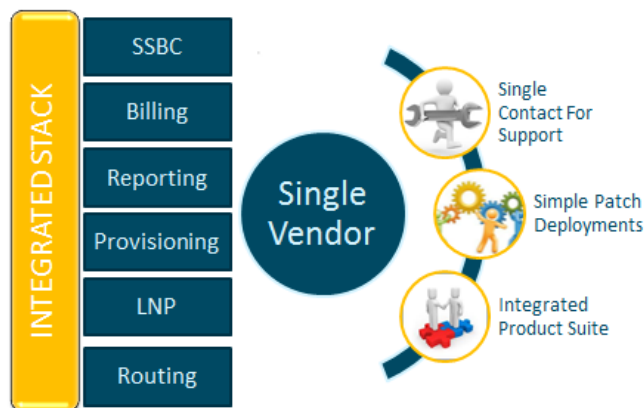


# OptimalSuite

## Overview and Introduction

OptimalSuite is a tightly integrated set of applications for operating and managing your VOIP business:

- ✓ OptimalSwitch – a Session Border Controller (SBC) built for speed and scalability
- ✓ OptimalRoute – a dynamic routing engine that supports least cost and quality based routing
- ✓ OptimalSource – a Local Number Portability (LNP) product for real time dipping and batch lookup
- ✓ OptimalView – Comprehensive reporting system for monitoring and analysis
- ✓ OptimalBill – a wholesale billing/invoicing application



The OptimalSuite Architecture utilizes SIP Redirect, SIP-I, SIP-T and SIP B2BUA as communications protocols where required by the OptimalPath solution.

OptimalSuite uses a common web UI for provisioning and monitoring of all applications. EXT JS is used extensively for a clean and responsive web 2.0 interface.

This document provides a high level overview of each component in the integrated stack and a quick list of key features. *Each component can be deployed as part*

of the integrated stack, or it can run standalone and integrate into an existing network infrastructure.

# OptimalSwitch

The OptimalSwitch “Supersonic” Session Border Controller (SSBC) is a well-tested mid-range platform for enterprises and service providers. The 2RU SSBC i720 features OptimalPath’s custom hardware design tightly integrated with CentOS Linux to provide the critical controls for delivering trusted, first-class communications voice across IP network borders



The SSBC i720 offers multi-tenant software, and high availability through server clustering. (See the SSBC i720 datasheet for more details)

## Key Features

- ✓ Provides security through topology hiding and malformed packet protection
- ✓ Allows different parts of the network to communicate through SIP normalization
- ✓ Call admission control and rate limiting
- ✓ Support for voice and video calls
- ✓ Statistic and billing records
- ✓ Controls signaling and media streams

## Call Set-Up

- ✓ Maximum call setup rate: 700 cps

## Media Services

- ✓ Between 16,000 - 32,000 concurrent calls: with G.711, G.726, G.729A/B, G.723, G.722
- ✓ Wireline, wireless, wideband and clear channel codec pass through

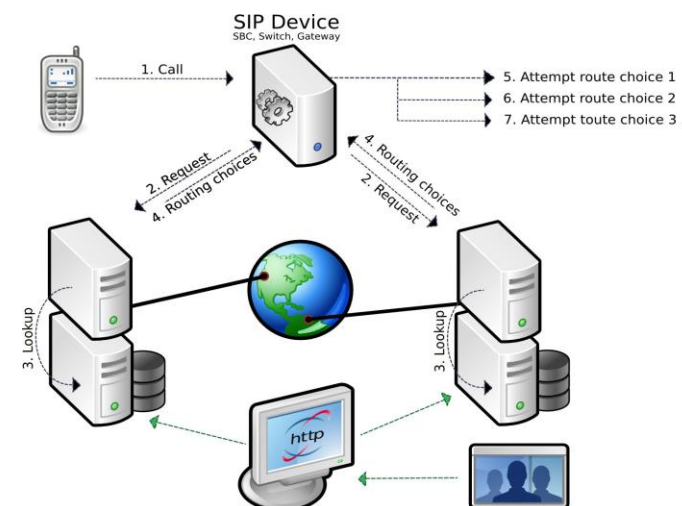
- ✓ NAT on media
- ✓ DTMF Trigger Detection and Notification
- ✓ Generic audio codec relay

## Signaling

- ✓ Back to Back User Agent (B2BUA)
- ✓ SIP, SIP-I/ SIP-T
- ✓ SIP protocol normalization/ protocol repair; SIP message manipulation
- ✓ NAT on signaling
- ✓ SIP Compliant with RFC 3261, 3264, 3325, 4457
- SIP Signaling Parameterization and Header manipulation
- Static & registration based SIP Trunks

# OptimalRoute

OptimalRoute provides a hosted, managed communications routing function that can route calls and sessions based on multiple factors, including the quality of the route and the cost to use it. Session Border Controllers connect to OptimalRoute™ via a SIP redirect through an SSBC instance or directly using one or more of their own switches or session managers. Rates and preferences are loaded into OptimalRoute via a web interface or command line.



