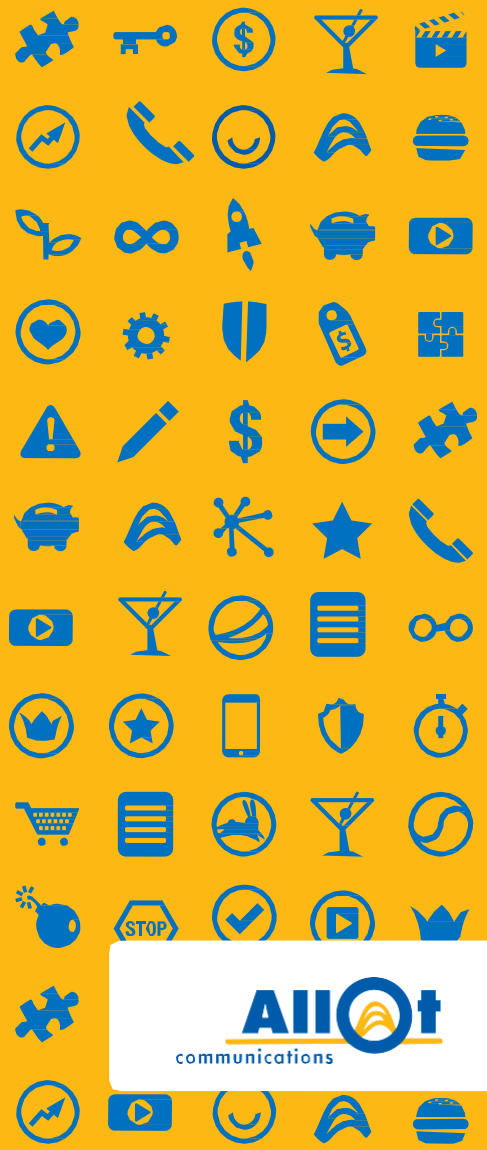
Delivering Digital Lifestyle Services



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Service Provider Use Cases

Allot Solutions

Analyze
The ability to capture rich source data from your network and turn it into valuable business intelligence

Improve
The ability to optimize the utilization and efficiency of data networks by controlling congestion and actively managing application and service delivery

Protect
The ability to protect data service networks and customer resources from external attack and from internal malware infections

Monetize
The ability to embrace personalized service plans, pay-for-use charging schemes, and revenue-sharing business models that fit the digital lifestyle

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Introduction

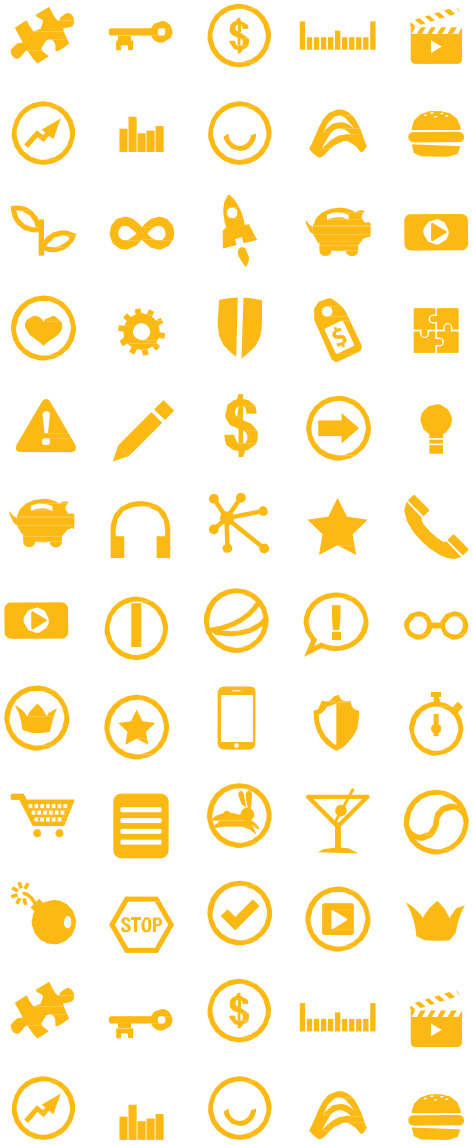
Allot Communications is a leading global provider of intelligent broadband solutions that put mobile and fixed networks at the center of the digital lifestyle. Allot solutions identify and leverage the business intelligence in your data network, empowering you to shape digital lifestyle experiences and to capitalize on the network traffic that they generate.

Allot's unique blend of innovative technology, proven know-how, and standards-based approach is enabling service providers worldwide to elevate their role in the digital lifestyle ecosystem and to open the door to a wealth of new business opportunity. The alternative is to run the risk of being relegated to the status of a utility that is always on, taken for granted, and highly undervalued.

The choice may seem simple, but the path is complex. An experienced, knowledgeable, and innovative partner can make all the difference in successfully managing the ongoing transformation that is required of Digital Lifestyle Service Providers.

Allot Communications is your transformation partner.

