

# Porta <mark>≦</mark> Billing 100<sup>™</sup>



Web Reference Maintenance Release 19

www.portaone.com

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Please address your comments and suggestions to: Sales Department, PortaOne, Inc. Suite #400, 2963 Glen Drive, Coquitlam BC V3B 2P7 Canada.

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# Preface

This document provides a general overview of the PortaBilling100 administrator web interface.

# 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.







# **Document Objectives**

The target audience of this document are system administrators, VoIP engineers, and system or helpdesk operators who will be managing your services via the PortaBilling100 web interface.

# How to Get Technical Assistance

The dealer from whom you purchased this product is the *first place* you should go for technical assistance. The dealer is usually the most qualified source of help, and is the person most familiar with your system and how this product should be installed. Many dealers have customer service and technical support programs that offer varying levels of support, depending on your needs and computer knowledge.

#### If your dealer cannot assist you

If you cannot get assistance from your dealer, the vendor provides varying levels of technical assistance.

PortaOne's Customer Support Service (e-mail: support@portaone.com) can supply quick answers to specific inquiries regarding product features and technical questions. You can visit our website (http://www.portaone.com) for more information.

# Hardware and Software Requirements

#### **Client System Recommendations**

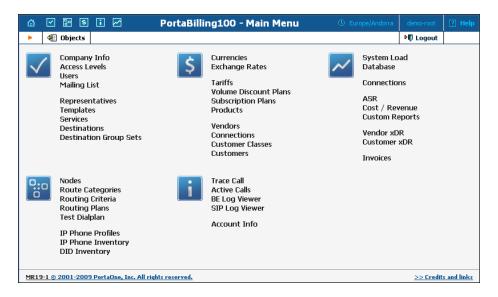


- OS: Windows 95-XP, UNIX or Mac OS
- Web Browser: Internet Explorer 6.0, FireFox 2.0 with JavaScript and cookies enabled.
- Spreadsheet processor (MS Excel)
- Display Settings:
  - o Min. Screen Resolution: 1024 x 768
  - o Color Palette: 16 bit color (minimum)

**NOTE:** To view downloaded CSV (Comma-Separated Values) files in Windows, please do the following to match PortaBilling's default list separator: My Computer -> Control Panel -> Regional Settings -> Number -> List Separator type ",".

# **1**. Introduction

PortaBilling's front-end design and functionality are simple and intuitive. The web interface of the PortaBilling home page is the main point of entry to all system objects and tools. Divided into five functional blocks, the icons below link to pages containing tools for system management, VoIP networking, billing, customer help, and generating statistics. Each second-level page contains a link back to the home page.



#### These are the five functional blocks:



Global system maintenance tasks, such as adding administrative users, managing the list of services provided, and maintaining the database of rate codes (destinations).



Configuration of network components: registering new nodes (network endpoints) in the system; configuration of IP phone profiles; tools for configuring and testing call routing.



Tasks related to billing, such as customer, vendor and account management and rate plan definition; maintenance of currencies and exchange rates.



Tasks available to help desk staff for assistance in troubleshooting problems that clients may inquire about.



A variety of statistics and reports are available, reflecting the status of the system or providing information on call records, costing and revenue.

# PortaBilling Security

#### PortaBilling100 is compliant with Visa Security Standards.

#### **User Interface**

- o Inactivity logout
- o Unconditional logout

#### **User Passwords:**

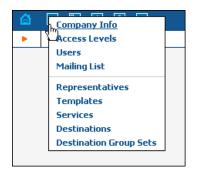
- The minimum password length is six (6) characters. In the case of long passwords, only a certain number of the leading characters will actually be used (however, at least eight (8) characters).
- Passwords include both alphabetical and numerical components.
- o Passwords are stored under irreversible encryption.
- It is required that the current password be used before allowing a new password to become effective.
- The user's last four (4) passwords cannot be re-used (see the note above about long passwords; new passwords must differ in at least one of their first 8 characters).
- It is prohibited to change a password within one (1) day of the previous change.
- o The initial password must be changed on the first login.
- Passwords must be changed at least once every 30 days.
- Use dictionary checking to restrict password selection.

#### **Credit Card Information**

- o Credit card information is displayed as 1234xxxxx567
- Credit card information is stored using the same encryption as for the Payment System password.

