Use Case: Volume-based Data Plans

What Is the Value of Volume-based Data Plans?

Operators can gain additional revenue by offering subscribers data plans based on monthly anticipated usage. Volume-based Data Plans are quickly replacing earlier flatrate, unlimited data plans designed to stimulate mass market demand for services as user reliance on smartphones and other mobile data devices have grown dramatically. For operators, data services can be monetized for higher revenues based on usage. For subscribers, buying data services based on usage volume is considered reasonable and competitive.

What Problems Does It Help Solve?

Unlimited, flat-rate mobile data plans were used effectively by mobile operators to encourage customer adoption of smartphones. In 2012, mobile broadband-capable smartphones represented half of all handsets sold in Western Europe and the U.S., according to Gartner. The trend is impacting other parts of the world as well. The typical smartphone generates 24 times more mobile data traffic than basic-feature cell phones, according to the Cisco Visual Networking Index and Global Mobile Data Traffic Forecast 2012-2017. The Cisco study also showed that the top 10 percent of mobile data subscribers now generate approximately 60 percent of mobile data traffic.

Low, medium, and high-volume subscribers are worth different average revenues per user (ARPU) and each subscriber group creates unique incremental cross marketing and up-selling opportunities. In mature markets, offering flat-rate, unlimited data plans is no longer necessary to generate customers. Operators can better monetize mobile data use by offering varied pricing for different levels of monthly data usage. Tiered pricing allows subscribers to select from different usage quotas limits. This "pay for what you need" pricing model, along with the increasing availability of affordable smartphones, is expected to drive increased data traffic in emerging market regions where standard mobile data plans have been costly.

What Do I Need?

Volume-based data plans require intelligent network technologies that control the allocation of network resources based on subscriber plans. Operators also benefit from solutions that provide a fast, easy way to introduce new business models; gather network analytics per subscriber; and enable operational efficiencies between access, RAN, aggregation, and core layers of the network.

Cisco solutions to enable you to deliver Volume-based Data Plans along with many other revenue-generating services include:

Cisco Solution	Description
Cisco ASR 5500 Multimedia Core Platform	Part of the Cisco ASR 5000 Series packet core platform, it combines massive performance and scale with flexibility, virtualization, and intelligence so network resources are available exactly when they are needed. The Cisco ASR 5000 Series' elastic architecture enables its software-based mobile functions to utilize system resources across the entire platform to optimize performance and maximize efficiency. This approach allows operators to deploy more efficient mobile networks that can scale to support a greater number of concurrent sessions, optimize resource usage, and deliver enhanced services. Integrated Deep Packet Inspection (DPI) and value-added services on the Cisco ASR 5000 Series are deployed within the data session instead of requiring it to be off-loaded to standalone platforms.
Cisco Quantum Policy Suite	A comprehensive policy, charging, and subscriber data management solution that allows service providers to control and monetize their networks and to profit from personalized services. The solution supports the rapid and efficient deployment, management, and monetization of basic and advanced service offerings, such as service tiers, personal price plans, prepayments and a growing array of application-based services.
Cisco Quantum Services Bus (QSB)	Provides a common bus architecture that allows mediation, connectivity, and communication among and between network elements through a standardized framework. The QSB facilitates network data collection, aggregation and orchestration to augment information in all decision processes. It helps service providers quickly create and modify use cases for monetization while optimizing network costs. It can help introduce new business models by exposing network capabilities and information with SLAs to third-party application and content providers. For additional revenues, an operator can extend the Volume-based Data Plan service by enforcing data usage quotas for the services of content providers by giving the partner API access to the operator's network policy and quota management services.
Cisco Prime Analytics	Provides business and network analytics capabilities that can enable both historical trend and real-time predictive policy decisions. Includes dashboards for data visualization and programmable interfaces to create system alerts in conjunction with policy. It includes indoor location analytics such as foot-fall, dwell time, and more. It includes the ability to leverage the DPI capability within the Cisco ASR 5000 Series of packet core solutions to correlate massive volumes of dynamic usage data and catalog data to deliver up-to-the-minute insights. Provides visibility to marketing to help determine impact of Volume-based Data Plans and to create new tariff plans for new revenues and customer retention.
Cisco ASR 5000 Series Small Cell Gateway	Provides intelligent Wi-Fi access for subscribers, including support for: • 3rd Generation Partnership Project 2 (3GPP2) WLAN Packet Data Interworking Function (PDIF) for untrusted Wi-Fi networks • 3GPP Interworking WLAN (iWLAN) Packet Data Gateway (PDG) for untrusted Wi-Fi networks • 3GPP iWLAN Tunnel Terminating Gateway (TTG) for untrusted Wi-Fi networks • 3GPP evolved Packet Data Gateway (ePDG) for untrusted Wi-Fi networks • Evolved Wireless Access Gateway (eWAG) for trusted Wi-Fi networks For Volume-based Data Plans, operators can offer ubiquitous service across 3G, LTE, and Wi-Fi access networks and can even include Wi-Fi usage in overall data quotas and/or establish separate quotas for Wi-Fi usage.

Cisco Solution	Description
Cisco Small Cell Solutions	Designed to address the challenge of mobile service coverage and to expand network capacity. Small cells can extend voice and data services to mobile subscribers while offloading traffic from the macro network. Additionally, Cisco Small Cell capabilities are uniquely used to deploy consumer services that are based on indoor location and presence.
Cisco Unified RAN Backhaul	Reduces cost and increases capacity of Radio Access Network (RAN) backhaul from any multivendor radio, across any transport media. Includes unified operations, management, and migration technologies designed to reduce the complexity of operating, deploying, and scaling backhaul of multivendor, multigenerational RANs. Includes the Cisco ASR 901 Series Aggregation Services Routers – environmentally hardened, high-speed, low-power-consumption routers optimized for any-G cell-site Radio Access Network (RAN) backhaul and Ethernet access. And the small-form-factor Cisco ASR 901S is designed specifically to enable the wide scale deployment of small cells by extending routing intelligence to the pole.

What Are the Benefits of Volume-based Data Plans?

- Increase revenue with differentiated data service offerings

- Optimize use of network resources by subscribers

- Improve customer satisfaction

- Provide competitive pricing based on data usage

Why Cisco?

The Cisco Open Network Environment (ONE) converges physical hardware and virtual software technologies to make the network easier to program, access, use, operate, and manage. Cisco ONE can help you drive new revenues and monetize your network in new and profitable ways. Cisco's solutions, platforms, and technologies provide a scalable, standards-based intelligent IP architecture that enables you to integrate subscriber knowledge with network and application intelligence in real-time to offer an expanding portfolio of "Use Cases," which are innovative, revenue-generating applications and services that:

- Drive profitable data revenues by providing user personalization and seamless, secure heterogeneous access across 3G, LTE, and Wi-Fi networks

- Evolve your network into a platform for both direct and third-party partner monetization

- Enable you to establish profitable new business-to-business-to-consumer (B2B2C) revenue models

- Help you enter new, growing markets such as cloud services, content delivery, enterprise services, location-based services, machine-to-machine (M2M) applications, and more

To help deploy mobile Internet solutions efficiently and successfully, Cisco Services offers consulting for design, implementation, integration, and support.

For more information, please visit: http://www.cisco.com/go/mobile.