The use cases in this booklet present some of the many ways in which Allot works with leading service providers to deploy the technologies and solutions that enable them to shape the digital lifestyle experience, drive the ecosystem, and reap the rewards.



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Service Provider Use Cases

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Use Cases

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1. Network Resource Planning

Analyze

Key Benefits

- Pinpoint the causes of network congestion
- Understand usage trends and better predict congestion
- Save on resource capex and opex through accurate planning

Network Resource Planning in Action

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Allot Service Gateway

Allot ClearSee Analytics

Allot ClearSee Data Source

Network planning relies on accurate and meaningful information regarding congestion episodes on the network, why they occur, and their effect on subscriber quality of experience. For example, real-time analytics can show which subscribers, applications and devices are consuming the bandwidth in a temporarily congested cell, while historical analysis can be used to identify the usage patterns that make a cell chronically congested. The effects of congestion may be felt keenly by video consumers who experience more stalls, stutters and long load times. Analyzing video QoE per subscriber, application and device in congested cells can help operators identify problem areas and better plan around them. For example, expedited forwarding and video optimization may alleviate most of the QoE problems, rather than bandwidth expansion.

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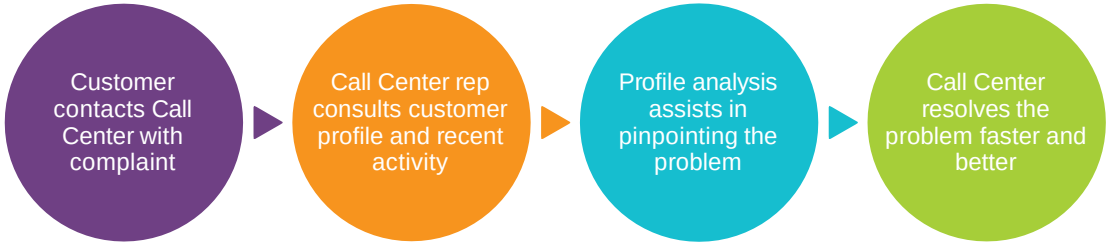
2. Customer Touch-point Optimization

Analyze

Key Benefits

- Reduce trial and error in resolving customer complaints
- Improve your Customer Care service
- Enhance your brand image

Customer Touch-point Optimization in Action



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Allot ClearSee Analytics

Allot ClearSee Data Source

Every interaction with your customer is critical. The right kind of usage and activity analytics can assist Customer Care personnel in resolving customer issues. For example, customers may complain that their handset battery requires frequent recharging and is running out of juice after only a few hours of use. While the usual suspect may be the battery, the customer's usage history points to a recent download of one or more bandwidth-intensive applications as well as frequent use of that application. The history may also show that the downloaded application works better with a later version of the device's operating system. Armed with this usage history and analysis, support personnel could recommend using an alternative application that is easier on the battery, upgrading the device OS, or upgrading the battery, or all three options. With so many factors affecting data service, customers value a service provider who is knowledgeable and can resolve problems quickly.

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3. Customer Segmentation

Analyze

Key Benefits

- Gain deeper understanding of customer online activity and preferences
- Increase ARPU through better targeting of services/promotions
- Reduce churn with “stickier” services

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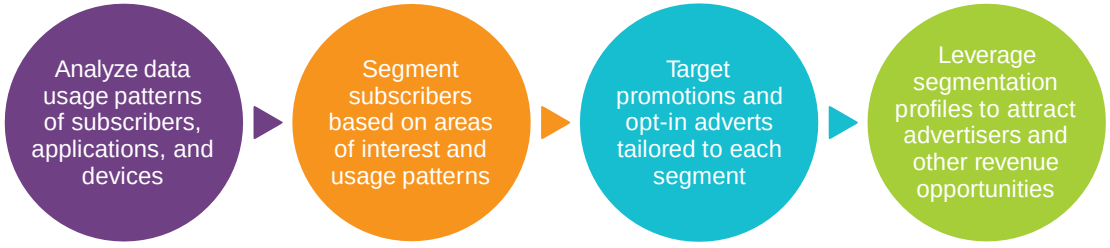
Customer Segmentation in Action



The ability to identify subscriber interests and usage patterns enables service providers to introduce targeted promotions and to benefit from other revenue generating opportunities. For example, one user segment may be characterized as having an interest in gadgets, while the subscribers in another segment are music lovers. By identifying these interest segments – along with other attributes such as usage patterns and type of device – the operator can launch effective promotions that offer subscribers relevant products and services such as new or additional devices or personalized service plans. Subscriber segmentation also offers abundant opportunities for revenue generation from advertising.

