

Sonus Least Cost Routing (LCR) Server

If you want to find the shortest path between two points, draw a straight line. If you want to find the cheapest path, however, it can be anything but straightforward.

The cost of communications is in a constant state of flux, as each regional and international carrier charges different prices based on traffic volume, time of day and type of call, with prices changing daily like a stock market commodity. For example, a call from Singapore to Boston might need to traverse three separate carrier networks from a field of eight or nine possible carriers, creating dozens of pricing options based on different connection scenarios. In order to determine the lowest cost connection for each call, wholesale carriers and interconnecting service providers turn to powerful analytics tools known as Least Cost Routing (LCR) solutions. LCR enables carriers and service providers to make real-time routing decisions by comparing current pricing rates with routes and forwarding communications along those paths that offer the best combination of price and quality. The difference may be only a few pennies per call, but when you consider that many networks support thousands of calls per minute, the cost savings of LCR can quickly add up to millions of dollars.

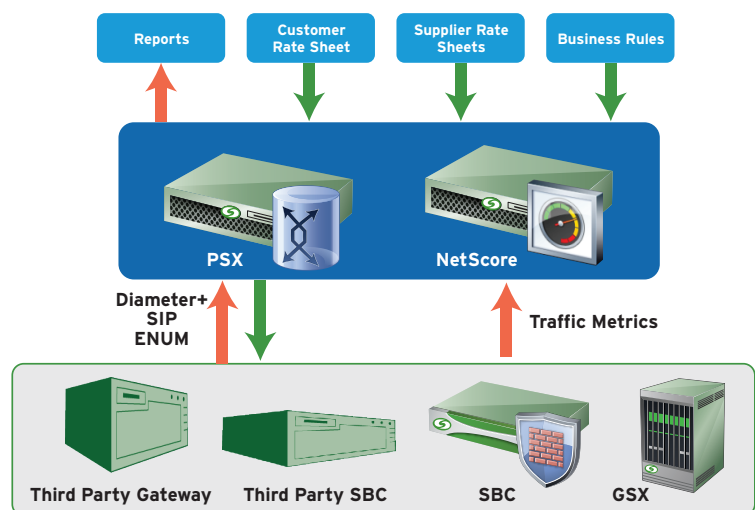
In the past, network operators employed teams of analysts to pore over pricing sheets and calculate the lowest-cost traffic routes. Today, automated LCR solutions can do the same thing in a matter of microseconds, although these solutions can vary significantly in terms of functionality and actual savings. Standalone LCR systems, for example, may have the most robust features but also add complexity and latency to the communications path by requiring an additional “hop” to an LCR engine for each call. Embedded LCR solutions, on the other hand, are sometimes little more than “LCR Lite” and fail to realize significant savings. What carriers and service providers require is a robust LCR solution that integrates powerful analytics with networkwide policy and routing intelligence, so they can make real-time, least-cost routing decisions without adding complexity to the call. We call that solution the Sonus Least Cost Routing (LCR) Server.

Least Cost Routing Makes More Sense with Sonus:

- Lower OPEX costs by 20% with integrated solution
- Increase margins by 10%
- Improve call quality with QoS-based routing
- Load rate sheets in as little as 30 minutes

Sonus: A Better Path to Profitability

The Sonus Least Cost Routing Server is different from other LCR solutions by design. It combines powerful LCR analytics with the Sonus PSX Policy and Routing Server, so networks have LCR intelligence where they need it most: right at the source of every routing decision. The world’s leading communications networks already trust the Sonus PSX Server to drive their SIP routing decisions—over 500 million times every day. With the Sonus LCR Server, carriers and service providers get all of the advantages of the PSX platform—scalability, performance, single-point provisioning for all network policies and routes—plus the advanced analytics of a powerful LCR engine in a single, integrated solution.



Make the wrong decision on your LCR solution today, and you'll pay the price tomorrow... and the day after and the day after that. The Sonus LCR Server puts your network on a better path to profitability through smarter engineering:

Simple to Manage, Easy to Deploy

A standalone LCR solution means more boxes, more layers of redundancy and management, and more money to maintain, integrate and upgrade. The Sonus LCR Server is a single, integrated solution that combines SIP routing, centralized policy enforcement and LCR analysis in a single device for simpler deployment.

A Quicker Path to Profits

The Sonus LCR Server loads daily rate sheets in as little as 30 minutes and provides a real-time flow of LCR intelligence across your entire network through centralized, automated provisioning—so your network can instantly begin to enjoy the savings from lower rates and cheaper routes with no additional provisioning required.

Faster Call Completion

A standalone LCR solution adds an extra “hop” to every call, which means calls take longer to complete. The Sonus LCR Server is specifically designed to reduce delays by combining the LCR and routing intelligence in a single device.

Better Performance

Standalone LCR solutions need to re-create routing information for analysis, in some cases adding and deleting millions of route entries every day, all of which can negatively impact the LCR engine's performance. The integrated design of the Sonus LCR Server eliminates the need to re-create route entries and puts the processing power where it matters most: on crunching numbers and saving money.

