Porta Switch™

New Features Guide

Maintenance Release 16

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Preface

This document provides information for PortaOne users regarding new features that will appear in PortaSwitch Maintenance Release 16.

Where to Get the Latest Version of This Guide

The hard copy of this guide is updated at major releases only, and does not always contain the latest material on enhancements occurring between minor 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/**

Conventions

This publication uses the following conventions:
- Commands and keywords are given in **boldface**
- Terminal sessions, console screens, or system file names are displayed in `fixed width font`

Caution indicates that the described action might result in program malfunction or data loss.

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 in the paragraph.

Tips provide information that might help you solve a problem.

1. New Features in PortaBilling100

Converged Billing – Support for Various Service Types and Services

PortaBilling enables you to offer multiple services to your customers, so you can broaden your range of services while providing clear transaction and invoice information to your subscribers and administrators. The concept of various service types available in Maintenance Release 15 has been further improved to support

- Service types
- Services
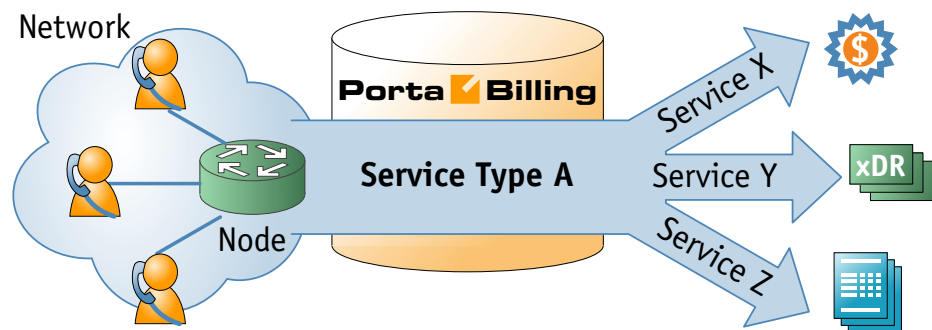
A **service type** is a description of the physical service provided to an end-user. A service type primarily defines the way in which the billing engine interacts with network equipment to ensure that the service is authorized, provided and rated correctly. VoIP calls and dialup or WiFi Internet access are examples of service types. The list of available service types is determined by the billing engine capabilities in a given release, as new service types appear when proper support is added to the billing engine internal modules.

A **service** is a description of the user's activities from a business perspective. Services are the foundation of your billing configuration, and new services may be defined according to your business model. This permits flexible branding of your services to costumers and opens the possibility of bundling various services into one product. You can choose names and billing parameters for new services as desired. For instance, the same physical service, such as Internet access, can be sold to one category of users as "High-speed Internet", and to another category of users at a different rate as "Broadband connectivity". Moreover, the **same** physical service can be sold to the **same** customer as multiple entities: for example, the use of WiFi in the customer's office and at the airport are treated as two separate services with a different price. A breakdown of charges per service is provided on the invoice and in the xDR browser.

Multiple Tariffs Applied to a Reseller

Previously, only one tariff could be assigned to a reseller. For all calls made by his sub-customers, the reseller was charged according to this tariff. Maintenance Release 16 introduces an ability to apply multiple tariffs to the same resellers. In the reseller's product you can now assign a reseller's tariff to every entry in the accessibility list. This allows to:

- Charge resellers different rates based on their sub-customers' products. E.g. you may create two products to be used by a reseller: EasyCall (simple product) and SuperCall (premium service). When a sub-customer with EasyCall product makes a call to India, the reseller is charged $0.05/min and when a sub-customer with SuperCall product makes a call to the same number – the reseller is charged $0.06/min

- Apply different charges based on the service used by the reseller's sub-customers, i.e. "VoIP wholesale" tariff includes rates for outgoing phone calls and "Internet access" tariff contains your rates for WiFi connectivity.

