Monetizing Networks with Services Exposure

An Oracle White Paper
November 2009
EXECUTIVE OVERVIEW

170 million smartphones shipped globally since 2008. Web 2.0 social network developers contribute over 300 applications per day. Over 1 billion downloads and almost 40,000 applications created in the first nine months of the Apple App Store. The Web, communications, and entertainment worlds are converging from multiple dimensions -- whether from the device, service, or applications perspective. End-user and market demands are forcing transformations and changes in the definition of what a “service provider” is, the products and services they develop and deliver, and the business models behind how those products and services are consumed. In response, network operators are investing aggressively to make themselves more attractive to third party developers by leveraging their unique assets: multiple networks, existing revenue relationship with subscribers, and unique subscriber information.

This paper discusses how network operators can better monetize their unique network assets by adopting a service exposure approach to third party developers and service providers using Oracle Communications Services Gatekeeper.

INTRODUCTION

With the global proliferation of fixed and mobile devices, with relatively easy and cheap access to broadband Internet and 3G wireless, network operators are facing a business climate where voice revenues are declining, and converged data-Web-entertainment revenues are growing. At the same time, an increasing number of large, non-telecom service providers from the consumer electronics, Web and device manufacturing industries — such as Apple, Google and Nokia—are competing with operators for end-user share of-mind and wallet.
To successfully compete in this dynamic competitive environment, operators are selectively opening their key network assets to third-party developers and application providers, seeking more collaborative business models. Critical to this strategy, operators must have the proper service exposure solution within their service delivery platform (SDP). As many operators still maintain legacy, custom service exposure mechanisms based on proprietary, telecom-specific application interfaces, it is important to examine and understand the barriers to effectively and profitably monetizing network assets.

BARRIERS TO EFFECTIVE NETWORK MONETIZATION

Operators face many business and technical challenges in implementing an effective and profitable network monetization strategy through services exposure. A typical operator takes 4-12 weeks to on-board a third party’s application into the network. Some have integrated over 100 third parties into their network, with each partner requiring 5-20 custom interfaces and point-to-point integrations. To provide network access to these third party partners, a typical operator has opened more than 20 network entry points, requiring more than 20 internal employees to manually on-board, administer, and enforce the complex myriad of service level agreements (SLA) for each partner.

Point-to-point integrations using custom, proprietary interfaces between the third party applications and the operator’s SDP, Operations Support Systems (OSS) and Business Support Systems (BSS) result in the operator becoming slow, unattractive to third parties, risky and unreliable, and unprofitable to scale. Figure 1 highlights the following challenges being faced by operators.

Figure 1: Barriers to Effective Network Monetization
Slow time to service launch and third party on-boarding results in lost revenue opportunities

With legacy service exposure mechanisms, each third party application to be on-boarded into the operator’s SDP and integrated with the BSS/OSS requires dozens of point-to-point, custom, and proprietary interfaces and integrations, requiring a significant investment in time and budget. Typically, these custom integrations are implemented using internal developers or external system integration consulting resources. As the operator looks to expand their open, collaborative business models, the process of on-boarding more partners, along with their applications becomes too slow for the operator, as well as the partner.

Unattractive application interfaces and third party on-boarding processes results in limited services portfolio

With custom, proprietary and telecom-specific application interfaces, together with manual, time-consuming on-boarding and integration processes, operators are making themselves unattractive to third party developers. The “App Store” type of over-the-top third party application business models are attracting thousands of developers due to their simplicity and speed to market. As a result, operators are limited in providing a robust portfolio of innovative new services from third parties.

Uncontrolled network access and usage results in increased risks of service outages and lower quality of service (QoS)

As more and more third party partners and their applications are added to an operator’s legacy SDP using custom application interfaces, and point-to-point integrations, the operator faces significantly increased risk of service outages caused by unauthorized, as well as unintended, network usage by third parties. Lacking a centralized policy and SLA enforcement mechanism across point-to-point integrations, the QoS promised by the operator to its third party partners becomes very unreliable.

Custom, non-reusable application interfaces and enablers results in unprofitable scalability

When networks are exposed to third party partners using custom interfaces with silo’d service enablers, operators are unable to re-use them for other partners. Custom enablers built for one type of application and partner cannot be re-used for other applications and partners. Creating the same messaging, call control or charging enablers multiple times for each different partner type and for each
partner application is not a model for scaling cost-effectively. With legacy architectures, operators are inhibited from scaling their exposure programs to large numbers of third parties, which results in a limited return-on-investment (ROI).

**A OPEN, UNIFIED SERVICES EXPOSURE APPROACH**

Industry analysts from Gartner have stated the failure by operators to invest in a more agile service creation and delivery environment for innovative services will result in a declining subscriber base and decreased profitability over the next decade. Others have indicated that operators should create a single, unified service delivery platform around their unique network assets. Subscriber profile information is often spread across disparate systems and made available in multiple proprietary formats. In addition, operators need to promote their SDPs to external developer communities.

