



# PortaSwitch



# New Features Guide

Maintenance  
Release

# 46



Documentation

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**PortaSwitch® New Features Guide, March 2015**  
**Maintenance Release 46**  
**V1.46.08**

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## Preface

PortaSwitch® Maintenance Release 46 is the next leap-forward release, consistent with our “fast releases, precisely on time” ideology introduced in 2012.

### Where to get the latest version of this guide

The hard copy of this guide is updated upon major releases only and does not always contain the latest material on enhancements introduced between major releases. The online copy of this guide is always up-to-date and integrates the latest changes to the product. You can access the latest copy of this guide at: [www.portaone.com/support/documentation/](http://www.portaone.com/support/documentation/).

## Conventions

This publication uses the following conventions:

- Commands and keywords are given in **boldface**



The **exclamation mark** draws your attention to important information or actions.

**NOTE:** Notes contain helpful suggestions about or references to materials not contained in this manual.



**Timesaver** means that you can save time by performing the action described here.



**Tips** provide information that might help you solve a problem.

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## Multi-level Resellers

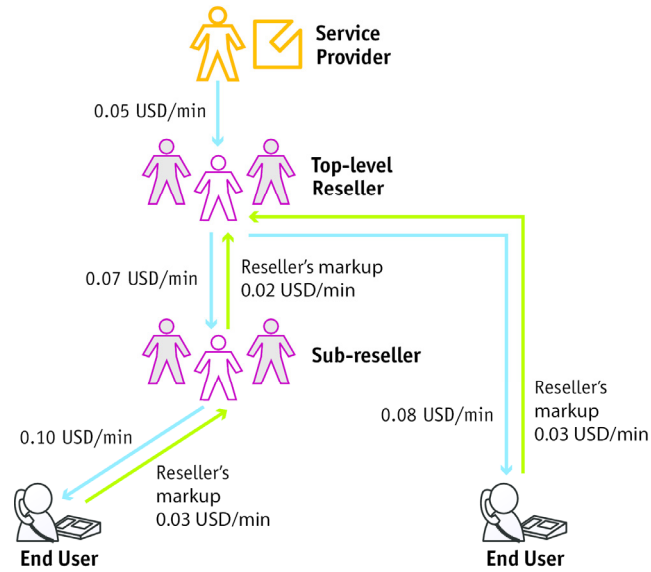
To reach more customers in the market many ITSPs sell their services through a multi-level network of resellers. To implement this functionality in PortaBilling®, we have extended the current “carrier – reseller – end user” model to a multi-level reseller structure where the entire chain of resellers is virtually unlimited.

Let's assume that an ITSP engages Reseller A to sell VoIP services. Reseller A operates independently from the ITSP and is free to set his own prices for services provided. Reseller A begins to sell services to his direct clients and some small business owners thus building his own network of sub-resellers. Each sub-reseller engaged by Reseller A can act as a “white label” reseller and resell a package of services (e.g. through their own network of reselling partners) under their own brand name.

In this scenario, it might appear that services purchased by customer John Doe from some reseller have in fact been provided through the n-level network of resellers. Consider the example of the resellers' network shown in the diagram below.

The reseller's hierarchy is modeled as follows:

- Top-level reseller – This reseller stays at the top of the resellers' hierarchy. He is created and managed by an administrator and deals directly with the service provider. He can create and manage his own sub-resellers as well as provide services directly to end users. Note that all resellers previously configured in PortaBilling® become top-level resellers after the update.
- Sub-reseller – The sub-reseller is created and managed by a top-level reseller or another (higher-level) sub-reseller. Likewise the top-level reseller, the sub-reseller can create and manage their own (lower-level) sub-resellers and provide services to some end users.

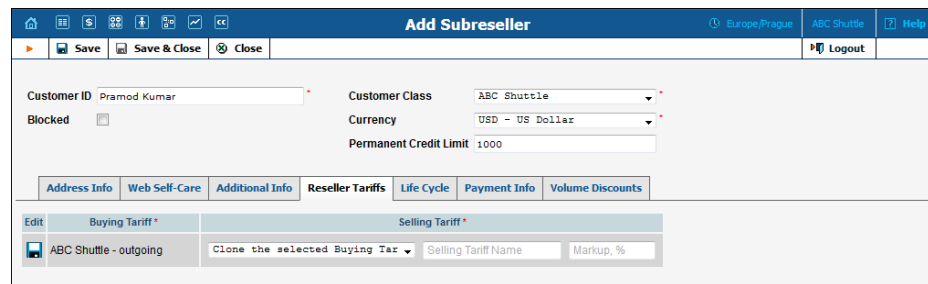


### Managing tariffs

Each reseller operates with three types of tariffs:

- **Buying tariffs** – are tariffs according to which the reseller is billed by a higher level reseller or service provider.
- **Selling tariffs (applied to sub-resellers)** – are tariffs that the reseller charges their sub-resellers.
- **Selling tariffs (applied to sub-customers)** – are tariffs that the reseller charges their end users.

*Buying* tariffs are assigned to a reseller during their creation. *Selling* tariffs *for charging to sub-resellers* are configured as follows: when a reseller creates his sub-reseller, he clones the existing *buying* tariffs by applying a profit markup (a percentage) to them. Mapping between reseller’s buying and selling tariffs is shown on the **Reseller Tariffs** tab. *Selling* tariffs *for charging to end users* are described in the **Product management** section below.

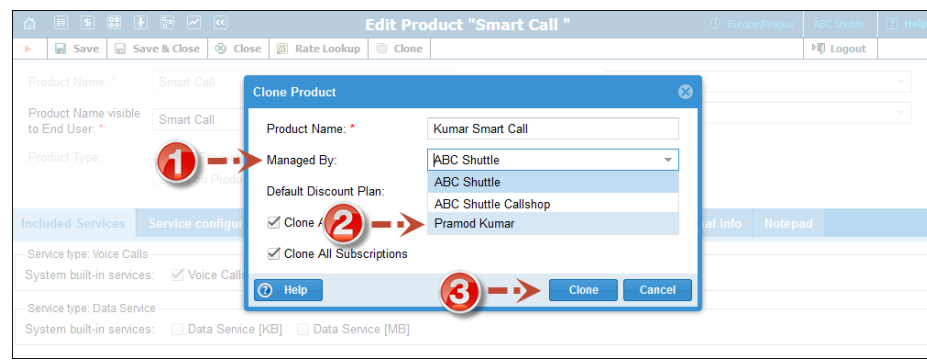


Resellers can always adjust their rates for *selling* tariffs for specific destinations. As a rule, rates in *selling* tariffs are higher than those defined

for *buying* rates so that the reseller creates and receives a profit each time the service is used.

## Product management

The product is the main tool that defines which services a reseller can offer to their end users. Resellers are not permitted to create their own products by themselves as this requires deep knowledge of the ITSP's network structure (gateways, access lines, etc.), which most of them might not have. Instead, resellers are *assigned* their products from a service provider or higher-level resellers. This is done as follows: the higher-level reseller clones one of his products and indicates that this new product will be *managed by a lower-level reseller*. The cloned product becomes 'at the disposal' of the lower-level reseller.



Note that the cloned product is created with empty selling tariffs (i.e. tariffs according to which end users are charged). So in order to start selling a product, a reseller needs to define the appropriate rates for their selling tariffs.

With multi-level reseller functionality, ITSPs are now able to easily and quickly build their own networks of resellers. This helps them increase their service offerings and gain higher profit margins.

## PortaSwitch® Callshop Solution

PortaSwitch® presents a brand new solution for callshop network owners and the staff who operate their callshops. This solution was developed based on industry best practices and our customers' feedback.

A callshop is a public facility where end users come to make low-cost international or domestic calls. In a callshop, a customer is guided to enter a phone booth, makes calls and then pays for them at a cash desk. The callshop is managed by a callshop business owner who sets up the tariffs according to which end users are charged, pays for outgoing traffic and earns a profit on the margins between these costs. Callshop operators

control the authorized use of booths, collect payments from customers and provide customers with receipts.

The following step-by-step scenario explains how a customer makes a call from a callshop and how he is then charged for it:

1. First, a customer is directed by a callshop operator to a specific booth.
2. The callshop operator unlocks a booth to allow making calls from this booth.
3. The customer dials a desired destination number.
4. PortaSwitch® identifies the phone booth, keeps track of call details, and calculates the corresponding charges.
5. When the call session ends, the customer leaves the booth.
6. The operator presents the customer with a bill for the call(s) made according to rates set up by the callshop business owner.

In PortaSwitch®, a callshop business owner is configured as a *callshop reseller*. This type of reseller *only* provides callshop services to end users (any other services are not permitted to be offered). In the multi-level reseller hierarchy, the callshop reseller is usually created under a top-level reseller or a sub-reseller.

**Note:** To permit the creation of callshop resellers directly under service providers the **Callshop** option must be enabled on the Configuration server.

The callshop reseller has their own self-care interface that has been specially customized for providing callshop services.



Equipped with a wide range of features that are oriented to callshop owners and their staff, the PortaSwitch® callshop solution assists callshop network owners to easily and effectively provide reliable, high-quality and cost-effective services to their customers.

## Billing of On-net and Off-net SMS Messages

In addition to SMS routing we've implemented an option for applying different prices to on-net and off-net SMS messages. The following rates for special destinations can be added to a "normal" tariff alongside traditional "phone number"-based destinations:



- MSG – A rate for this special destination is applied to messages sent to any destination.
- MSGN – A rate for this special destination covers messages sent to an IP phone connected to PortaSwitch (regardless of the actual phone number).
- MSGNR – This special destination allows you to create a rate to be applied to on-net messages sent among accounts of sub-customers managed by the same reseller – so the reseller can apply this rate in the tariffs to be applied to the subscribers.
- MSGNRX – Rate for this special destination covers messages sent among a single customer's accounts (among extensions within the same IP Centrex context).

## Incoming Call Delivery to an IP PBX with Dynamic IP Address

When a customer purchases a certain quantity of DID numbers associated with external IP PBX phone lines, all of the DIDs are provisioned as accounts in PortaBilling®. Then the accounts are properly managed and charged for receiving calls.

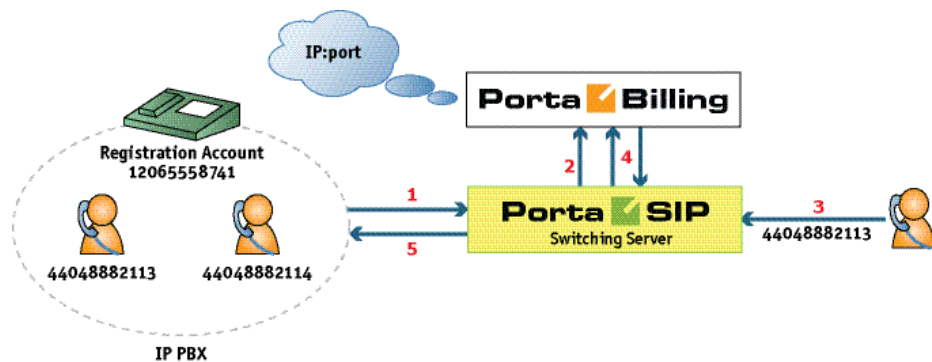
However, depending on the IP PBX features your customer operates, there are several ways to configure it in PortaBilling® to deliver incoming calls to it from the PortaSIP® server:

1. The IP PBX registers each phone line separately with its corresponding account on the PortaSIP® server. Then an incoming call to any of the DIDs is routed directly to that number. However, not all IP PBXs support such multiple registrations.
2. In case an IP PBX is located at a static IP address, calls must be delivered to this IP address. Therefore, you can create an account (the **Account ID** can be a DID number used for forwarding calls to the IP PBX) and specify the IP address in the **SIP Static Contact** field. Incoming calls will then be routed to the IP address of the IP PBX and delivered to the corresponding DID. This way each account (i.e. an IP PBX phone line being, as a rule, a DID number) can have its own configuration (e.g. follow-me lists, voicemail, etc.).
3. Usually, however, IP PBXs can only register their main phone lines on the PortaSIP® server. In this case this phone line is provisioned as the registration account (i.e. the account used for registration on the PortaSIP® server) in PortaBilling® and all incoming calls to any of the DIDs are forwarded to this account.