- Apply different rates based on the service scenario (accessibility entry). E.g., you may apply one tariff to the reseller's sub-customers for incoming calls and another tariff for outgoing calls made by his sub-customers.
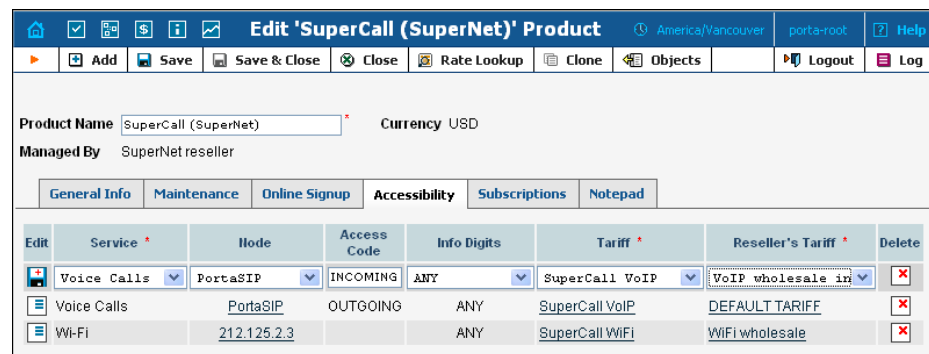
The **Tariff** configuration parameter in the reseller info has been renamed to "Default Tariff for Voice Calls" and is used only to specify a default entry in the **Tariff** menu when creating a new accessibility entry.

Product Cloning

Product configuration is an important step, since you need to specify all accessibility entries properly to ensure the correct functionality. To minimize the amount of work required to create a new product, PortaBilling100 allows to create a new product as a clone of an existing one. In this case PortaBilling100 will copy all tariffs used in the old product and generate a replica of this product. The new product will have

exactly the same accessibility entries except that they will now refer to the newly created tariffs.

Now you or your resellers can make any modifications in the product configuration, tariff or rate data without affecting users of the old product.

Account Aliases

Sometimes it is desirable to provide multiple means of authentication for the same account; for instance, several phone numbers may be registered for PINless dialing to a single prepaid card. In this case, a single account will contain the actual balance and other billing information and multiple account aliases will be associated with it.
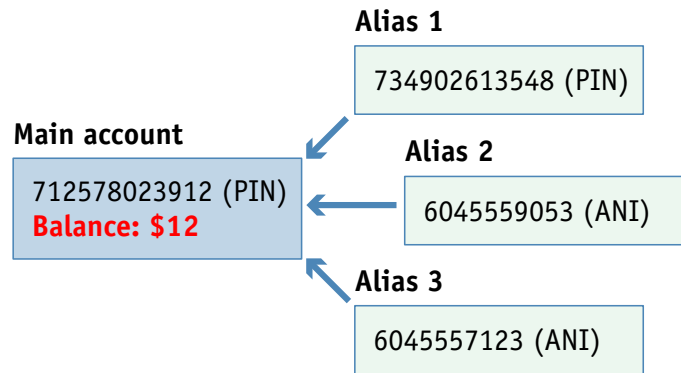
PortaBilling100 presents a new feature called "account aliases" where an alias serves as a link or pointer to the main account. When a customer uses an alias ID for authentication, PortaBilling retrieves information about the main account and uses its balance, product type and other parameters for all further operations.
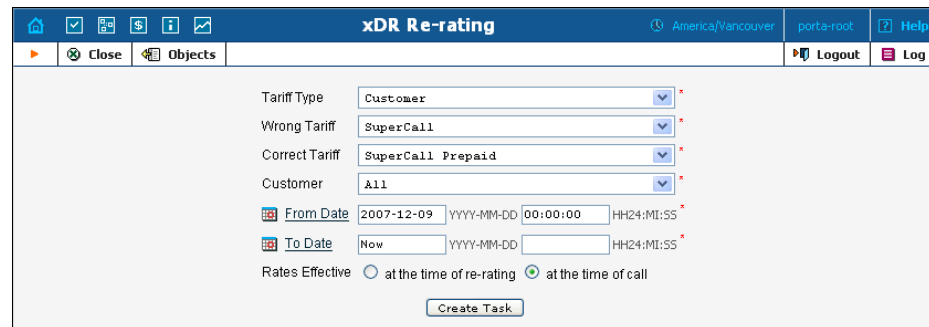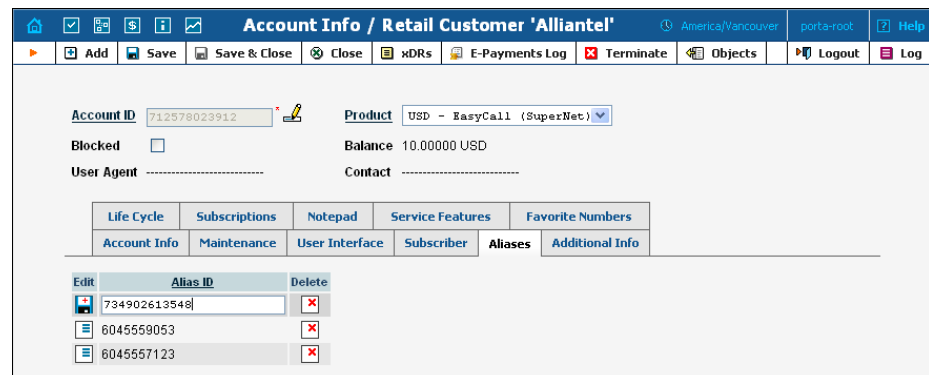
xDR Re-rating

