

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

May 2018

Version 1.0

Contents

1.3.6 - Customer Information Management	3
1.3.6.1 Create Customer Record	4
1.3.6.2 Update Customer Data	5
1.3.6.3 Notify Customer Data Change	6
1.3.6.4 Archive Customer Data	7
1.3.6.5 Build a unified customer view	8
1.3.9 - Bill Invoice Management	9
1.3.9.1.1 Obtain Billing Events	10
1.3.9.1.2 Apply Pricing, Discounting, Adjustments & Rebates to Customer Account	11
1.3.9.1.3 Apply Agreed Customer Bill Adjustment	13
1.3.9.2.1 Render & Format Invoice	15
1.3.9.2.2 Deliver Electronic Invoice	16
1.3.9.2.3 Verify Invoice Quality	17
1.3.9.2.4 Manage Customer Invoice Archive	18
1.3.10 - Bill Payments & Receivables Management	19
1.3.10.1 Manage Customer Billing	20
1.3.10.2.1 Manage Customer Payment Plan	21
1.3.10.2.2 Collect Customer Payment	22
1.3.10.2.3 Reconcile Customer Payment	23
1.3.10.2.4 Manage Back-End Bank Account	24
1.3.10.2.5 Administer Commercial Arrangement for Third Party Supplier	25
1.3.13 - Charging	26
1.3.13.1 Perform Rating	27
1.3.13.2 Apply Rate Level Discounts	28
1.3.13.4 Manage Customer Charging Hierarchy	29
1.3.13.5 Provide Advice of Charge/Rate	30
1.3.14 - Manage Balances	31
1.3.14.1 Manage Balance Containers	32
1.3.14.2 Manage Balance Policies	33
1.3.14.3 Balance Operations Management	34
1.3.14.4 Authorize Transaction Based on Balance	35

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

1.3.6 - Customer Information Management

Version 1 Review 1

May, 31st 2018

Sergii Kirik, PortaOne

1.3.6.1 Create Customer Record

Conformance	Full
Level	3

Description

Create a new customer record in the customer inventory.**AM**

Extended Description

The purpose of this process is to create a new customer record in the customer inventory. This process follows the processes in Establish Customer Relationship that make sure that a single record is created for each customer, and it persists the customer data in the customer inventory.**AM**

Supporting Description

New customers records in the customer inventory can be created by

- Operations Manager on Administrator WEB GUI
- Reseller on Reseller Self-Care WEB GUI
- User with Custom ACL on Administrator/Reseller WEB GUI
- Sign-up WEB page via WEB Services API
- Any application via WEB Services API

Supporting References

1. [PortaBilling® web interface](#), p.16
2. [Retail Customers](#), pp.40-41
3. [Resellers](#), pp.68-69
4. [Billing entities hierarchy](#), p.88
5. [Access levels](#), p.352
6. [Online web signup](#), p.362
7. [Customer Information Management in PortaBilling XML / JSON API](#)

1.3.6.2 Update Customer Data

Conformance	Full
Level	3

Description

Update the customer data in the customer inventory.**AM**

Extended Description

The purpose of this process is to update the customer data in the customer inventory. This can happen as a result of direct notification from the customer, as a result of information gathered as part of other processes (such as selling and order handling) or as a result of back office processes (such as customer data cleansing) .**AM**

Supporting Description

Customers records in the customer inventory can be updated by

- Admin on Administrator WEB GUI
- Reseller on Reseller Self-Care WEB GUI
- User with Custom ACL on Administrator/Reseller WEB GUI
- Customer on Customer Self-Care WEB GUI
- Any application via WEB Services API

Supporting References

1. [PortaBilling® web interface](#), p.16
2. [Retail Customers](#), pp.40-41
3. [Resellers](#), pp.68-69
4. [Billing entities hierarchy](#), p.88
5. [Access levels](#), p.352
6. [Customer Information Management in PortaBilling XML / JSON API](#)

1.3.6.3 Notify Customer Data Change

Conformance	Full
Level	3

Description

Notify other processes that customer data has been changed. **A**

Extended Description

The purpose of this process is notify other processes that customer data has been changed. Other processes (mostly long-lived processes) might need to know about such changes in order to adapt to such changes. In addition some processes which gather the data for centralized systems (such as Data Warehouse or Master Data Management) should be notified about such changes. **A**

Supporting Description

Customers records updates in the customer inventory as an event, trigger and execute pre-configured actions in External System Provisioning Framework. For example, the following events can trigger an action:

- Customer/New
- Customer/Status/Changed
- Customer/Status/Suspend
- Customer/Status/Unsuspend
- Customer/Status/Closed
- Customer/Status/Deactivated
- Customer/Status/Activated
- Customer/ServiceFlags/Changed
- Customer/ServiceAttribute/Changed
- Customer/Blocked
- Customer/Unblocked
- Customer/CustomField/Changed
- Customer/BalanceChanged
- Customer/Name/Changed
- Subscriber/Name/Changed
- Subscriber/Address/Changed
- Subscriber/ContactInfo/Changed

An action can notify other processes like Service Configuration & Activation / Resource Provisioning.

