



AVB AAA RADIUS: High Performance unified AAA RADIUS Servers

AVB Founded in 1999 to offer enhanced and improved billing systems, AVB is now globally recognized and has expanded its business worldwide while serving more than 300 Service Providers in over 40 countries. The company currently has trained developers and support engineers and a dedicated team of sales and marketing specialists. Company runs a 24 x 7 support center that serves its entire customer base of hundreds of customers.

AVB AAA RADIUS Server is a powerful unified AAA Server for Fixed and Wireless Service providers offering voice, data and converge multiple services.

AVB AAA RADIUS Server provides centralized authentication, authorization and accounting (AAA) and enables Service Providers to manage their AAA functions for their users.

AVB Unified AAA RADIUS with its special capability to support up to 10 Million AAA Transactions per day on a single server is one of the most cost effective and scalable AAA platform for small to medium range of Service Providers with flexible upgrade options to large scale deployments.

Services support:

- xDSL, GPON, FTTX & Cable
- ISDN, Dialup based ISPs
- Wireless ISP deployments such as Wi-Fi hotspots and WiMAX
- Prepaid Calling Cards / Pin-less / carrier pre-select
- Wholesale interconnect Carriers & SIP Peering services
- VoIP services - Call Back, SIP Trunking, Residential VoIP & Enterprise VoBB services
- Converged Multi Services Operators

Add on Billing components:

Optional add-on billing components also available:

- AVB Data Billing (Advanced ISP Billing) for data/broadband internet services
- AVB VoIP Billing for VoIP services
- AVB Convergent Billing Engine for Multi-services Operators

3rd party billing integrations option:

Moreover AVB Radius AAA server can be integrated with any third party RADIUS supported billing system.

Benefits:

Major benefits of AVB RAD series AAA RADIUS Servers are highlighted below

- Provides State-of-the-art scalability, reliability and performance
- High Performance RADIUS Server with capability to scale up to 10 Million AAA Transactions per day supporting 100k concurrent users on a single server
- Smooth migration path from small, medium to large scale setups
- Affordable software solution which can run on a low cost Hardware & COTS server(s)
- Add-on modules of Database Replication with Failover & Carrier Grade High Availability & Automatic Failover.

Features:

