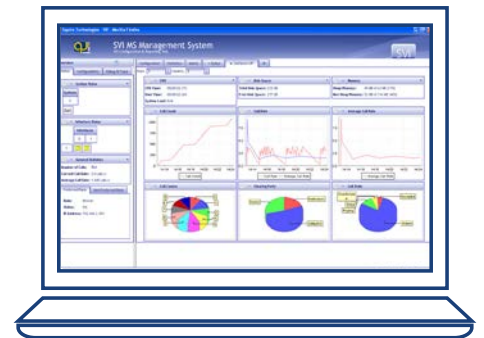


Product Datasheet

SEP 18 / Rev. 2.41

SVI_DSC

Diameter Signalling Controller



The SVI-DSC provides a carrier grade Diameter signalling product delivering any combination of routing (DRA), inter-working (IWF) and network edge (DEA) functionality.

Continuing Squire Technologies decades of signalling expertise the SVI-DSC comes with powerful routing, message manipulation, debug, redundancy, load balancing, monitoring and maintenance functionality out of the box.

The SVI-DSC allows service providers to rapidly manage and rollout new services in a Diameter network safe in the knowledge that they are deploying a scalable, carrier grade product with full 24x7x365 support from Squires signalling specialists.

Delivering:

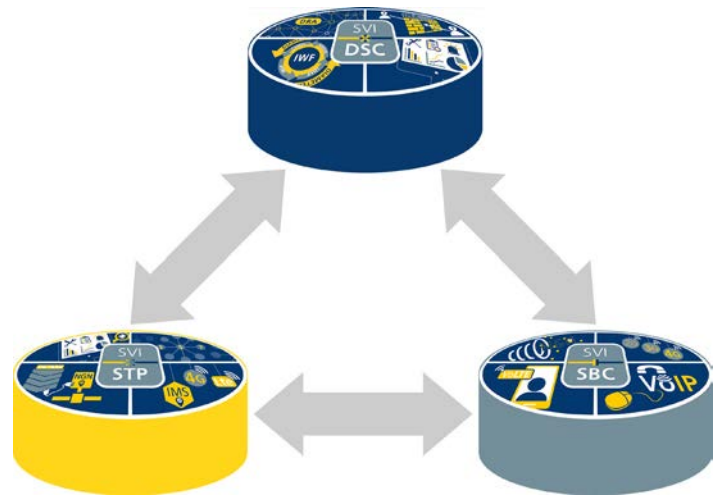
- **Comprehensive** Diameter traffic management
- **Legacy Interworking** - retain seamless inter-op with legacy networks
- **Service Migration** - easily migrate 2G/3G services to 4G
- **Roaming** - topology hiding and security
- **Wi-Fi offload** for mobile subscribers
- **Scalability** - advanced load balancing and congestion control allows operators to easily scale
- **Vendor Interoperability** - using Diameter Manipulation Engine

Features

- Full DRA, DEA and IWF support
- NFV ready
- Load Balancing
- n + 1 redundancy
- Overload and Congestion Control
- Scales to 100K TPS
- SS7 / SIGTRAN support
- Detailed debug and trace
- Comprehensive OA&M
- Powerful routing support
- Flexible message manipulation and normalisation
- Fully featured Service Creation Toolkit
- SNMP support

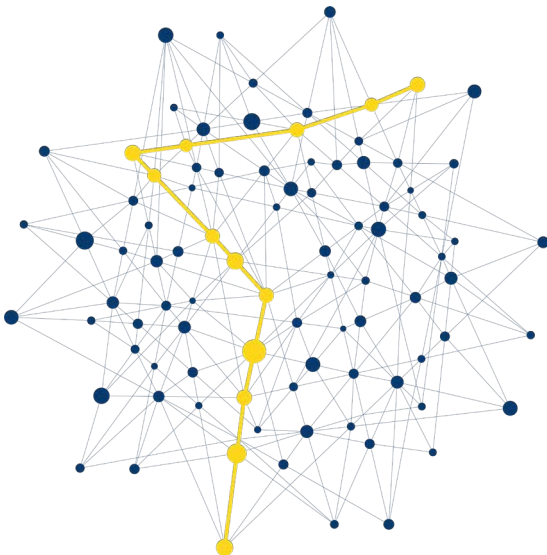
Integrated Deployments

The modular build means that the SVI-DSC can be easily deployed as an integrated product alongside Squire Technologies range of SVI products. Integrated deployment with the SS7 STP product provides a comprehensive bridge for legacy networks and Squire Tech's carrier grade SBC with VoLTE support delivers a fully flexible 4G solution.



Load Balancing, Overload and Congestion

To handle congestion, overload and scalability of Diameter server nodes such as PCRF, HSS, OSS the SVI-DSC has a range of advanced load balancing and throttling capabilities. Load balancing can be performed on a range of criteria for example on AVP contents, service failure to round robin algorithms, reattempts etc. Meanwhile traffic can be throttled based on bandwidth usage, message per second, peer requests etc.