Supporting References

1. [External System Provisioning Framework](#), p.27

1.3.6.4 Archive Customer Data

Conformance	Full
Level	3

Description

Archive the customer data.AM

Extended Description

The purpose of this process is to archive and clean up customer data when it is no longer needed as part of the customer inventory. The information is archived according to the CSP policies and the local regulations. In most cases customer information is not deleted unless this is specifically required by the customer.AM

Supporting Description

Operations Manager may terminate a customer including all his accounts. If, for some reason, CSP doesn't want a customer to remain in PortaBilling® environment any longer, Operations Manager opts to stop all the customer's activities, and later to remove him and all his accounts from the environment. When terminated, the customer is no longer available for any operations but for informational / regulatory purposes. The only way to trace this customer is to use Advanced Search with the "Permanently Terminated" status filter. Termination/Closure can be scheduled so the data will be archived automatically.

The record can be cleaned up completely via WEB GUI/API if there are no dependencies like (xDRs, e-payment transactions, etc). CLI command is available to clean up records unconditionally.

Supporting References

1. [Customer termination](#), p.46
2. [WEB GUI: Change Customer Status](#)
3. **CLI to clean-up records on request**

1.3.6.5 Build a unified customer view

Conformance	Full
Level	3

Description

Create a single customer record from the information stored in multiple systems and present a single, most updated record of the customer information.**AM**

Extended Description

The purpose of this process is to create a single customer record from the information stored in multiple systems and present a single, most updated record of the customer information. This process invokes business rules in order to reconcile the customer data in a single accurate record. This process may be activated immediately upon any update of customer data or may be invoked on request to retrieve the customer data. This process may replicate data from other systems or calculate the unified record on the fly without persisting any customer data.**AM**

Supporting Description

Any external system can replicate its data into available PortaBilling Customer attributes, including any number custom fields/attributes via API. The unified record is then calculated from the PortaBilling storage DB whenever requested by WEB GUI or WEB services API application.

For instance, when the unified customer view is created, a customer SIP Registration information, stored in the external system (e.g. PortaSIP), can be calculated on the fly without persisting the same in PortaBilling. Another example, is getting Trouble Tickets from an external Request Tracker on the spot.

Supporting References

1. [Custom Fields, p.361](#)
2. [Customer Information Management in PortaBilling XML / JSON API](#)
3. [Customer Custom Field Management in PortaBilling XML / JSON API](#)
4. [Customer Account view with SIP Registration information](#)
5. [Customer view with Trouble Tickets](#)

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

1.3.9 - Bill Invoice Management

Version 1 Review 1

May, 31st 2018

Sergii Kirik, PortaOne

1.3.9.1.1 Obtain Billing Events

Conformance	Full
Level	4

Description

Accept billing events that have been collected, translated, correlated, assembled, guided and service rated before determining the information would be applied to the customer's bill invoice(s).AM

Mandatory

The purpose of the Obtain Billing Events process is to ensure that all billing events for services delivered to the customer by the Service Provider are available for processing.AM

Supporting Description

Billing events are typically stored in PortaBilling database as xDRs - eXtensible Detail Records. xDRs can store information about various types of billing events (such as voice calls, texts, chargeable downloads, use of antivirus software, purchase of tangible goods). These billing events records are typically collected, translated, correlated, assembled, guided and service rated by online (e.g. RADIUS, Diameter real-time charging) or offline Rating (xDR Mediation) automated processes of PortaBilling. Other sources of xDRs (billing events) are automated Recurring Charging and manual Balance Adjustment. PortaBilling functionalities above ensure that all billing events of customer's billing period are available for processing the bill.

To ease operations, PortaBilling® can accept all the relevant billing events automatically and generate bill. Alternatively, an operations manager can activate the delayed billing period closure functionality and set the allowable maximum number of days for approval. This functionality allows bill operations managers to review, adjust and accept billing events to generate customer's bill based on.