The best approach to resolving the barriers to effective network monetization, as described above, is for operators to implement an open, unified services exposure platform based on both IT and telecom industry standards to replace the existing custom, proprietary service exposure implementations. Existing custom-built and proprietary solutions, as well as niche, telecom-specific gateway solutions based on technologies such as Parlay X, cannot fully resolve the operator’s challenge of having a services exposure solution which is slow, unattractive to third parties, risky and unreliable, and unprofitable to scale.

**ORACLE SOLUTION FOR SERVICES EXPOSURE**

Oracle’s solution to eliminating the barriers to effectively monetizing network assets is to provide operators a single, centralized service exposure platform – Oracle Communications Services Gatekeeper. As the service exposure component of the Oracle Communications Service Delivery product family, Oracle Communications Services Gatekeeper eliminates the barriers to an operator’s ability to implement an effective and profitable service exposure solution by enabling the operator as shown in Figure 2 and with the following attributes:

- **Speed:** Fast service launch and third party on-boarding times help maximize revenue opportunities. Oracle Communications Services Gatekeeper delivers unparalleled speed to an operator’s service exposure platform by providing a comprehensive portfolio of out-of-the-box application programming interfaces (API) to accelerate third party application development and integration and a partner relationship management module for rapid third party application on-boarding. With Oracle Communications Services Gatekeeper, operators eliminate the need for custom, proprietary, and
Oracle Communications Services Gatekeeper is a powerful, converged Web-SOA-Telcom service exposure platform, delivering an open, standards-based framework for exposing value-added communications capabilities to third party application and content developers. As the service exposure platform component of the Oracle Communications Service Delivery product family, Oracle Communications Services Gatekeeper helps network operators to significantly enhance the monetization of their service delivery platforms (SDP), reduce total cost of ownership (TCO), and increase quality of service (QoS).

- **Attractiveness: Diverse choice of application interfaces and easy partner on-boarding promotes large services portfolios.** Oracle Communications Services Gatekeeper provides a choice of out-of-the-box, converged Web-SOA (Service Oriented Architecture)-Telcom interfaces, and a Web services-based partner relationship management module, which enables operators to become more attractive to third party developers. When building network and communications-enabled applications, different types of developers demand different types of application interfaces. Oracle Communications Services Gatekeeper provides native telecom interfaces for telecom-savvy developers, SOAP (Simple Object Access Protocol) Web Services for developers familiar with Parlay, SOA Web services for enterprises and businesses, and REST (Representational State Transfer)-ful Web Services for Web 2.0 developers.

  ![Figure 2: Oracle Services Exposure Platform Solution – Oracle Communications Services Gatekeeper](image)

- **Control : Centralized control of network access and usage minimizes service outages and ensure service quality.** Oracle Communications Services Gatekeeper provides a powerful policy enforcement engine which allows operators to exert comprehensive and fine-grained control over how third party partners and their applications can access and use the operator's network assets. It automatically enforces SLAs and policies at runtime, thereby preventing any one application or partner from exceeding the terms and conditions of their SLAs. Policies can be applied at the application, partner and subscriber level, thereby limiting the risks of services outages caused by SLA violations by any one or group of third party applications.

manual process of exposing network APIs and on-boarding third party partners and applications.
• **Profitable Scale**: Open application interfaces and re-usable service enablers enables cost-effective scalability. Key to profitable scale of service exposure solutions are automation, modularity and re-usability. With Oracle Communications Services Gatekeeper, operators can automate the administration and management of large numbers of third parties via integration with partner management portals. In terms of modularity and re-usability, a comprehensive set of out-of-the-box communication services and network plug-ins in Oracle Communications Services Gatekeeper can be re-used across different types of third party partners and applications. And because of their modular architecture, new services and plug-ins can be added to accommodate custom network and service requirements.

**CONCLUSION**

The upstream business model of leveraging third party applications and content providers to drive significant revenue has been proven to be successful worldwide. This includes service providers from diverse industries such as telecom, Internet, retail, and entertainment. The “app store” business model leveraging third party applications to drive increased data ARPU has been clearly validated, and the competition for third party developer mindshare, and ultimately end-user share of wallet, has begun. To take advantage of the popularity of “app stores” and their applications, device manufacturers are delivering advanced, powerful and innovative smartphones, which are being rapidly adopted by millions of consumers. And due to the rapidly changing dynamics of the marketplace, network operators are aggressively identifying and implementing so-called “Telco 2.0” strategies, bringing together the worlds of fixed, mobile, and Web.

The key is to leverage the innovation and time-to-market advantage provided by the broader Web and IT developers, in addition to the operator’s traditional ecosystem of telecom-specific developers. According to leading industry analysts, the approach best suited for operators to address these changing market requirements and dynamics is one based on leveraging third party developers and applications using open, standards-based service exposure platforms. By using a unified service exposure approach, operators will be able to achieve the necessary speed, attractiveness, control, and profitable scale in monetizing their network assets.

The Oracle service exposure solution is based on Oracle Communications Services Gatekeeper, which has been successfully tested and proven to help operators better monetize their network assets by leveraging third party partners. This includes customers such as Telecom Italia, 3 Australia, O2 UK, SingTel, Aircel, and Telstra, among others. Industry analysts such as Yankee Group, Analysys Mason, and Infonetics Research have all listed Oracle as the #1 SDP vendor.