Dialogic®

Datasheet

Dialogic® DSI Diameter Stack

Dialogic® DSI Diameter Stack enables user applications to interface directly to IMS and LTE networks, for the realization of high value services in areas such as Mobility, Charging and Location.

The versatile DSI Diameter Stack is a high performance, carrier ready software implementation of the Diameter protocol. It is packaged with ease-of-use DSI Diameter Functional APIs (an extensible and flexible Java Functional API is available; a C++ Functional API is planned). These Functional APIs give a user application control over sent and received Diameter messages, while handling underlying Diameter protocol complexity to allow for straightforward application development.

Features	Benefits
Java Functional API (a C++ Functional API is planned)	Empowers user application development by providing a simple to use API with full access to Diameter attribute–value pairs (AVPs)
User Customizable XML Diameter Dictionaries	Enables easy extension and modification of Diameter AVPs for support of vendor-specific Diameter implementations and fast generation of new services
Scalable transaction-based licensing	Gives a low cost of entry for new projects, plus the ability to scale up to meet demanding application throughput requirements
Comprehensive support for a wide range of Diameter interfaces; **Mobility - S6a, S6d, S13 and S13'** **Charging - Ro, Rf** **Location - SLh, SLg**	Enables high value user applications for Mobility, Mobile Payments and Location to be swiftly developed for deployment into IMS and LTE networks
Compatible with other Dialogic® DSI Protocol Stacks	Gives the ability to build systems spanning 3G and 4G networks, requiring, for example, GSM MAP (over SIGTRAN) and Diameter support.

The DSI Diameter Stack operates within the field proven Dialogic® DSI Protocol Stacks message environment, as shown in Figure 1. This provides a dependable base for high value user applications connecting into IMS or LTE networks.

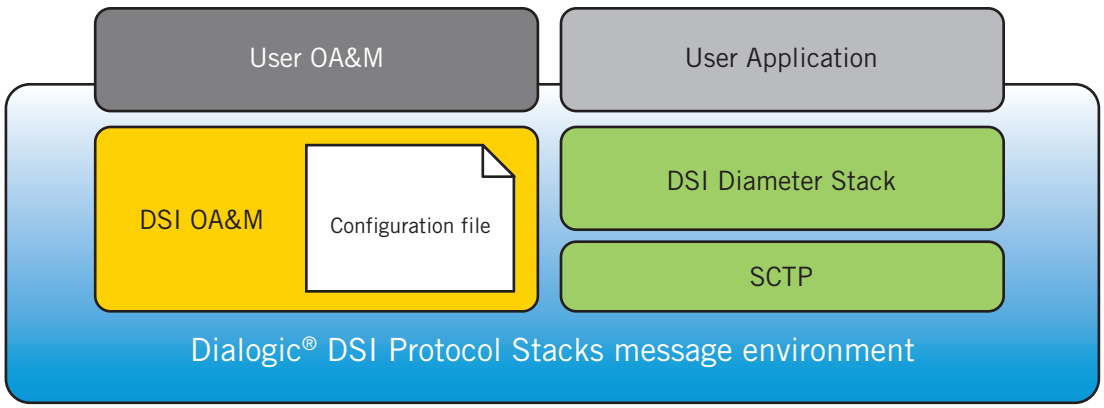

Figure 1 DSI Diameter Stack and the Dialogic® DSI Protocol Stacks message environment

The DSI Diameter Stack supports;

- Peer Management: Establishment and control of peer connections
- Session Management: Implementation of Diameter session state machines
- Route Management: Routing control based on destination host, realm and application id, including support for resilient routes
- SCTP transport layer for connectivity, including multi-homing support for network-level fault tolerance
- Collection of throughput statistics and measurements
- Capture of comprehensive trace information
- The DSI Diameter Stack configuration interface, giving the ability for peer connections, routes, applications and timers to be controlled

Operation within the DSI Protocol Stacks message environment enables multithreaded user applications to be developed, supporting both Diameter and SS7-based protocol stacks. For instance, this could facilitate creation of an interworking function between GSM MAP-based and Diameter-based interfaces as per 3GPP TS 29.305.

Flexibility to interface with vendor-specific Diameter Variants

The Dialogic® DSI Diameter Stack supports the ability to handle messages for vendor-specific Diameter variants. Diameter messages are defined in an XML 'Diameter Definition File' supplied with the DSI Diameter Stack. This Definition File can be used as supplied, to provide an IETF and 3GPP standards-based Diameter implementation. Alternatively, the supplied XML Diameter Definition File can be edited to meet the needs of a vendor-specific Diameter implementation, by modifying defined AVPs or adding new ones.

Technical Specifications

Diameter Base Protocol Support	RFC3588 and RFC6733
Diameter Interface Support	
Charging	Ro interface for real-time online charging applications (3GPP TS 32.299)
	Rf interface for offline charging applications (3GPP TS 32.299)
	Diameter Credit-Control Application (RFC 4006)
Mobility	S6a interface for transfer of subscriber-related data between MME and HSS (3GPP TS 29.272)
	S6d interface for transfer of subscriber-related data between SGSN and HSS (3GPP TS 29.272)
	S13 and S13' interfaces for support of Mobile Equipment Identity Check procedure (3GPP TS 29.272)
Location Services	SLg interface between MME and GMLC (3GPP TS 29.172)
	SLh interface between GMLC and HSS (3GPP TS 29.173)
Operating System Support	Linux; Solaris (SPARC-based and x86-based servers)
Transport Protocol	SCTP (RFC 4960 compliant)
	IPv4 (IPv6 is planned)
Functional API language support	Java (C++ is planned)
Licensed Capacities	
Base Throughput Licenses	Base licenses available for 500, 1000, 1500 and 2000 Transactions Per Second
Additive Licenses	Additive licenses available (for 100, 200, 500 and 1000 Transactions Per Second) as throughput needs grow
Service plans	See Dialogic® Pro™ Services information at www.dialogic.com/products/services

For More Information

For more information about the product discussed in this datasheet, contact your local Dialogic representative. Worldwide contact information can be found online at www.dialogic.com/contact.

Dialogic®

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