Supporting References

1. [Billing Events, Entities and xDRs](#), p.24
2. [Real-time charging via RADIUS/Diameter](#), pp.13-15, p.392
3. [xDR mediation and import](#), pp.292-295
4. [Invoicing Concept](#), pp.297-300
5. [Invoices review](#), pp.308-309

1.3.9.1.2 Apply Pricing, Discounting, Adjustments & Rebates to Customer Account

Conformance	Full
Level	4

Description

Determine the customer account or customer specific pricing, charges, discounts, and taxation that should be delivered to the invoice(s) for the customer. **A**

Mandatory

The purpose of Determine Customer Account process is to determine the customer account or customer specific pricing, charges, discounts, and taxation that should be delivered to the invoice(s) for the customer and ensure that the each cost item included in customer bill invoice(s) can correspond to a correct account through which customer will pay for the cost item. **A**

Supporting Description

At the end of the billing period, PortaBilling® can produce an invoice for customers. An invoice reflects all the transactions (calls, payments, refunds, subscription charges, and so on) which occurred during this period, and serves as the primary record of services provided to a specific customer, as well as his current status.

- Usage charges can be defined on a customer Account level in the Product. These charges are typically applied online.
- The Subscriptions module allows you to charge customers periodic fees to use the service - these are recurring charges to be reflected in the bill.
- Discounts are available for both usage (Volume Discount Plan) and recurring charges (Subscription Discount/Promotion) as well as commitment discounts (Bundle Promotions).
- Rebates can be applied automatically based on Subscriptions/Bundle Promotions setup.
- There are two methods for calculating taxes: inclusive and exclusive. Inclusive means that the rate in the price list is defined with all the applicable taxes included; so that a single xDR is produced, and the amount in the xDR includes both charges for services and the taxes applied to them. In the exclusive method, the rate is defined without taxes, and the total amount in the xDR includes only charges for services. Taxes are calculated later on, and added as separate xDRs. With PortaBilling® you can use both methods simultaneously to produce the same final result.

As transactions are tied to a specific customer account, PortaBilling automatically determines the customer account and associated definitions above to deliver customer specific records (e.g. cost items) to the invoice.

Supporting References

1. [Billing entities hierarchy](#), p.88
2. [Pricing definition in PortaBilling Product](#), pp.31-33
3. [Volume discount plans](#), p.98
4. [Recurring charging: Subscriptions](#), p.143
5. [Recurring charging: Bundle Promotions](#), p.161
6. [Processing taxes](#), p.316
7. [Invoicing Concept](#), p.297

1.3.9.1.3 Apply Agreed Customer Bill Adjustment

Conformance	Full
Level	4

Description

Apply and review any adjustment agreed in the previous billing period and make these included to the bill invoice.**AM**

Mandatory

The purpose of the Apply Agreed Customer Bill Adjustment process is to ensure that any adjustments which have been agreed between customer and Service Provider are included in the customer bill invoice.**AM**

Supporting Description

Occasionally the billing operations manager needs to intervene in the billing process and amend charges automatically produced by the system (xDRs for voice calls or Internet sessions, subscription charges, etc.). PortaBilling® offers a set of transactions for adjusting a customer's bill before it's generated.

In order to provide customers with correct invoices, PortaBilling® allows you to review invoices before sending them to customers. The administrator reviews the invoices and then approves them, or if necessary, makes balance adjustments (for example, to correct an invoice total) or sends them to be regenerated. Only after that step the invoices are delivered to customers via email.

It sometimes happens that an error is detected after an invoice has been generated and delivered to the customer. A new invoice must be produced, but the old one must be kept for audit purposes. The void invoice operation marks the invoice as canceled (this will also be visible in the .pdf file), and then a new invoice is automatically produced.

Alternatively, service providers may need to adjust an invoice amount and leave it unchanged (for example, when a customer disputes an invoice and asks for a waiver although the invoice data has already been included in company reports). Outstanding balance adjustment functionality does just that. Administrators can reduce the amount a customer must pay for an invoice without regenerating the invoice.

Administrators can also adjust invoices with a Paid status that have already been paid by customers (e.g. automatically by credit card). In this case the adjustment transaction is a refund which is applied to the customer's balance. When adjusting a paid invoice, an administrator can select how to apply a refund to the customer: either to the customer's balance as an unallocated fund or to their credit card, if that has been configured for the customer.

Supporting References

1. [Invoices review](#), pp.308-309
2. [Balance adjustment](#), pp.311-316

1.3.9.2.1 Render & Format Invoice

Conformance	Full
Level	4

Description

Render and format the customer bill invoice.**AM**

Mandatory

This process provides formatting of invoices in different ways and to achieve different publishing possibilities, and supports the creation of different invoice formats for different publication media. The process is further responsible for splitting and re-arranging invoices for customers (particularly customers with complex account structures) according to agreements made with these customers.**AM**

Supporting Description

Communication Service Provider can design multiple invoice templates, so that each template has its own layout, language, logos/pictures, and the like. Every customer will be assigned a specific invoice template (either individual or inherited from a customer class). Based on that template and billing data, PortaBilling® will automatically render and format an html and then .pdf file that can be emailed to the customer and/or downloaded from the PortaBilling® web interface and/or delivered to Produce & Distribute Bill processes.

