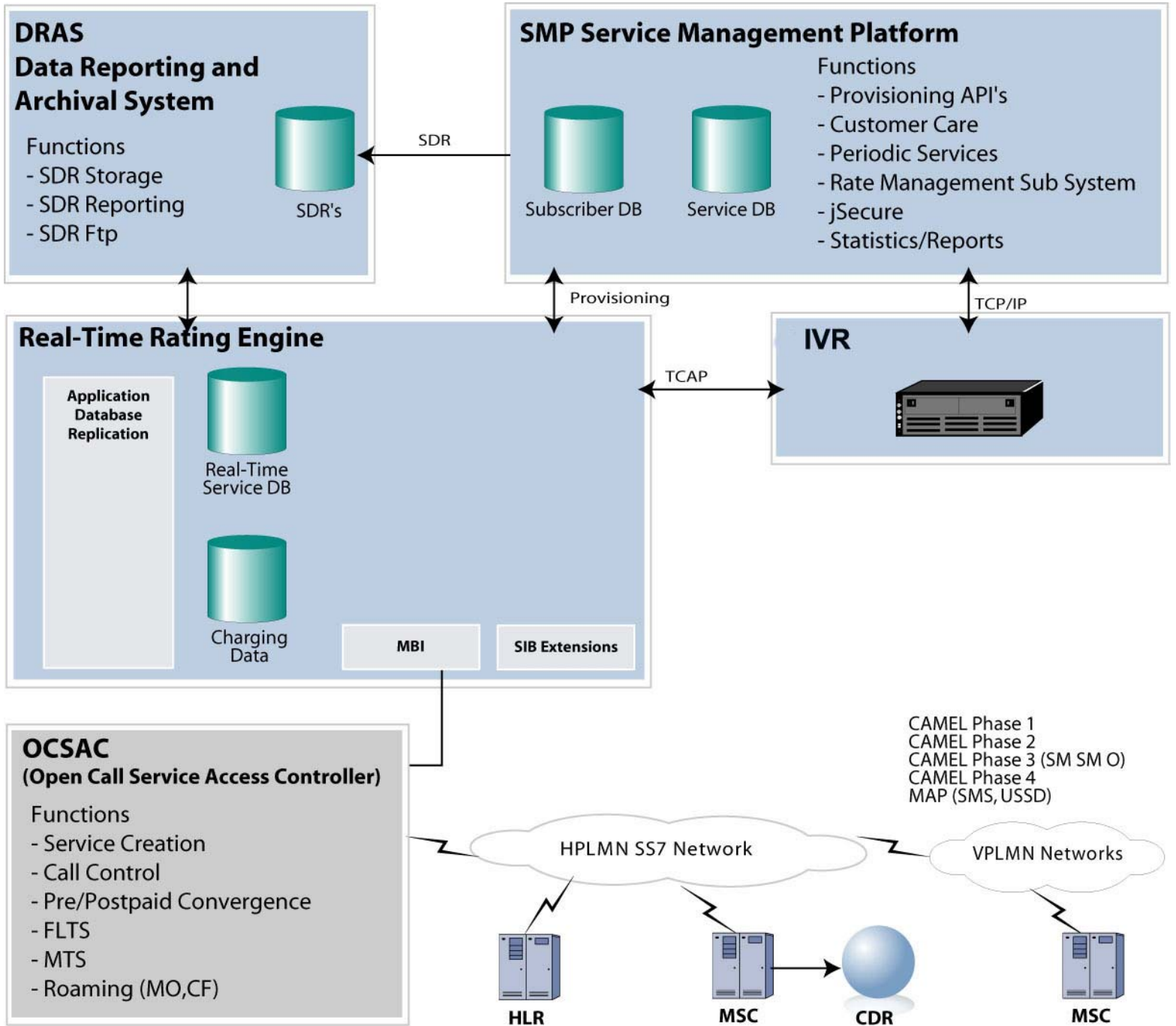
As a carrier-grade solution, Invigorate is engineered for sustainable modularity, enabling SPs to confidently predict additional infrastructure needs as subscriber numbers and/or transaction traffic grows. Rapid extensibility is also addressed, an essential quality as a service provider obtains new third party service partnerships and business tools.

Supplied standard product interfaces enable Invigorate to exchange billing, account performance and other pertinent data in real-time with external Business Support Systems (BSS), Operational Support Systems (OSS) and Operations, Administration and Maintenance (OAM) systems

### Aperture Open APIs

Aperture is our full set of open APIs that external systems can use to control key aspects of Replenishment, Customer Care, and E-Services are available for Invigorate. Each time an advanced service is demanded by the competitive marketplace, these interfaces may be utilized to rapidly interface with Invigorate's components in order to deploy introductory solutions to an end user's environment.

# INTERACT INVIGORATE(X) REAL-TIME BILLING SOLUTION ARCHITECTURE



# Technical Specifications

- **Service Control Point**
- Operating System
  - HP NSK (Invigorate)
  - HP-UX (InvigorateX)
- Software
  - HP TSCE (NSK only)
  - HP OCSAC (HP-UX only)
  - HP IUM (HP-UX only)
- Hardware
  - HP NonStop Servers
  - HP-UX Servers
  
- **Intelligent Peripheral (IP)**
- Interact's VIP Media Platform
- Operating System
  - Linux
  - HP-UX
- Software
  - VXML
  - ARCADE
- Hardware
  - HP Proliant Servers
  - HP 9000 Servers
  
- **Data Reporting & Archival System (DRAS)**
- Operating System
  - HP-UX
  - Linux
- Software
  - Oracle
- Hardware
  - Tailored HP storage
  
- **Service Management Point (SMP)**
- Operating System
  - Linux
- Software
  - Oracle (SMP Database)
  - Jakarta Tomcat (SMP Webserver)
- Hardware
  - Proliant Servers
  
- **Standards Supported**
- ANSI
- ETSI
- 3GPP(2)
- ITU
- IETF
  
- **Signaling Supported**
- Core INAP
- CS 1,2
- AIN 0.1,0.2
- MAP
- IS-41D
- CAMEL 2,3
- WIN 2

## About Interact

Since 1981, Interact has been dedicated to providing highly customizable Communication and Rating solutions to discriminating clients spanning the globe.

Readily equipped to supply extremely short time-to-market solutions accommodating both entry-level and central office class models, Interact builds every solution on an open, distributed, and modular architecture which is deployable on a variety of hardware platforms.

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