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4. Prepaid Behavior Analysis

Analyze

Key Benefits

- Elevate your relationship with prepaid customers
- Reduce the risk of prepaid churn
- Increase opportunities for revenue generation

Prepaid Behavior Analysis in Action

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Prepaid customers comprise a significant segment of users in mobile data networks. However their activity and preferences are mostly unknown. This limited relationship makes it easier for them to churn. Prepaid Behavior Analysis allows service providers to change the nature of the relationship by providing valuable insight into the online activity of prepaid customers. Usage trends regarding popular applications, time-of-day patterns, device, and other parameters help service providers identify different profiles within the prepaid community so they can target the right kind of value to this important segment. For example, behavior analysis can be used to incentivize users of bandwidth-intensive applications to increase the amount of their regular top-up, or move up to a higher-tier prepaid package. It can also assist in targeting relevant ad campaigns to prepaid customers.

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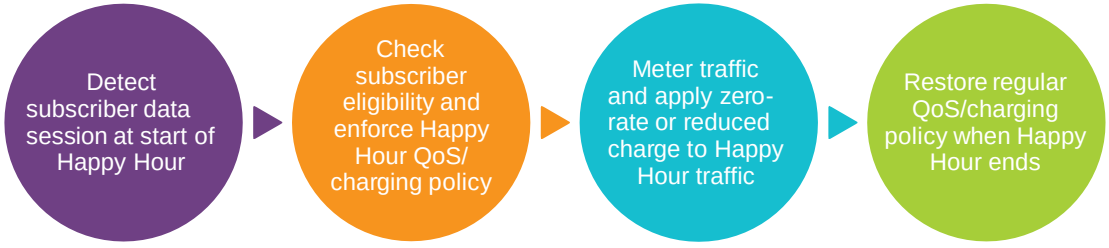
5. Happy Hour

Improve

Key Benefits

- Reduce congestion during peak usage hours
- Improve overall user experience
- Optimize overall network utilization and flatten peaks

Happy Hour in Action



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Happy Hour allows operators to reduce network congestion and improve overall user experience by providing subscribers with financial incentives to shift usage to off-peak hours. Service providers may define one or multiple Happy Hours, during which data usage is not counted against the subscriber's volume allowance or alternatively, is charged at lower rates. Happy Hours may be implemented for all applications or for specific applications, depending on a subscriber's service plan.

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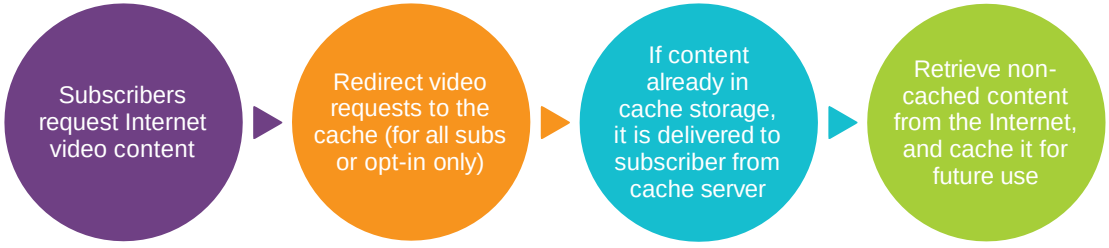
6. OTT Video Caching

Improve

Key Benefits

- Save bandwidth capacity and costs on Internet transit and peering links
- Reduce churn through improved video QoE
- Accelerate video delivery

OTT Video Caching in Action



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Video caching greatly improves over-the-top video delivery by storing large and popular video files in the service provider network, assuring that they are geographically closer to subscribers and can be retrieved quickly, without going over expensive Internet transit links. Intelligent algorithms determine the content to cache while a centralized controller manages storage and delivery across all POPs in real-time. As a result, customers enjoy consistently good quality of experience, especially for streaming video and other latency-sensitive content. Caching also takes the load off of transit links, saving bandwidth capacity and costs. When combined with Video Optimization, the ability to assure video QoE can be the basis for premium video service plans.

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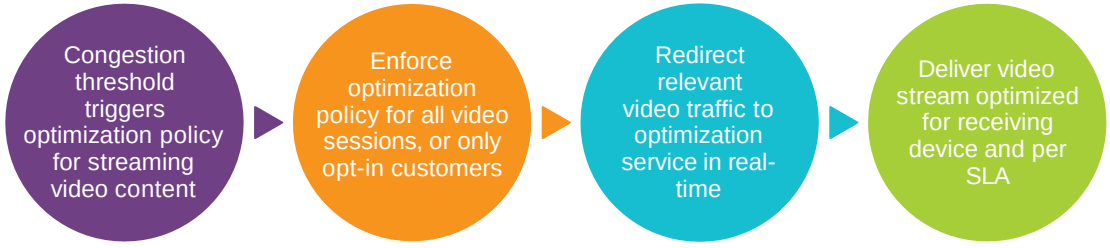
7. OTT Video Optimization

Improve

Key Benefits

- Save network bandwidth and contain costs
- Ensure consistently good video QoE
- Increase ARPU with value-added video services

OTT Video Optimization in Action



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Allot VideoClass

Video streaming is among the most popular network applications. Its quality is highly susceptible to network conditions. Consumers tend to have low tolerance for stalls, stutters and other symptoms of poor quality of experience. Meeting the expectations of video consumers is no simple challenge for broadband service providers. One solution is real-time optimization of Internet video content, which intelligently adjusts the video stream according to network conditions, the target device and the service plan SLA. Adjustments reduce the size of the video in a way that is not discernable to viewers. This not only saves bandwidth, it ensures uninterrupted delivery of video content under dynamic network conditions. The service can be deployed for all subscribers, or as a chargeable value-add for heavy video consumers.

