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No. 33 – Class 5 Feature Support

WTL Products (Softswitch and Hybrid TDM/IP switches) can best be defined as "Class 4+"
That is to say, they are not full blown Class 5 Residential Switches in the traditional sense but they offer many more features than the standard interconnect and routing of an old-style Class 4.
In the TDM world WTL switches are often deployed as Class 4, indirect access devices. The high capacity call switching engine, the multi-protocol support, real time rating and the powerful routing functions have made the products very successful in this role. However, it is perfectly normal to use them for the direct connection of subscribers. This is increasingly so for SIP-based residential and business services.

SIP Trunking

SIP Trunking is the name given to the service of replacing business ISDN E1s or groups of analog lines with a single, multi-call SIP connection.

WTL SIP Trunking Benefits:
- Inbound, outbound or total call limits
- Wide interoperability with business CPE
- Real time rating & balances
- Strong authentication features
- Extensive CDRs generated
- Rerouting to fallback carriers

'Classical' Class 5 Features Supported

- Divert on Busy
- Divert on no answer
- SIP call forward
- User Authentication
- User programmed favorite numbers
- Last number redial
- Follow-on call
- Emergency service

Other Direct-Connect Subscriber Features

- Residential SIP Service
- Reseller Web Portal
- Business Customer SIP Service
- Interworking of different media gateways
- Prepaid Service
- Postpaid Service
- Web phone/PC phone support
- Calling Cards
- Call back
- Service numbers
- Number portability
- Carrier Pre-selection
- Low balance announcement
- Time remaining announcement

- SIP VoIP Routing Service (SIP to SIP, SIP to H.323, H.323 to SIP, H.323 to H323)
- Carrier Wholesale (Multi-tenant platform, multiple clients)
- ENUM (own or external database query) – No formal ENUM support but internal location database to map IP addresses to phone numbers
- Voicemail, voicemail to email, fax to email – Routing to Voicemail supported, Voicemail system not supplied. No conversion to email supported.
- CDR Reporting and Recovery
- Welcome announcement and balance announcement

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- Time remaining announcement (max call duration for a call can be enabled/disabled when needed).
- Top-Up (customer can input new calling card/voucher number when balance is low).

SIP + MVNO Operation

It is possible to create MVNO-type services with the WTL SoftSwitch. The SIP subscriber service can use existing GSM numbers without any need to get a new range of numbers from the regulator.

This service may be integrated with the MVNO or not, as required. In the first case, the switch supports automatic fallback to GSM with prior interrogation of the HLR to get the roaming number. This allows location-based rating and routing. If looser integration is needed then the switch still supports VoIP to VoIP or VoIP to GSM calls between subscribers.

SBC Features

An essential part of a well-designed VoIP network is a Session Border Controller (SBC). In order to make network architecture and deployment easier, WTL have designed extensive SBC features into our switches and gateways, instead of offering a standalone SBC device.
The benefits of the WTL approach include:
- Fewer boxes in the network (means less cost, easier deployment)
- Single point of administration
- Same policies/rules can be applied to both VoIP <u>and</u> TDM traffic

W T L   S B C   F e a t u r e   L i s t

- Firewall Traversal
- NAT Traversal
- Topology hiding
- IP Address Resolution/Management
- SIP to H.323 conversion
- RTP termination and regeneration
- SSL tunnels
- H.323 V2 & 3 (+ partial V4 support)
- H.323 Fast Start & Slow Start
- H.323 ToS support
- Qos Marking, DiffServe support
- SIP transaction rate limiting (limit number of SIP Invites)
- Detect and drop malformed packets

- Per trunk bandwidth RTP policing

- Voice codec conversion*
- Built-in firewall
- Authenticate VoIP calls and callers
- Session Admission Control
- Prevention of DoS attacks
- CDR generation
- G.711 / T.38 Fax relay for SIP and H.323
- RADIUS Support
- Digit matching/manipulation
- Deep packet inspection
- H.245 tunnelling support
- H.225 RAS messages for alternative gatekeeper functionality
- Source and destination trunk group support
- Simultaneous peering with multiple gatekeepers and gateways

* Codec conversion requires hardware-based voice resources

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SIP Application Servers

WTL equipment has successfully been deployed with a number of SIP application servers to add extra functionality not supported natively on our switches.
For example:
IVR/Customer Care systems (Avaya,DataMedia, Voxeo)
IP-PBX (Asterisk, Cosmocom, Mitel)
Class 5 feature Severs (Broadsoft, Centile)

Please contact your WTL account Manager if you are interested in connecting something not currently on our interconnect list.