Subscriber Management Platform

Per-Subscriber Visibility and Control of Broadband Services

Building Intelligent, Subscriber-Aware Networks

The challenge for today's broadband service providers is to build an intelligent network that knows how to deliver the quality of experience that each subscriber expects, while allowing providers to retain control over network usage. Allot Subscriber Management Platform (SMP) can help service providers achieve this goal. The powerful application and subscriber awareness provided by Allot SMP is the key to customizing service offerings and maximizing service revenues.

Subscriber Visibility

Through deep packet inspection (DPI), Allot SMP maps dynamically allocated IP addresses to the individual subscribers using them. This provides the visibility that is needed to monitor and understand subscriber usage and to track and control service and application performance.

Subscriber Tiered Services

Per-subscriber policy control facilitates the rapid deployment of services that are tailored to user demands and in tune with market trends. Allot SMP makes it easy to create tiered subscriber service plans and to provision different Quality of Service (QoS) policies that enforce how each subscriber's traffic is treated.

Subscriber Quota Management

The subscriber-awareness offered by Allot SMP enables quota-based service plans that allow providers to meter and control individual use of applications and services. Usage allowances are based on volume or time, and can be applied to the subscriber's overall usage or to the use of specific applications, with options for automatic QoS adjustment and/or redirection when quota limits are exceeded.

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Getting a Clear Picture of Subscriber Service Usage

Understanding subscriber behavior is the first step to identifying ARPU opportunities and creating profitable service plans. The Allot SMP provides real-time and long-term reports detailing individual usage patterns, most popular services, top users, and other usage statistics. These give service providers the network intelligence they need to analyze subscriber behavior and direct their broadband resources toward more profitable revenue plans.
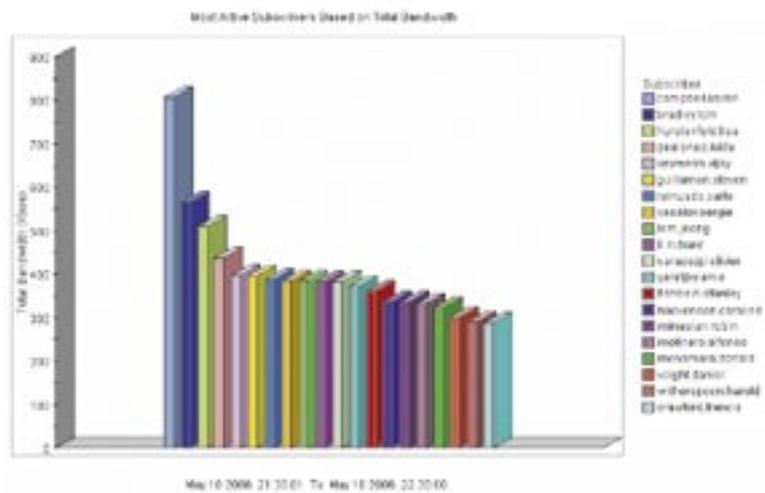
Insightful Reporting
Allot SMP monitoring reports help service providers to:

- Identify the most popular applications and top users
- Analyze application usage per subscriber
- Create subscriber profiles based on usage patterns

- Target individuals and groups with customized service plans
- Track and evaluate the performance of deployed service plans
- Detect and isolate security threats
- Troubleshoot customer problems quickly

Allot SMP builds upon the reporting capability of Allot NetXplorer, adding a full complement of subscriber-based statistics to its utilization, distribution, and popularity reports.

Increase ARPU with Tiered Services and Quota Management

Through tiered service control and quota management, Allot SMP creates unlimited opportunity for innovative service packaging and pricing. Joint revenue models with alternate providers and non-provisioned services such as gaming and competing VoIP applications can also become a source of revenue as SMP meters their usage, enforces QoS, and generates usage statistics and accounting CDRs.

Tiered Services
Allot SMP's intuitive policy provisioning interface lets providers define multiple service plans with different SLAs, and then assign individual subscribers to the plans.

Quota Management
Providers can also create competitive service plans based on time and volume quotas.

Controlling Service Usage:
SMP Quota Management lets service providers set a usage allowance per subscriber, meter actual service consumption, and adjust QoS control based on content, volume, and/or time elapsed.