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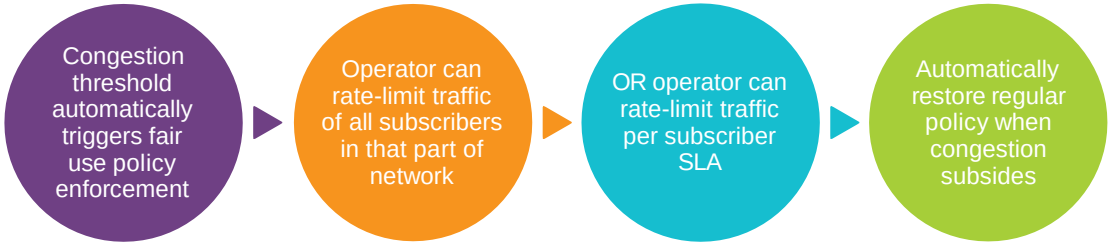
8. Fair Use Management

Improve

Key Benefits

- Reduce network congestion
- Ensure service availability/delivery even when network is congested
- Enhance customer satisfaction and reduce churn

Fair Use Management in Action



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Allot NetXplorer

Whether providing fixed or mobile connectivity, broadband service providers must constantly struggle to deliver fair and consistent QoE to all network subscribers, while refraining from making further investments in network resources. No single user is to be discriminated against, yet at the same time, none are to be allowed to abuse shared network resources at the expense of others. Fair use management ensures that no individual subscriber disrupts the service provided to others. It does so by managing throughput and subscriber QoE on the basis of congestion thresholds across the entire network.

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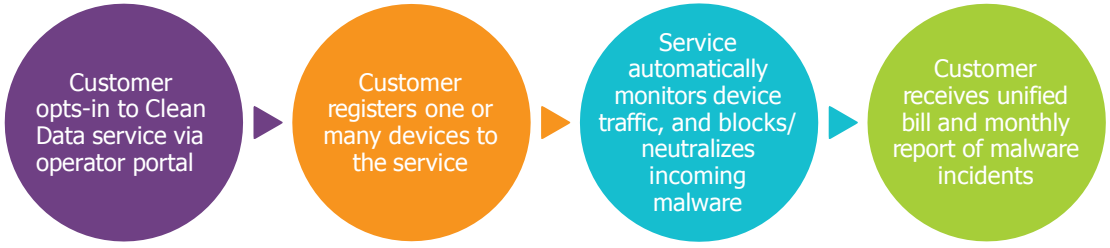
9. Clean Data

Security

Key Benefits

- Increase revenue
- Enhance customer satisfaction
- Reduce churn

Clean Data in Action



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Allot Service Gateway

Allot WebSafe Personal

Viruses, trojans, spyware, phishing, and bots are among the many security threats that Internet users face every day. Consumers are scrambling to install the right security measures on all their devices and keep them up to date as threats increase and become more sophisticated. Operators can make it easier and provide the security customers seek by offering network-based anti-malware services that prevent virus, Trojan, bot, spyware, adware, and other malware from infecting subscriber devices. The service can also offer powerful anti-phishing measures for both email (SMTP, POP3) and web traffic. This wide protection net is updated 24/7 requires no action from subscribers, and no resources from their devices.

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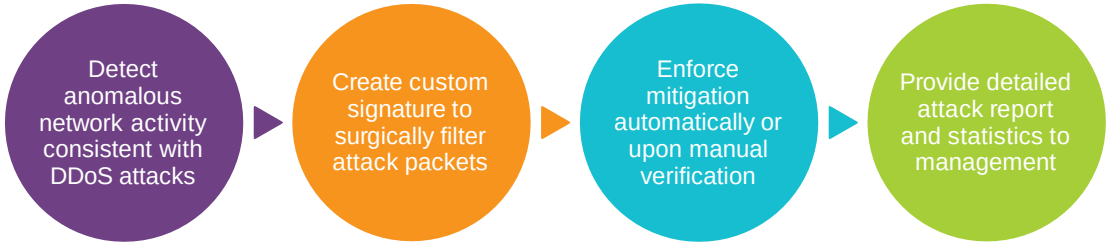
10. DDoS Protection

Security

Key Benefits

- Protect availability, performance, and integrity of service network
- Minimize losses associated with SLA credits issued following DDoS outages
- Generate revenue with DDoS protection service offerings

DDoS Protection in Action



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Allot ServiceProtector

Distributed Denial of Service (DDoS) attacks have attracted an unprecedented amount of media attention in recent years, with major online corporations, government agencies and even entire countries falling victim to them. Yet beside high exposure outages are many other, lesser profile ones that cause no less disruption to both subscribers and operators. These must bear the very high volumes of added traffic generated during the attacks, designed to exhaust network entities' bandwidth and processing resources, and to cause widespread damage. Surgical DDoS protection neutralizes distributed denial of service attacks within seconds of emergence, by accurately detecting and filtering DDoS packets.