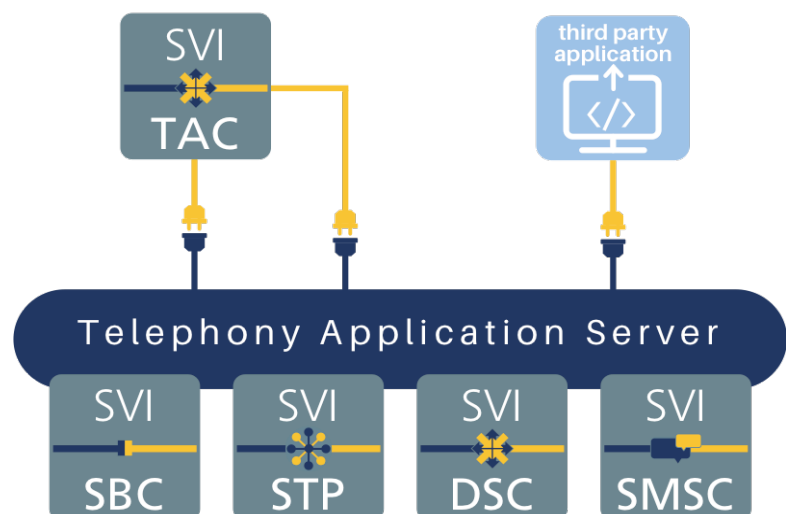
Routing, Normalisation and Manipulation

Extensive routing capabilities come as standard across the entire SVI range and on the SVI-DSC delivers not only real-time routing but an offline harness where routing and configuration can be tested before going live. Routing conforms to RFC 3588 and can be performed on header and AVP content, protocol type and has full support for session bindings.

The SVI-DSC's in-built Diameter Manipulation Engine is powered by regular-expressions insuring normalisation and manipulation at the Diameter signalling interface.

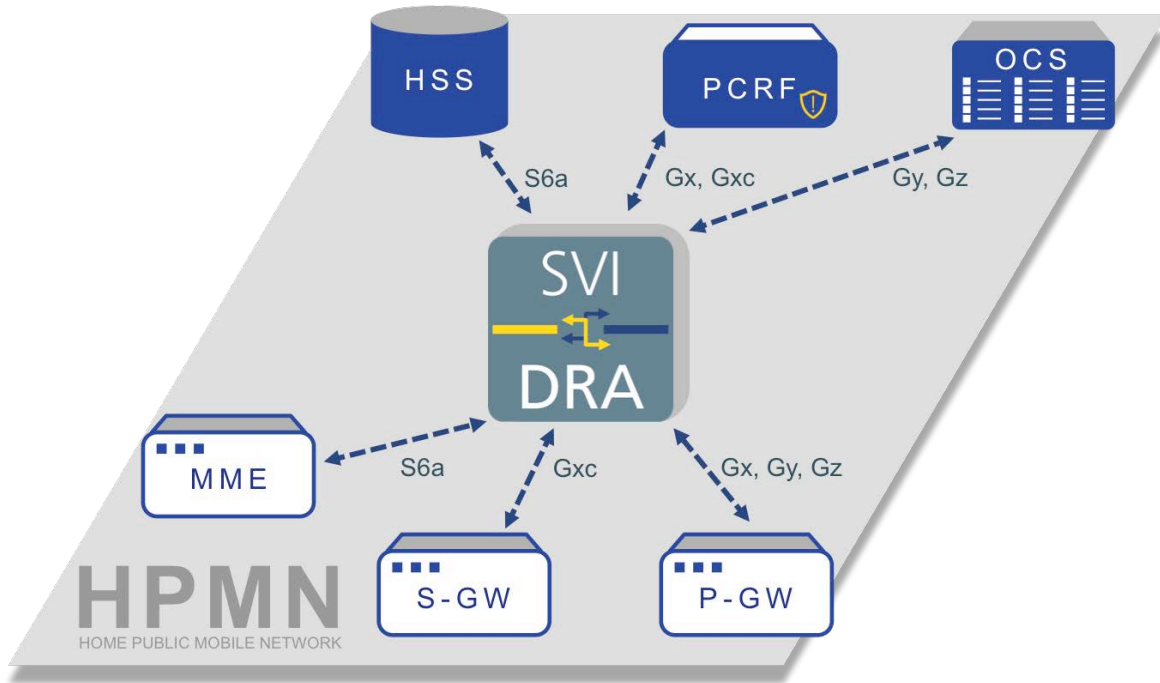
Telephony Application Server

The SVI_TAS operates over clearly defined API's that present an abstracted version of the underlying DIAMETER, SIP, CAMEL, MAP etc signalling. It can be driven by either Squire Technologies python based client (SVI_TAC) or by operators 3rd party applications, and provides an extremely flexible, service driven platform with huge benefits.



