

# Globberry AAA Solution

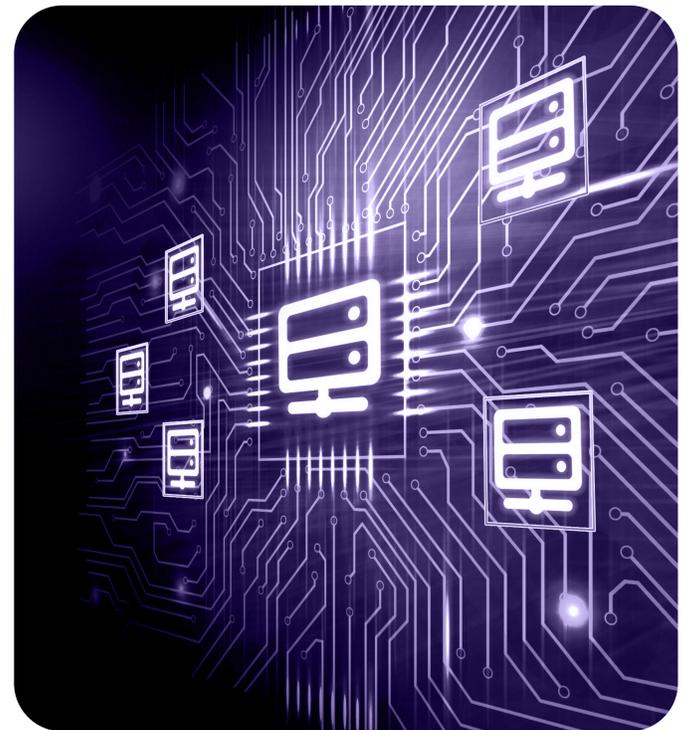
Carrier-grade authentication, authorization, and accounting — affordable, flexible, and built for scale.

## Overview

Modern operators face a dual challenge: maintaining carrier-grade reliability while reducing operational and licensing costs. Traditional AAA systems, tied to expensive vendor ecosystems, make it difficult to scale efficiently or adapt to the evolving service landscape.

Globberry AAA Solution changes this. Built on open, field-proven frameworks, it provides the same reliability and performance as legacy systems — at a fraction of the cost. Its modular, cloud-ready architecture is designed for telecom operators and ISPs who value flexibility, rapid deployment, and independence from vendor lock-in.

Deployed across broadband, fixed, and mobile networks, the solution supports millions of concurrent sessions while integrating seamlessly into existing OSS/BSS environments.



## Key Benefits

### Cost Efficiency

- Built primarily on open-source software components, eliminating traditional license fees.
- Transparent pricing model — no per-session or per-subscriber costs.
- Reduces CAPEX and OPEX while ensuring access to continuously maintained, community-driven technologies.

### Elastic Scalability

- Scales horizontally by adding additional stateless processing nodes without downtime.
- Handles growing subscriber bases and traffic surges seamlessly.
- Ideal for large-scale operators, national ISPs, and enterprise network providers.

### Virtualization & Cloud Readiness

- Fully compatible with virtualization environments including VMware, OpenStack, and Kubernetes.
- Supports VNF and CNF architectures, enabling fast deployment and scaling through orchestration tools.
- Automated configuration and provisioning using REST APIs and YAML templates.

### Seamless Integration

- Open APIs for integration with OSS/BSS systems: provisioning, mediation, CRM, billing, and self-care portals.
- TM Forum-aligned architecture to simplify interoperability across platforms.
- Supports real-time analytics, reporting, and monitoring via standard interfaces (SNMP, REST, Kafka).

### Reliability & Service Continuity

- Achieves 100% uptime through active-active redundancy and stateless node design.
- Features built-in bypass mechanisms for session continuity during maintenance or component failures.
- Supports database replication and failover for maximum resilience.