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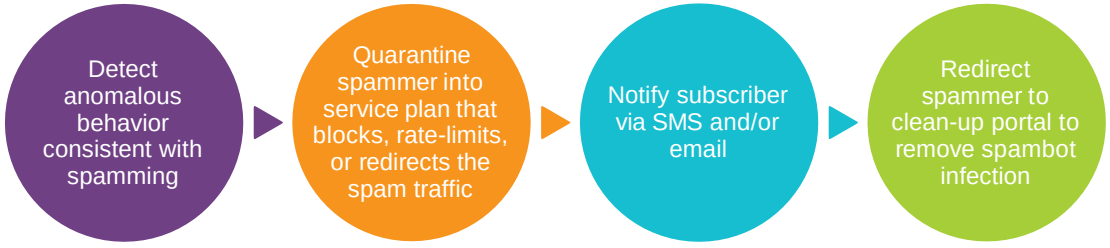
11. Blacklist Prevention

Security

Key Benefits

- Get off and stay off spammer blacklists
- Reduce complaints from other operators
- Avoid unnecessary investment in content-based spam filtering solutions

Blacklist Prevention in Action



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Outbound spam is the primary cause of service provider blacklisting. While DNS blacklists (DNSBL) are widely used as a first line of defense, they are mostly ineffective as they rely solely on the spamming IP address. Consequently, when spam originates from the service provider network the spamming IP blacklisted, and many innocent subscribers are also impacted, either by having inherited a blacklisted IP (via DHCP) or by sharing the same “public” IP (behind the same NAT IP) as the spammer. Blacklist prevention obviates this problem by detecting the spamming subscriber and automating the process of notification and remediation of infected devices.

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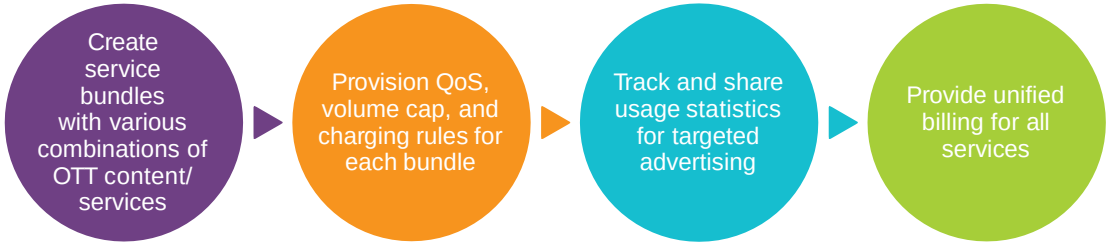
12. OTT Content Bundling

Monetize

Key Benefits

- Create new sources of revenue together with OTT content providers
- Differentiate your service offering
- Reduce churn

OTT Content Bundling in Action



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Over-the-top content is an integral part of the digital lifestyle. One of the ways service providers can capitalize on this phenomenon is by generating and sharing revenue through tiered bundles of popular OTT content and services. For example, service providers can partner with local content providers to bundle their music, games, movies, video, and social networking applications into a variety of tiered packages aimed at different customer segments. Bundled applications may be loaded onto smartphones at the point of sale, together with usage caps, overage policy, and unified billing by the service provider for pay-for-use content. The bundle may include content caching or video optimization to ensure great QoE. It may also offer options for targeted advertising based on in-depth analysis of subscriber behavior and bundle popularity. With so many kinds of local and global content coming online all the time, service providers have unlimited opportunity to launch new business ventures with OTT providers and share the revenue.

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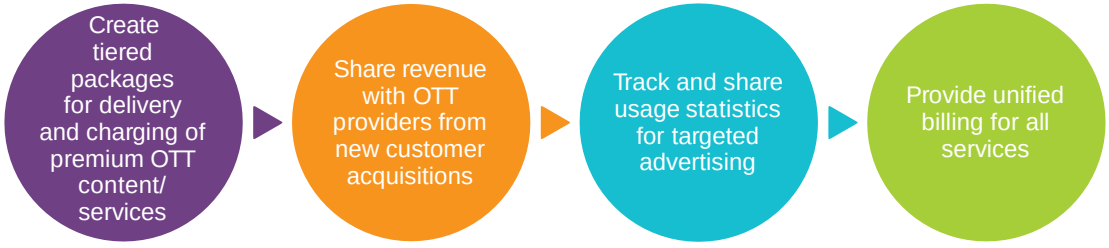
13. OTT Premium Content

Monetize

Key Benefits

- Differentiate your offering to high-end customers
- Expand revenue-share business
- Increase ARPU

Premium OTT Content in Action



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While most over-the-top content is free, many content providers also offer premium Internet content and services for a fee. Service providers can capitalize on this growing phenomenon by leveraging their unique ability to enable access, shape the user experience and to track and analyze OTT usage. For example, service providers can help popular music-, video-, or TV-on-demand providers to expand their pay-for-use business by bundling the OTT service together with smartphone acquisition, high-speed access, guaranteed QoE, and unified billing in a premium package. The premium-content relationship may share revenue and also offer options for targeted advertising based on analysis of subscriber behavior and application usage.