This is a lightweight and easy-to-use alternative to re-feed designed to fix the most common problem: incorrect pricing information entered into a tariff. It is operated completely from the PortaBilling web interface. The administrator specifies the "original" (incorrect) tariff and the correct tariff, and narrows the set of xDRs to be processed by time interval and specific customer.

The re-rating task starts in the background and during its execution:

- The script locates all xDRs produced according to the incorrect tariff (and matching the time interval and customer criteria).
- For every xDR, the script calculates the charge according to the new tariff. If the charges are identical, no further action is taken with the given xDR.
- xDRs are then updated with the correctly charged amount, and the balance is adjusted by the difference between the new and old charged amount.


Favorite Numbers Billing

If this feature is enabled for a specific account the administrator can associate a set of phone numbers with it. When the account owner makes a phone call, the dialed number is checked against a list of "favorite" numbers. If a match is found, the call is rated according to a special rate defined in the customer's tariff (FAV). This allows you to offer customers a "call friends & family cheaper"-type service.
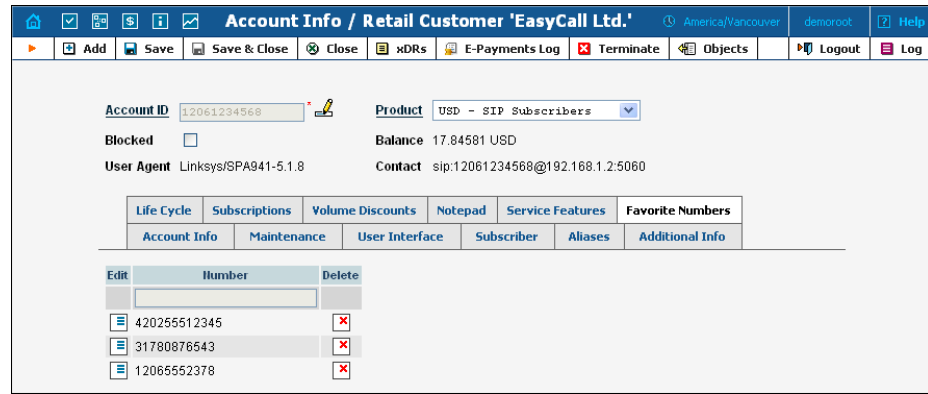
ACLs Designated to be Used by Resellers

Previously a reseller was able assign any ACL of the **Customer** type at **User Interface** tab in the customer info screen to his sub-customers. This allowed quick and convenient system management of multiple resellers – the administrator only had to pre-create several ACLs and any reseller could use them for their sub-customers. This although was creating a challenge when there were several resellers and ACLs were custom-tailored to the needs of a particular reseller, since in this case it was advisable to allow every reseller to see only "his" ACLs.

PortaBilling Maintenance Release 16 still provides the "easy" method of ACLs usage, described above, but you also have a new option now - when creating ACLs for sub-customers you should mark them as 'Visible To' the reseller (or a group of resellers). Afterwards you should include the 'Access only to ACLs visible to the reseller' component into the ACL applied to the reseller. Now the resellers will be able to assign to his sub-customers only ACLs marked as "visible" to him.

2. New Features in PortaSIP

Selective Call Processing

Sometimes incoming calls need to be treated differently: calls from your boss or secretary should reach you on your cell phone even during the weekend, while other calls can go to voicemail. Calls in the evening hours should go straight to your cell phone (there is no point in ringing your IP phone while you are not in the office), while calls from your ex-girlfriend should always go to voicemail.

All of this can be done using the selective call processing rules in PortaSwitch. When the selective call processing feature is enabled for an account (phone line), you can define a set of rules that will be applied to every incoming call. Each rule may include a set of conditions based on the calling number status (e.g. you can list extensions for your boss and secretary, your home phone, your wife's cell phone number, and so on.), called number condition or the time when the call is made (this is ideal to make sure your phone will not ring in the middle of the night).