This configuration method is frequently used for IP PBXs with dynamic IP addresses.

This last case requires special attention. Using call forwarding for incoming call delivery has some side-effects (it prevents the use of individual forwarding lists for accounts and increases the number of xDRs for a single incoming call). Therefore, it is desirable to directly route all incoming calls to an IP PBX.

Starting from this release, the routing of incoming calls to an IP PBX with a dynamic IP address via another account (i.e. the registration account) has been implemented. Now the registration information (IP:port) is taken from the registration account and used by the PortaSIP® server to deliver incoming calls to an IP PBX (e.g. a customer has DID number 44048882113 and another one, 12065558741, used as an IP PBX registration account. The IP PBX is registered on the PortaSIP® server with IP address 10.254.302.5. A call to number 44048882113 is delivered to IP address 10.254.302.5).



- When an IP PBX registers with account 12065558741, it sends (1) the REGISTER request to the PortaSIP® server. This request contains the current registration information (IP:port) in its SIP contact header.
- The IP:port information is taken from the SIP contact header and stored (2) in the database of IP device registrations.
- Someone makes an incoming call (3) to a DID number (44048882113). This call arrives at the PortaSIP® server.
- The PortaSIP® server sends an authorization request to the billing engine. After the usual authorization checks, the billing engine returns the authorization response with instructions to the PortaSIP® server to route this call to the IP PBX (4).
- The PortaSIP® server takes the IP:port information (from IP PBX's registration account 12065558741) and routes the call to the IP PBX (5).

Whenever an IP address changes, the IP PBX re-registers with it. Thus, this updated registration information is used for routing incoming calls to the IP PBX on all of the accounts.

To specify which IP PBX account to use for registration, select it on the customer site. All accounts belonging to this customer site inherit the defined settings.

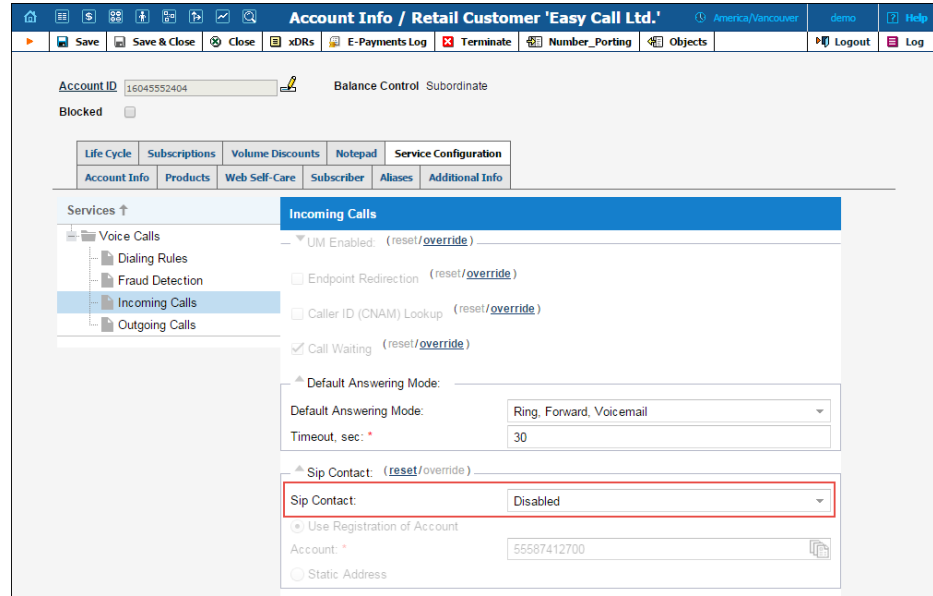
Consider the following example:

A customer has an IP PBX that uses a dynamic IP address for registration and has 10 DID numbers assigned to it from the range 16045552400 – 16045552409. The administrator configures the IP PBX to register with registration account 55587412700 and then creates a customer site for the DID numbers and specifies account 55587412700 in the **Account** field of the **SIP Contact** service feature.

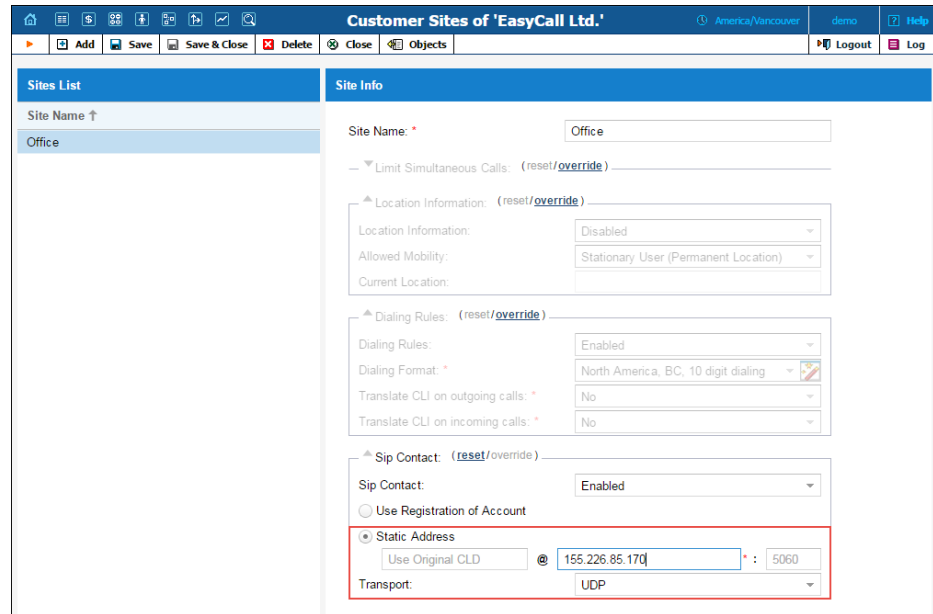
The screenshot shows the configuration page for a customer site named 'Office'. The 'Sip Contact' section is highlighted with a red box, showing the 'Use Registration of Account' option selected and the account number '55587412700' entered in the 'Account' field. Other sections include 'Location Information' (Disabled, Stationary User), 'Dialing Rules' (Disabled, No), and 'Limit Simultaneous Calls'.

The IP PBX receives IP address 145.163.12.123 from the DHCP server. With this address it registers on the PortaSIP® server by sending a registration request with the SIP contact header 55587412700@145.163.12.123:5060. IP address 145.163.12.123 and port 5060 are taken from the header and saved in the database so that when a call arrives to number 16045552401, it is routed to the following destination 16045552401@145.163.12.123:5060.

Later on the IP PBX is given a new IP address: 20.415.65.4. The IP PBX re-registers with it and sends the new registration request with SIP contact header 55587412700@20.415.65.4:5060 to the PortaSIP® server. Upon successful re-registration, a call arriving at number 16045552401 is now routed to the following destination 16045552401@20.415.65.4:5060.



Then suppose the administrator decides to use the number 1604552404 on a separate SIP phone. He disables the SIP contact feature for account 1604552404 and provisions a SIP phone with this account.



Finally, the IP PBX is allocated static IP address 155.226.85.170. The administrator defines the registration with the static address and specifies IP address 155.226.85.170 as a host.

Upon registering the IP PBX, all incoming calls to DIDs are routed to IP address 155.226.85.170:5060.

**NOTE:** When defining that incoming calls for a particular account will be delivered via the registration information of another account, the configuration parameters of the selected account are not considered (e.g. an administrator defines that incoming calls to account 16045552407 will be delivered via account 55587412700. The account 55587412700, in its turn, has a static IP address defined. When someone dials number 16045552407, the system sends the incoming call using the IP:port of account 55587412700).

Thus, delivery of incoming calls via the registration information of an account simplifies the configuration of an IP PBX with dynamic IP address, significantly decreasing the administrative load.

ITSPs can provide their customers with SIP trunking services regardless of the way the PBX acquires the IP address for registration.

## Porting Numbers from / to PortaBilling®

With this new release of PortaBilling®, a new method for porting numbers has been introduced. This feature provides the following options:

- To port a number to PortaBilling® from another telecom (port-in);
- To port a number from the PortaBilling® system to another telecom (port-out).

This feature is convenient for customers who want to change telephone providers but keep their original numbers. This new framework provides the option to port numbers via Neustar Inc. – a major player in the number portability market.

In order to port-in a number, a PortaBilling® user sends a request via the **Number Porting** button on the **Account Management** page. In the request dialog window two parameters must be mentioned:

- The phone number that the customer wants to use;
- The date by which this request must be completed.

The screenshot shows the 'Account Info / Retail Customer 'EasyCall Ltd.' page. A 'Create Request' dialog box is open, displaying the following fields:

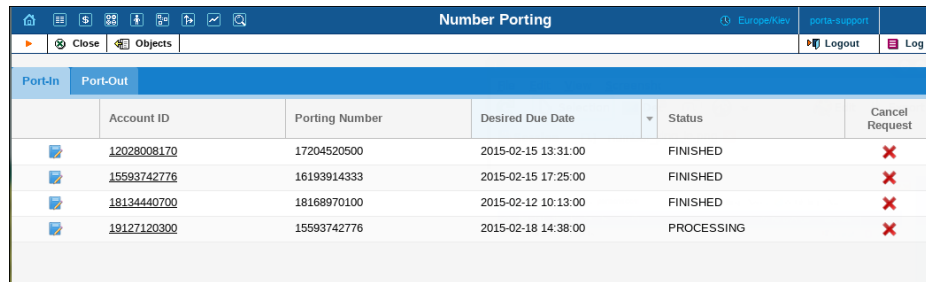
Field	Value
PortIn Number	1212555123
Desired Due Date	2016-01-01 00:00

Buttons: Create Request, Cancel

PortaBilling® sends the porting request to the number porting company and waits for confirmation. The number porting company requests the number from the telecom and when confirmation is received, the number is replaced in PortaBilling® and the customer can receive calls at the new number.

Let's consider the following example: John Doe is a customer of X-Telecom and has the number 1212555123. Due to questionable connection quality, he decides to switch from X-Telecom to GlobalNet Telecom. He calls GlobalNet Telecom, asks to use their services, but declares his wish to keep his old number. The GlobalNet Telecom operator informs John Doe that the service will be available starting January 1<sup>st</sup>. Then the operator creates an 1818123555 account for John Doe in GlobalNet Telecom, makes the porting request via PortaBilling® to Neustar, and when the request is confirmed, the system replaces 1818123555 with 1212555123. So while John Doe continues to use his old 1212555123 number, the calls are now charged according to GlobalNet Telecom's tariffs.