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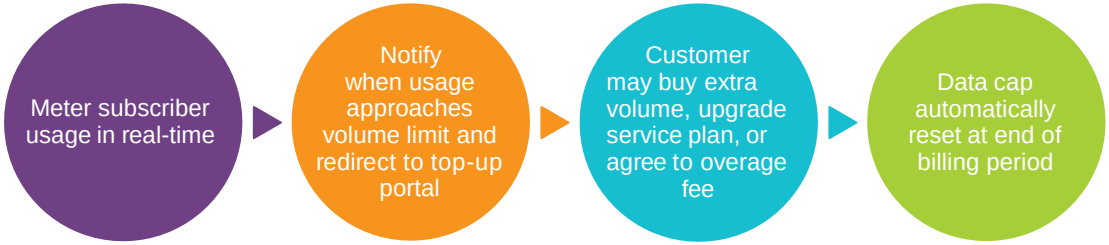
14. Volume-based Charging

Monetize

Key Benefits

- Increase ARPU
- Close the gap between network usage and revenues
- Promote fair use and predictable utilization

Volume-based Charging in Action



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Volume-based charging translates increased usage into proportional revenue growth for data service providers. It also helps them better regulate network utilization. For example, operators can offer a choice of data plans with megabyte or gigabyte caps priced according to the volume of data traffic allowed during a one-month period. Subscribers gain complete transparency regarding their actual data consumption plus the ability to control monthly costs. Further monetization opportunities open up when customers who are approaching their cap limit are notified and given the option to “top-up” their data cap for a fee, or to upgrade to higher usage plan. Volume-based charging also promotes fair use, as heavy users are no longer subsidized at the expense of others.

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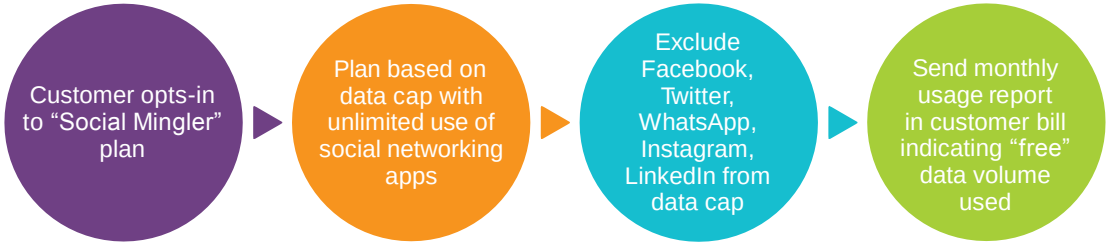
15. Application-based Charging

Monetize

Key Benefits

- Increase ARPU
- Enhance customer choice and increase loyalty
- Differentiate your service offering

Application-based Charging in Action



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The ability to identify applications at Layer-7 allows operators to differentiate their offering with a range of unique service plans based on gaming, social networking, streaming video, basic email, and other popular applications. For example, operators may identify a large number of customers who are “Social Minglers” meaning they are heavy users of social networks. This segment can be offered zero-rating on popular social networking apps so that usage is not counted against their data cap. Similarly, frequent gamers would be attracted to a plan that offers guaranteed quality of service for World of Warcraft, Call of Duty, and other interactive games.

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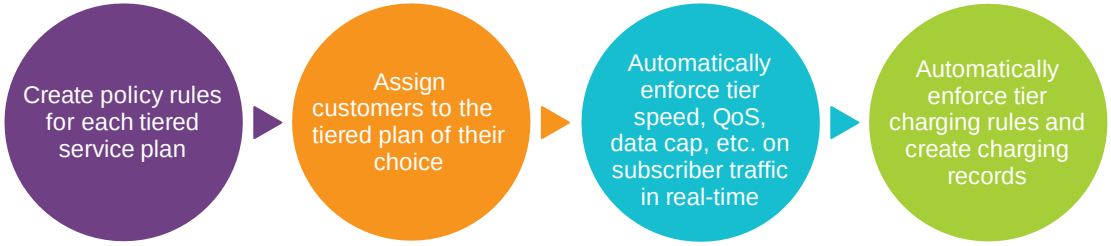
16. Service Tiering

Monetize

Key Benefits

- Increase revenue and upsell opportunities
- Differentiate your service offering
- Enhance customer satisfaction

Service Tiering in Action



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Data service providers use service tiering to tailor competitive service plans to specific market segments and subscriber preferences. Service plans may be tiered according to different speeds (Mbps, Gbps), QoS, usage allowances, Happy Hours, fair use provisions, application-based SLAs and more. For example, a basic tier could offer high speed but low monthly data cap, while a premium tier offers high speed, unlimited data volume, and expedited forwarding for Streaming Video and Gaming applications. Tiered plans can be rolled out for specific devices as well. In this way, operators can target each customer with the right service plan at the right price.

