AARENET VOIP SWITCH SYSTEM CHARACTERISTICS

AARENET VOIP SYSTEMS

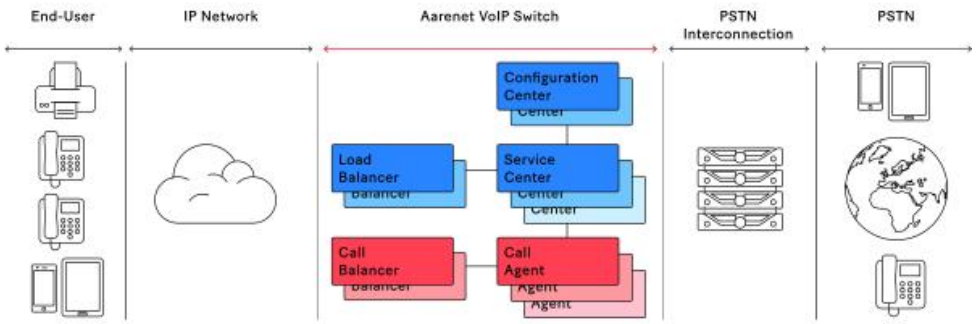
The Aarenet VoIP Switch ensures the interoperability of the various elements of the system and facilitates the cardinal functionalities of the system. The Aarenet VoIP Switch is a class 5 soft switch, tending on end-users the same quality, variety and availability of services as legacy Time Division Multiplex (TDM) systems. Subscribers will not experience any deviation compared with legacy systems. The Aarenet VoIP Switch supports all customary features such as emergency number routing, short number dialing, VAS numbers, carrier selection, number portability, fax-services, call-blocking sets and many other features. In addition, the system offers functionalities which are not available on legacy systems such as Web-access for subscribes or Virtual PBX functionalities.

AARENET VOIP SWITCH HARDWARE

AARENET VOIP SWITCH ARCHITECTURE

The modular design of the Aarenet VoIP Switch allows an optimal adaptation to specific customer requirements. For a small, non-redundant system all system components are installed on one server. Fully redundant carrier grade systems for SIP clients have usually two Service Centres, two Config Centres and two Load Balancers. To scale up and sup-port larger volumes addition-al Service Centres may be added. The architecture facilitates the realization of location redun-dant systems.

AARENET SYSTEM ARCHITECTURE



To support MGCP client systems require additional components such as the Call Balancer and the Call Agent. Depend-ing on the size of the system these components are installed on the same servers or on independent additional servers.

INTERCONNECTION

The intercarrier connection is a key feature of a VoIP System. Multiple links at different locations, for example in different countries and into different networks or to multiple carriers can be handled by the Aarenet System. The system will route calls on the most suitable alternative or at lowest costs. This feature is important in case a destination may not be reached at all or at insufficient quality via the preselected carrier or a carrier's pricing is not matching competitive standards.

SECURITY AND AVAILABILITY

Security is of upmost importance. For example, the authentication of the CPE's is fully encrypted and even voice traffic may be encrypted if this is not violating legal regulations. The VoIP system itself is protected by Firewalls or Session Border Controllers (SBC). The use of redundant, high quality components ensures the required operating reliability of 99.999%, which is required for carrier systems. To meet more demanding availability requirements the systems may be delivered in location redundant configuration.

CUSTOMER MANAGEMENT SYSTEMS

Thanks to their flexibility Aarenet VoIP Systems may easily be integrated into existing Customer Management Systems (CMS) or Billing Systems. Bidirectional automated data ex-change is implemented with specialized interfaces.

SIZE OF SYSTSEMS AND SCALABILITY

The maximum number of subscribers which may operate on one system is determined by the performance of the deployed hardware and therefore highly scalable.

EXTENSION LEVELS

Aarenet distinguishes between Test Systems, Entry Level Systems and Carrier Grade Systems.

TEST SYSTEMS

Test Systems are used for evaluation purposes and as pre-production systems for customers with productive systems. The Test System supports the full functionality. All software components are mounted on a server or on two servers in the case of a redundant system. Test Systems are equipped with non-commercial licenses.

ENTRY LEVEL SYSTEMS

Entry Level Systems are available with extensions from 1000 up to 5000 accounts. They are available as non-redundant systems mounted on one server as well as redundant systems on two servers. Entry Level Systems may not be extended beyond the limit of 5000 accounts. For more than 5000 accounts a change to a Carrier Grade System is required.

CARRIER GRADE SYSTEMS

Carrier Grade Systems have an initial system size of 5000 accounts. These systems may be extended to very large systems of several hundred thousand accounts without interruption of operations. Carrier Grade Systems are always redundant and can even be built in a location redundant configuration. They are designed and built according to specific customer needs and may include additional servers for Voice Mail, Data Base, etc.

LICENCING STANDARDS

Licences can be based on the number of accounts, numbers or concurrent calls, and can be issued in flexible, customised steps.

The Aarenet VoIP System is a Carrier VoIP Switch and provides telephony services that are unique in extent and quality for its price range. Modular design allows optimized adaptation to individual customer needs. It is the key element for telephony services in a modern NGN environment.