The PortaBilling® administrator may monitor all requests from his system (the **Port-in** tab) and to his system (**Port-out** tab) by clicking the **Number Porting** button on the **Account Info** page from the main menu.



Port-In	Port-Out	Account ID	Porting Number	Desired Due Date	Status	Cancel Request
		12028008170	17204520500	2015-02-15 13:31:00	FINISHED	✘
		15593742776	16193914333	2015-02-15 17:25:00	FINISHED	✘
		18134440700	18168970100	2015-02-12 10:13:00	FINISHED	✘
		19127120300	15593742776	2015-02-18 14:38:00	PROCESSING	✘

**NOTE:** The **Number Porting** button is only available when **NumberPorting** is enabled on the Configuration Server. To use Neustar for number portability, **NumberPortability\_Neustar** must also be enabled.

Thus, this new feature makes it possible for customers to use their original numbers, regardless of the telecom. Number portability works through Neustar Inc., but if necessary, PortaBilling® can collaborate with other number porting companies via additional plug-ins.

## Improved DID Inventory Management

When working with DID Inventory and provisioning DID numbers it is very important to have a clear idea of which costs you bear and which charges you apply to your customers.

Managing the DID Inventory has been simplified and enhanced and now touches upon the following concepts:

- Billing for DID numbers usage;
- Assigning DID numbers to owner batches;
- Allocating DIDs to customers and resellers.

When you obtain DID numbers from a DID provider, you are usually charged an activation fee and then monthly recurring costs for all of the DID numbers. Therefore, when allocating DID numbers to your customers, you apply an additional markup to these charges in order to compensate for your costs and earn some profit. The parameters of the markup are defined in owner batches.

Please note that activation costs do not increase the DID provider's balance (a DID provider is provisioned as a vendor in PortaBilling®). Monthly recurring costs are recalculated according to the vendor's billing period and applied for all obtained DID numbers regardless of whether or not they are allocated to customers. These costs are what increase the vendor's balance.

### **Billing for DID numbers usage**

Every DID number now belongs to an owner batch. The pricing parameters of this batch, if any, define which charges will be applied to a customer when a DID number is allocated to him / her.

This allows you to set up different pricing for your customers for different DID number provisioning (e.g. local or international ones).

Consider the following example:

A customer is allocated a US number with \$5 in activation costs and \$3 in recurring costs from the "Domestic numbers" owner batch. The markup for this batch is defined as follows: a \$1 additional activation fee and a \$2 additional recurring fee. The customer is charged \$6 ( $\$5+\$1$ ) upon DID activation and a \$5 ( $\$3+\$2$ ) monthly recurring fee recalculated according to the customer's billing period (i.e. if a customer has a bi-weekly billing period, he is charged \$2.5 per billing period).

Then the customer is allocated a Chinese DID number with \$15 in activation costs and \$5 in recurring costs from the "International numbers" owner batch. This batch has the following DID markup defined: a \$5 additional activation fee and \$4 additional monthly recurring fee. The customer is now charged \$20 ( $\$15+\$5$ ) for DID activation and \$9 ( $\$5+\$4$ ) for the monthly recurring fee.

### Assigning DID numbers to owner batches

You can provision DID numbers to your customers either with your markup or free of charge. This is defined by the type of owner batch a DID number is assigned to (i.e. either a free owner batch or one with a DID markup).



To properly manage DID numbers and control your costs and revenue, it is important to assign each DID number to an appropriate owner batch prior to allocating this number to a customer.

DID Number	Managed By	Vendor Batch	Owner Batch	Country	Status
1604123505			Retail		Free for 14 days Canada

When a DID number is allocated to a customer from an owner batch with a DID markup, the markup is applied to the customer.

DID Number	Managed By	Vendor Batch	Owner Batch	Country	Status
1604123504			Free DID numbers		Free for 14 days Canada
1604123506			Free DID numbers		Free for 14 days Canada

When added to a free owner batch, a DID number becomes free of charge. This means that no charges apply to either a customer or a reseller when a DID number from a free owner batch is allocated to them (e.g. DID number 16045552879 has a \$10 activation cost associated with it and is assigned to the free owner batch. Customer John Doe signs up for the EasyCall product and is provided with the number 16045552879. He is charged nothing for the DID number activation yet the administrator now owes \$10 to the DID provider).



## Allocating DIDs to customers and resellers

When an administrator allocates a DID number to a *customer*, it is no longer necessary for the customer to have an owner batch explicitly assigned to him / her. If any owner batch has been previously assigned to this customer, the charges defined in this owner batch will be ignored and instead, the charges defined in the DID number owner batch will apply.

However, if customers allocate DID numbers themselves (i.e. by using on-demand DID provisioning), they are required to have the owner batch with the DID markup assigned to them, because they are billed according to the pricing parameters defined in this owner batch.

When DIDs are allocated to a *reseller*, the owner batch with the DID markup must be assigned to this reseller. Otherwise, the administrator is prompted to assign such an owner batch to a reseller when allocating DIDs to him / her.



Resellers are still charged according to pricing parameters defined within the owner batches that are directly assigned to them. However, if an administrator allocates a DID number to a reseller and this number belongs to the administrator's free owner batch, no charges apply to the reseller.

Thus, enhanced management of DID Inventory simplifies the process of DID provisioning to your customers, while improved DID billing allows you to set up flexible pricing parameters for your customers thereby better managing your costs and revenue.

## Least-cost Routing for SMS Services

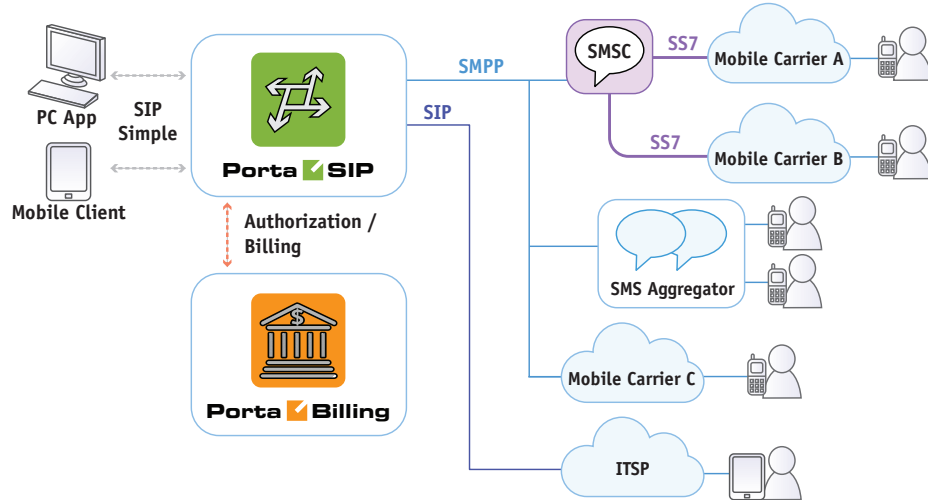
Starting from this release, PortaSwitch® supports least-cost routing across multiple outgoing SMS carriers.

PortaSwitch® allows the ITSP to offer SMS services (such as instant messaging to mobile users, premium number SMS, SMS campaigns and wholesale SMS) while using an all-IP infrastructure:

- PortaBilling® performs the authorization, rating and billing for outgoing SMS messages.
- PortaSIP® routes SMS messages to one of the vendors for termination by using either the industry standard SMPP protocol or the SIP protocol, thus providing fail-over routing.

SMS messages can be routed to the SMSC (short message service center) from **NewNet** and to SMS aggregators using the SMPP protocol.

Also, messages can be routed to other ITSPs using the SIP protocol. For example, if a large fraction of your messaging traffic goes to UK numbers, then it would be to your advantage to connect with a local ITSP (which serves those numbers) to send SMS messages directly, and thereby avoid extra costs.



Note that using either the SMPP or SIP protocol for sending SMSs depends on the configuration of an end user’s instant messenger. This, in turn, determines which messaging vendors’ connections (SMPP or SIP) participate in routing.

When sending messages within your network, the SIP protocol is always used.

Future releases will implement rating and billing for incoming SMS messages. With this improvement, everything that is required is in place to provide full-scale SMS messaging services.

Together with instant messaging, presence services and voice calls, this feature offers your customers a complete, real-time communication experience.

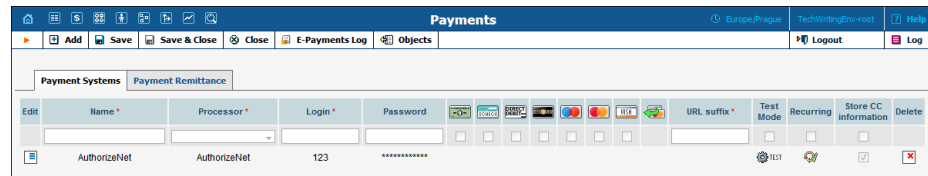
## Token-based Payments via Authorize.Net and Payment Express

At PortaOne we continue to expand the range of payment processors for which we support token-based payments and since this new release we support token-based payments via Authorize.Net and Payment Express.

In case of token-based payments, a payment processor stores the credit card data (or other payment information) in its own storage and issues a token instead. A token contains no actual credit card data yet serves as an identifier of it for the payment processor. Thus when an end user pays you online for a service, sending merely the corresponding token to the payment processor is enough to perform the payment. Storing tokens, as opposed to storing credit card data, doesn't require you to obtain PCI DSS or similar security certification, so you can launch the service almost immediately.

To configure how the system saves payment data, when you add a payment system, do the following:

- Select **Store CC information** if you want PortaSwitch® to save a customer's full credit card information.
- Unselect **Store CC information** if you want PortaSwitch® to save only the token obtained from the payment processor after a customer makes a first payment.



For more information about token-based payments please refer to the [PortaBilling®: Administrator Guide](#) and [PortaBilling® Web Reference Guide](#).

## Product Groups

When you provide various add-on products and allow end users to sign up for add-ons via the account self-care portal, you may also want to provide them with effective product management tools.

This can be done by organizing your add-on products in groups. Now administrators or resellers can create product groups and assign corresponding add-ons to them via the admin web interface / reseller's helpdesk.