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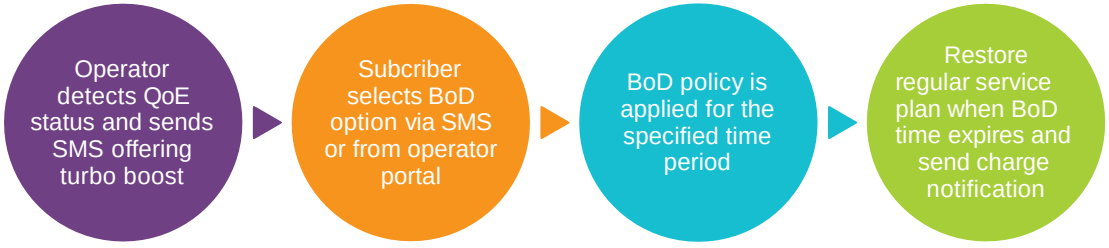
17. Turbo Boost

Monetize

Key Benefits

- Increase bandwidth upsell opportunities
- Increase incremental ARPU through opt-in services
- Enhance your brand with services for the Digital Lifestyle

Turbo Boost in Action



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Broadband subscribers typically sign up for the data plan that best suits their digital lifestyle. But there are always those moments when an extra boost of bandwidth is desired. For example, when snapping and sending photos from a sports venue with thousands of people doing the same, the data experience could be poor. Likewise, when streaming a full movie or downloading large files, real-time bandwidth on demand (BoD) comes in handy. The ability to obtain an on-demand speed upgrade for a limited duration is something many subscribers want and are willing to pay for.

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18. Parental Control

Monetize

Key Benefits

- Increase ARPU with incremental revenue from premium, opt-in services
- Strengthen customer loyalty with personalized services
- Enhance brand image

Parental Control in Action

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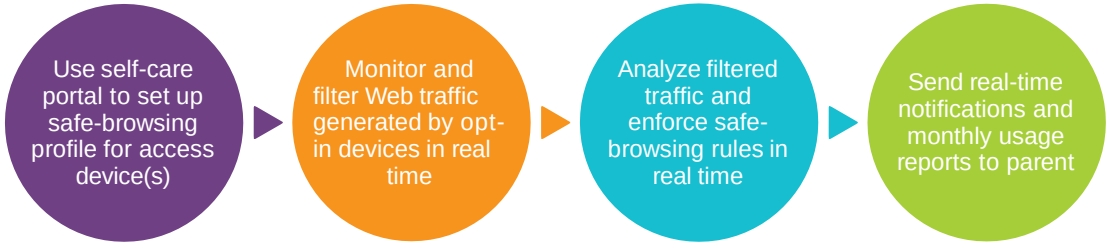

Parental Control service allows operators to provide peace of mind to parents who are concerned about the online activity of their children. Using a simple online setup screen, parents can control access to specific URLs and to a wide array of content categories such as gambling, pornography, dating sites, violence, racism and many others. They can also set time limits on browsing, set up different rules for each child's device, and adjust them at any time. Real-time notifications and monthly usage reports are all part of the service. Operators can deploy this opt-in service in in multi tenancy mode that allows consumers to personalize their own security settings or in single tenancy mode that offers a standard set of security features for all subscribers.

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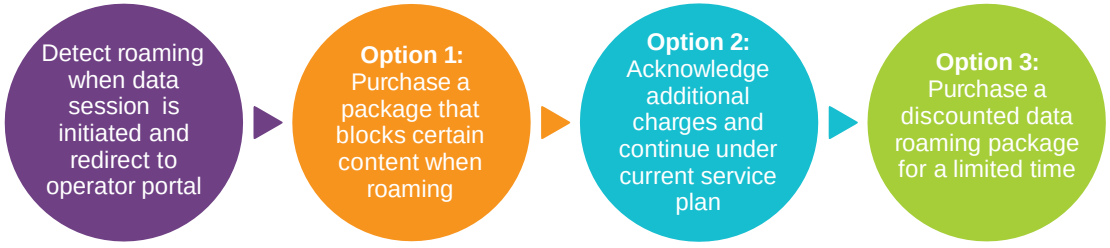
19. Bill Shock Prevention

Monetize

Key Benefits

- Comply with regulations
- Increase customer satisfaction and loyalty
- Generate additional revenue via new upsell opportunities

Bill Shock Prevention in Action



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When faced with an unexpected high charge for data roaming services, customers are likely to be in for a shock. Valid or not, they often contest the charges claiming they were not informed by the operator. Hoping to keep customer satisfaction and retention high, operators may end up waiving the extra charges and pick up the tab themselves, resulting in significant revenue loss. This phenomenon has resulted in legislation and regulations to prevent bill shock. Bill shock prevention service enables operators to notify roaming subscribers of data session costs in real time, and require that they acknowledge these charges before establishing a connection. Customers feel more in control when charging schemes are transparent and known up front.

