# AVAVoIP
## *VoIP Turn-key Solution*

AVAVoIP is a carrier-grade VoIP turn-key solution created from ground up to meet the challenges of the today's dynamic VoIP world. The system enables service providers to gain flexibility in all areas of the billing process: pricing, rating, invoicing, settlement, balance management, reporting, revenue assurance and accounting. AVAVoIP is available as a turn-key solution (integrated with Asterisk and Yate) and as a service (as a Cloud and an On-premise solution).

## Hardware requirements

Two types of servers are proposed: Standard Edition and High-Availability Edition.

### Standard Server:

- ✓ CentOS 6.3 compatible server
- ✓ 4x Cores Intel Xeon Processor 5000 Series or better
- ✓ Compatible Intel Server Boards chip-set 5000 or better
- ✓ Two-disk hardware RAID-1 controller. Recommended: 3Ware; other solutions need testing for driver compatibility: Mylex, Adaptec, Intel
- ✓ High-performance SATA/SAS disks (recommended: 32MB disk cache, at least 500GB each, at least 7200rpm, 10000rpm recommended)
- ✓ 4 GB or more of DDR3 Registered ECC memory
- ✓ 2x Gigabit NIC

### Standard Virtual Private Server:

- ✓ Linux VPS – CentOS 6.3
- ✓ Virtual Processors – 8
- ✓ Disk - 100GB
- ✓ RAM – 6GB
- ✓ IP – 1
- ✓ Bandwidth - 600GB per month

### High Performance Server:

- ✓ CentOS 6.3 compatible server
- ✓ 8x Cores Intel Xeon Processor 5000 Series or better
- ✓ Compatible Intel Server Boards chip-set 5000 or better
- ✓ Four-disk hardware RAID-5 controller, capable of running a hot-spare drive with auto-replace function. Recommended: 3Ware; other solutions need testing for driver compatibility: Mylex, Adaptec, Intel
- ✓ High-performance SATA/SAS disks (recommended: 32MB disk cache, at least 500GB each, 10000rpm)
- ✓ 16 GB or more of DDR3 Registered ECC memory
- ✓ 2x Gigabit NIC

### High Performance Virtual Private Server:

- ✓ Linux VPS – CentOS 6.3
- ✓ Virtual Processors – 16
- ✓ Disk - 200GB
- ✓ RAM – 8GB
- ✓ IP – 1
- ✓ Bandwidth - 3600GB per month

*Note! For media proxy applications bandwidth must be estimated based on projected volume.*

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## Single Unit Setup

Entry level solution, featuring all-in-one single, easy to deploy server.
Recommended for solutions that feature both the billing components and the VoIP components. Server type depends on the expected load.

Recommended setup is a single High Performance Server.

## Enterprise Setup

A redundant solution for higher loads and demanding environments. Aims at reserving all crucial elements and at providing automated fail-over. Services are split into web access layer, data storage plus processing layer and application layer. Each server is redundant with one running as master and second – as a hot stand-by copy. Upon primary failure, the secondary takes over automatically.

Recommended for customers that need high availability of the service.

### Server roles:

- ✓ Data Storage and Billing server – high performance server
- ✓ Backup Data Storage and Billing server – high performance server
- ✓ VoIP Switch server – high performance server
- ✓ Backup VoIP Switch server – high performance server

## Carrier Setup

A versatile and flexible solution for heavy loads and extremely demanding environments. Aims at reserving all elements and at providing automated fail-over. The system makes use of optimized virtualization for system partitioning in reseller business models. Further split of application layer into two parts to achieve higher throughput. Introduces networked storage for better data management and reservation. Introduces separate monitoring system.

Recommended for customers that need extra scalability and high availability of services.

### Server roles:

- ✓ Billing Server – primary – high performance server
- ✓ Backup Billing – high performance server
- ✓ Database Processing engine – high performance server
- ✓ Backup Database Processing engine – high performance server
- ✓ VoIP Switch Server – high performance server
- ✓ Backup VoIP Switch Server – high performance server
- ✓ Networked Disk storage array (at least 1 TB redundant disk space)
- ✓ Monitoring server (optional) - standard edition server

*Note! For high loads the VoIP switch may need to be setup in cluster configuration with SIP load balancer.*