Cisco Access Registrar Business Data Sheet

Product Overview

Cisco® Access Registrar is a high performance, carrier class RADIUS/Diameter solution that provides scalable, flexible, intelligent authentication, authorization, and accounting services.

Service providers face tremendous challenges in deploying and managing mission-critical access services, such as AAA. These include:

- Efficiently serving an increasingly diverse mix of access technologies (and corresponding authentication protocols), users, and roaming partners
- Rapidly delivering new subscriber services for competitive advantage (for example, a new prepaid service)
- Efficiently managing resources like IP addresses or session limits
- Keeping up with scalability, performance, and stability demands

Adding to this complexity is the fact that many service providers have multivendor, heterogeneous AAA environments and increasingly complex business requirements. Service providers also are under pressure to reduce operating expenses (OpEx) and have to keep up with the needs to centralize data stores and adapt billing systems. Operators need a comprehensive access management solution to address these issues.

Cisco Access Registrar consists of a RADIUS/Diameter AAA server designed from the ground up for scalability and extensibility for deployment in complex service provider environments including integration with external data stores and systems and multivendor network access servers. Session and resource management tools track user sessions and allocate dynamic resources to support new subscriber service introductions. The solution supports service provider deployment of access services by centralizing AAA information and simplifying provisioning and management. See Figure 1.

Figure 1. Cisco Access Registrar Provides Scalable, Flexible, Intelligent AAA Services
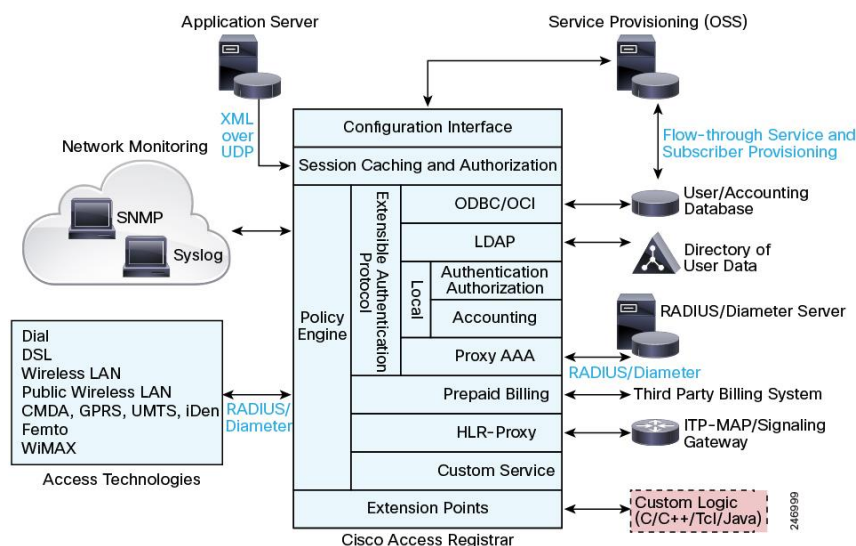
Features and Benefits

- Supports a broad range of wireline and wireless **access technologies** like DSL, dial, Code Division Multiple Access (CDMA), General Packet Radio Service (GPRS), Universal Mobile Telecommunications Service (UMTS), Wireless LAN, public WLAN, WiMAX, femtocell, and others. By enabling standardization on a common AAA server platform, the solution delivers operational and capital expense savings while providing flexibility to the service provider regarding choice in AAA.

- Provides support for a wide variety of **authentication protocols** such as Password Authentication Protocol (PAP), Challenge Handshake Authentication Protocol (CHAP), and Extensible Authentication Protocols (EAP), including EAP-SIM, EAP-AKA, EAP-TLS, EAP-TTLS, EAP-MSCHAPv2, EAP-GTC, PEAPv0, PEAPv1, LEAP, EAP-FAST) with the ability to extend to others such as POP3 through custom services for meeting unique requirements.

- Provides extensive **subscriber data store** support including an internal database and integration with existing external databases including Oracle, MySQL, Microsoft Active Directory (AD), and Open LDAP through the use of connectivity mechanisms such as Open Database Connectivity (ODBC), Lightweight Directory Access Protocol (LDAP), Oracle Call Interface (OCI), and Java Database Connectivity (JDBC). This integration support is schema independent, simplifying deployment and day-to-day operations, providing OpEx savings by using existing infrastructure, and helping to support networks with tens of millions of subscribers.

- Provides **scalability** to support large service deployments. An external session manager allows tens of millions of simultaneous active sessions. Additionally, the multithreaded architecture provides performance that scales with additional CPUs.

- Efficiently **manages resource use** with real-time session management to track user sessions and dynamically allocate resources like IP addresses (to support centralized IP address assignment) or user/group session limits (to support enforcement across access devices, access technologies, and multiple servers). The session manager also facilitates new revenue streams by helping to enable service enhancements such as reduced sign-on, personalization, and enhanced video delivery through consolidation of subscriber and network state data into one common session data store.

- Gives service providers an off-the-shelf, standards-based RADIUS/Diameter server that offers the **flexibility and extensibility** previously available only by maintaining internally built versions of public-domain RADIUS/Diameter software. With extension point scripting (EPS), the solution can be customized to meet unique business, regulatory, and technical requirements. EPS allows users to interact with request processing and communicate with Cisco Access Registrar at numerous API points to develop and deploy custom logic for user authentication, authorization, or accounting.

- Provides broad **integration support**: Reduces operational costs and speeds service rollout by supporting integration with provisioning, billing, and other service-management components. A billing interface allows billing vendors to integrate their systems into Cisco Access Registrar for prepaid functionality, such that service providers may offer prepaid data or usage-based premium services while reusing their existing billing system and protecting their investments.

Additional features and benefits of the AAA server include:

- Industry-leading RADIUS performance/transaction rate to handle the busiest networks

- Replication of the internal database, allowing multiple servers to be similarly configured for centralized management and ease of use

- Support for virtualization technologies: Oracle VM Server for SPARC (previously called Logical Domains, LDoms) and VMware ESXi 4.1, improving scale and availability and helping to enable server footprint reduction and efficient use of resources
- IPv4 and IPv6 support
- Option for end-to-end Cisco solution including software, Cisco Unified Computing System™ (Cisco UCS™) hardware, and professional services
- Resilience and reliability through server, remote system, and process system redundancy; automatic server restart; and Veritas and Sun clustering for high availability
- Support for PWLAN/hotspot markets and wireless data offload

Cisco Services

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For More Information

For more information about Cisco Access Registrar, visit http://www.cisco.com/go/car/, contact your local account representative, or send an email to ar-tme@cisco.com for presales/business queries or cs-ar@cisco.com for technical queries.