Customers with complex account structures a handled by Consolidated/Individual Invoice for Customer Hierarchy feature of PortaBilling.

Supporting References

1. [Invoice templates](#), p.300
2. [PortaBilling Templates Guide](#)
3. [Consolidated invoice for customer hierarchy](#), pp.44-46

1.3.9.2.2 Deliver Electronic Invoice

Conformance	Full
Level	4

Description

Deliver the electronic copy of an invoice to customers.AM

Mandatory

The purpose of Deliver Electronic Invoice process is to deliver the electronic copy of an invoice to customers.AM

Supporting Description

Customer classes allow you to define a set of parameters which will be shared among a certain category of customers. Sending invoices by e-mail is one of such parameters with the following options:

- Automatically
- After review and approval by admin
- Never

Therefore, PortaBilling can deliver a PDF copy of an invoice by e-mail. A customer can also download the bill through self-care WEB interface.

Supporting References

1. [Customer Classes, p.47](#)
2. [WEB GUI: Sending invoices via e-mail](#)
3. [Customer Self-Care: Invoices](#)

1.3.9.2.3 Verify Invoice Quality

Conformance	Full
Level	4

Description

Verify invoice quality before distribution to the customer in electronic form and the process responsible for physical invoice production and distribution.**AM**

Mandatory

The purpose of Verify Invoice Quality process is to verify invoice quality prior to distribution to the customer in electronic form, or to the process responsible for physical invoice production and distribution. Verifying invoice quality is either a manual operation or an automatic behaviour. The process is responsible for ensuring the invoice format and content can meet customer requirements. When verifying invoice quality is failed, the process is also responsible for sending the invoice back to another process to reprocess.**AM**

Supporting Description

In order to provide customers with correct invoices, PortaBilling® allows billing operations managers to review invoices before sending them to customers/Produce & Distribute Bill process. To implement this PortaBilling automatically marks relevant invoices as "needs review". The billing operations managers reviews the invoices and then approves them, or if necessary, makes balance adjustments (for example, to correct an invoice total) or sends them to be regenerated (if, for example, the billing operations manager has additional reasons to update the invoice). Only after that step the invoices are delivered to customers/processes via email.

Multiple invoice generation notifications contribute to the automation of invoice quality verification, e.g. e-mail/SMS notification on generation failure.

Supporting References

1. [Invoices review](#), pp.308-309
2. [Invoice Generation Notification Templates](#), p.113

1.3.9.2.4 Manage Customer Invoice Archive

Conformance	Full
Level	4

Description

Store the customer invoice for a period of time is to address regulation and/or internal requirements, during which they can be accessed to support any customer or regulator agency inquiries on bill invoices. **A**

Mandatory

The purpose of Management Customer Invoice Archive process is to store the customer invoice for a period of time, to perform regulation and/or serve internal requirements, during which they can be accessed to support any customer or regulator agency inquiries on bill invoices, and the process is further responsible for archiving the customer invoices to historical customer invoice after a period of time according to Service Provider's management requirements. Furthermore the process is responsible for managing and maintaining archiving cycle. **A**

Supporting Description

By default, invoices are automatically stored in the primary DB and never cleaned up. Therefore, Billing Operations Manager and a customer can access any invoices from WEB and API interface to support any inquiries on bill invoices. Should Service Provider require the archiving the customer invoices, PortaBilling Archivist utility is to be used for managing and maintaining archiving cycle.

Supporting References

1. [WEB GUI: General Invoices page for operations managers](#)
2. [WEB GUI: Invoices of retail customer](#)
3. [Customer Self-Care: Invoices](#)
4. [Archivist utility](#)

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

1.3.10 - Bill Payments & Receivables Management

Version 1 Review 1

May, 31st 2018

Sergii Kirik, PortaOne

1.3.10.1 Manage Customer Billing

Conformance	Full
Level	3

Description

Ensure effective management of the customer's billing account as it relates to the products purchased and consumed throughout the appropriate billing cycle.**AM**

Extended Description

The primary purpose of this process pertains to effective management of the customer's billing account as it relates to the products purchased and consumed throughout the appropriate billing cycle. This process focuses on managing changes to the customer's billing account (for example, customer billing address, etc.) as it relates to the customer's service portfolio, such as ensuring that the correct purchased products are assigned to the customer's billing account for accurate billing.**AM**

Supporting Description

Operations Manager can manage customer's billing account of a client on Customer page of Administrator WEB GUI (e.g. customer billing address, billing cycle, balance model, etc.). In addition, Customers can be allowed to update their billing address via Self-Care WEB GUI.