# **Common Features**

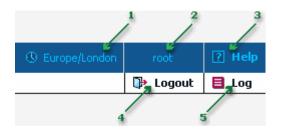
All of the functions available from the home page (main menu) are also available using the drop-down menus:



The Home icon f on the left also contains a menu with shortcuts to all the other PortaBilling interfaces:

Admin - Shortcut to this interface; same result as clicking the Home icon
Customers - Customer Self-Care interface
CC-Staff - Customer Care Staff interface
Accounts - Interface for account owners (end-users)
Vendors - Interface for your termination partners
Representatives – Interface for your sales agents or distributors

The top right-hand side of the interface provides users with the following information:



- 1. The time zone where the current user operates. Click on this link to select a time zone for your current session.
- 2. Login name of the user currently logged in.
- 3. Context help for the current screen. Click this link and the Help window will pop up.
- 4. Logout button. Used to end the current session or, when necessary, to re-login as another user.
- 5. View Log. This link is only available to users with corresponding access rights and where applicable. Clicking it will open a window showing all logged activities performed on the current screen.

The toolbar often also shows a list of available actions relative to the current page:



This toolbar acts as the equivalent of the "File" menu for the application, i.e. the usual location for the "Save", "Close" and "Add" operations.

#### **Delete an Object in the Database**

If you see the icon interview next to an object name in the list of objects, this means it can be deleted from the system. Note that only objects which are not used elsewhere in the system may be deleted. For instance, in the screenshot below, the **DID supplier costs** and **Termination services** tariffs can be deleted, whereas the rest of tariffs are being used by some product or connection.

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#### **Show Objects**

The **Objects** icon is only available to the Root user; when selected next to any web element (such as a data field or select menu) it displays an **ACL** control. Move your mouse over the ACL control for the given element to see the object properties, as illustrated below. These object properties can be used by the administrator when configuring access levels for certain users in the system. See the **Access Levels** section for more information.

# PORTA **Silling** 100°

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#### **Sorting Tables**

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atch	23 Aug 2002	23 Aug 2002		

This feature is available for all xDR browsers in order to sort the displayed information according to different criteria, where necessary. The table header cell with the orange triangle shows the sorted row. A triangle pointing downward indicates descending order, while a triangle pointing upward means ascending order.

Sorting is available for all columns with a bi-directional white arrow in the top left-hand corner of the header cell. To sort a column, simply click on the header; click the same column again for the opposite sorting order.

Another handy feature for sorting tables is that the table header is always visible, even if you scroll to the bottom of a large table which does not fit completely on the screen.

#### **Multiple Languages**

PortaBilling uses a flexible and extensible localization system. Every user of the system (admin user, account, customer, vendor, customer care admin) can choose the language of the web interface for his session. This does not, of course, affect other users; thus user John can work with the system using English as his interface language, while user Peter can make use of Chinese simplified as his language. Currently, PortaBilling supports such commonly-used languages as Arabic, Chinese, French, German, Portuguese, Russian and Spanish, in addition to English. New languages may easily be added on request; please contact Porta Software to obtain the XML template files if you would like to perform the translation yourself.

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Currently the following languages are supported:

- Arabic
- Chinese (traditional and simplified)
- Czech
- English
- Estonian
- French
- German
- Hebrew
- Hungarian
- Italian
- Latvian
- Lithuanian
- Norwegian
- Polish
- Portuguese (and Brazilian Portuguese)
- Russian
- Spanish
- Swedish

#### **Tab Controls**

Some forms (e.g. customer or account information) contain so much information that it is not feasible to display it all on a single screen. The standard practice in this case is to divide the information between multiple tabs, each of which contains only a portion of the information and can be individually selected for display. To provide a better user experience with a high number of tabs, PortaBilling provides two rows of tab controls.