\$?	Name	Managed By	Type	Currency	Description	Delete
	Calling Cards	Administrator Only	Main	USD		
	EasyCall	Administrator Only	Main	USD		
	Fransis	Administrator Only	Add-on	USD		
	Postpaid services	ABC Shuttle Ltd.	Main	USD		
	Premium_TV	Administrator Only	Main	USD		
	SIP Subscribers	Administrator Only	Main	USD		

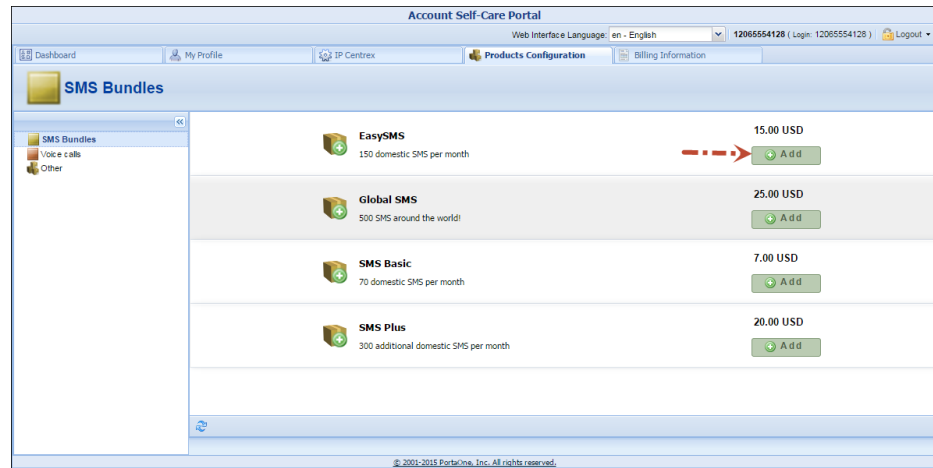
Edit	Name ↑	Managed By	Delete
	SMS Bundles	Administrator Only	
	ABC Shuttle Ltd	ABC Shuttle Ltd	
	Internet Access	ABC Shuttle Ltd.	
	Voice Calls	Administrator Only	

Then these groups are available to end users on the **Products Configuration** tab of the account self-care portal. A user can easily find a desired add-on by entering the corresponding group that the add-on belongs to.

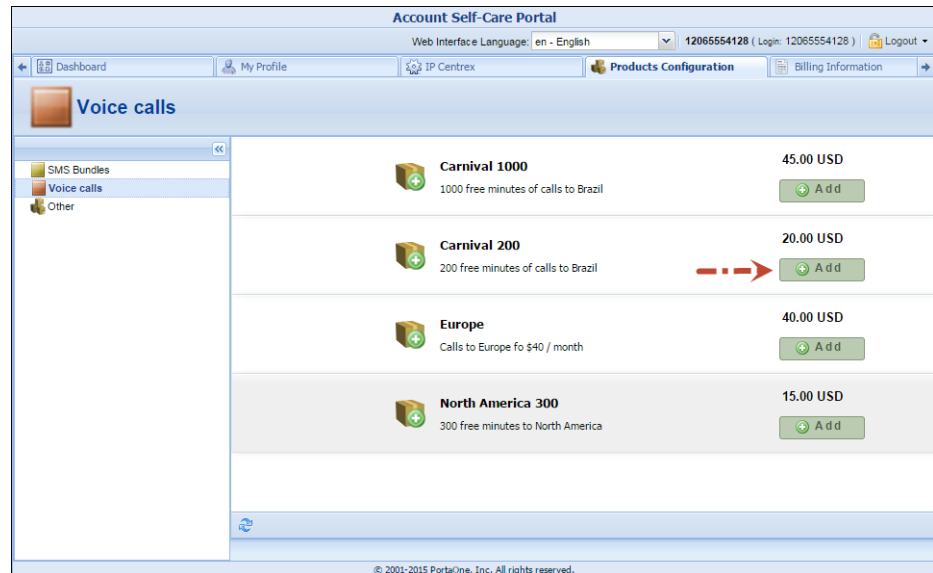
Consider the following example:

Customer John Doe has 50 free domestic SMS and 100 free minutes of calls to US and Canada destinations included in his main product. He wants to increase the number of domestic SMS to 200 and add 200 free minutes of calls to Brazil.

He visits his account self-care interface and goes to the **Product Configuration** tab. He selects the SMS Bundles group, finds the Easy SMS add-on product that provides 150 domestic SMS messages and signs up for it.



Then he selects the Voice calls group and signs up for the Carnival 200 add-on product that provides 200 free minutes of calls to Brazil.



Now John Doe has his desired product configuration and can further enjoy its services.

Thus, product groups enable end users to perform a quick and easy product search and self signup, thereby decreasing the load for your administrators and customer care staff.

## Different Temporary Credit Limits

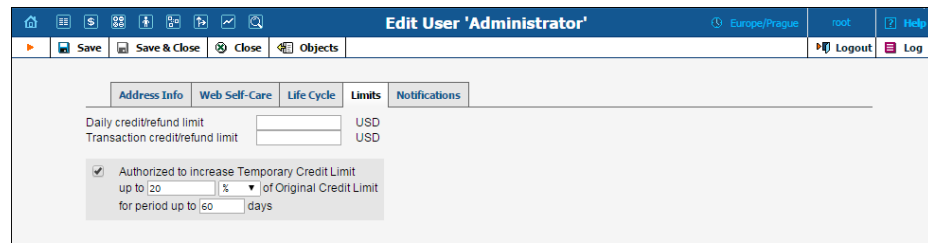
Starting from this release, you, as a business owner, can empower employees to define a temporary credit limit for a customer depending on

the confidence level that you share with your employees. This new feature allows you to:

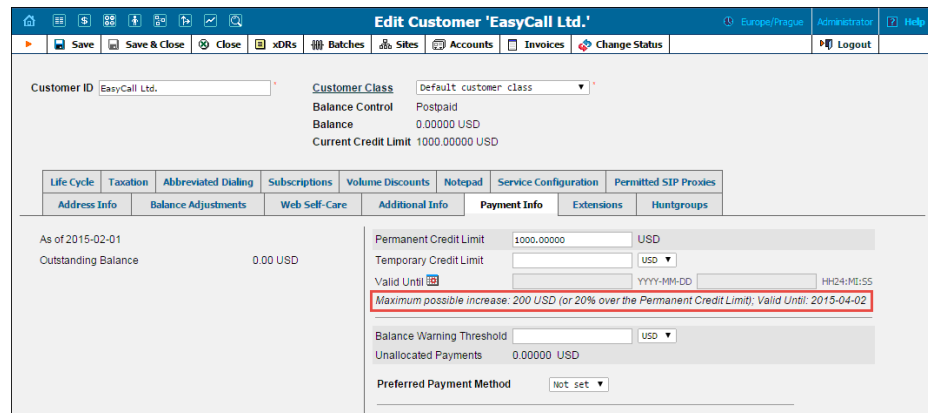
- Adjust a temporary credit limit for each PortaBilling® user depending on the trust level you share with them.
- Assign a temporary credit limit amount.
- Set an amount either as an absolute value or as a percentage of the original credit limit.
- Assign a period for temporary credit limit usage.

To do this, two new fields are now available:

- **Amount** of the temporary credit limit
- The **duration** for this temporary credit usage.



Your staff can increase the credit limit for a particular customer on the **Payment Info** tab. The amount and duration of this temporary credit limit cannot be higher than allowed for this user (these values are reflected in the **Maximum possible increase** prompt).



Consider the following example:

A business owner sets a credit limit increase for a Helpdesk operator named Roger as follows:

- Temporary credit limit amount – 10% of the original credit limit;
- Duration – 30 days.

For the customer relations manager (CRM), Andrew, he defines different values:

- Temporary credit limit amount – 20% of the original credit limit;
- Duration – 60 days.

Customer John Doe has a \$200 original credit limit. He has reached the limit and he has made a payment, however, the money has not yet transferred to his PortaBilling® account. John urgently needs to make some calls so he attempts to obtain a temporary credit limit increase. He calls the ITSP Helpdesk and asks to recharge his account by \$20 for the next 7 days. The helpdesk operator satisfies this request since both parameters (amount and duration) do not exceed the maximum values allowed for the helpdesk staff.

The customer EasyCall Ltd. has a \$1000 original credit limit. The company also faces a situation when their original credit limit is reached. The representative of the company makes a call to the ITSP Helpdesk and requests a credit limit increase of \$200 for 40 days. The helpdesk operator does not have permission to raise the limit (neither the amount nor the duration are allowable), so he raises the issue to the CRM. The CRM knows that EasyCall Ltd. is a reliable customer that can be trusted, so he increases the credit limit and the duration period. The customer EasyCall Ltd. is satisfied and continues to enjoy the services.

Consequently, it is now possible to define different temporary credit values for CRMs, helpdesk operators and other employees, individually. A business owner can easily define and change these values on the PortaBilling® web interface; default values are set on the Configuration server.

## Daily and Transaction Limits on Credit / Refund for PortaBilling® Users

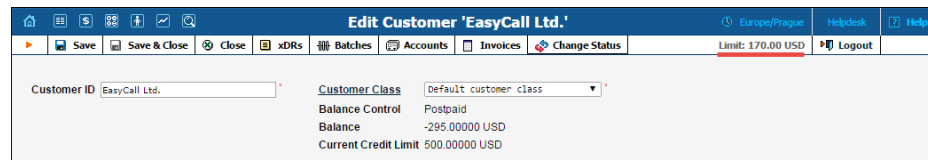
Business owners now have the opportunity to define daily and transaction limits on credits / refunds for PortaBilling® users. This feature helps to prevent potential abuse by employees and avoid money leaks.

To implement this feature two new fields are introduced on the **Limits** tab of the **User Management** page:

- **Daily credit / refund limit** – This defines the amount the user cannot exceed for generating either a credit or a refund for customers during a 24-hour period.
- **Transaction credit / refund limit** – This defines the amount the user cannot exceed per transaction.



PortaBilling® users can check their daily credit / refund limit on the right-hand side of the toolbar. This prompt is visible on the Customer, Distributor, Reseller, Account management pages and the xDR browser page. Limit values change after each transaction that impacts the limit: manual credit, promotional credit, refund and e-commerce refund. The limits are reset at midnight (in the time zone of the PortaBilling® user’s environment).



Let’s consider the following example. The business owner defines a daily limit of \$200 and a transaction limit of \$10 to helpdesk operator John.

- John attempts to apply a \$15 credit to a customer but the operation fails.
- John applies a \$3 credit to a customer and the operation is successful, so John’s daily credit / refund usage is now \$3.
- John applies a \$2 refund to a customer and the operation is successful, so John’s daily credit / refund usage is now \$5.
- John applies a \$20 manual payment to a customer and the operation is successful, so John’s daily credit / refund usage does not change (it is still \$5).
- John applies a \$20 credit card charge to a customer and the operation is successful, so John’s daily credit / refund usage again does not change (it is still \$5).
- John subsequently applies a \$10 credit to 19 different customers and all of the operations are successful, so John’s daily credit / refund usage is now \$195.
- John attempts to apply a \$10 credit to a customer but the operation fails since John’s daily limit is exceeded.
- After midnight, John’s daily credit / refund usage is again reset to its defined values and he can retry the transactions.

Thus, this new feature provides new opportunities for protecting your business via money allocation control in the credit arena.



## Restricting Login IP Addresses to PortaBilling® Users

Now you can ensure that access to the PortaBilling® administrative web interface only occurs from physical locations that you define. For example, you can specify IP addresses that belong to your network. If a user tries to log in from outside your network, PortaBilling® denies that access and the user cannot log in.

The following formats can be used to permit access from specific IP addresses or networks:

- A single IP address: 10.10.10.1;
- A network in IP prefix (slash) notation: 192.168.192.0/24;
- An IP address and a netmask: 192.168.192.0/255.255.255.0

You can enter multiple definitions, with each starting from a new line and ending with semicolon.

This new feature further improves system security and helps an ITSP prevent unauthorized access to the PortaBilling® web interface – even if a user’s login and password get into the wrong hands.

