

# VAS - Value Applications Server

VAS - the unique Applications Server for Carrier and Service Provider!

*The intense competition in telecommunication business constantly increases. Nowadays each T3 carrier or Internet Telephony Service Provider (ITSP) has to be able to differentiate its services by Value Added Solutions. For this reason there is a need for accordingly powerful and cost-efficient infrastructure. Exactly this is our concern and our challenge: We develop products and solutions for Telephony Service Providers, which allows them a fast and individual market appearance with Value Added Telephony Solutions.*

*The multi-tenant architecture based VAS platform of CTModule AG is scalable from a small entry server to a multiple redundant cluster solution. VAS grows with the amount of end-users and therefore ensures a cost-efficient solution with a short Return on Investment (ROI).*

*As the world's first carrier applications platform, VAS offers the possibility of individualized services: not only for the tenants but also for each individual end-customer!*

- ▶ CARRIER-GRADE MULTISERVICE APPLICATIONS PLATFORM FOR T3-CARRIER AND ITSP's
- ▶ FLEXIBLE MODULAR AND INDIVIDUALLY EXTENSIBLE
- ▶ MODULES: VOICEMAIL, FAXMAIL, CONFERENCE, IVR, ETC.
- ▶ INDIVIDUALLY EXTENSIBLE THANKS TO THE INTEGRATION OF THE DEVELOPMENT PLATFORM CTMAKER®
- ▶ INDIVIDUAL SERVICE OFFERING UP TO END-CUSTOMERS LEVEL (E.G. INDIVIDUAL IVR FOR BAKERY STONE)
- ▶ TELEPHONY SWITCH INDEPENDENT
- ▶ MULTI-TENANT ABILITY
- ▶ BLACKBOX CONCEPT WITH SOAP/XML INTERFACE, INCL. STANDARD IMPLEMENTATION OF THE USER INTERFACE
- ▶ HIGH SECURITY LEVEL THANKS TO SEPARATION OF THE SERVERS FOR THE USER INTERFACE AND FOR THE ENGINE
- ▶ OPEN SCALABLE

VAS (Value Applications Server) represents a modularly extensible, carrier-grade applications platform for innovative Telephony Service Providers. The black-box concept enables a fast integration into existing system environments. The multi-tenant architecture based VAS platform of CTModule AG is scalable from a small entry server to a multiple redundant cluster solution. Due to VAS' own development system CTMaker® and the interface "Open Inbound Manager" (OIM), the VAS platform can be individualized for each Telephony Service Provider: Up to end-customer level (business customers) individual applications such as ACD, IVR, Voice Portal, etc. may be offered. The unbeatable price/performance ratio makes VAS a must for each innovative and creative Telephony Service Provider.

## A Multi-service Applications Server par Excellence...

The Value Applications Server VAS offers Value Added Services to Telephony Service Providers end-customers par excellence. Those Value Added Solutions can be modularly arranged by the Service Provider. On demand existing modules can easily be activated by the VAS licensing system to offer these new services very quickly to tenants and/or end-customers. The Service Provider can define or develop own individual application modules using the VAS' own development tool CTMaker®. Thus an incomparable fast time to market for this competitive business is ensured. Value Added Services or Applications may be for example:

- ▶ Voice- and Faxmail System
- ▶ Conference System
- ▶ OneNumber Routing
- ▶ IVR/ACD
- ▶ Etc.

There are no limits of possibilities for attractive and profitable Value Added Solutions. At this point VAS offers the highest flexibility possible for an unbeatable price.

## Multitenancy for Resale...

As a matter of course the VAS architecture offers multi-tenant ability, which enables reseller of telephony services to offer any service module available on the platform. With the inimitable flexibility of the VAS platform it is even possible to put any individual service on the platform for a certain tenant. Thus tenants are able to differentiate in the market offering among each other by their own individual services based on one single infrastructure.

## Unique: Individualization of Services...

Based on the interface module "Open Inbound Manager" (OIM) Telephony Service Providers are able to individualize applications for each single end-customer. This new concept of individualization of carrier services is unique in the market place.

In the basic system VAS consists of two carrier class servers. The first one is called "VAS engine". It represents the applications' runtime platform. The second one is called "VAS GUI" and it provides the users' and administrators' interface to the applications. Using the SOAP/XML interface either an individual user Web interface can be connected or the existing VAS Web interface can be used.