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Save	🕞 Save & Clo	se 🛞 Close (	xDRs G	Account	s 📮 E-Pa	yments Log	Invo	ces 🖾	Terminate	🗐 Objects	₩0 Logout
	istomer Name ocked pe	John Smith		Ba	ening Balan lance stomer Clas	ce 2.00000 U 2.00000 U S Default	SD				
	Taxation	Abbreviated Dia	ling Subs	criptions	Notepad	Service Fe	atures	Permit	ted SIP Proxid	es	
	Address Infe	Maintenance	User Interfe	ece Dial	ing Rules	Additional Inf	e Paym	ent Info	Custom Fie	lds	
Co	mpany Name	- 66 		1 1	Contact			_			
Mr	/Ms/	[			Phone	-		_			
Fir	stName		M.I.		Fax	[					
	stName			_	Alt Phone						
Ad	dress	1830 Bothell	Way NE, A	3	Alt Contact						
					E-mail						
					BCC	-		j			
Pri	ovince/State				Description						
	stal Code										
Cit	h l										
Co	untry/Region										

When you click on a tab's name, it is selected (black font on a white background) and you can see the associated information. Note that even if a tab from the upper row is selected, the row order does **not** change, and all the tabs stay in their original location. Thus you can always remember where a particular tab control is located on the form; see below for an example where a tab from the upper row has been selected.

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		Address In	o Maintenance	User Interfac	e Dialing Ru	des Additional In	lo Payme	t Info Custon	Fields			
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#### **Date & Time Format**

PortaBilling allows users to define both the input and output formats for date and time.

Date	DD-MM-YYYY	31-12-2003	•
Time	HH24:MI:SS	User Defined	-
Date & Time	DD-MM-YYYY HH24:MI:SS	User Defined	•
Input Format			
Date	DD-MM-YYYY	31-12-2003	•

Making changes to the date and/or time format on this page enables users to enter dates and times in the desired format throughout the entire PortaBilling100 web interface. Correspondingly, all pages generated at a user's request will contain the date and time in the previously set-up format.

Date/Time format strings are composed using specifiers that represent the values to be inserted into the formatted string.

In the following table, the specifiers are given in upper case. Formats are case-insensitive.

Specifier	Value	Description					
		Date					
DD	01-31	Day of the month					
D	1-31	Day of the month without a leading 0					
MM	01-12	Number of the month					
MON	Jan-Dec	Name of the month					
MONTH	January-	Full name of the month					
	December						
YYYY	2003 +	Year					
YY	00-99	Last two digits of the year					
		Time					
HH, HH24	0-24	Hours					
HH12	0-12	12-hour time format; requires AM/PM					
		Specifier					
MI	0-60	Minutes					
SS	0-60	Seconds					
AM, PM,	AM, PM						
AM/PM							
		Separators					
A separator can	be any symb	ol except for letters and digits, or may be					
left blank							

Example	Value
DD/MM/YYYY	12/03/2003
MON-DD-YY	MAR-12-03
HH:MI:SS	12:30:00
HH12 MI:SS	WRONG! AM/PM Specifier is missing
HH12mi pM	1230 AM

#### **Current Release and Build information**

In the bottom left corner of the main menu screen, you can see information about the maintenance release and build of the software currently installed, e.g. MR19-3 means "Maintenance Release 19" and "Build 3".



# 2. System Management

# **Company Info**

The Company Info screens allow the administrator to maintain corporate information relating to your business. This data will be included on reports such as invoices.

۵	Image: Second	s i 🖂			E	dit Comp	any Info	)		America/Vancouver	porta-root	🕐 Help	5
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		Contact info	Legal info	Report info	Payment S	ystems Cu	stom Fields	Call Barring	]				
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	Add		Suite 400, Coquitlam,										
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	Fax	Γ											
	Ema	ail 🔽	ontact@portaon	e.com									
	Web	, F	ww.portaone.cor	n									

#### **Contact Info**

The information provided in the Contact Info tab is typically used on reports as the primary point of contact for your vendors and customers. This information is the same as that which appears on your letterhead and business cards, for example.

Field	Description					
Company	The conventional form of your company's name. (For					
Name	example, "EasyCall, Inc.")					
Address	Street address of the company.					
Country	The country may be selected from a drop-down list.					
Phone	one Primary telephone number for the company.					
Fax	Primary fax number.					
E-mail	Primary e-mail contact for the company. If defined, this email address will appear in the From: field of all outgoing emails, e.g. statistics/invoices or low credit warnings sent to your customers.					
Web	Web address of the company.					