# Solution Architecture

The Globberry AAA Solution is built on a modular, distributed architecture designed to balance performance, redundancy, and flexibility.

## AAA Processing Cluster

- Powered by the Radiator engine, supporting both RADIUS and Diameter protocols.
- Handles authentication, authorization, and accounting requests from network access servers, BRAS, and EPC elements.
- Fully multi-threaded for high-performance environments.

## Globberry API Gateway

- Acts as a bridge between the AAA core and OSS/BSS components.
- Supports subscriber provisioning, modification, and session management.
- Includes robust authentication and access control.

## Load Balancer and CoA Module

- Ensures optimal traffic distribution across multiple nodes.
- CoA (Change of Authorization) supports real-time adjustments — throttling, policy updates, or service terminations.

## Database Layer

- Built on PostgreSQL or MariaDB clusters, configured for replication and high availability.
- Supports high-volume session data, accounting logs, and subscriber profiles.
- Includes optimized caching for real-time lookups.

## Administration & Reporting Server

- Web-based GUI for operators to manage subscribers, sessions, and policies.
- Provides detailed dashboards and KPIs for usage, performance, and fault statistics.
- Supports scheduled and on-demand reporting in PDF, CSV, and Excel formats.

## Bypass Functionality

- Keeps users connected during backend outages or maintenance.
- Handles temporary RADIUS proxying and cached authentication states.

## Functional Highlights

### Multi-Access Technology

Supports PPPoE, IPoE, DHCP Option 82, 802.1x, Wi-Fi, and LTE EPC.

### High Concurrency

Millions of concurrent sessions with low latency (<10ms per transaction).

### Multi-Vendor Interoperability

Compatible with Cisco, Huawei, Nokia, Juniper, and other vendors.

### Flexible Policy Enforcement

Supports integration with PCRF/PCF for QoS and bandwidth control.

### Advanced Accounting

Detailed CDR generation, aggregation, and real-time export to billing systems.

### Monitoring & Visualization

SNMP monitoring, REST APIs, and Grafana/Prometheus integration.

## Use Deployment Models

### Centralized Architecture

- Ideal for large operators managing millions of subscribers through a single data center or regional cluster.

### Distributed / Edge Architecture

- Enables regional AAA nodes close to access networks to reduce latency and enhance resilience.

### Cloud-Native Deployment

- Containerized setup with Kubernetes orchestration for rapid scaling and lifecycle management.

## Integration Scenarios

Globberry AAA seamlessly integrates into complex OSS/BSS landscapes, including:

### Provisioning and Self-Care Systems

Automated subscriber onboarding and real-time updates.

### Billing & Mediation

Real-time accounting exports and usage-based charging.

### Monitoring Systems

Northbound SNMP and REST APIs for alarms and performance data.

### Policy Control (PCRF/PCF)

Dynamic policy enforcement via Diameter interfaces.

## Use Deployment Models

### Broadband Access (Fixed and Wireless)

Subscriber management for IPoE, PPPoE, and Wi-Fi.

### Mobile Core Integration

EPC and 5GC-ready Diameter-based AAA for telecom networks.

### Enterprise Authentication

Centralized AAA for wired, wireless, and VPN access.

### Public Wi-Fi and Smart City Networks

Scalable, multi-tenant AAA for hotspot authentication.

## Professional Services



### Consulting

System audit, migration planning, and performance optimization.



### Implementation

End-to-end deployment, configuration, and user acceptance testing.



### Support

24/7 operations, second-line support, and proactive monitoring.



### Training

Customized sessions for operations, integration, and maintenance teams.

## About Globberry

Founded in 2014, Globberry quickly earned recognition from telecom industry leaders like Red Hat, Ericsson, and NEC. With proven expertise and carrier-grade solutions, we serve global telecom providers such as Vodafone, Veon, Kyivstar, and Telus. Our focus is delivering practical solutions and dedicated professional services designed specifically for telecom network management and infrastructure.



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