



A SIMPLE, FLEXIBLE APPROACH TO SHARED DATA PLANS

USING ALCATEL-LUCENT SUREPAY[®] ONLINE,
MULTI-LEVEL HIERARCHY TO DEVELOP
INNOVATIVE MOBILE DATA PLANS

APPLICATION NOTE

ABSTRACT

Mobile service providers face increasing demand for data that enable allowance sharing by multiple members or devices while providing spending limit capabilities. To address these needs, mobile service providers must provide a variety of personalized offers and innovative pricing plans.

This application note explains how the online, multi-levels hierarchy of Alcatel-Lucent SurePay® enables mobile service providers to develop innovative tariff plans to meet diverse market segment requirements for shared data plans and shared service allowances.

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INTRODUCTION

Today's mobile communications market emphasizes allowance sharing and cost control, which are important issues for individuals, families and businesses. Mobile service providers need innovative solutions to address the growing demand for rate plans that enable mobile data allowance sharing by multiple members and devices while providing cost-control capabilities.

Targeting these market segments helps mobile service providers to attract and grow groups, families and business customers. It facilitates the evolution of old mobile tariff plans, which are inadequate for new data-usage behaviors across multiple devices within a household, communities and businesses. New tariff plans can offer a monthly fee for a bucket of data allowance shared among the members and devices while collecting monthly line fees per devices in exchange for unlimited voice, Short Message Service (SMS) and Multimedia Messaging Service (MMS).

Shared plans can benefit:

- Individuals who use several devices, such as a smartphone, tablet and laptop
- Families who get a better deal by sharing a pool of data among family members
- Groups/communities and businesses

Alcatel-Lucent helps mobile service providers meet the requirements of these market segments with SurePay. This product provides a flexible, multi-level hierarchy that can speed and simplify the deployment of new tariff plans — which target individuals, families, communities and business customers with various payment types, including prepaid, postpaid and hybrid accounts.

FLEXIBLE, MULTI-LEVEL HIERARCHY

Alcatel-Lucent SurePay, a part of Alcatel-Lucent Smart Plan solution portfolio, provides a flexible, multi-level hierarchy to support mobile tariff plans through hierarchical association among accounts. This feature enables *vertical data sharing* among groups with hierarchical structures, such as enterprises and government agencies. Vertical data sharing allows sharing of data and a service allowance vertically through the organization's reporting layers. (Horizontal data sharing allows sharing across the members within the same layer.)

The multi-level hierarchy is the fundamental design for building today's popular shared-data offerings. This feature also allows sharing of other services, including voice, SMS, and MMS.

The SurePay hierarchy is a collection of groups and subscribers. Group accounts generate traffic usage. However, a group account does not generate traffic directly. Instead, it aggregates traffic usage from all its group members, who have subscriber accounts. Subscribers in a group share hierarchy account balances, usage buckets and promotional tariff plans.

SurePay also comes with real-time charging and cost control, various billing relationships and diverse payment modes, including prepaid, postpaid and hybrid. All these features can be applied to the hierarchical group sharing accounts.

HIERARCHIES FOR THE REAL WORLD

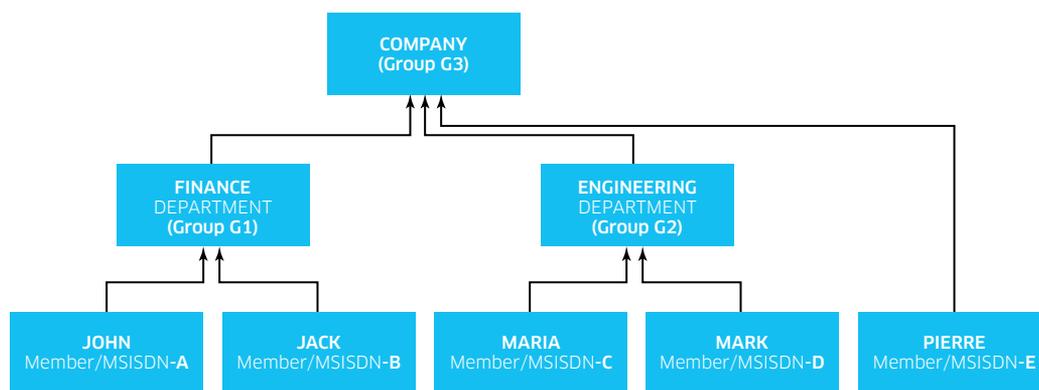
Individuals, families, communities and businesses can be treated similarly in hierarchy design. But often, business examples are the most complex and complete. The following examples illustrate business hierarchy relationships.