## New Expiration Date Option for Accounts

Capability for defining the life circle of an account has been extended with this new release. The accounts that are not used by the customers for a certain period of time can automatically become expired. There are currently three options available for defining when an account will expire:

1. **Specific Date.** The administrator defines a **Specific Date** on the **Life Cycle** tab. For instance, if 2015-03-20 is set as the day of expiration, then the end user may use the services till 23:59 on the 19<sup>th</sup> of March. After that, the account will expire.
2. **Account availability after the first use.** The customer assigns how many days the services will be available for after the first use. For instance, the period for using the calling card service was

defined as 30 days. An end user makes the first call on the 1<sup>st</sup> of March at 11:00 and uses the calling card daily. Therefore, the 30<sup>th</sup> of March 23:59 is the last time when the end user can use this calling card.

**NOTE:** The default value for this field can be defined on the Configuration server. That is the value that will be used if it is not redefined here.

3. **Account expiration after last use.** The administrator assigns after how many days from the last use the services will be available for. For instance, this period equals 30 days. The end user makes his first call on the 21<sup>st</sup> of February. He also makes calls on the 23<sup>d</sup>, 25<sup>th</sup> of February and on the 1<sup>st</sup> of March at 11:00. Therefore, the 30<sup>th</sup> of March 23:59 is the last time when the end user can use this calling card.

<b>Account ID</b> 12345678912		<b>Balance</b> 10.00000 USD	
<b>Blocked</b> <input type="checkbox"/>			
<b>Life Cycle</b>	<b>Subscriptions</b>	<b>Volume Discounts</b>	<b>Notepad</b>
<b>Account Info</b>	<b>Products</b>	<b>Balance Adjustments</b>	<b>Web Self-Care</b>
<b>Subscriber</b>	<b>Aliases</b>	<b>Additional Info</b>	
<b>Activation Date</b>	2015-01-26	<b>Issue Date</b>	2015-01-26
	YYYY-MM-DD	<b>First Usage</b>	
<b>Expiration Date</b>		<b>Last Usage</b>	
<input checked="" type="checkbox"/> <b>Specific Date</b>	2015-03-30	<b>Last Recharge</b>	
	YYYY-MM-DD	<b>Expiration Date</b>	2015-03-30
<input type="checkbox"/>			
<input checked="" type="checkbox"/>	7		

These options can be chosen together or separately. They have equal priority: the account expires according to which event occurs first. However, it is not obligatory to select any of the **Expiration Date** check boxes. As long as all of them are unselected, the account will not expire.

Another important point regarding expiration options is that a voucher recharge operation extends the life cycle of an account. Thus, if an account is adjusted to be available for 60 days after first use, and the account's owner recharges the account 57 days after the date of its first use, the service is extended for another 60 days. The account recharge works analogically for account expiration after last use. A new **Expiration Date** label on the left part of **Life Cycle** tab represents the actual date when the account will expire.

This new feature provides a good reason for the ITSP to encourage customers to use their services regularly. As a result, the company profits.

## Token-based Authentication for Applications

You can now use tokens instead of standard login-password pairs for authenticating your applications integrated with PortaBilling via API.

To enable token-based authentication, select the **API token access** checkbox on the **Web Self-care** tab of a PortaBilling® user.

The screenshot shows the 'Edit User' interface for a user named 'demo'. The 'Web Self-Care' tab is selected. The 'API token access' checkbox is checked. The 'API authentication token' field contains the value 'dc3fc522-f881-4096-9fba-d7' and has a 'Generate' button next to it. Other fields include Login (demo), Password (masked), Access Level (Admin), Allow login from (Any IP address), Time Zone (America/Vancouver), and Web Interface Language (Default Language).

Input the combination from the **API authentication token** field into your application and remove the password from it (the AuthInfoStructure and LoginRequest API structures have been updated accordingly and now have a new *token* property).

**NOTE:** Starting with this release, the password expiration feature will be enabled for all users in order to improve security (users utilized for applications authentication had this feature disabled before). We strongly suggest that you switch your applications to token-based authentication **before** upgrading to MR46.

This feature provides better security for your system since you no longer need to keep the administrative user's login and password in your applications.

## Taxes Upon Payment

As a general rule, taxes for consumed services are calculated at the end of each billing period and are included in the invoice that the customer receives.

However, for prepaid services such as prepaid cards, taxes are applied at the time a calling card or top-up voucher is purchased. The amount of the card excludes taxes. If later on a customer makes a payment using a credit card to top-up his / her account, the taxes must be applied at the time of purchase.

The *Taxes upon Payment* feature does just that. When enabled, the system calculates and applies the taxes to your prepaid customers when they top up their balance via a credit card.

When defining it for a particular customer class (e.g. the one applied to prepaid residential customers), an administrator specifies the tax rate and enables the **Apply Taxes to a prepaid Customer when a payment is made to an Account** option. Thus, you can differentiate among your prepaid customers and specify different tax rates for them (e.g. Canadian residential customers are charged 13% HST tax while European residential customers are charged 20% VAT tax).

Apply	Name	Tax rate (%)	Applied to
<input checked="" type="checkbox"/>	HST	13.00	All Charges

For now, the *Taxes upon Payment* feature is supported for VAT and custom taxation plug-ins only. In future releases, it will be implemented for other supported taxation plug-ins.

This is how it works:

When a prepaid customer makes a payment via a credit card on the self-care interface, the tax is calculated for him / her based on the amount of the top-up and is added to the payment sum. Upon successful payment processing, the customer's balance is topped up by the actual amount excluding the tax.

For each payment transaction, two xDRs are created and recorded in the database, one for the total payment made (the topped-up amount + tax) and another one that only contains the amount of tax.

Consider the following example:

A prepaid customer, John Doe from Vancouver, BC, buys a \$10 prepaid card and registers it for PINless dialing service.

After awhile he only has \$4 in available funds so he wants to top up his account.

He visits his self-care interface and enters \$10 as the top-up amount. A \$1.30 HST tax (13%) is calculated and added to the amount entered, bringing the total sum to \$11.30.

The screenshot displays the 'Customer Self-Care Portal' interface. At the top, it shows 'Available Funds: 4.00 USD' and the user 'John Doe (Login: jdoe)'. The main heading is 'Make a Payment'. On the left, there is a navigation menu with options like 'Billing Summary', 'General', 'Subscriptions', 'Transactions', 'Reports', 'Volume Discounts', 'Invoices', 'Make a Payment', and 'Payment Info'. The main content area shows the following details:

- Balance, USD: -4.00
- Amount, USD: 10.00 (with a note: *\*minimum payment 1.00 USD*)
- Tax, USD: 1.30
- Total, USD: 11.30
- Card Number: 1234xxxxx9544
- Expiration Date: 01 / 2015
- Payment Method: American Express

There are two buttons: 'Use Other Payment Methods' and 'Pay Now'. At the bottom, there is a copyright notice: '© 2001-2015 PortaOne, Inc. All rights reserved.'

John Doe confirms the payment and his credit card is charged \$11.30. After the payment is processed, two xDRs are recorded in the database: one for the amount paid (\$11.30) and another one for the amount of tax (\$1.30). John's available funds are now \$14.

If the top-up is done using a voucher, the tax amount is not included in the voucher. However, the taxes are included in the voucher purchase (e.g. when John Doe buys a \$10 voucher, he pays \$11.30).

Thus, calculating taxes and applying them to your customers when they make payments allows you to effectively manage your tax proceeds and keep your accounting clear.

## Call Queue Enhancements

This is another migration stage of the Call Queue application. As announced earlier, call queues in PortaBilling® are based on huntgroups only and are configured via the customer self-care portal.

The internal structure of the application has now been enhanced.

New PortaBilling API methods have been developed to manage call queue application parameters and prompts. These allow you to operate call queues via either PortaBilling® or your custom self-care portals.

### Existing call queue conversion

A few words must be said about the conversion of existing call queues during the software upgrade procedure. Starting from this release, call queues are associated with and configured for huntgroups. During an

upgrade, it is necessary that all existing call queues are converted following this general rule.

For call queues with a destination number defined as *existing huntgroups* or *existing accounts*, the conversion is automatically performed. Call queues with a destination number defined as other numbers (e.g. as external numbers or defined in a local format) are not converted.

During an upgrade, call queues with destination numbers defined as existing huntgroup numbers are converted as is. If a call queue destination has more than 5 symbols, the system tries to find an account with this ID and convert the call queue as being assigned to an existing account.

When converting call queues with a destination number defined as an account ID provisioned in PortaBilling®, the system associates a call queue with an auto-generated huntgroup created for the corresponding customer. The huntgroup contains an auto-generated 4-digit extension followed by Q (e.g. 1234Q) associated with this account.

Information about call queues that cannot be converted automatically is gathered at the pre- upgrade stage. Our support team performs the call queue conversion and contacts you if there are any actions required from you.

After the update, all call queues have the same configuration, i.e. they are assigned to huntgroups and remain transparent for end users.

## Enhanced Invoice Information on the Customer Self-care Interface

Throughout all customers' lifecycles, it is important to have a clear picture of their invoice status and other billing-related details – a thumbnail sketch, so to speak, of how much money is owed, the due date, is there any amount overdue, etc. This could be challenging if previous invoices have only been partially paid.

To facilitate timely invoice processing and payments, we have extended the **Invoices Information** section on the customer self-care interface with the following fields:

- **Balance Due** – This represents the remaining amount a customer must pay for their invoice.
- **Last Invoice Due Date** – This shows the date by which the last invoice should be paid. If no payment is received for this invoice or the invoice is only partially paid and the due date has passed, the invoice is considered overdue.

- **Last Invoice Amount** – This represents the last invoice total plus whatever unpaid amount from any and all previous invoices owed by the customer at the time of invoice generation.
- **Overdue Balance** – This represents the total remaining balance for all overdue invoices. The overdue balance decreases as payments are received.
- **Last Payment Received on** – This shows the amount of the last payment and the date when this transaction took place.

For example, an invoice was generated for a customer on February 1<sup>st</sup> and the following information was displayed on their self-care interface:

Invoices Information	
Balance due	<b>100.00 USD</b>
Last invoice due date	2015-02-05
Last Invoice Amount	100.00 USD
Last Payment received on	100.00 USD
	2015-01-01

This means that the customer must pay \$100 on their invoice by February 5<sup>th</sup> and there is no overdue balance.