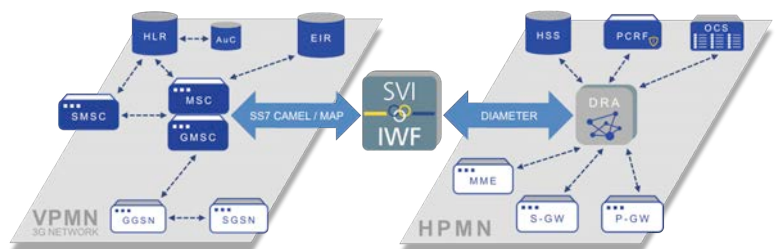
Diameter Routing Agent

The Diameter Routing Agent is the central routing point in any Diameter network providing flexible routing and message manipulation to insure inter-op between multiple devices and device vendors. At the same time it prevents overload and congestion of diameter traffic through sophisticated load balancing and routing algorithms whilst delivering graceful scaling to match network demand.



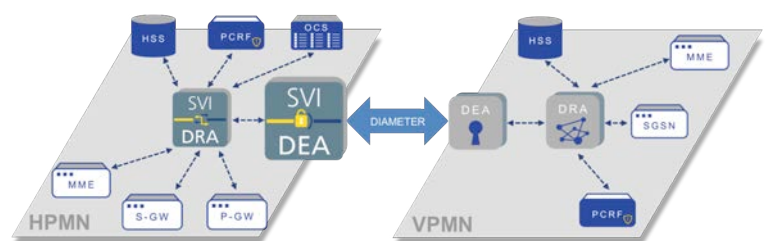
Interworking Function

The Inter-working Function (IWF) provides a vital bridge between legacy networks and Diameter based 4G LTE networks. Supporting 3G SS7 MAP and CAMEL inter-op with 4G Diameter insures service providers can rapidly provide roaming for their subscribers without having to upgrade legacy equipment. Offload to incumbent WiFi networks can also be supported through Diameter to Radius inter-op.



Diameter Edge Agent

At the edge of the Diameter network sits the Diameter Edge Agent. Its primary function is to provide network security with secure exchange of authentication, authorisation and subscriber policy. Out of the box it provides topology hiding, DOS and DDOS protection whilst also delivering load balancing and congestion control functionality.



SVI_DSC

Technical Specifications

IP	
Networking	IPv4, IPv6
Transport Protocol	TCP, UDP, SCTP, SIGTRAN, TLS/DTLS
Diameter base specs	RFC 6733, RFC 3588
IETF Diameter Agent Support	Relay, Proxy, Translation
3GPP Diameter Agent Support	DRA - 3GPP TS29.228 SLF - 3GPP TS29.228 Subscriber Locator Function
3GPP Diameter Agent Support	IWF - MAP TS29.305 - CAMEL 3GPP 32.293 - RADIUS T29.234, IR.61 - LDAP
GSMA Diameter Agent Support	DEA - GSM IR.88
Protocol Support	DIAMETER, RADIUS, SS7, HTTP, SOAP, REST, XML, LDAP, SQL
Diameter Interface Support	Sh, Sd, Sy, Dh, Rf, Ro, Re, Cx, Dx, Sp, Rx, Gx, Gy, Gz, Gq, Gi, SGi, Zh, Dz, Zn, Zn', Dw, Wa, Wd, Wx, Wm, Wg, Pr, Wm, Gmb, Mz, Bi, MM10, Ty, Tx, S6a, S6b, S6d, S7c, S9, S13, S13', Gxa, Gxb, Gxc, SWa, SWd, SWn, SWm, SWx, Sta, H2, Gq', E2, E4, E5, Re, A4, Rr, Zh, Zn, Cx, Dx, Pkt-laes-2, P-CSCF- PAM, Pkt-mm-2, TC-6, TC-7, TC-8, TC-9, TC-10, TC-11, DB-0, DB-2, BI-1, LOC-1, Rw, Rs
Form Factor	1U
NFV	Minimum server specs depend on sizing requirements
SS7	
E1 / T1	8E1 per board scale to 128
SS7 Low Speed Signalling Links (LSL)	2 to 512
High Speed Links (HSL) supporting Q.703 Annex A and ATM AAL5	2 to 16
Originating Point Codes	32
Destination Point Codes	1024
Linksets	128
A, F link support	Yes
SIGTRAN	
SCTP	RFC 2960 Stream Control Transmission Protocol
M2UA	RFC 3331 Signalling System 7 (SS7) Message Transfer Part 2 (MTP2) -User Adaptation Layer (M2UA)
M3UA	RFC 3332 Signalling System 7 (SS7) Message Transfer Part 3 (MTP3) - User Adaptation Layer (M3UA)
SUA	RFC 3868 Signalling Control Part User Adaptation Layer (SUA)
M2PA	RFC 4165 Signalling System 7 (SS7) Message Transfer Part 2 (MTP2) User Peer-to-Peer Adaptation Layer (M2PA)
SNMP	Version 1,2 and 3 supported



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