#### Legal Info

₫	<b>&gt;</b>	\$ 🖬 🖂	Ed	it Company In	fo	0	America/Vancouver	demo-toor	? Help
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Name		Porta Software L	_td.	7					
Addre	SS	902 - 2181 W 8	th Ave.						
City		Vancouver		7					
Count	try	CANADA			~				
	ice/State	BC - British	Columbia	×					
	I Code	V6M 1R8	]						

The Legal Info tab allows you to enter information about your company that could be used for any legal transactions, e.g. for taxation purposes.

Field	Description
Name	Proper, legally-recognized form of the company's
	name.
Address	Address where this company name is legally
	registered. Two lines are provided.
City	City in which the company is legally registered.
Country	The country in which the company is legally
	registered.
Province/State	The province or state where the company is
	registered may be selected from a drop-down list,
	depending on the Country option selected.
Postal Code	Postal code for the company's registered location.

#### **Report Info**

6 🗹 🔛 🕏	•	Edit Company Info						porta-root	? Help	
🕨 🖬 Save 🖃	Save & Close	🛞 Close	🙀 E-Payments Log	) 🐐 Objects				M Logout	目 Log	
Contact info	Contact info         Legal info         Report info         Payment Systems         Custom Fields         Call Barring									
Time Zone	America/Va	ancouver	•							
Reconciliation Perior	Daily		•							
Tax ID	2340923									
Currency	USD									

The data contained in the Report Info tab may be used for any financial reports, e.g. for invoicing or taxation purposes.

Field	Description								
Time Zone	Time zone in which global reports for the								
	environment (e.g. Cost/Revenue Report) will be								
	generated.								
Reconciliation	One of the following: daily, weekly, bi-weekly or								
Period	monthly. This will also set up the periodicity of								
	the Unresolved xDR Reports. (See the Statistics								
	section below.)								
TaxID	Locally-designated tax number.								
Currency	The company's internal currency. You can use								
	different currencies for your customers or								
	vendors, but Cost/Revenue Reports will be								
	generated in this currency. The value for this								
	parameter is set permanently for the new								
	environment, and cannot be changed later.								

#### **Payment Systems**

The Payment Systems tab lists all existing payment systems, and allows you to enter information related to payment gateways used to receive payments from customers.

One or more payment systems may be utilized for electronic payments. In order to make use of these services, you must first register with one of the currently-supported<sup>\*</sup> merchants, as shown below:

<sup>\*</sup> Supported means that a corresponding Business: OnlinePayment plugin module is available at **www.cpan.org**. This does not guarantee that the module will support all the required features, and some extra work may be required to integrate it into the solution and perform testing. Please contact **support@portaone.com** for a current list of payment modules which have been thoroughly tested and work "out of the box", such as AuthorizeNet.

Name	Web Page
2CheckOut	www.2checkout.com
Assist	www.assist.ru
AuthorizeNet	www.authorize.net
Beanstream	www.beanstream.com
BoV	www.bov.com
eSELECTplus	www.moneris.com
GlobalColect	www.globalcollect.nl
LinkPoint	www.linkpoint.com
Moneybookers	www.moneybookers.com
Netaxept	www.paynet.no
Ogone	www.ogone.com
PaymentExpress	www.paymentexpress.com
ProxyPay3	www.eurobank.gr
SecureHosting	www.securehosting.com
TripleDeal	www.docdatapayments.com
WorldPay Invisible	www.worldpay.com
WorldPay Junior	www.worldpay.com

To add a new payment system, click Add and enter the Account Name, Login, Password and Merchant in the edit row at the top of the listing. Choose one or several payment methods which will be used for payments made by these payment systems. To edit an existing account, click E Edit and copy the information from the current row into the form above. Save changes using the Save button. A recurring payment allows customers to set up periodic payments on this payment system. Payment systems with recurring payment enabled are indicated by the icon.



After adding the payment system, it is necessary to assign it to one or several currencies in which payments will be processed using the chosen payment methods (see the *Currencies* section). Only after doing so can this payment system be used for payments by customers and accounts defined in these currencies. Please note that several (more than one) systems may not be assigned to the same currency using the same allowed payment method, i.e. you cannot have two systems with VISA as the allowed payment method assigned to the currency USD. However, you can assign both a system with VISA as the allowed method and another with MasterCard as the allowed method to the currency USD. Similarly, you can assign one system with VISA to the currency USD and another with the same method to the currency EUR.

