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Comverse ONE 3.7.7

Level 2 Process: 1.1.1.14 Manage Billing Events

Version 1

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Self-Assessment Process Mapping Report

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About Comverse

Comverse is the world's leading provider of software and systems enabling value-added services for voice, messaging, mobile Internet and mobile advertising; converged billing and active customer management; and IP communications. Comverse's extensive customer base spans more than 125 countries and covers over 450 communication service providers serving more than two billion subscribers. The company's innovative product portfolio enables communication service providers to unleash the value of the network for their customers by making their networks smarter.

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1 L2: 1.1.1.14 Manage Billing Events

Encompasses the functions required to guide, distribute, mediate, summarize, accumulate, and analyze billing event records.

The billing events management processes encompass the functions required to guide, distribute, mediate, summarize, accumulate, and analyze billing event records. These processes may occur in real-time, near real-time, or may be executed on a periodic basis.

Billing event records include records produced by network elements (service events), records that indicate the need for periodic billing of a reoccurring product rate, and records that indicate the need for billing of a non-reoccurring rate.

The guiding processes ensures that the event records used in the billing processes are appropriately related to the correct customer billing account and products.

The billing event records are edited and if necessary reformatted (mediated) to meet the needs of subsequent processes. The billing event records may also be enriched with additional data during this process.

1.1 L3: 1.1.1.14.2 Guide Billing Events

Ensures that the event records used in the billing processes are related to the correct customer billing account and subscribed products.

The Guide Billing Events processes ensure that the event records used in the billing process relate to the correct customer billing account and products. A specific event record may be related to multiple customer billing accounts and subscribed products.

Distribution of billing event records to other processes may also occur.

1.1.1 L4: 1.1.1.14.2.1 Ensure Billing Event Usage – Mapping Details

Process Identifier: 1.1.1.14.2.1

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie “instantiated”) with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS 1.1.1.14.2.1 Ensure Billing Event Usage
Brief Description Ensure that the event records used in the billing process relate to the correct customer billing account and products. **Extended Description** Not used for this process element **Explanatory**

A specific event record may be related to multiple customer billing accounts and subscribed products.

Mandatory

The purpose of Ensure Event Record Usage process is to ensure that the event records used in the billing process relate to the correct customer billing account and products.[A]

A Comverse ONE bill includes a variety of different billable events, represented by event records created by multiple sources. See ***Error! Reference source not found.*** *for more details.*

Each such record is associated automatically with the appropriate billing account and product as part of the automatic processing or creation of that record type, as follows:

- *Usage records are provided to Comverse ONE by external network elements; these records contain a subscriber ID, such as (for example) the MSISDN of a mobile call. In some cases, usage records are accumulated in a mediation layer and provided to Comverse ONE as usage files for batch rating.*
  In either case, the Customer Inventory in Comverse ONE includes various network IDs for each subscriber, and when records are received the Comverse ONE subscriber is identified based on the corresponding ID for the appropriate network. Each Comverse ONE subscriber is associated with one or more billing accounts; Comverse ONE selects the appropriate account for the type of charge, and the usage event is assigned to that account.
  See the following flows for illustrations of related processes:
  - ***Error! Reference source not found.***
  - ***Error! Reference source not found.***
  - ***Error! Reference source not found.***
  - ***Error! Reference source not found.*** *(and children)*
  - ***Error! Reference source not found.***
- *Recurring charges, such as monthly fees, and non-recurring charges, such as installation or activation fees, are assessed and scheduled either automatically based on Bundle/Offer configuration or manually through a Comverse ONE GUI or API.*
  In either case, the charge is associated with a subscriber (if configured as subscriber-level) or directly with a billing account (if configured as account-level). Subscriber-level charges are mapped to billing accounts as described above for usage.
  See ***Error! Reference source not found.*** *(and children) for related flows.*
- *Line-item adjustments are associated with specific target transactions (see* ***Error! Reference source not found.*** *for an example). The adjustment is always billed to the same account as the transaction being adjusted.*
- *Payments, refunds, prepayments, recharges and miscellaneous adjustments are balance-level transactions and are always associated with the billing account that owns the balance.*

There is not always a product associated with a billable transaction. For example payments, refunds, prepayments, recharges and miscellaneous adjustments are balance-level transactions not

associated with a product. Where a product is associated with the transaction, it is determined based on the associated Offer or Bundle assigned to the subscriber or account to which the transaction is assigned. This is always the case for usage charge transactions, for example.

Optional

Not used for this process element

Interactions

Not used for this process element

1.1.2 L4: 1.1.1.14.2.2 Distribute Billing Event – Mapping Details

Process Identifier: 1.1.1.14.2.2

Process Context

This process element represents part of the overall enterprise, modeled in business process terms, and can be applied (ie "instantiated") with other similar process elements for application within a specific organization or domain.

LEVEL 4 PROCESS MAPPING DETAILS

1.1.1.14.2.2 Distribute Billing Event

Brief Description

Distribute billing event records to other processes.

Extended Description

Not used for this process element

Explanatory

As a typical example, billing events are transferred to Charging process for event/product charging via this process. In general, the billing events are distributed in the specific format, e.g. plain text format, binary format, XML format.

Mandatory

The purpose of Distribute Billing Event process is to distribute billing events to other processes which need access to billing events. This process is also responsible for recording distribution logs to avoid duplicated billing event distribution. [A]

Within Comverse ONE there is typically no transfer required; the billing events are maintained in a common database, as illustrated in ***Error! Reference source not found.****. All the processes that need*

access to those events access the same database. This also ensures that no duplication and no event loss during transfer is possible, since there is no transfer in the first place.

For example, when recurring charges are first processed a record is stored in the database by the Recurring Charge Server (RCS) as illustrated in ***Error! Reference source not found.*** *when they are subsequently billed associated billing records are stored in other tables (e.g. BILL_INVOICE_DETAIL) within the same database, joined back to the original record to assure database integrity. Discounts, adjustments, and other operations performed on the recurring charge are similarly stored in the same database, with references back to the original charge. All the transaction access is logged using standard Oracle tools.*

The same charge transactions in the same database are exposed to custom/external systems through APIs, and can therefore be treated similarly.

However, in some cases external systems wish to maintain their own copies of transaction data. This is common, for example, in data warehousing and OLAP applications, where providers wish to avoid contention on the main billing database. In these cases, the preferred transfer method uses the DWH tool, which can be configured with the tables to be transferred. (Typically these are transaction tables, but in principle can be anything.)

DWH manages its own tracking and logging, allowing it to "pick up where it left off" to ensure that each transaction is transferred once and only once. The source transactions are not modified or deleted; what is transferred is a copy and must be treated accordingly. (For example, modifications made to the transferred records will not affect the customer's account unless some method for applying the corresponding modifications to the Comverse ONE transaction tables is also used.)

(Of course, code using Comverse ONE APIs can also make copies of transaction data if they choose. This is not recommended, both for performance reasons and because they become responsible for their own logging, etc.)

Optional

Not used for this process element

Interactions

Not used for this process element