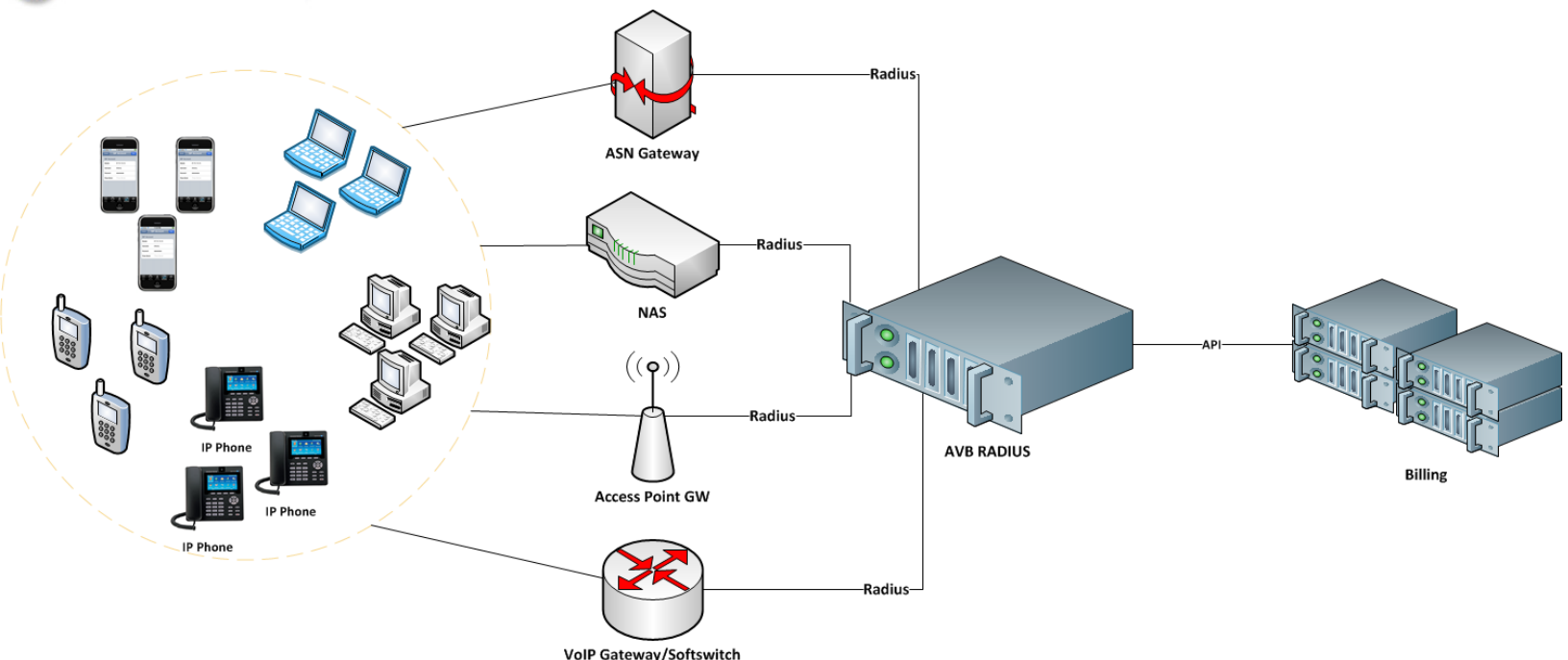
- Session Management: flexible session handling for active user sessions
- Support of Basic Authentications such as
 - MAC based authentication
 - Username/password based authentication (Portal based)
 - MD5 Digest
 - PIN
 - CLI/ANI based
 - IP based

- Advanced Authentications and multiple EAP authentications support
- Authorizations: Set of applications for Multiple authorization functions such as
 - Authorization (Origin)
 - Authorization (Request)
 - Authorization (Credit)
 - Authorization (Concurrency) for concurrency control
 - Authorization (Route)
 - Authorization (Capacity): for vendor side capacity management
- Start & Stop Accounting applications
- RADIUS Proxy capability
- DB Replication with Failover option

Add-on features available in Enterprise edition

- Support of Interim Accounting
- Session Control/CoA
- Re-authorization application with unit reservation
- Policy based Request routing
- Carrier Grade High Availability & Automatic Failover option

For list of complete features and details check the AVB RAD series feature list



AVB RAD Series editions

Standard Edition	Enterprise edition level 1	Enterprise edition level 2
<p>Standard edition supports</p> <ul style="list-style-type: none"> • 1 M AAA Transactions per day • 50 AAA TPS • Ideal for up to 10K concurrent users on a single server <p>Price Single server RADIUS SW license = USD 2,500-</p> <p>2 server licenses Primary + Backup software license with DB replication and failover = \$3,000</p>	<p>Enterprise edition level 1 supports</p> <ul style="list-style-type: none"> • 2 M AAA Transactions per day • 100 AAA TPS • Ideal for up to 25K concurrent users on a single server <p>Price Single server RADIUS SW license = USD 4,000-</p> <p>2 server licenses Primary + Backup software license with DB replication and failover = \$4,500</p> <p>Add on HA & Auto Failover = \$3,000</p>	<p>Enterprise edition level 2 supports</p> <ul style="list-style-type: none"> • 10 M AAA Transactions per day, 400 AAA TPS, and up to 100K concurrent users on a single server <p>Price Single server RADIUS SW license = USD 6,000-</p> <p>2 server licenses Primary + Backup software license with DB replication and failover = \$6,500</p> <p>Add on HA & Auto Failover = \$3,000</p> <p>Option to scale to unlimited version by adding more RADIUS licenses at \$1k per server only</p>