The customer doesn't pay the invoice in a timely manner, so on March 1<sup>st</sup>, another invoice for \$50 is sent. As of March 1<sup>st</sup> the balance due is \$150 and now there is overdue balance which equals \$100. The last payment amount and date remain the same (since no payment was made) and the last invoice due date changes to March 5<sup>th</sup>, correspondingly. On March 2<sup>nd</sup> the customer makes a payment of \$80. The following information is displayed on their self-care interface:

Invoices Information	
Balance due	<b>70.00 USD</b>
Last invoice due date	2015-03-05
Last Invoice Amount	150.00 USD
Overdue balance	20.00 USD
Last Payment received on	80.00 USD
	2015-03-02

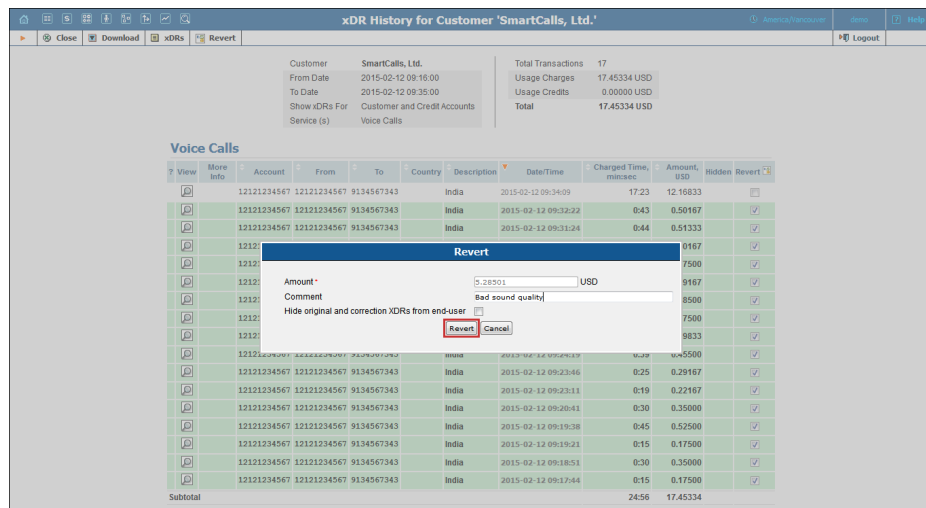
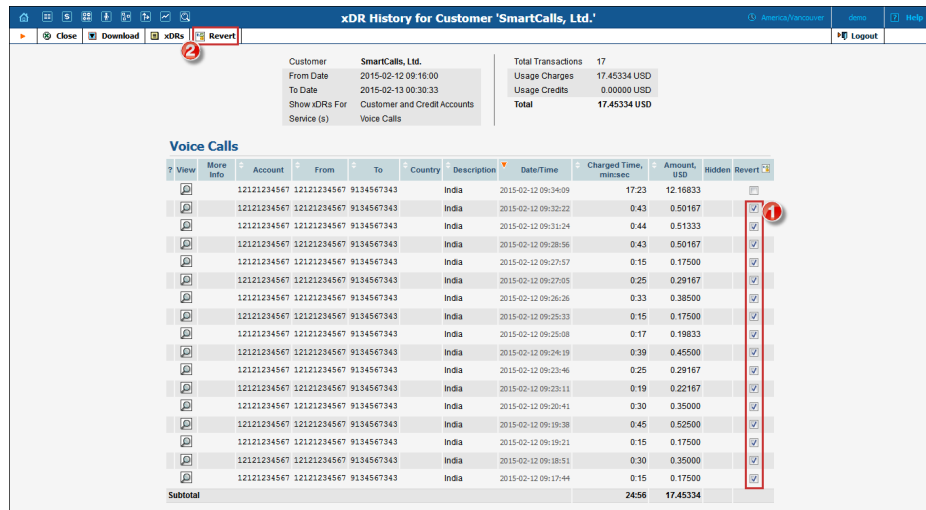
Thus, the customer can see that he has an overdue balance of \$20, and must pay \$70 to cover the invoices in full.

With enhanced invoice information on self-care interface, it is easier for customers to understand their invoices and make payments on time.

# Ability to Reverse Multiple xDRs

Imagine that a customer makes a call, the call is established, but the sound quality is poor. The customer hangs up and tries to call the same destination again. Sound issues persist (due to complications on the vendor's side) and the customer tries several times more, but finally calls your support team to complain about the sound. You appreciate your customers and so you agree to credit all calls that suffered poor sound quality.

To credit a call you need to create a reverse xDR. Now we offer the option for creating multiple reverse transactions simultaneously.



To do this, open the **xDR Browser**, select the xDRs you want to reverse and click the **Revert** button. A dialog box will appear where you can review the total amount to be reversed (calculated as the sum of selected xDRs amounts), specify the reason for making the credit and select



whether to hide the original and reverse xDRs from the customer. Click **Revert** to finish creating reverse transactions.

## Additional Information about Balances

It's essential to provide your customers with information about their unpaid and overdue invoices.

To facilitate this, we added a section that contains aggregates of invoiced amounts. To review them go to the **Edit Customer** page and click the **Payment Info** tab:

The screenshot shows the 'Edit Customer' page for 'SmartCalls, Ltd.'. The 'Payment Info' tab is selected. A red box highlights the following summary table:

As of 2015-02-11	
Last Payment received on 2015-02-11	1575.00 USD
Outstanding Balance	675.00 USD
Overdue Balance	425.00 USD

Other visible fields include: Customer Class (Smart Daily Charges), Balance Control (Postpaid), Balance (995.24202 USD), Current Credit Limit (1000.00000 USD), Permanent Credit Limit (1000.00000 USD), Temporary Credit Limit, Valid Until, Maximum possible increase (100 USD), Balance Warning Threshold (500.00000 USD), Unallocated Payments (0.00000 USD), and Preferred Payment Method (Not set).

Alternatively, go to the **Edit Customer** page, open the **Invoices** page and click **Search**:

The screenshot shows the 'Invoices' page with search filters. A red box highlights the following summary table:

As of 2015-02-26	Outstanding Balance	693.30 USD
Last Payment received on 2015-02-11	Overdue Balance	674.99 USD

Below the summary table is a table of invoice items:

View	No.	Date	Payment Status	Status	Re-create	Period From	Period To	Due Date	Amount Due	Amount Net	Open Amount	Void
	10	2015-02-26	Do not pay			2015-02-16	2015-02-16	2015-02-27	-1306.70 USD	-0.01 USD	N/A	X
	9	2015-02-26	Unpaid			2015-02-11	2015-02-11	2015-02-27	-1306.69 USD	18.06 USD	18.06 USD	X
	8	2015-02-26	Unpaid			2015-02-10	2015-02-10	2015-02-27	-1324.75 USD	0.25 USD	0.25 USD	X
	3	2015-02-10	Overdue			2015-02-09	2015-02-09	2015-02-11	250.00 USD	250.00 USD	250.00 USD	X
	2	2015-02-05	Overdue			2015-02-05	2015-02-05	2015-02-05	500.00 USD	500.00 USD	424.99 USD	X
	1	2015-02-05	Paid			2015-02-05	2015-02-05	2015-02-05	1500.00 USD	1500.00 USD	Paid in full	X

The section provides the following information:

- **Last Payment received on** – The amount of the last payment received and the date of receipt.
- **Outstanding Balance** – What a customer must pay to cover all invoices.
- **Overdue Balance** – A customer's total overdue invoiced amount.

Let's review the following examples of outstanding and overdue balances.

A customer receives 3 invoices for amounts of \$50, \$35 and \$40 and makes a payment of \$20.

The customer's outstanding balance is now:

$$\$50 + \$35 + \$40 - \$20 = \$105.$$

In a week the first two invoices become overdue.

The outstanding balance remains: \$105 (the customer made no new payments and received no new invoices).

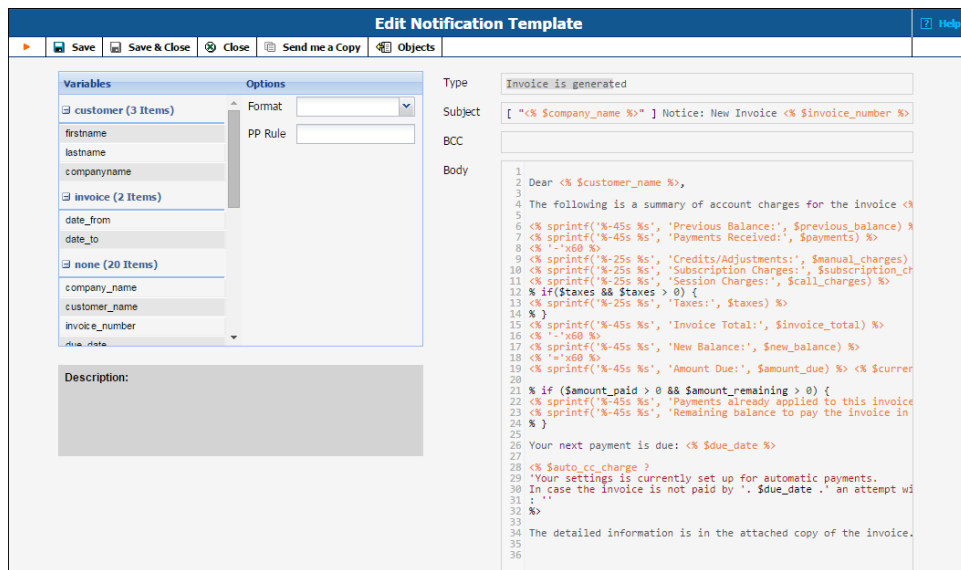
$$\text{The overdue balance is now: } \$50 + \$35 - \$20 = \$65.$$

Information on aggregates of invoiced amounts is available for resellers, distributors, representatives and their subentities (except accounts).

## Additional Variables for SMS and Email Notifications Templates

Notifications via SMS and emails are becoming more personal and informative. Starting from this release you may include the following information in the notifications for your customers:

- **firstname** – Customer's name. This value is taken from the Customer management page -> the **Address Info** tab -> the **First Name** field.
- **lastname** – Customer's surname. This value is taken from the Customer management page -> the **Address Info** tab -> the **Last Name** field.
- **date\_from** – Represents the start date of the billing period.
- **date\_to** – Represents the end date of the billing period.
- **overdue\_balance** – Represents the balance remaining for all overdue invoices.



## Auto-provisioning for New Models of IP Phones

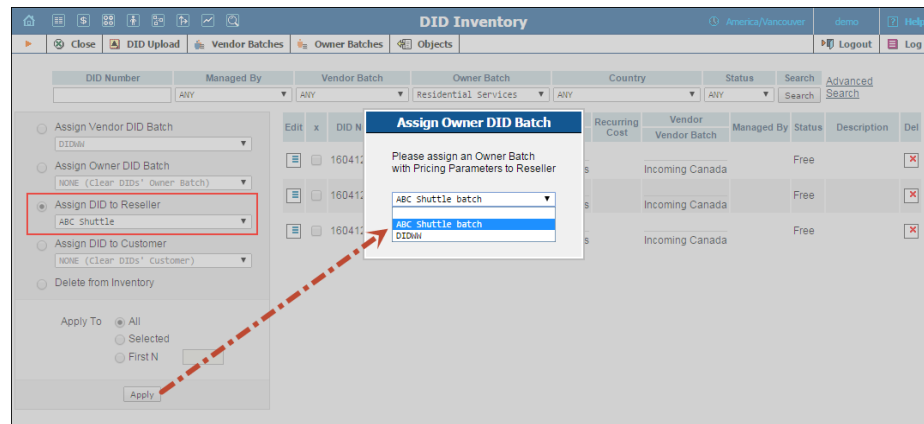
The list of IP phones that are auto-provisioned by PortaSwitch® has been extended to include the following phones:

- GrandStream DP715
- GrandStream GXP1400/1405
- GrandStream GXP1450
- GrandStream GXP2130
- GrandStream GXP2140
- GrandStream GXP2160
- GrandStream GXV3240
- GrandStream HT503
- GrandStream HT702

## What's New in Maintenance Release 46?

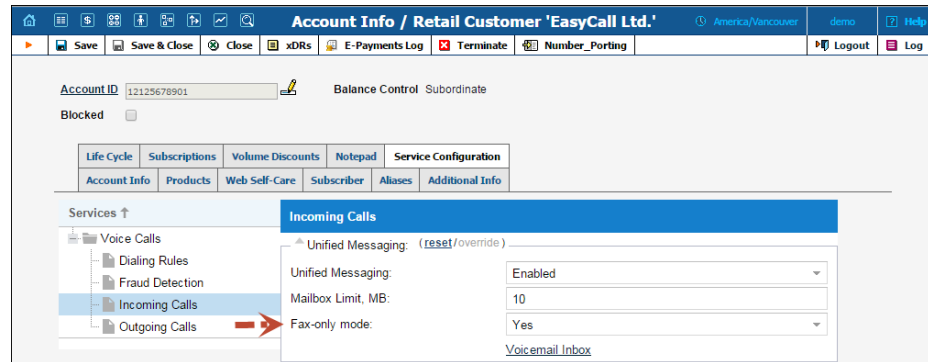
This release includes several new features and improvements:

- **An administrator is prompted to assign an owner batch to a reseller** – When trying to allocate DID numbers to a reseller with no owner batch assigned via the DID Inventory, the dialog box appears and prompts the administrator to assign a corresponding owner batch to this reseller.

