Ascend

APPLICATION FEATURES

Ascend Signaling System 7 (SS7) Gateway

ASCEND

The Ascend SS7 Gateway (ASG) application consists of two major components:

- Internet Call Diversion (ICD) and Signaling System 7 (SS7) Infrastructure Software

Internet Call Diversion – enables the offloading of Internet traffic from the Public Switched Telephone Network (PSTN). This function improves service quality and lowers infrastructure costs for service providers, plus provides a critical link between SS7 and data networks.

SS7 Infrastructure Software – a full, UNIX®-based implementation of the SS7 protocols for building and linking Intelligent Network elements. The ASG employs industry-standard SS7 signaling to set up and tear down calls, a prerequisite for transparently routing calls between voice and data networks. It features a widely deployed protocol stack that supports multiple variations of SS7 used in carrier networks internationally.

The following features are supported:

- **Complements Ascend MultiVoice architecture.** The ASG is a building block in the MultiVoice™ architecture that is designed to deliver voice and fax over IP, ATM and Frame Relay networks. Future applications will enable the ASG to use standards-based SS7 carrier signaling to direct voice traffic to a MultiVoice network.
- **Open, standards-based application.** Support for emerging and established Bellcore generic requirements, and ANSI and ITU standards assures an open interface between the PSTN and data networks. Future compliance with specifications recommended by the Technical Advisory Council (TAC) industry group and the Bellcore Internet Traffic Engineering Solutions Forum (ITESF) will allow ASG to interface with remote access concentrators provided by other vendors.
- **Expandable and flexible distributed architecture.** Supports the Enterprise Computer Telephony Forum (ECTF) framework architecture. The ASG can be integrated into an existing telephony network and can adapt to host a variety of applications over a diverse set of telephony resources. In addition, the ASG is capable of handling multiple links and networks while also providing centralized management of all circuits.
- **Processes all inbound data calls.** The ASG performs all relevant call processing to determine the destination of a call and sends a signal through the SS7 network. In addition, all data call tear-down functions are supported.
- **Operational interface performing functions.** Circuit queries, circuit blocking and shutdown are supported. The ASG includes a messaging and user utility called the Operations Character User Interface (OCUI) which provides an interface between the user and the access server and allows resources to be removed from service for maintenance purposes. Maintenance operations that impact usability of circuits are visible from the PSTN switch via the SS7 network and are supported by the ISUP blocking/unblocking functionality.
- **Comprehensive alarm management.** The Alarm Manager offers a centralized set of processes that handle all emergency, warning and messaging signals. In addition, the Alarm Manager continuously monitors the ASG system, detecting any error condition, fault, unexpected event or status change.
- **Call events automatically recorded.** Call Event Records (CER) are made for every call that the ASG attempts to handle. The individual records contain information about the call such as the SS7 point codes and circuits, the access server information, the dates and times of the call arrival, answer and disconnect. CER can be used to view the historical record of all call activity on the system.
- **Scalability from 50,000 to 100,000 ports.** A single gateway can support many network access devices that are sited in one location or geographically distributed, delivering a solution that can scale up to tens of thousands of modem ports. These configurations are based upon industry-wide averages for data call traffic patterns; they may not be the same for every service provider. Installed configurations will be based on traffic studies in individual service provider networks.



Where Network Solutions Never End™

Worldwide and North American Headquarters
Ascend Communications, Inc.
One Ascend Plaza
1701 Harbor Bay Parkway
Alameda, CA 94502, United States
TEL: 510.769.6001
FAX: 510.747.2300
E-mail: info@ascend.com
Toll Free: 800.621.9578
FAX Server: 415.688.4343
Web Page: http://www.ascend.com

European Headquarters
Rudolph-Diesel-Strasse 16
D-64331 Weiterstadt
Germany
Tel: +49.6150.1094.10
Fax: +49.6150.1094.94

Asia-Pacific Headquarters
Suite 1908
Bank of America Tower
12 Harcourt Road
Hong Kong
Tel: +852.2844.7600
Fax: +852.2810.0298

Japan Headquarters
Level 19 Shinjuku Daiichi-Seimei Bldg.
2-7-1 Nishi-Shinjuku
Shinjuku-ku, Tokyo 163-07, Japan
Tel: +81.3.5325.7397
Fax: +81.3.5325.7399
Web Site: http://www.ascend.co.jp

Latin, South America and the Caribbean Headquarters
One Ascend Plaza
1701 Harbor Bay Parkway
Alameda, CA 94502, United States
TEL: 510.769.6001
FAX: 510.747.2300

Ascend and the Ascend logo are registered trademarks and all Ascend product names are trademarks of Ascend Communications, Inc. Other brand and product names are trademarks of their respective holders.

1857c-af
11/98

©1998 Ascend Communications, Inc.