Business Access Gateway (BAG)

Operators aare implementing next-generation access networks to capitalize on emerging business opportunities. The Business Access Gateway (BAG) solution serves as the cornerstone for critical subscriber access and policy control functions ensuring simple, secure and seamless subscriber experiences across endpoints, hotspots, and carrier access networks.

CHALLENGE

Conventional enterprise wireless LAN controllers were designed for use in enterprise networks and are unable to meet the stringent service provider scalability, availability and security requirements. Meanwhile, carrier broadband network gateways do not offer the ability to layer on intelligent network services.

In response, new carrier-grade access gateways are specifically designed for next-generation carrier network deployments. They deliver high performance, strong security, massive scalability, advanced network services, and carrier-class reliability and integrate seamlessly with established service provider systems and practices.

BAG OVERVIEW

The advancements in the Internet and cloud services have led to the exponential growth of broadband. This growth presents a major opportunity for service providers, Telco and MSOs to offer an enhanced broadband user experience, increase stickiness, and enable new business models. This opportunity requires operators to offer carrier-grade broadband access that addresses large scale coverage, mobility, security, and tiered service delivery for consumer, retail, venue, and business. Current solution provides a next generation mobile gateway platform to enable carrier-grade service delivery.

Business Access Gateway (BAG) delivers performance for advanced IPv4/IPv6 subscriber management, wireless mobility including cellular interworking, DHCPv4/v6 server, Carrier Grade Network Address Translation (CGNAT), service edge routing (OSPF, BGP, IS-IS), access control and filtering policies, and many other features necessary to deliver a carrier-grade solution experience and services.

VERTICAL MARKETS SERVED:

Fixed Wireless Access

- Smart Cities
- Home as a HotSpot
- Multi-Dwelling Unit (MDU) with Virtual Tenant
- Large Venue Wi-Fi

SOLUTION FEATURES

BAG application provides best-in-class wireless platform functions, including:

- Mobile 3G/4G Offloading
- Carrier Wi-Fi aggregation via Soft-GRE
- VLANs, or L2TPv3 from the CPE or access point
- Authentication procedures are based on an EAP and 3GPP AAA server or the STa reference interface
- Device authentication with EAP (AKA/SIM)
- High capacity inline DHCP and CGNAT services
- OAM & TAC integration via SNMP/CLI, etc.
- Application & service steering: e.g. in-browser ads (HTTP-mirror)
- Charging and policy control
- Lawful interception

PRODUCT DETAILS

Functional Solutions

- Wireless Access Gateway (WAG)
- Trusted Wireless Access Gateway (TWAG)
- Business Networking (MBN) - vCPE
- Multiple Dwelling Unit (MDU) Wi-Fi
- DS-Lite/AFTR

Connectivity

- GREv2
- L2AF
- L2TPv3
- IPSec tunnel
- S2A, Gn (GTPv1-U, GTPv1-C, GTPv2-C)
- PMIPv6

Authentication, Authorization, and Accounting (AAA)

- RADIUS AAA Client Support RADIUS Accounting
- EAP Authenticator
- EAP-AKA, EAP-SIM
- IKEv2
- 802.1x
- RADIUS AAA Server Groups
- RADIUS Custom Dictionaries
- RADIUS (STa)

Management

- CLI, Telnet, SSH, SNMP, MIBs
- FTP, TFTP, SFTP, NTP, PING, Traceroute,
- MTU Settings
- Active Control List (ACL)
- FTP Client/Server Syslog
- Stateless High Availability

Quality Of Service (Q o S)

- Rate Limiting (Device, VLAN, Tunnel)
- DSCP Marking

IP Address Management

- IP Address Assignment
- IPv4
- IPv4 FW & Port Forwarding
- IPv4 Firewall Protection
- IPv4 Block Fragment
- IPv4 UPnP Enable
- IPv4 DMZ Address
- IPv6
- IPv6 Tunnel and Dual Stack
- IPv6 FW & Port Forwarding
- IPv6 Block Fragmented Packets
- IPv6 Firewall
- DHCP v4 Server
- DHCP v6 Server
- Overlapping Private IP Address Pools
- DHCP Relay
- DNSv4 Client/Resolver
- DNSv6 Client/Resolver
- Private Static IP
- Public Static IP