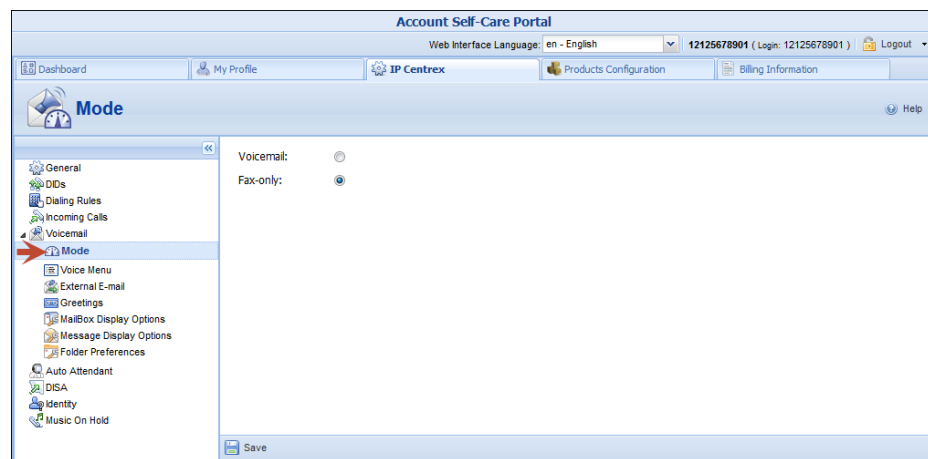


The owner batch can be assigned to a reseller using this very dialog box, thus saving an administrator a bit of time.

- The **Release Media upon Connection** option, which establishes direct gateway-to-gateway media stream / communication after processing a call by the IVR application has been added. If this option is enabled, the RTP stream from a gateway goes through the Media Server, where the IVR application answers an incoming call. When the end user defines how the call is to be further processed in the IVR menu and the outgoing call is established through the same or another gateway, the Media Server no longer participates in further call flow (leaving the RTP traffic to be handled by gateway(s) only). This feature may decrease the amount of network traffic required for calls processed by IVR applications, but in turn, it disables call recording and NAT traversal functionality as well as music on hold function and voiceover announcements during the call. This option was added to the following IVR applications:
  - Prepaid card calling
  - Callback calling
  - One-stage calling
  - Pass-through IVR
- **Fax-only mode for Unified Messaging** – With this release, the **Fax-only mode** service attribute allows administrators to configure a phone line as a dedicated fax machine. When the **Fax-only mode** is set to **Yes** (e.g. for an account that represents a DID number), every incoming call to this number will be answered with “start fax” tones, indicating that it will only receive fax messages. Thus the phone line will serve as a dedicated fax line, emulating the behavior of a legacy fax machine. When the **Fax-only mode** is set to **No**, the voicemail mode is enabled for the phone line and allows a caller to leave a voice message which can be listened to later.



End users can select which mode (fax-only or voicemail) to use for their phone lines on the account self-care interface.



- **Usage charges are shown in billing units in the xDR browser** – End users found it more convenient to see usage charges in units in which prices are established (for example, in minutes for voice calls and megabytes or gigabytes for broadband Internet connection services).

To provide a better user experience, the xDR browser now shows usage charges for the selected services in billing units (i.e., units in which prices are established for end users).

The screenshot shows the 'xDR History for Customer 'SmartCalls, Ltd.' interface. On the left, there are filters for Customer (SmartCalls, Ltd.), From Date (2014-02-15 01:36:48), To Date (2015-02-16 01:36:58), Show xDRs For (Customer and Credit Accounts), and Service (s) (All). On the right, a summary table shows Total Transactions (46) and various charges and credits. A red arrow points to a table below the summary:

Service	Charged Quantity	Amount, USD
Voice Calls (minute)	39.90000	1518.30136

- **The administrator can now enter any valid IP address to the account’s Forward to SIP URI field to forward calls using the “SIP URI forward” feature** – The end user, on their self-care interface, can only select SIP proxies that are listed in the customer’s **Permitted SIP Proxies** list, as before.
- **Subscription Type and Discounts are visible on the Subscription Management Page now** – These two columns were added to the table to provide more information for quick viewing. Now a PortaBilling® administrator can quickly capture the main properties of all subscription plans at a glance. This enhancement saves administration time.

The screenshot shows the 'Subscription Plan Management' interface. It features a search bar and a table of subscription plans:

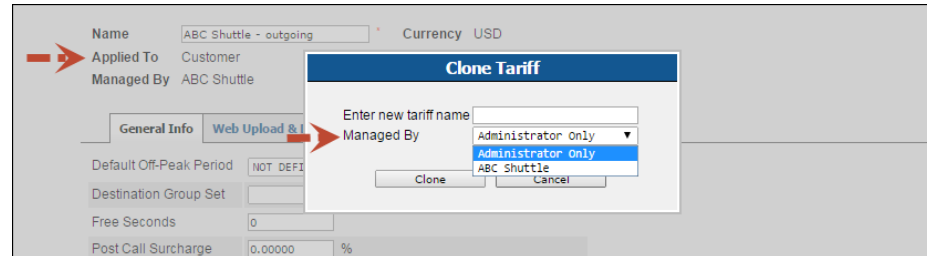
Name	Currency	Managed By	Type	Discounts	Description	Delete
EasyCall Subscription	USD	Administrator Only	In Advance	Multi-Month Discounts	\$15 activation fee, subscription for 6 months	
Equipment Rental	USD	ABC Shuttle Ltd.	Postpaid		\$5 activation fee, subscription for 6 months	
Linksys Phone Rental	USD	Administrator Only	Postpaid	Promotional Periods	\$5 activation fee, subscription for 1 month	
Spring Promo	USD	Administrator Only	Progressive		\$10 activation fee, subscription for 3 months	
Subscription plan	USD	ABC Shuttle Ltd.	Postpaid		currently is not used	

- **The Geo-redundancy solution now supports the PortaSIP® Presence Server** – Now you can continue to deliver the presence service to your users during an outage at the “main” site.
- **Managed by option for cloning tariffs** – To create a tariff for charging sub-customers of a particular reseller, now an administrator can simply clone the tariffs that are applied to your direct customers.

This is possible with the **Managed by** option which has been added to the cloning tariffs functionality. When a tariff is cloned, the administrator can specify that the new tariff is managed by a particular reseller (to be used to charge the reseller’s sub-customers). Rates in the new tariff are exactly the same as in the

original and are provided to the reseller by example only. The reseller then adjusts them in accordance with actual selling rates.

Note that the **Manage by** option is only available for cloning Customer type tariffs.



- **Additional functionalities supported by the New Media Server** –Functionalities that are used to process calls made by screened accounts (to prompt the user to confirm his identity by entering the “service unblock” code) and to notify a caller when he dials a ported number are now supported by the New Media Server.
- **The Payment Remittance – TransferTo IVR application is now supported by the New Media Server** – By calling the access number associated with this application, end users can send funds from their accounts to customers of mobile carriers.
- **We improved our xDR import utility** – Now, before sending an xDR for accounting, the utility can query PortaBilling® about whether any additional billing rules apply for this calling or / and called number or other xDR parameters. If PortaBilling® answers positively, the xDR import utility adds these rules to the accounting request. This ensures proper charging for many kinds of xDRs – those that represent on-net calls, local calls or calls made from / to ported numbers, etc.
- **We now support the Cielo payment processor** – This may be of much interest to Brazilian providers, since Cielo is the largest Brazilian credit and debit card operator as well as being known for having the lowest rate of e-commerce fraud in the Brazilian market.

## Important Upgrade Notes

- When updating PortaSwitch® to MR46, be aware that all resellers who have the **Callshop Enabled** check-box selected on the **Additional Info** tab, will become callshop resellers after the

update (that is, will be permitted to *only* provide callshop services). If your resellers only provide callshop services to their end users, no additional actions are required on your side. However, if your resellers are not involved in the callshop business, but have the **Callshop Enabled** check-box selected – they must uncheck the box before the update.

If your resellers provide callshop and other services simultaneously, the best workaround would be as follows: for such resellers, an administrator unchecks the **Callshop Enabled** check-box before the update. After the update, these resellers create their own callshop resellers. The callshop resellers then configure all the required callshop services via their self-care interface.

The screenshot shows the 'Edit Reseller' interface for 'ABC Shuttle'. The interface includes a navigation bar with options like 'Save', 'Save & Close', 'Close', 'xDRs', 'Subcustomers', 'Distributors', 'E-Payments Log', 'Invoices', 'Logout', and 'Log'. Below the navigation bar, there are fields for 'Customer ID' (ABC Shuttle) and 'Customer Class' (default customer class). The 'Balance' is 0.00000 USD and the 'Current Credit Limit' is 1000.00000 USD. There are several tabs for configuration: Life Cycle, Taxation, Subscriptions, Volume Discounts, Trouble Tickets, Notepad, Address Info, Balance Adjustments, Web Self-Care, Additional Info, Payment Info, and Custom Fields. The 'Additional Info' tab is active, showing various settings like 'Auto-Provision DIDs via Batch', 'Default Tariff for Voice Calls', 'Routing Plan', 'Subscription Discount Rate', 'Representative', 'Tax ID', 'Callshop Enabled' (checked), and 'Override Tariffs Enabled' (unchecked). A red dashed arrow points to the 'Callshop Enabled' checkbox.

- Allocating DID numbers to a customer via the DID Inventory** – When an administrator allocates a DID number to a customer, it is no longer necessary for the customer to have an owner batch explicitly assigned to him / her. If any owner batch has been previously assigned to the customer, the charges defined for it will be ignored and instead, the charges defined in the owner batch of a DID number will apply.

However, if customers allocate DID numbers themselves (i.e. by using on-demand DID provisioning), they are required to have the owner batch with the DID markup assigned to them, because they are billed according to the pricing parameters defined in this owner batch.

- DID workflow after a software upgrade** – During a software upgrade, all DIDs allocated to a customer will be added to the customer's owner batch to preserve the long-standing workflow. Legacy DIDs without fees associated with them and not allocated to customers will be left as is. To start using those DIDs, it is



necessary to assign them to an owner batch and allocate them to a customer or a reseller.