The products purchased and consumed throughout the appropriate billing cycle are either charged directly to Customer (e.g. subscription fees, DID fees, charges for measured services) or charged to Customer Service Account (e.g. add-ons purchased through Self-Care) which are then billed to the tied billing account automatically.

Supporting References

1. [Billing entities hierarchy](#), p.88
2. [Pricing definition in PortaBilling Product](#), pp.31-33
3. [Pricing definition in PortaBilling Product Add-Ons](#), pp.34-35
4. [Retail Customers](#), pp.40-41
5. [Customer Service Accounts](#), pp.49-50
6. [WEB GUI: Customer's billing account management](#)

1.3.10.2.1 Manage Customer Payment Plan

Conformance	Full
Level	4

Description

Manage payment plans made with the customer.**AM**

Mandatory

The purpose of Manage Customer Payment Plan process is to establish new payment plans, modify or remove existing payment plans.**AM**

Supporting Description

Customer classes allow you to define what type of service a customer uses and a set of parameters which will be shared among a certain category of customers. For instance, suppose your invoice term for retail customers is “Net 21 days,” while for business customers it is “Net 30 days.” One can define two separate customer classes, one named “Retail” and the other “Business,” and define these parameters within them. After that, operators need only to assign a specific class to a given customer in order for the customer to automatically inherit all the class properties (e.g. grace period, automated notifications and actions upon non-payment).

Customer class allows defining a policy for automated payment collection. For example, an assigned policy enforces automated payment for a bill using the customer’s credit card or bank account (eCheck) with configurable grace period and dates of transaction attempts. In this example, Customers can manage preferable payment methods on their Self-Care WEB GUI.

Supporting References

1. [Customer Classes](#), p.47
2. [Collection policy](#), pp.305-307
3. [Customer Self-Care: Payment Methods Management](#)

1.3.10.2.2 Collect Customer Payment

Conformance	Full
Level	4

Description

Collect payments made by the customer.**AM**

Mandatory

The purpose of Collect Customer Payment process is to collect the payments from the customer. To the extent that processing of any payments is undertaken internally, i.e. check processing, these processes are responsible for managing the operation and quality of the internal processing.**AM**

Supporting Description

PortaBilling collects the payments made by the customer following payment collection policy (inherited from customer class). This can be done automatically by charging the tied credit card or the bank account (eCheck/Direct debit) of the customer once an invoice is issued. Payments can be collected manually through Administrator/Self-Care WEB GUI and API interfaces.

Another way to automate processing of payments is to use external payment collection gateways. The information about the transaction is then sent to PortaBilling® via the external payment gateway and PortaBilling® records the transaction and updates the customer's balance.

Supporting References

1. [Collection Policy](#), pp.305-307
2. [Payments](#), pp.334-341
3. [Customer Classes](#), p.47
4. [Customer Self-Care: Make a Payment](#)
5. [Customer Self-Care: Payment Methods Management](#)

1.3.10.2.3 Reconcile Customer Payment

Conformance	Full
Level	4

Description

Reconcile the payments to the invoices. **AM**

Mandatory

The purpose of Reconcile Customer Payment process is to reconcile the payments to the invoices. This process is meant to match these payments with the services/invoices delivered to this customer. Where payments do not match invoices, this process is responsible for informing the Manage Customer Debt Collection processes of any underpayments, and the Bill Inquiry Handling processes for any over-payments. These processes are responsible for reconciling the money received into the bank accounts against the payments expected in the invoices. Additionally these processes inform the Financial Management on all those payments for updating the ledger. **AM**

Supporting Description

PortaBilling conformance to 1.3.10.2.2 Collect Customer Payment implies that the money is well received into the bank accounts of CSP via merchant accounts of Payment GWs. Those transactions are automatically recorded to the customers in PortaBilling as a part of the same process.

As soon as the payment is matched against the customer, PortaBilling automatically puts the payment in full (or partially) to unpaid invoices (from old to new ones). Invoice status is then updated: Paid or Partially Paid.

- Overpayments are tracked as Unallocated Payments in PortaBilling to be reused automatically as soon as a new invoice is out.
- Underpayments are then handled by the Payment Collection and Action upon non-payment defined in appropriate PortaBilling Customer Class the Customer is tied to.

