Datasheet

Dialogic® DSI Diameter Stack

Dialogic® DSI Diameter Stack enables user applications to interface directly to IMS and LTE networks, to enable high value services in areas such as Mobility, Charging, Policy, Location and SMS.

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 for Java and C++. 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 and C++ Functional API	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	Enables high value user applications for Mobility, Charging, Policy, Location and SMS 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.

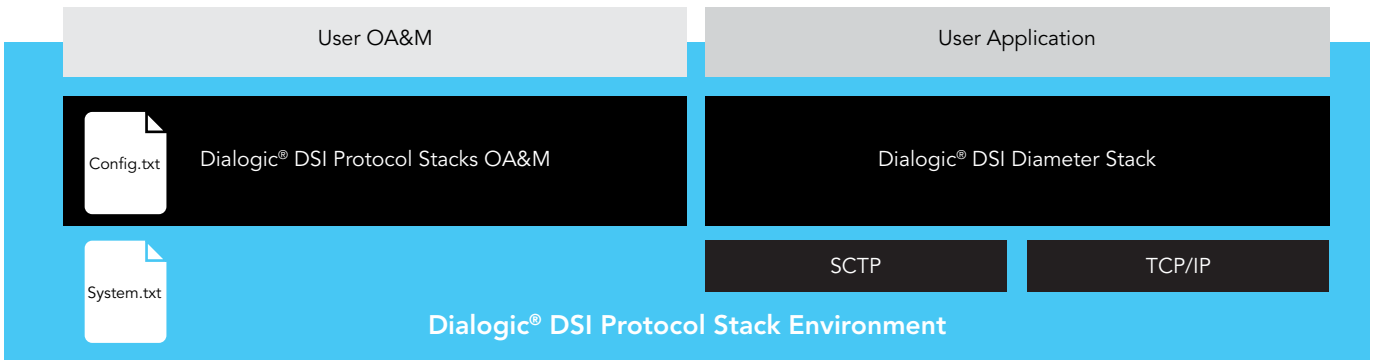

Figure 1 Dialogic® DSI Diameter Stack and the Dialogic® DSI Protocol Stacks message environment

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 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 and Policy	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)
	Gx interface between PCEF and PCRF (3GPP TS 29.212)
	Rx interface between AF and PCRF (3GPP TS 29.214)
	S9, S9a interfaces between VPCRF and HPCRF (3GPP TS29.215
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)
SMS	S6c interface between GMSC and HSS (3GPP TS29.338)
	SGd interface between MME and SMSC (3GPP TS29.338)

Operating System Support

Linux

Solaris (x86)

Transport Protocols

SCTP (RFC 4960 compliant)

TCP/IP

IPv4

IPv6

Functional API language support

Java and C++

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

www.dialogic.com

For a list of Dialogic locations and offices, please visit: https://www.dialogic.com/contact.aspx

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