- **API methods for the call queue configuration have been changed and moved from the PortaSIP® Media Server to the PortaBilling® Web Server** – To use the API for the call queue configuration your external application must now use the following SOAP URI (namespace):

- <https://portabilling-web.yourdomain.com/Porta/SOAP/Customer>

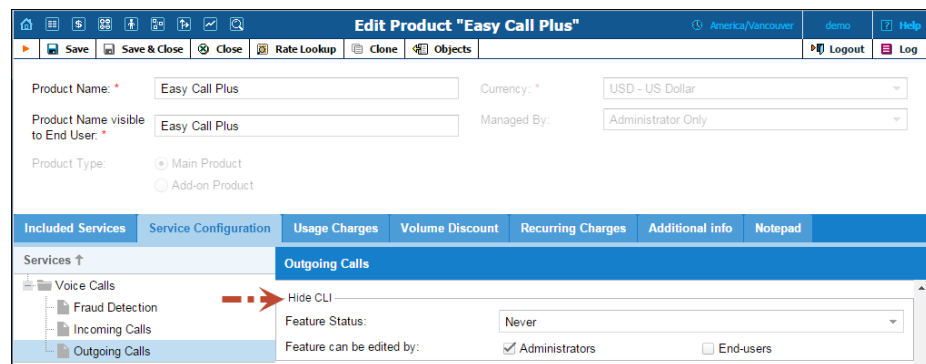
All SOAP requests to PortaBilling® API must now be sent to the following URL:

- <https://portabilling-web.yourdomain.com:<port>/soap/>

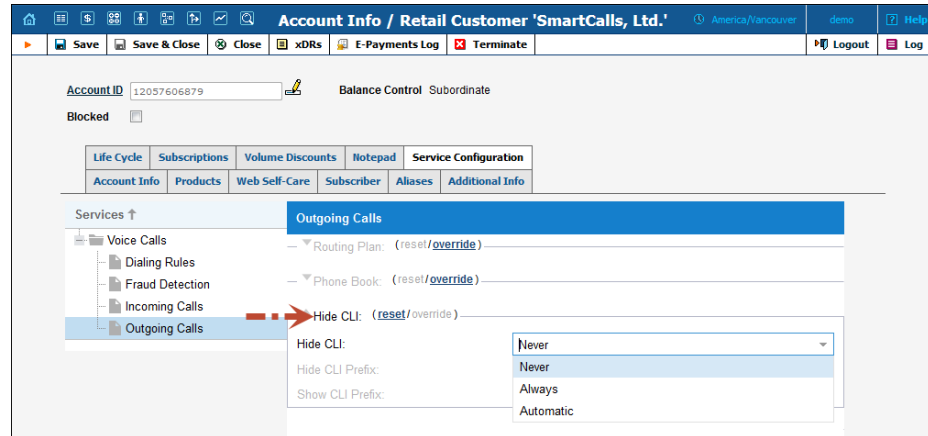
Please replace the portabilling-web.yourdomain.com with your actual PortaBilling® web server hostname.

Replace <port> with the required port.

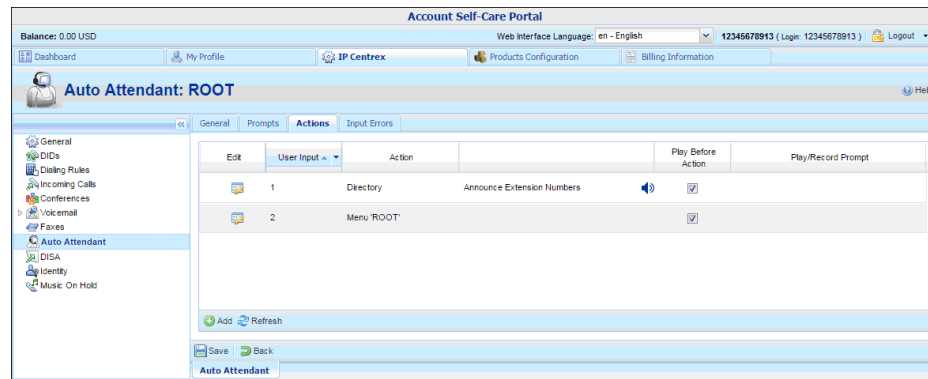
- An account's mode can now be set to auto-attendant via PortaBilling® API only. The PortaSIP® Media Server API can still be used for switching between voicemail and fax-only voicemail modes.
- **Improved subscription charges** – When a subscription with activation option **“At the given start date”** is assigned to an account and this account has the activation date defined as sometime in the future, the subscription will only start to be charged after the account is activated. This assures that end users are only charged when they use services.
- **Hide CLI becomes part of product service configuration** – The **Hide CLI** service feature that allows you to remove CLI (ANI) information for outgoing calls is now included as part of the product service configuration.



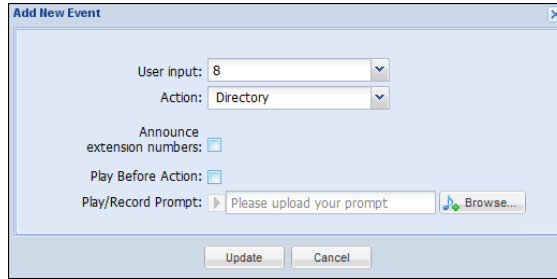
Note that **Hide CLI** will no longer be present in the customer service configuration, but can still be configured for individual accounts.



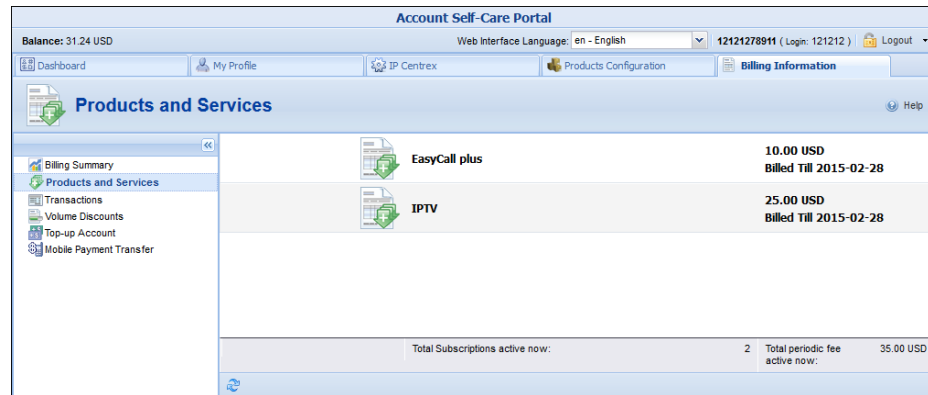
- **Auto Attendant service is becoming more user-friendly** – A list of changes has been applied to the Action tab:
  - There is a new **Edit** button for editing actions.
  - Column **Event** has been renamed **User Input**.
  - Additional information is displayed in the fourth column.



- Adding a new action is now realized via a dialog window.
- With the **Directory** action, a customer may select the **Announce extension numbers** check box and then the auto attendant will announce the extensions to the caller.



- **All incoming calls to accounts with the SIP Static Contact enabled are delivered to PortaProxy** – When an incoming call arrives (whether by TCP or UDP transport protocols) to the DID number with the SIP Static contact feature enabled, it is sent to this number via PortaProxy (UDP/TCP 5060 port).
- **The Subscriptions page has been redesigned on the account self-care interface** – The **Subscriptions** page on the account self-care interface has been re-named to **Products and Services** and redesigned to deliver a more intuitive user experience. The **Products and Services** page presents information about subscription plans that apply to the account, subscription plans’ recurring fees and “billed till” dates for subscriptions charged in advance.



- **Timestamps in Call List and Call Diagram are displayed in User Time Zone** – For convenience, PortaBilling® users now see the time of the calls in their own time zone.

The PortaSIP® server time zone appears when your mouse hovers over **Date / Time** column of the call diagram. The raw log under the call diagram remains in the PortaSIP® Server time zone.

**SIP Log Viewer** America/Vancouver demo Logout

Trace a call Show Call Attempts View Log 4

Time Interval: 60 minutes

From Date: Nov - 60 minutes YYYY-MM-DD HH24:MI:SS

To Date: Nov YYYY-MM-DD HH24:MI:SS

Show

Pages: 1 Total: 1 1-3 of 3

Setup Time	Caller's Protocol:IP:Port	CLI	CLD	Call-ID	Caller's User Agent	Node
2015-02-10 13:15:22	UDP:193.28.87.78:5061	999000444	999000333	aa7d91eb-b2c1f7b6@192.168.224.114-10 (log only   legacy)	Sippy	193.28.87.78
2015-02-10 13:14:54	UDP:192.168.224.114:5060	999000444	12333	aa7d91eb-b2c1f7b6@192.168.224.114 (log only   legacy)	Linksys/SPA941-5.1.8	193.28.87.78
2015-02-10 13:10:11	UDP:192.168.224.114:5060	999000444	123	cd5d5407-c5594db8@192.168.224.114 (log only   legacy)	Linksys/SPA941-5.1.8	193.28.87.78

**SIP Log Viewer** America/Vancouver demo Logout

Trace a call Show Call Attempts View Log 4

Porta SIP node: 193.28.87.78  
 Call-ID: aa7d91eb-b2c1f7b6@192.168.224.114-10  
 H323-Conf-ID: DA616AAE B11611E4 911A000C 29B18177

Hide panel

Log level: e - simple

Date / Time	AAA	PortaBilling	PortaSIP	PortaSIP	PortaSIP
2015-02-10 13:15:21.511	<- Authorization request				
2015-02-10 13:15:22.145	>- Auth request accepted				
2015-02-10 13:15:22.762	SIP Server Time Zone: 2015-02-10 11:15:22.762				
2015-02-10 13:15:22.762				>-> (A.7 366/I) INVITE	<-> (A.7 366/I) INVITE
2015-02-10 13:15:22.762				<-> (A.7 366/I) 100 Trying	
2015-02-10 13:15:22.762					<-> (A.7 366/I) INVITE
2015-02-10 13:15:22.762					<-> (A.7 366/I) INVITE
2015-02-10 13:15:22.762					<-> (A.7 366/I) INVITE
2015-02-10 13:15:22.762	<- Accounting (stop/orig)				
2015-02-10 13:15:22.762				>-> (A.7 366/C) CANCEL	
2015-02-10 13:15:22.762				<-> (B.7 672/I) INVITE	
2015-02-10 13:15:22.762				<-> (B.7 672/I) 100 Trying	
2015-02-10 13:15:22.762				<-> (B.7 672/C) 200 OK	
2015-02-10 13:15:22.762					<-> (B.a 672/A) 200 OK
2015-02-10 13:15:22.762	<- Accounting (start/orig)				
2015-02-10 13:15:22.762	<- Accounting (start/orig)				
2015-02-10 13:15:22.762					<-> (B.a 672/A) ACK

```

2015-02-10 11:15:22.142|b2bua|19776|aa7d91eb-b2c1f7b6@192.168.224.114-10|IA|1076|AAA request accepted, processing response:
b2bua_request_serial = 65ADdECE
h323-Return-Code = "13"
h323-ivr-in = "PortaBilling_Authorize:base*;avail=1"
h323-ivr-in = "PortaBilling_CompleteNumber:999000333"
PortaOne-Service-Features = "rtpp-level=0;clit=1"
PortaOne-Calling-Party = "id=999000444;display-id=999000444"
    
```