Sonus Global Services

Whether you need a little help or a lot, onsite support or remote assistance, Sonus Global Services can help you get more from your LCR solution more quickly. We offer a range of consulting services including:

- Project management and network planning
- Hardware/software installation, configuration and testing
- Database loading, migration and optimization
- Integration with back office systems including custom adaptor development

Product Features & Specifications

Least Cost Routing Features

- Load multiformat domestic & international rate sheets
- Currency normalization
- Routing based on Least Cost, Answer Seizure Ratio (ASR), Average Call Hold Time (ACHT), Mean Opinion Score (MOS) and Post Dial Delay (PDD)
- Platinum, Gold and Silver-tiered routing
- Volume commitments
- Margin-based routing
- Lossless routing
- Exception or Black Lists
- "Single click" enable/disable of rate sheets
- Effective date rate sheet

Additional Routing Configurations

- Calling party category routing
- Carrier cut through routing
- Casual call routing
- Codec-based routing
- Direct dial routing
- Emergency routing
- Fallback routing
- Generic number routing
- International routing
- Leading digit routing
- Nested routing labels
- Operator services and directory assistance
- Origination entity routing
- Overflow routing
- Percentage allocation routing
- Round robin routing
- Private call routing
- Private number routing
- Route hopping
- Routing to announcements
- Temporary alternate routing
- Time of day/time zone and day of week routing
- Transmission medium requirements routing
- Trunk group prioritization routing

SCP Signaling Protocols

- TCAP (ANSI & ITU) over SIGTRAN (SUA/SCTP)
- INAP CS2
- AIN 0.2
- IN (Toll-Free and CNAM)
- GSM-MAP/CAMEL
- IS41
- SIP
- ENUM
- DNS

Number Portability Service

- Multi-Protocol Support
 - ENUM
 - SIP
- Multi-Protocol Support
 - Local DB
 - External ENUM
 - External TCAP
 - External SIP
- Multi-country support
- SIP-IX based LSMS in the North American market

High Availability and Reliability

- 99.999% availability
- Geo-redundancy
- N+1 master replica architecture
- Live data migration
- Shadow database
- Test database

Hardware Specifications

- HP DL380 G8 carrier-grade, NEBS-compliant server
- Two (2) rack-unit configuration
- Intel Xeon ES-2658 processor (eight cores)
- Memory: 64 GB
- Storage: Four 450 GB 6G SAS drives
- Eight (8) GbE interfaces: four (4) interfaces on board plus an additional quad Ethernet card
- H211 Host Bus Adaptor for external RAID system
- Dimensions (HxWxD): 3.38 in. x 17.54 in. x 27.25 in. / 8.59 cm. x 44.55 cm. x 69.22 cm.
- Maximum weight: 60 lbs. / 27.27 kg.
- 1200W AC or DC power supply
- HP iLO 4
- HP Insight Control

Database Management System

- Oracle 11.2.01EE

Operating System

- Red Hat Enterprise Linux 6.1

External Storage System

- IBM DS3524 RAID system

About Sonus Networks

Sonus is a leader in IP networking with proven expertise in delivering secure, reliable and scalable next-generation infrastructure and subscriber solutions. With customers in over 50 countries across the globe and over a decade of experience in transforming networks to IP, Sonus has enabled service providers and enterprises to capture and retain users and generate significant ROI. Sonus products include session border controllers, policy/routing servers, subscriber feature servers and media and signaling gateways. Sonus products are supported by a global services team with experience in design, deployment and maintenance of some of the world's largest and most complex IP networks. For more information, call 1-855-GO-SONUS

Sonus Networks North American Headquarters

4 Technology Park Drive
Westford, MA 01886
U.S.A.
Tel: +1-855-GO-SONUS

Sonus Networks APAC Headquarters

1 Fullerton Road #02-01
One Fullerton
Singapore 049213
Singapore
Tel: +65 6832 5589

Sonus Networks EMEA Headquarters

56 Kingston Road
Staines, Middlesex TW18 4NL
United Kingdom
Tel: +44-0-17-8422-5750

Sonus Networks CALA Headquarters

Mexico City, Campos Eliseos Polanco
Andrés Bello 10, Pisos 6 y 7, Torre
Forum
Col. Chapultepec Morales, Ciudad de
México
Mexico City, 11560 Mexico
Tel: +52 55 36010600

To learn more, call your Sonus sales representative
or visit us online at www.sonus.net

Microsoft Partner
Gold Communications

Voice
Unified Communications
Business Productivity Solutions
Midmarket Solution Provider

The content in this document is for informational purposes only and is subject to change by Sonus Networks without notice. While reasonable efforts have been made in the preparation of this publication to assure its accuracy, Sonus Networks assumes no liability resulting from technical or editorial errors or omissions, or for any damages resulting from the use of this information. Unless specifically included in a written agreement with Sonus Networks, Sonus Networks has no obligation to develop or deliver any future release or upgrade or any feature, enhancement or function.

Copyright © 2013 Sonus Networks, Inc. All rights reserved. Sonus is a registered trademark and SBC 1000 is a trademark of Sonus Networks, Inc. All other trademarks, service marks, registered trademarks or registered service marks may be the property of their respective owners.