Example 1: A subscriber in a simple group hierarchy

An individual subscriber account can belong to a group account nested under another group account. For example, in Figure 1, a hierarchy has the following scenario:

- Subscribers John (individual account MSISDN-A) and Jack (individual account MSISDN-B) form level 3 of the hierarchy. Both belong to the Finance Department, which is at level 2 of the hierarchy (group account G1).
- Subscribers Maria (individual account MSISDN-C) and Mark (individual account MSISDN-D) form level 3 of the hierarchy. Both belong to the Engineering Department, which is at level 2 (group account G2).
- The Finance department (group account G1) and the Engineering Department (group account G2) form level 2 of the hierarchy. Both are linked to the Company (group account G3) at level 1 of the hierarchy.
- Subscriber Pierre (individual account MSISDN-E) also belongs to the Company (group account G3).

Figure 1. A subscriber in a simple group and hierarchy

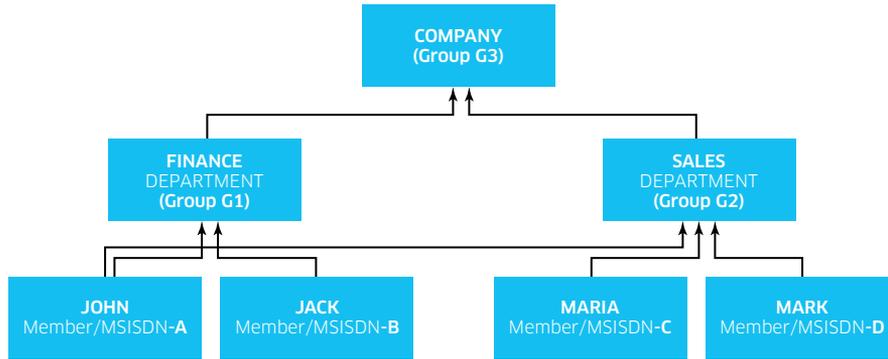


Example 2: A subscriber in multiple groups at the same hierarchy level

Figure 2 shows an example where a subscriber belongs to two different groups in the same hierarchy.

- Subscriber John (individual account MSISDN-A) belongs to the Finance Department (group account G1) and the Sales Department (group account G2).
- Both the Finance Department (group account G1) and the Sales Department (group account G2) belong to the Company (group account G3).

Figure 2. One subscriber in two groups within the same hierarchy level

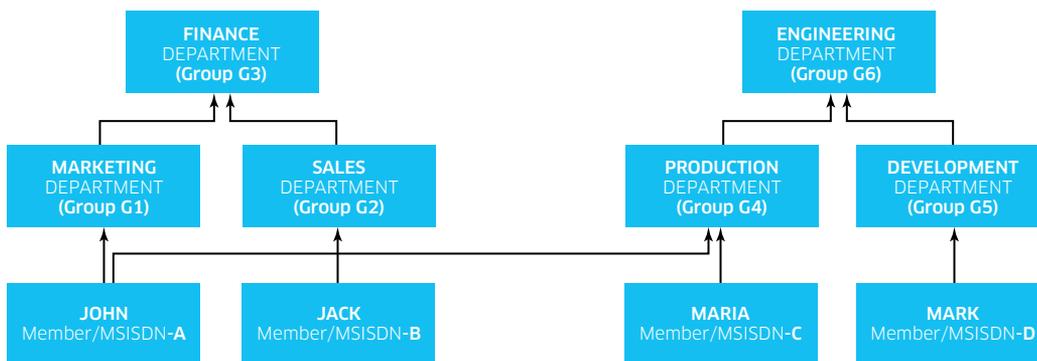


Example 3: A subscriber in multiple groups and multiple hierarchies

Figure 3 shows an example where a subscriber belongs to two different groups in different hierarchies.

- Subscriber John (individual account MSISDN-A) belongs to the Marketing Department (group account G1), which is under the Finance Department (group account G3).
- John also belongs to the Production Department (group account G4), which is under the Engineering Department (group account G6).
- The Marketing Department (group account G1) and the Production Department (group account G4) belong to different hierarchies.

Figure 3. A subscriber in two groups in different hierarchies



BILLING RESPONSIBILITIES

In an enterprise setting, each organization often is responsible for its own telecom expenses. There are instances where employees' telecom expenses may be split across two organizations. In the mobile data world, usage and allowances require real-time processing in order to charge the usage to the right accounts.

Defining billing responsibility in a hierarchy

The SurePay account hierarchy supports the concept of billing responsibility, which allows a subset of subscriber accounts and lower-level group accounts to share the balance of a higher-level group account. All data and service usage and charges are associated with a responsible party. In group settings, it is usually the group account that will be responsible, but partial billing relationships can also be defined.

On the path from the subscriber account to its top hierarchy account, there can only be one billing responsibility for each subscriber or group account. The billing responsibility accounts pay for the usage charges incurred by the subscriber accounts under it.

