

# IMS Diameter Toolkit



## Application

The Softil IMS Diameter Toolkit is a powerful software tool designed for the development of IMS Diameter-compliant network elements. It includes all required development components, including a set of quick-start sample applications that demonstrate efficient API usage, a GUI test application, and detailed documentation. Implementing all major IMS interfaces and IETF RFC 3588-compliant, the IMS Diameter Toolkit allows seamless integration with IMS-based IP networks (3GPP, TISPA and Packet Cable 2.0).

The IMS Diameter Toolkit is standards-based and highly reliable, delivers superior performance, and is used to develop both client and server applications. It is designed to ensure maximum flexibility and is equipped with API hooks that allow the application layer to control call flows and objects inside the Toolkit for enhanced application capabilities.

The IMS Diameter Toolkit allows multiple applications to run over it transparently. It is developed completely in-house, with no use of open source, and is available in C Code.

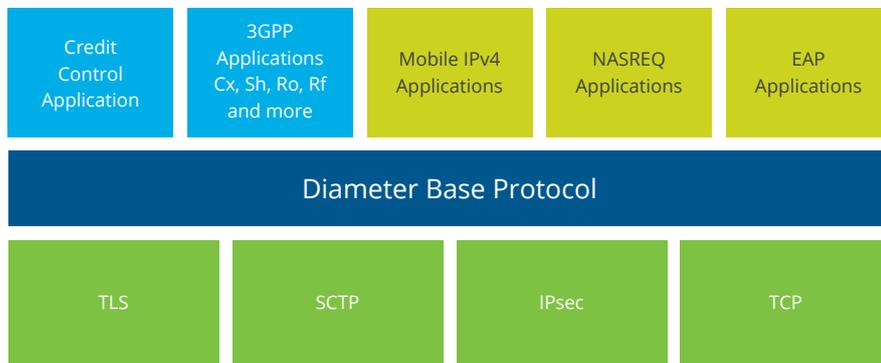
## Diameter Protocol

Diameter is an extensible messaging protocol, enabling Authentication, Authorization and Accounting within and across IP multimedia networks that rely on secure and reliable transports. Diameter evolved from the RADIUS protocol but is much more scalable and well defined, has fail-over capabilities, runs over secure TCP/SCTP transport, and more. Its modular architecture offers a flexible base protocol that allows application-specific extensions.

## Diameter and IMS

The IMS standard bodies chose the Diameter protocol for enabling IMS network Authentication, Authorization and Accounting capabilities. IMS-specific interfaces were developed to standardize Diameter-protocol communication in the IMS network.

## Diameter Protocol



## Softil Diameter Toolkit—IMS Interfaces

Interfaces	Description
Sh	Interface between an AS (SIP-AS or OSA-CSCF) and an HSS
Dh	Interface between an AS and an SLF
Rf	Offline charging interface between an IMS network entity or an AS and a CCF
Ro	Online charging interface between an AS or MRFC and the ECF
Cx	Interface between a CSCF and an HSS
Dx	Interface between a CSCF and an SLF
Gq	Reference point between a P-CSCF and a PDF
Gx	Interface between an Policy and Charging Rules Function (PCRF) and a Policy and Charging Enforcement Function (PCEF)
Rx	Interface for exchanging flow-based charging information between the Charging Rules Function (CRF) and the Application Function (AF)
Px	Interface between an HSS and a Presentity Presence Proxy
Ph	Interface between an AS and a Presence Network Agent
Gy	Interface between a PCEF and an OCF
Gz	Interface between a PCEF and a CDF
Wx	Interface between an HSS and an AAA Server
S9	Interface between HPLMN and VPLMN
S6a	Interface between MME and the HSS

## IMS Developer Suite

The Softil IMS Diameter Toolkit is part of Softil's IMS Developer Suite, which includes all signaling and media Protocol Toolkits and products to easily and cost-effectively meet the IMS challenge. The Diameter Toolkit works seamlessly with all Softil signaling Protocol Toolkits.

### Protocol Toolkits

- IMS SIP Developer Suite
  - IMS SIP Toolkit
  - XDM Toolkit
  - MSRP Toolkit
  - ICE/STUN/TURN NAT Traversal Toolkits
- IMS Megaco/H.248 Toolkit
- IMS Diameter Toolkit
- IMS Advanced-RTP/RTCP Toolkit

IMS Application Server Platform

IMS SIP Server Framework

IMS Client Suite

## Ordering Information

Considering the wide range of available system configurations, we recommend contacting Softil for detailed ordering information.

## Softil Global Services

Softil Global Services provides a variety of professional services, support services and education services, all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit our website at [www.softil.com](http://www.softil.com) or contact your Softil sales representative.

For more information, contact Softil at [info@softil.com](mailto:info@softil.com)

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