Protocols

- ECMP: Equal Cost Multi Path
- 802.1ad Link Aggregation
- Layer 2 VPN (L2VPN)
- Layer 3 VPN (L3VPN)
- Route Maps
- Static Routes
- Address Resolution Protocol (ARP)
- IPv4 Fragmentation Handling
- IPv6 Fragmentation Handling

Policing & Security

- IPv4: Standard and Extended Access Control Lists
- IPv6: Standard and Extended Access Control Lists
- Carrier Grade Network Address Translation (CGNAT)
- Legal Intercept
- Subscriber Mirroring
- AP Mirroring

Enhanced Services

- Captive Portal Redirect
- HTTP Enrichment
- Integrated Malware and Phishing Protection
- REST-API

Other

- VLAN over LAG
- LAG
- VLAN Interface
- VLAN ACL
- Port and VLAN Utilization Metrics
- Subscriber VLAN
- IP-MAC Binding for Redundancy
- Tunnel Policing
- Advance DNS ACLs
- Public IPv4 via RADIUS
- IPv6 Prefix via RADIUS

PART NUMBERS	DESCRIPTION
PL-WAG-700-BNDL0-WW	Standard Image license (10K OS license, 1G BW capacity, RTU, 1K sGRE tun, 1k CADs, 100K CGNAT flows)
PL-WAG-700-1234-WW	WAG: BAG Bandwidth Capacity License 10G
PL-WAG-700-2603-WW	Add-On: BAG sGRE Tunnels 1K
PL-WAG-700-2604-WW	Add-On: BAG sGRE Tunnels 10K
PL-WAG-700-2608-WW	Add-On: L2TPv3 1,000 Tunnels - BAG
PL-WAG-700-2609-WW	Add-On: L2TPv3 10,000 Tunnels - BAG
PL-WAG-700-2605-WW	Add-On: BAG CAD 1K sessions
PL-WAG-700-2606-WW	Add-On: BAG CAD 10K sessions
PL-WAG-700-2601-WW	Add-On: BAG 100K CGNAT Flows
PL-WAG-700-2602-WW	Add-On: BAG 1M CGNAT Flows
PL-WAG-700-2607-WW	Add-On: BAG 10M CGNAT Flows
PL-WAG-700-2615-WW	Add-On: TBAG Service - RTU xMEG/vMEG
PL-WAG-700-2610-WW	Add-On: TBAG S2a 1,000 SAU License xMEG/vMEG
PL-WAG-700-2611-WW	Add-On: TBAG S2a 10,000 SAU License - xMEG/vMEG
PL-WAG-710-1460-WW	Add-On: SSA - Analytics Module
PL-WAG-710-1461-WW	Add-On: Analytics CAD 1K sessions
PL-WAG-710-1555-WW	Add-On: BAG Integrated Security
PL-WAG-710-1556-WW	Add-On: BAG Integrated Security CAD 1K sessions
PL-WAG-710-1760-WW	Monitoring system: BAG BOSS

ABOUT CAMBIUM NETWORKS

Cambium Networks is a leading global provider of wireless connectivity solutions that strengthen connections between people, places and things. Specializing in providing an end-to-end wireless fabric of reliable, scalable, secure, cloud-managed platforms that perform under demanding conditions, Cambium Networks empowers service providers and enterprise, industrial and government network operators to build intelligent edge connectivity. Cambium Networks' commitment to continuous innovation in wireless access is demonstrated in the millions of radios deployed in thousands of networks that benefit communities around the world. Team members also contribute to social responsibility activities to serve the communities in which they live. Headquartered outside Chicago and with R&D centers in the U.S., U.K. and India, Cambium Networks sells through a range of trusted global distributors.

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