SurePay also allows mobile service providers to define billing responsibility for recurrent charges and non-recurrent charges on the hierarchy group account. Both these charges are billed to a provisioned group account with designated billing responsibilities.

Multiple billing responsibilities in a hierarchy

One group account can have multiple sub-group accounts or subscriber accounts. However, business organizations have complex financial rules that need to be considered. In response, SurePay provides the flexibility to overlay billing responsibility on group hierarchy. At each hierarchy group level, the parent group account can have billing responsibility for only a subset of or all of its lower-level group accounts or subscriber accounts.

TARIFF INNOVATIONS FOR INTRA-HIERARCHY RELATIONSHIPS

Not only can SurePay process all traffic types, it can also identify and process charges for intra-hierarchy calls when the calling party and called party belong to the same hierarchy within the same top group account. This allows mobile service providers to define tariff plans with a preferential tariff or discount dedicated to intra-hierarchy calls and events. The intra-group is defined by configurable selection criteria for products subscribed to at the group account and subscriber levels.

Multiple promotional tariffs

SurePay supports promotional tariff plans at the hierarchy account level as well as at the individual subscriber level. Based on the criteria, priority and promotional period, SurePay will accurately select the right tariff out of all tariffs assigned at the group or user level.

Shared metering buckets

To process usage traffic, SurePay allows the use of multiple metering buckets — based on time, volume, items or cost. The buckets measure usage at both the hierarchy group account level (any group level) and the individual account level. SurePay also allows mixing buckets from both the hierarchy group account level and the individual account level to choose the applicable buckets, based on the buckets' selection criteria and priority.

- Cost bucket application in the hierarchy: SurePay allows charging for bundle subscription or termination fee, bundle renewal fee, bundle reactivation fee and other types of recurring and non-recurring charges, with multiple cost-based buckets from both the subscriber level and hierarchy level.
- Bucket sharing and applicability rules in the hierarchy: Multiple buckets from the same type of metering mode (time, volume, unit or cost) can be used for call or event charging, from both hierarchy and individual account levels. SurePay provides a mechanism for selecting the applicable bucket from all the possible buckets defined at the hierarchy and individual account levels. An applicable bucket is selected based on the configured selection criteria and priority. When multiple buckets from a hierarchy level and an individual level have the same priority, configurable precedence is used to determine which bucket to select.

Shared usage-based discounts

With SurePay, mobile service providers can define multiple metering (time, volume, item or cost) usage-based discounts (UBDs) at both the hierarchy group account level (any group level) and individual account level. The group and individual discounts can be mixed together to select the applicable UBD based on the associated selection criteria and priority. If multiple discounts from the hierarchy and individual levels have the same priority, precedence rules can be defined to determine the UBD to use for the call charging.

Shared product bundles

SurePay supports shared bundles at the group account level, and discounts can be applied to bundle subscriptions and renewal on hierarchy accounts. SurePay supports the following capabilities in the online hierarchy:

- Subscription to a bundle and bundle reactivation
- Application of the discount on the bundle fee
- Application of bundle fee prorating
- Capability to query bundle subscription requests
- Bundle promotion check

Dual-account support

The SurePay hierarchy provides corporate customers with advanced capabilities that allow call charges to be applied to a personal account or a hierarchy account, based on selection criteria. For example, a family offer can charge the head of a household 10 Euros a month for a voice and text bundle (postpaid-mode bundle) while a child covers anything extra through a prepaid-mode bundle. For businesses, an enterprise-charging model can allow employees personal usage on a prepaid basis while business use remains postpaid.

Marketing promotions and bonus rewards

Promotion and bonus rewards capabilities help mobile service providers retain group members as SurePay subscribers. Service providers can define promotions and rewards for cumulative usage or at time of recharge of all subscribers belonging to a hierarchy group during a predefined period (which can be established by start and end date or calendar month).

INNOVATIVE SHARED PLANS

Alcatel-Lucent SurePay provides a online, multi-level hierarchy structure that enables mobile service providers to design various types of innovative tariff plans, adapted for multiple devices, family groups, communities and business customers, to address sharing and spending limit requirements. Its features and tools are differentiators that enable service providers to attract and retain subscribers and generate additional revenues. As a part of the Smart Plan solution, SurePay provides the pre-integrated, online charging capabilities to help service providers execute the new mobile broadband business models, enabling a new mobile retail channel and allow mobile users to easily discover, purchase, and manage their mobile broadband needs.

For more information about SurePay, go to <http://www.alcatel-lucent.com/products/surepay>
For more information about Smart Plan solution, go to <http://www.alcatel-lucent.com/solutions/smart-plan>

ACRONYMS

MMS	multimedia message service
MSISDN	mobile station international subscriber directory number
SMS	short message service
UBD	usage-based discount