PortaBilling Custom Reports (e.g. Account Receivable with Aging, Payments) can be used to inform the Financial Management on all those payments and invoice statuses.

Supporting References

1. [Invoice Payment Status](#), pp.302-305
2. [Custom Reports](#), pp.380-384

1.3.10.2.4 Manage Back-End Bank Account

Conformance	Full
Level	4

Description

Manage back-end bank accounts for receipt of the customer payments and for the transfer of funds collected by third parties.**AM**

Mandatory

The purpose of Manage Back-End Bank Account process is to manage back-end bank accounts for receipt of the customer payments and for the transfer of funds collected by third parties. These processes are responsible for managing payment commercial agreement agreed with banks and the payment interfaces for collecting the customer payments.**AM**

Supporting Description

CSP can tie their merchant account in the bank with one of supported online payment processors in PortaBilling®. Multiple merchant accounts are supported (for instance, CSP's merchant account A accepts payments in USD, while account B takes payments in euros). CSP can manage the list of accepted payment methods (VISA, MC, eCheck, etc.) for every merchant account.

When payment is initiated (either by the customer from web self-care, or automatically) the PortaBilling® system connects to the online payment processor and makes the transaction. Upon receiving confirmation that the transaction was successful, PortaBilling® writes transaction information to the PortaBilling® database and modifies the balance for the customer. On the other end the online payment processor is managing the transaction for the merchant account in the bank. The level of available automation depends on the bank, payment processor, local regulations, etc.

PortaBilling® can automatically notify CSP via e-mail/SMS of any failures to receipt of the customer payments on the back-end merchant bank account.

Supporting References

1. [Merchant Bank Account of CSP](#), pp.335-337
2. [Payment Notification Templates](#), p.111

1.3.10.2.5 Administer Commercial Arrangement for Third Party Supplier

Conformance	Full
Level	4

Description

Establish the requirements for, and manage any commercial arrangements agreed with, third party suppliers.**AM**

Mandatory

The purpose of Administer Commercial Arrangement for Third Party Supplier process is to establish the requirements for, and manage any commercial arrangements agreed with, third party suppliers of payment services. After commercial arrangements are agreed, this process is responsible for monitor the execution of the commercial arrangements.**AM**

Supporting Description

CSP can tie their merchant account in the bank with one of supported third party suppliers (e.g. online payment processors) of payment services in PortaBilling®.

When payment is initiated (either by the customer from web self-care, or automatically) the PortaBilling® system connects to the third-party supplier of payment service and performs the transaction. Upon receiving confirmation that the transaction was successful, PortaBilling® writes transaction information to the PortaBilling® database and modifies the balance for the customer. The level of available automation depends on the bank, third party supplier, local regulations, etc.

PortaBilling® can automatically notify CSP via e-mail/SMS of any failures to process the customer payments with the third-party supplier, thus monitoring the execution of the commercial arrangements.

Supporting References

1. [CSP's Third Party Suppliers of payment services](#), pp.336-340
2. [Payment Notification Templates](#), p.111

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

1.3.13 - Charging

Version 1 Review 1

May, 31st 2018

Sergii Kirik, PortaOne

1.3.13.1 Perform Rating

Conformance	Full
Level	3

Description

Calculating the value of the service/product, before, during or after the rendering of the service.▲

Extended Description

Process responsible for calculating the value of the service/product, before, during or after the rendering of the service, based on parameters of the request (type, quantity, etc.), parameters of the customer/subscriber (tariffs, price plans, accumulated usage, contracts, etc.) and other parameters (time-of-day, taxes, etc.). The same request maybe rated differently for different subscribers based on their purchased offers or service agreements.▲

Supporting Description

In PortaBilling, rates and tariffs are the essential parameters that define how a certain event must be billed. It is very important to find a correct set of billing parameters and rules (e.g. time-of-day rates) for each event. This is done automatically by matching a service identifier with the rates available in the rate plan (tariff):

- during Authorization/Credit-Control request (before the rendering of the service)
- during Alive Accounting/Dynamic ReAuthorization/Credit-Control request (during the rendering of the service)
- during Stop Accounting/Credit-Control request (after the rendering of the service)

Real-time rating in PortaBilling takes into account products purchased by subscribers, their volume discount plans (e.g. quota and discounts based on accumulated usage) and service wallets (e.g. service units).