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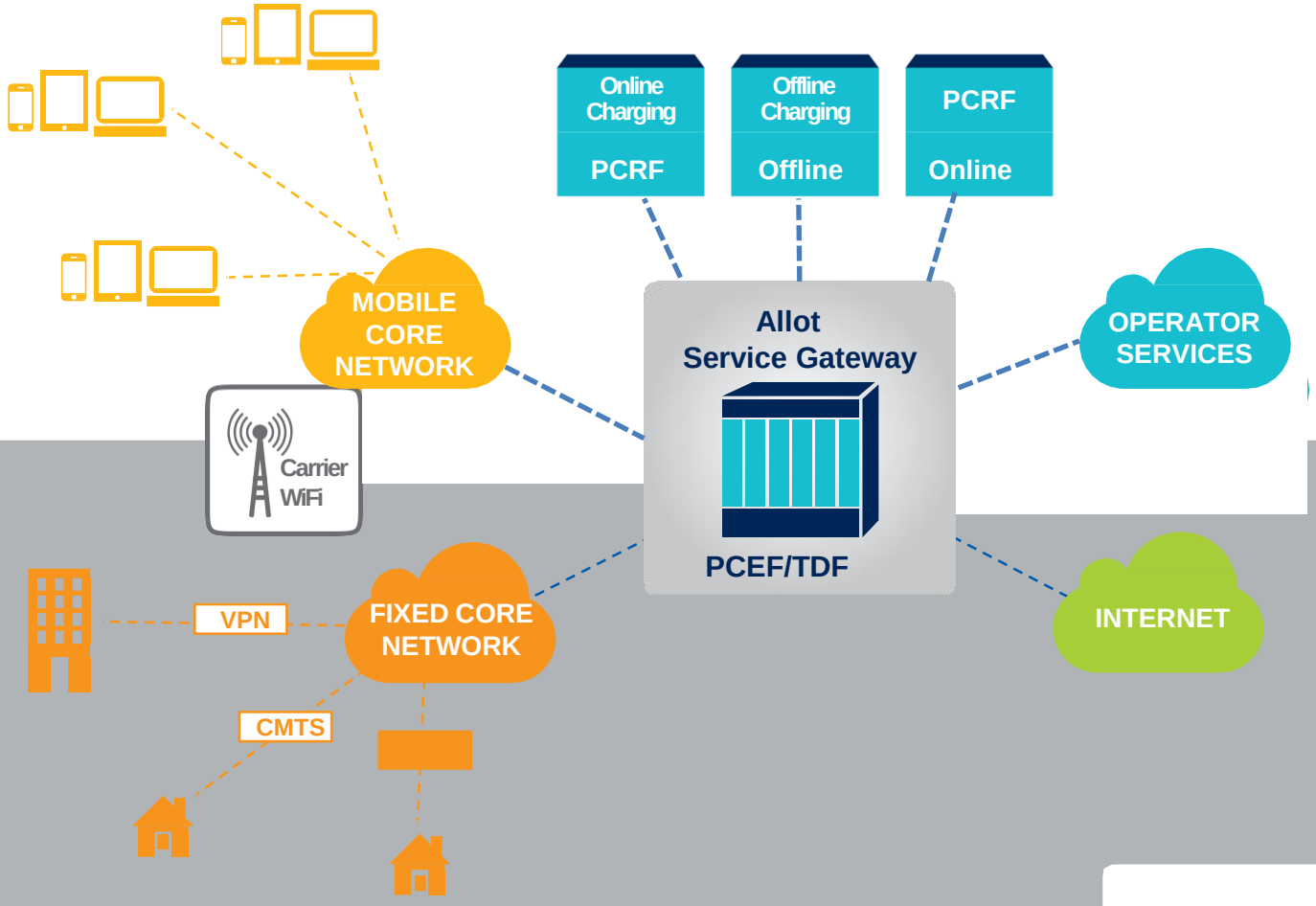
Service Provider Network Deployment



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About Allot Communications

Allot Communications Ltd. (NASDAQ, TASE: ALLT) is a leading global provider of intelligent broadband solutions that put mobile, fixed and enterprise networks at the center of the digital lifestyle and workstyle. Allot's DPI-based solutions identify and leverage the business intelligence in data networks, empowering operators to analyze, protect, improve and enrich the digital lifestyle services they deliver. Allot's unique blend of innovative technology, proven know-how and collaborative approach to industry standards and partnerships enables network operators worldwide to elevate their role in the digital lifestyle ecosystem and to open the door to a wealth of new business opportunities. For more information please visit www.allot.com

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