When an incoming call matches a certain rule, one of several possible call processing scenarios will be executed – for instance "reject call", "forward this call to voicemail without ringing the phone", "ring on the IP phone, but do not engage any of the follow-me destinations", etc..

SIP TAPI Support

SIP TAPI is a driver that enables the SIP click2dial functionality for TAPI applications (like MS Outlook). After the SIP TAPI client software is installed on the customer's computer, he may click on the phone icon next to the person's name in his Microsoft Outlook or other software. SIP TAPI client will first initiate a call on the user's own IP phone, so it will start ringing. When he answers the phone, SIP TAPI client initiates the second call to the phone number listed in that person's contact information and bridges the two calls together, so the user does not have to dial the number on his phone.

Dedicated RTP Proxy Server

In the traditional architecture, the same PortaSIP server is used to run SIP proxy, registrar, B2BUA and also perform RTP proxying, so both SIP signaling and RTP media pass through it. Although PortaSIP does not perform transcoding of voice traffic, the many concurrent calls passing through the server put a certain load on the system as a result of a huge number of relatively small packets that need to be processed.

As an alternative for systems where a high number of proxied calls is required (e.g. "call friends" online communication service, where a majority of calls goes between customers using soft-phones), it is possible to transfer the RTP proxying function to a separate server.
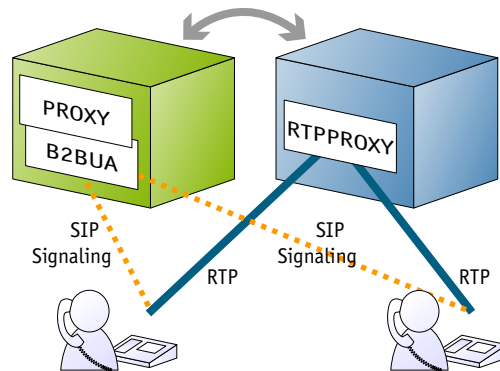
This allows to efficiently prioritize transmission of IP packets carrying the voice media and prevent any resource-intensive operations on the SIP side from affecting the voice quality.

Since fast and reliable connectivity between PortaSIP server and RTP proxy is important, both PortaSIP and RTP proxy servers should be installed on the same LAN and connected by the FastEthernet link.

RADIUS Network Interface

PortaSIP Maintenance Release 16 supports the use of a separate network interface (or a IP alias) for communications with the billing system. This allows PortaSIP server to run the actual voice traffic (SIP, RTP media) via one network interface (connected to the public Internet), while the other network interface will be used for secure communications with the billing.

3. New Features in PortaUM

Improved Auto-Attendant Controls

PortaUM Maintenance Release 16 includes several enhancements in the editor for the auto-attendant IVR dialogs: you can now record a separate prompt for instances where a user did not press any keys or if he pressed a key, which is not used in the current IVR menu.

Debit Card Application Improvements

In the pre-paid (debit) card application in Maintenance Release 16 you may define IVR configuration parameters (such as enabled IVR languages, whether ANI authentication should be done or not, PIN length and others) per IVR access number, so you can run multiple instances of the debit card application on the same PortaUM server.
PortaUM debit card application now supports the French language.

PortaUM Stand-by Server

To improve reliability of the voicemail or auto-attendant service it is possible to use a tandem of PortaUM servers. One serves as the master and handles PortaUM web interface, stores new messages, allows users to change their configuration settings, etc. The other server runs in the standby mode, it is connected to the master server via the LAN interface and constantly replicates the data from the master. If the master fails, the standby has an up-to-date copy of all user data and settings, so it can be brought up with the master's IP address and take over the master's role.

PortaUM Distributed Architecture

A single PortaUM server capacity is limited by the number of user mailboxes it can store and the number of concurrent IVR sessions it can process. If you need to serve more customers than a single PortaUM server allows you to – you can use several PortaUM servers simultaneously. User mailboxes will be distributed between available PortaUM servers (e.g if you have 250,000 users and 3 PortaUM servers – each server will contain about 83,000 mailboxes). When a call must be delivered to the user's mailbox or if the user presses *98 to listen to their messages – the call is automatically directed to the PortaUM server, which contains the user's mailbox.