## Switch independent...

VAS provides various standard interfaces and can be connected to any existing infrastructure. The Value Applications Server VAS supports



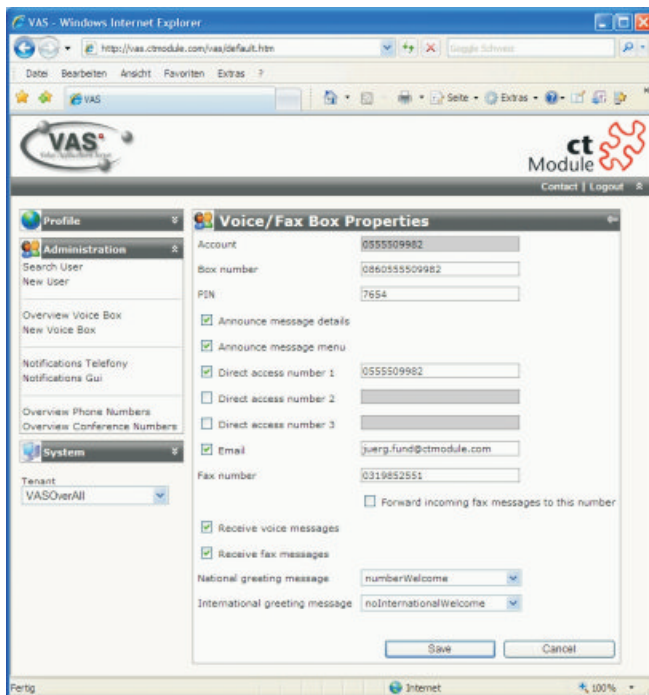
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telecommunication protocols like ISDN (DSS1), SS7, QSig, SIP or H.323 (both incl. T.38) to be plugged to a telephony switch. Restrictions apply, if the according switch does not support a specific functionality used by a certain VAS application. If a switch is being up for discussion, a carrier soft-switch of our partner Aarenet can be included in the VAS offering. Thus out of one hand an overall solution can be offered, which leaves nothing to be desired.

## Flexibility and Security...

The security of the VAS platform is just as strong as its flexibility: The VAS engine, which represents the executing part of the VAS environment, is separated from the user interface (VAS GUI) reached by external parties and can therefore optimal profit by the security infrastructure of the provider. The VAS engine is being implemented in an internal, secure network and provides only the effective required interfaces to the VAS GUI.



An optimal load balancing of the VAS GUI can be reached by hardware design. Thus the VAS engine always gets enough system resources even if the variable load of the user interface is high. The extension of security and availability of the system can be designed after the needs of the according provider.

## Feature Overview...

### General

- ⇒ Administration via VAS GUI or Web services (SOAP/XML)
- ⇒ Flexible hierarchical user and group administration, unrestricted hierarchical levels
- ⇒ Mapping on arbitrary organizational structures possible
- ⇒ Role based right management
- ⇒ Multilingual; the system may be localized to any language
- ⇒ Flexible, modularly extensible and individualizable
- ⇒ Open scalable

### VAS Engine

- ⇒ Communication over SIP, T.38, H.323, SS7, DSS1, QSig
- ⇒ Switch independent
- ⇒ Engine autonomous executable
- ⇒ Amount of concurrent calls only limited by hardware
- ⇒ Database support of Microsoft® SQL, MySQL, Oracle®

### Voicemail/Faxmail

- ⇒ Up to 3 direct access numbers
- ⇒ Forwarding to E-Mail
- ⇒ Notification to SMS
- ⇒ Fax forwarding
- ⇒ Several national and international announcements configurable
- ⇒ Callback function on received voice mails with available calling party number
- ⇒ Unlimited amount of voice mail boxes

### Conference

- ⇒ Amount of conference members only restricted by available lines
- ⇒ Resource optimized conference scheduling & invitation-management

### IVR (OIM)

- ⇒ Interface to integrate customer specific applications up to end-customers level
- ⇒ IVR/ACD/information systems/ASR-/TTS applications

*Subject to change without notice*

Please do not hesitate to contact us for any of your questions.

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