Facilitating Flexible Charging:
Allot SMP facilitates a variety of new and flexible charging models by metering and enforcing usage-based service plans. For example, a quota plan could be based on P2P usage that provides up to 1 Gig of data uploads/downloads per month at a base rate, with automatic redirection to a captive portal to buy extra volume when the quota is reached.

Chargeable Options:
Whenever a quota has been reached, subscribers may be redirected to portals where they can "top-up" their quota, upgrade their service plan, or other possibilities. Allot SMP also supports "turbo buttons" that will boost an application's performance for a limited period of time.

Service Plan		Gold	Silver	Bronze
Total Bandwidth		5 Mbps	2 Mbps	128 Kbps
Monthly quota		10GB	5GB	2GB
P2P	Max Bandwidth	1 Mbps	0.5 Mbps	None
	Daily Quota	2 GB	800 MB	100 MB
HTTP	Max Bandwidth	None	1 Mbps	128 Kbps
	Daily Quota	1 GB	500 MB	80 MB
Gaming	Min Bandwidth	1.5 Mbps	512 Kbps	128 Kbps
	Daily Quota	2 GB	1 GB	100 MB

Scalable Subscriber Management Solution

The Subscriber Management Platform is an integral component in Allot's solution architecture for intelligent IP service optimization. Its modular and layered structure is highly scalable to provide intelligent service and subscriber awareness in the most demanding broadband networks, as shown in the diagram below.

Subscriber Provisioning

Using seamless interfaces to RADIUS and DHCP provisioning systems, Allot SMP maps static and dynamically allocated IP addresses to individual subscribers and their service plans, and transmits this information to NetXplorer, NetEnforcer, and Service Gateway elements, ensuring that each user session gets the appropriate Quality of Service. IP mapping is transparent to the network.

- In RADIUS environments, Allot SMP intercepts RADIUS accounting messages, extracts their IP-to-subscriber mapping information and distributes it to the NetEnforcers or the Service Gateways in the network. Where available, SMP also extracts IP-to-subscriber-to-service level mapping.

- In DHCP environments, Allot SMP passively gleans the IP-to-subscriber mapping from the DHCP protocol. DHCP gleaning is performed directly on the IP allocation system, so there is no dependency on routing schemes to obtain IP mapping and enforce QoS policies.

- DHCP gleaning obviates the need for connectivity to both the data and authentication paths. Therefore, NetEnforcer and Service Gateway devices can be deployed at peering points to control subscriber Internet services that are external to the service provider domain. This provides a cost-effective first-stage installation that limits up-front investment. Furthermore, NetEnforcers or Service Gateways can be deployed at access points to support service plans that maximize revenues by managing services that are both internal and external to the service provider domain.

- Allot SMP can also operate as a DHCP extension, becoming an integral part of the authentication process. As an integrated element, Allot SMP gives the provider's provisioning system visibility into status, alert, and failure metrics, greatly enhancing troubleshooting and customer support capabilities.

Multiple Integration Interfaces

SMP is integrated easily with existing provisioning, OSS and billing systems, using standard protocols such as:

- SOAP
- SNMP
- Text (CSV)
- RADIUS
- CLI

Health Monitoring

SMP is equipped with system health monitoring capabilities and can report on system and subscriber statuses such as:

- CPU utilization
- Memory utilization
- Number of RADUIS/DHCP message updates per second
- Number of registered subscribers
- Subscriber status (associated service plan, used quota, state – active / not active).