Supporting References

1. [Pricing definition in PortaBilling Product](#), pp.31-33
2. [Real-time charging: Rates and Tariffs](#), pp.92-95
3. [Volume discount plans](#), p.98
4. [Billing for time-based services](#), pp.125-126
5. [Billing for Always-on services](#), pp.132-133
6. [Billing for quantity-based services](#), pp.134-135

1.3.13.2 Apply Rate Level Discounts

Conformance	Full
Level	3

Description

Applies discounts to product prices.▲

Extended Description

This process applies discounts to product prices at an individual product level. A discount may be expressed as a monetary amount or percentage, and modifies a price for a product. When a discount is expressed as a percentage, the discounting process determines the discount calculated in relation to the price for the product. The discount may be displayed as a separate entry on the bill or may be combined with the rate for the product to only show as one entry. Discounts may be a one-time event or may have some duration (days, months, life of product, etc.). Discounts may apply to a specific customer or be generally available based on selection of products (for example - bundles). Discounting structures may involve tiers, tapers, or thresholds.▲

Supporting Description

PortaBilling Volume Discount Plans tool is great for making automatic price adjustments and allotments. It allows manager to adjust prices depending on the volume of services consumed by customers, allocate a certain volume of free services and transfer a balance to a sub-wallet that has been designed for a particular type of service. A plan can be applied to a specific customer or be generally available as a part of product offering or add-ons.

Supporting References

1. [Volume discount plans](#), pp.98-100, pp.105-106

1.3.13.4 Manage Customer Charging Hierarchy

Conformance	Full
Level	3

Description

Managing the charging relationships among subscribers.**AM**

Extended Description

Customer hierarchies are commonly used for corporate customers, family plans or other type of affinity groups. This process manages the charging relationships among subscribers, e.g. sharing, inheriting or restricting balances, price plans and discounts. Thereby assuring that a charge is added to or subtracted from the correct (sub-)account balance.**AM**

Supporting Description

In PortaBilling, a customer is an entity (an individual or a company) who is responsible for using the service via one or more accounts. Multiple options of balance models of customer and/or customer account can be used to fit different requirements, e.g. a post-paid customer may have a prepaid account (PIN card) along with credit phonenumber accounts underneath. When a credit account is charged for using the service, this directly affects the customer's balance, and the activities of all subordinate accounts are included in the consolidated invoice.

Complex corporate charging relationships are supported as well (e.g. Head Office is charged for multiple subscriptions of different Branch Offices).

In addition, PortaBilling allows implementation of shared family discounts (e.g. customer level discount is shared/combined with subscribed accounts).

Supporting References

1. [Customer Charging Hierarchy](#), pp.40-45
2. [Family Discount Plans](#), p.111

1.3.13.5 Provide Advice of Charge/Rate

Conformance	Full
Level	3

Description

Provide advice of charge/rate.A

Extended Description

The activity of Provide Advice of Charge/Rate is responsible for providing advice on rates, in real-time or offline, an estimate or value of the charge or rate for a specific usage or service request. The advice is usually based upon performing a full rating process for the request. The accuracy of the Advice underlies the complexity of the product offering - so that a 100% accurate AOC might not always be available in real-time. In these cases alternatives are usually sought (for example offline presentation / product type offering change. Advice of charge can be provided pre-, during or post event. Advice of charge can be used/utilized by several different end-2-end processes.A

Supporting Description

In PortaBilling, rates and tariffs are the essential parameters that define how a certain event must be billed. It is very important to find a correct set of billing parameters and rules (e.g. time-of-day rates) for each event. AOC is done automatically online/offline by matching a service identifier with the rates available in the rate plan (tariff):

- during Authorization/Credit-Control request (pre-event)
- during Alive Accounting/Dynamic ReAuthorization/Credit-Control request (during the event)
- during Stop Accounting/Credit-Control request (post event)

Real-time/Offline AOC in PortaBilling takes into account the complexity of products purchased by subscribers, their volume discount plans (e.g. quota and discounts based on accumulated usage) and service wallets (e.g. service units). It's typically performed along with Rating process and thus automated.

Supporting References

1. [Pricing definition in PortaBilling Product](#), pp.31-33
2. [Real-time charging: Rates and Tariffs](#), pp.92-95
3. [Volume discount plans](#), p.98
4. [Billing for time-based services](#), pp.125-126
5. [Billing for Always-on services](#), pp.132-133
6. [Billing for quantity-based services](#), pp.134-135
7. [xDR mediation and import](#), pp.292-295

PortaOne, Inc.