AVB RADIUS AAA

(Modules & Features)	Standard Edition (AVB RAD 1000)	Enterprise Edition (AVB RAD 2000 & AVB RAD 4000)
Features		
Basic Authentications such as - MAC based authentication - Username/password based authentication (Portal based) - MD5 Digest - PIN - CLI/ANI based - IP based	✓	✓
Advanced Authentications: - Password Authentication Protocol (PAP), Challenge Handshake Authentication Protocol (CHAP), MS-CHAP v2 - EAP Authentication (RADIUS only) <ul style="list-style-type: none"> • EAP-TLS • EAP-TTLS • EAP-TTLS with MS-CHAP, PAP & MSCHAP V2 	✓	✓
Interfacing with DHCP Server AdvOSS AAA supports interfacing and integration with DHCP servers, thus abstracting out Authentication clients from DHCP details <ul style="list-style-type: none"> • DHCP lease query • DHCP address allocation request • IP Address allocation and configuration via RADIUS attributes in Access Accept 	✓	✓
Authorization Applications		
Authorization (Service & Service Profile)	✘	✓
Authorization (Origin)	✓	✓
Authorization (Request)	✓	✓
Authorization (Concurrency): for concurrency control	✓	✓
Authorization (Credit): for Credit Control	✓	✓
Authorization (Route)	✓	✓
Authorization (Capacity): for vendor side	✓	✓

Re-Authorization Application	x	✓
<ul style="list-style-type: none"> • Unit Reservation <ul style="list-style-type: none"> • Units of duration or usage reserved by network service delivery function before delivering the service • Units reserved from the account balance • (Re-)Authorization application reserves the units before delivering service in collaboration with Charging Engine <ul style="list-style-type: none"> • More units reserved when expired if session still going on • Residual units returned to account from last reservation when session terminates <ul style="list-style-type: none"> • Enables pure real-time prepaid behavior • Enables concurrent sessions • Account cannot go into negative balance ever • Quota Reservation 	x	✓
Session Control/CoA	x	✓
Accounting Application	✓	✓
<ul style="list-style-type: none"> • Start Accounting • Stop Accounting 	✓	✓
Interim Accounting	x	✓
Session Management	✓	✓
Advanced RADIUS Proxy Capabilities	✓	✓
Policy based request routing	x	✓
Hunt-group based Routing/Policy based Access Control <ul style="list-style-type: none"> • User can create/Delete a new hunt group • Specify users as members of Hunt-groups. • Specify a RADIUS attribute as a filter to be used to match the Hunt-group in an incoming packet • Associate IP address pools with Hunt-groups to bind specific users with specific IP address ranges. This feature is useful in controlling user access to the network from specific entry points only. 	x	✓
Logging	x	✓
WiMAX support	x	✓
Dynamic IP address allocation <ul style="list-style-type: none"> - NAS side pooling - Server side IP Pooling 	x	✓
Subscriber Profiles Management	x	✓
Management, Configuration and GUI	✓	✓
Integrated Hot-lining/Captive Portal	x	✓

Database Integration	✓	✓
Prepaid Authorization	✓	✓
Ability to generate raw CDRs in a file for Revenue Assurance if accounting DB is unavailable	✓	✓
Non-Functional		
Extensibility		
VSA Definitions and RADIUS Dictionary Extensibility	✓	✓
Performance & Scalability Architecture		
High Speed Processing Performance	1 M AAA Transactions per day 50 AAA TPS	Enterprise level 1: 2M AAA Transactions per day, 100 AAA TPS Enterprise level 2: 10M AAA Transactions per day, 400 AAA TPS, and up to 100K concurrent users on a single server
Database Replication with Failover	✓ add on Module	✓
Carrier Grade High Availability & Automatic Failover	✗	✓ add on module
Centralized Monitoring	✓	✓
Admission control & rate limiting (for overload protection on NAS side)	✗	✓