The SMP platform is also capable of reporting, via SOAP and/or SNMP traps any failure in the subscriber provisioning process, allowing the provisioning and health monitoring systems of the SP to take actions in case of provisioning failures.
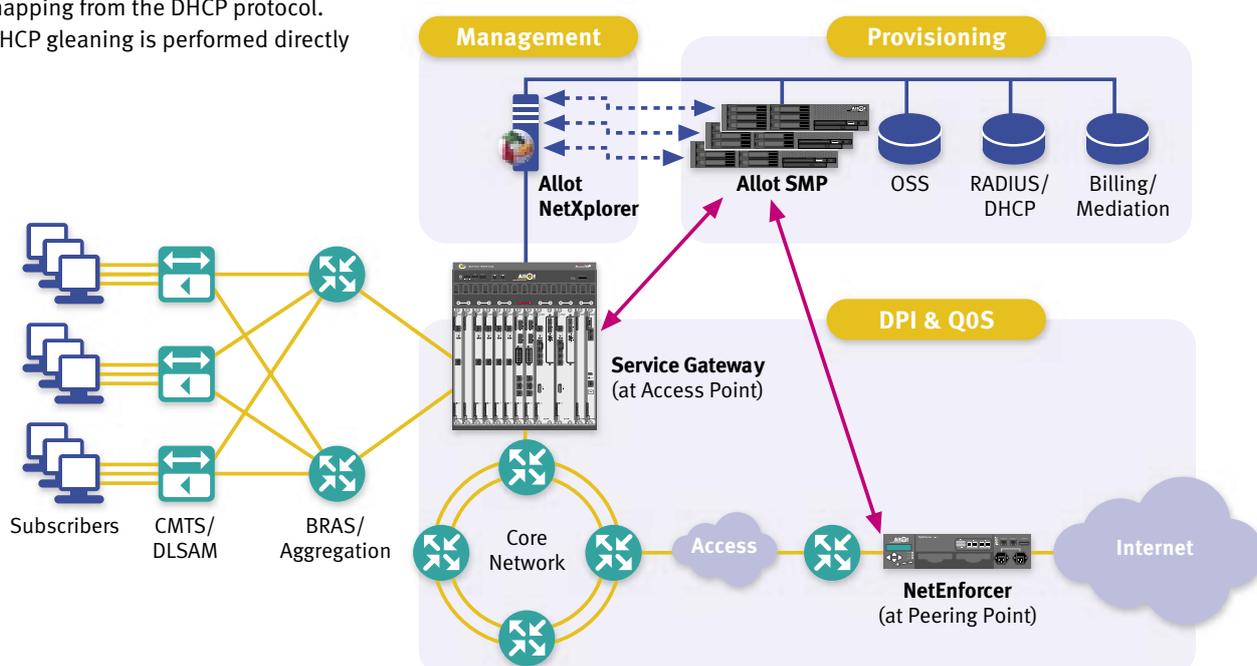
Specifications

High Availability
SMP can be deployed to support a high availability solution based on two installations of SMP appliances running in Active/Passive mode acting as one clustered SMP server. The solution supports up to 15 clusters of SMPs.

Distributed Design
Up to 15 SMP appliances can be added to the network to support up to 15 million subscribers.

Appliance Specifications

Capacity	
Number of subscribers	1 Million
Logins per second	500
IP Allocation System (IAS) Standard Compliance	
Authorization, Authentication, Accounting	RFC 2865 – RADIUS RFC 2866 – RADIUS Accounting DHCP DHCP Option 82
Open Interface for Integration with OSS, IAS, ISS, Billing, Health Monitoring Systems	
Accounting	CSV, CDR, JDBC
Provisioning	SOAP, COPS, RADIUS, CLI
Health Monitoring and Management	SNMP, SOAP, CLI
Integration with Allot NetEnforcer/NetXplorer	
NetEnforcer AC-1000 Series	Version S7.1.0 and up
NetEnforcer AC-2500 Series	Version C7.1.0 and up
NetXplorer Server	Version NX7.3.0 and up, Quota Management NX8.1.0 and up
SG Omega	Version SG8.1.0 and up
Licensing Options	
Monitoring Only	10K, 50K, 100K, 250K, 500K, 1M subscribers
Tiered Services	10K, 50K, 100K, 250K, 500K, 1M subscribers
Quota Management	10K, 50K, 100K, 250K, 500K, 1M subscribers
Dimensions	
Size	Standard 2U in 19" rack
Power Supply	
Power supply	2 (Load Sharing)
Power consumption	835W

About Allot Communications
Allot Communications (NASDAQ: ALLT) is a leading provider of intelligent IP service optimization solutions for DSL, wireless and mobile broadband carriers, service providers, and enterprises. Allot's rich portfolio of hardware platforms and software applications utilizes deep packet inspection (DPI) technology to transform broadband pipes into smart networks that can rapidly and efficiently deploy value added Internet services. Allot's scalable, carrier-grade solutions provide the visibility, security, application control and subscriber management that are vital to managing Internet service delivery, guaranteeing quality of experience (QoE), containing operating costs, and maximizing revenue in broadband networks.

www.allot.com   info@allot.com

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