PortaBilling Maintenance Release 69

TM Forum Framework 17.5 Certification

Business Process Framework (eTOM) Release 17.5

Self-Assessment Process Mapping Report

Customer Domain

1.3.14 - Manage Balances

Version 1 Review 1

May, 31st 2018

Sergii Kirik, PortaOne

1.3.14.1 Manage Balance Containers

Conformance	Full
Level	3

Description

Hold and maintain the different balances that a customer and/or a subscriber may have.**AM**

Extended Description

This process manages the balance containers assigned to a customer and/or subscriber and is used to keep track of usage events, providing input for decision making processes (such as service or product authorization) by means of the balance policies. The containers include monetary and non-monetary balances (or shared) and are used as prepaid balances (enabling real-time service or product authorization), postpaid balances (in conjunction with an Account-Receiveables [AR] application). Examples of non-monetary balances and allowances are: free minutes, WAP-only quota, etc.**AM**

Supporting Description

In PortaBilling, customers are divided into prepaid and postpaid categories, depending on how their balance is controlled. A customer may have both monetary and non-monetary balances. While default balance container of the customer is monetary, additional prepaid balances can be assigned and controlled via PortaBilling Service Wallets feature. Monetary and non-monetary service wallets can be used to divide the customer's balance into virtual sub-wallets. Each sub-wallet is designated for a specific service. The customer can share his balances to PortaBilling Accounts - identities of the end user who is using the service.

These balances are typically accompany automated Provide Advice Of Charge process to authorize the service usage real-time in PortaBilling. Balances are typically updated by automated Perform Rating process in PortaBilling.

Supporting References

1. [Customer balance model](#), pp.41-43
2. [Account and account types](#), pp.49-50
3. [Service wallets](#), pp.100-107

1.3.14.2 Manage Balance Policies

Conformance	Full
Level	3

Description

Executing policies per balance or balance type.AM

Extended Description

Balance policies are rules that describe how balance affecting events are to be handled. This is done by comparing the value of each event against criteria such as the following: - a minimum allowable balance limit (e.g. balance must remain above zero), - balance expiration dates, - balance thresholds actions and notifications and - roll-over & cyclic policies.AM

Supporting Description

In PortaBilling, if prepaid/or postpaid balance model is assigned to a customer/account, the system automatically applies respective policy for basic handling of balance affecting events, e.g. prepaid balance reflects available funds, must remain above zero, decreases as long as charges apply. PortaBilling Volume Discounts, Quotas and Service Wallets features enrich balance policies with multiple options like notification or limiting service on threshold, rollover/reset policy, balance expiration, etc.

Supporting References

1. [Customer balance model](#), pp.41-43
2. [Customer Classes & Balance policies & notifications](#), pp.43-44
3. [Account balances](#), pp.49-50
4. [Volume discount plans](#), pp.98-108, pp.110-111, pp. 119-120.

1.3.14.3 Balance Operations Management

Conformance	Full
Level	3

Description

Allow different operations to be performed on the managed balance.**AM**

Extended Description

Balance operations processes the charged events, using balance policies and then guides the results towards the relevant balance containers. Operations include : - Reserving amounts from any balance for any session, and crediting unused reservations back into the balance, when a session is released. - Updating balances by applying charges to the balance and credit/debit adjustments. - Balance queries. - Transferring amounts from one balance to another.**AM**

Supporting Description

By design PortaBilling automatically guides the result towards the relevant balance, e.g. if a customer has domestic SMS messages in a dedicated wallet - they may be charged first on respective billing event. PortaBilling AAA and DCCA implementation supports reserving and crediting unused units back into the balance. Balance queries, adjustment and transferring operations are available from WEB UI and WEB services API of PortaBilling.

Supporting References

1. [Service wallets](#), pp.100-107
2. [Dynamic authorization](#), pp.136-138
3. [Online Centralized Session/Event charging with units reservation](#), p.274
4. [Balance adjustment](#), pp.311-313
5. [Customer Information Management in PortaBilling XML / JSON API](#)
6. [Customer Transaction Management in PortaBilling XML / JSON API](#)
7. [Customer Wallets Management in PortaBilling XML / JSON API](#)
8. [Wallet Unit Transfer Management in PortaBilling XML / JSON API](#)

1.3.14.4 Authorize Transaction Based on Balance

Conformance	Full
Level	3

Description

Manages authorization of service/ product requests based on available balances (monetary or non-monetary) and policies. **A**

Extended Description

This process may include balance reservation and must be performed online. Subsequent balance updates are not required to be done in real-time. In this context a service is provided by the network, e.g. voice call. Product is digital content delivered via the network, e.g. content such as music, games, etc. **A**

Supporting Description

Online authorization of service/product requests in PortaBilling takes into account available balances and their policies, e.g. when a voice call is authorized, the system may provide real-time advice of charge/airtime based on available monetary and non-monetary balance units. PortaBilling AAA and DCCA implementation supports reserving balance units.

Supporting References

1. [Overdraft protection](#), pp.135-142
2. [Online Centralized Session/Event charging with units reservation](#), p.274