The loaded rates are stored in a database and loaded

into memory. OptimalRoute will consider those preferences and rates to make an Optimal Communications Routing (OCR) decision for each communication signaled to it with very low latency.

## LCR Features

- ✓ Central management of routes and rates
- ✓ Multi-jurisdiction (local, domestic, international)
- ✓ Up to 15 digit routing
- ✓ LCR by NPANXX, Local, OCN,inter/intrastate, Major Trading Area, 7 Digit, 10 Digit, International, Time of Day routing supporting LRN and DN routing via the NPAC real time feed for accurate routing
- ✓ Integrated LNP dipping
- ✓ Effective date based rates
- ✓ Real time routing to optimize on a call by call basis
- ✓ Standards based designed to work with ANY RFC compliant SIP agent: switch, gateway, SBC, etc.

Margin protection software enables service provider to proactively manage margins thresholds at the customer level, allowing the flexibility to establish different margins based on the type of customer.

Route choice definition enables the service provider to improve the quality of their service offering, by reducing the time that its network can look for an acceptable route choice. The number of route choices is defined at the customer level.

# OptimalSource

The number portability solution OptimalSource delivers service providers with the ability to solve for number portability in real-time within the communication flow as well as support pre- and post-communication analytics.

## LNP Features

- ✓ Ideal LNP solution for a myriad of Voice over IP (VoIP) platforms and services
- ✓ Robust redundant platform with sub-5ms response time
- ✓ Supports standard response structures (e.g. SIP 3XX responses)
- ✓ Easy setup and interconnection, just provide a source IP address for your queries
- ✓ Scales with your business, transactional pricing or flat monthly fee options are available
- ✓ Hosted, managed Telephone Number (TN) querying service that returns Local Number Portability (LNP) and other Telephone Number Information (TNI)
- ✓ OptimalPath customers connect their routing and billing systems to OptimalSource to query it in real-time (routing) and near-real-time (billing). OptimalSource returns the LNP or TNI for the queried TN(s) based on current or historical status.
- ✓ Fully integrated with OptimalRoute

- ✓ Stay on top of your cost, revenue, and margin:
- ✓ Profitability report
- ✓ Customer/Vendor margin analysis
- ✓ Under water report
- ✓ Customer revenue comparison
- ✓ Transaction reports - Current and historical call details

A single web interface exists for the provisioning of the SBC and the dynamic routing engine. This same interface is used to manage the reporting and alerting metrics. A full suite of utilities is baked in with the ability to define user roles and permissions adding an additional layer of security to your environment.



OptimalBill rates event records as they are received by the system, enabling the customer to monitor, and make changes to, their operational performance in real-time. OptimalBill provides the ability of re-rating at the customer or vendor level, so as to reduce the volume of event records that need to be re-rated, as a result of erroneous data entry or incorrect source information.

OptimalBill was designed to provide all the flexibility that is required for service providers to manage their revenue operations.

### Billing Features

- ✓ One stop for all financial management
- ✓ Provides up-to-date business visibility:
- ✓ Rates CDRs real time
- ✓ Enables customers to react to changing business dynamics
- ✓ Invoice generation
- ✓ Re-rating capability
- ✓ Go back to historical rates or easily correct mistakes
- ✓ Future customer/vendor/trunk/rate change support.
- ✓ Time of Day and Day of Week based rate

- support.
- ✓ Default jurisdiction support.
- ✓ Full/partial rate support switching

Rate Management enables efficient and speedy loading of rate information. Rates can be entered using different rate models, and the information is stored into the system as entered. OptimalBill will standardize the information for OptimalRoute to make OCR decisions dynamically.

Customer Pricing facilitates the development and distribution of customer price changes by monitoring cost and quality changes in the network, and developing new customer price lists.

Real-time Rating provides service provider to view revenue, costs, margins, and quality of service information as soon as the event records have been provided.

Customer invoicing generates customer invoices and manage receivables, to improve bill to cash cycle for the customer.

Vendor invoicing generates vendor invoices in advance to enable vendor invoice reconciliation, and facilitate dispute management. The system will also provide all the data at the relevant level of detail to enable the customer to resolve their billing disputes with customers.



All reporting is done in the provisioning and reporting server, to allow for dedicated CPU resources for offline analysis. Over 100 reports exist, depending on the CDR data made available to Optimal Path. Please see the OptimalView datasheet for a complete listing of all our reports, a summary follows.

### Reporting Features

- ✓ Quality & Margin Reports
- ✓ Real-time alerts based upon PDD, ACD, and ASR.
- ✓ Real-time analysis to optimize profit and quality.
- ✓ Quality of service reports with granularity down to the CDR.
- ✓ Never miss a network problem
- ✓ Set thresholds and get notifications on different quality controls for any trunk

OptimalSuite

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