**Test Mode** is a special mode of interaction with the system. It is useful during the initial setup phase, when a merchant may want to test its setup without processing live card data.

#### What is a Payment Processor?

A payment processor is a real-time transaction processing system that functions as a payment service using a secure transaction server on the Internet. Merchants with a valid merchant account at an acquiring bank ("payment system") can use this system to submit, authorize, capture and settle credit card or eCheck transactions without the need for a separate transaction terminal.

#### **Payment System Basics**

This section is provided for information purposes only. The terms and conditions of your payment system are subject to agreement between you and your bank or merchant service provider, and should be consulted for specific information relating to your payment system.

A payment system is required to accept credit cards using the system. A payment system is a special account with a bank that is a member of the Visa and MasterCard associations (American Express may also be part of your payment system). Such a bank has been certified by the Visa and MasterCard associations and can provide you, as the merchant, with all the services related to your payment system.

You *must* have a credit card payment system in order to use a payment processor for credit card transaction processing. The payment processor system is separate from your payment system, but it may be purchased at the same time from the bank or merchant service provider which is creating your payment system.

The merchant service provider normally does the following:

- Assigns you a payment system number.
- Sets up your payment processor account.
- Assigns you a login ID and password for use with your payment processor account.
- Acts as your main point of contact for basic issues regarding your merchant and payment processor accounts.
- Enables you to add certain types of credit cards to your payment system.
- If the merchant service provider is also your payment processor reseller, it also activates the processing capability for these cards on your payment processor account.
- Deposits credit card funds to your account.

Your merchant service provider may also provide you with MID and TID numbers. The payment processor does not need these numbers, but some third-party solutions (such as certain Shopping Cart providers) may require them. Once your payment system is set up and "live" on the credit card system, you can begin accepting credit cards from customers. It is your responsibility to configure the payment processor to meet your own needs, and to provide a hosting environment which is appropriate for the choices you have made within the payment processor.

The **E-Payments Log** button in the toolbar allows you to access information about credit card or direct debit charge attempts for the whole environment. Please see section *E-payments Log* for further details.

#### **Custom Fields**

Custom Fields are used for storing a set of extra attributes (e.g. driver's license ID or tax code) to supplement the standard PortaBilling100 information. You can create your own custom fields and give them whatever name you like, set a field type, and so on. Custom fields are treated like any other field; they can be set on the Customer/Account Info page and used for search queries.

Administrators can manage extra user information with the help of the **Custom Fields** tab on the Company Info page. For each new custom field, the following attributes must be set:

Field	Description							
Object	Defines whether the custom field applies to the							
	Customer or the Account.							
Name	The descriptive name of the field. This is the name							
	that will be displayed next to the custom field on the							
	Customer/Account Info page.							
Туре	Choose the type of field:							
	<ul> <li>Text – basic single-line input field;</li> </ul>							
	• Number – input field used to store and							
	validate numerical values;							
	• Date – field type used to store dates;							
	• Date & Time – custom field that stores dates							
	with a time component;							
	• List – single select list with a configurable set							
	of options.							
Properties	Enables you to customize properties of the field that							
	define its form, appearance, or value. These properties							
	are specific to the field type. Click Properties or the							
	wizard icon 🔀 to invoke the wizard. This will enable							
	you to define a new field format or change an existing							
	one and to specify the default value a custom field							
	should have.							
Default	Read-only attribute which must be specified in the							

	Properties attribute.
Mandatory	Defines the mandatory status of the field.

₫	<b>Y</b> :::	\$ : 2	3	Edit	Compa	ny In	fo	() Europe/Kiev	porta-support	? Help
•	🔁 Add	🛃 Save	📕 Save &	Close	🛞 Close	🐺 E-P	ayments Log	📲 Objects	🔰 Logout	📒 Log
C	ontact info	Legal info	Report i	info P	ayment S	ystems	Custom Field	ls		
Edit	Object *	Nar	ne *	Туре	*	🅎 Pr	operties	Defaul	t Mandator	y Delete
	Custom 💌			Text	<u>~</u>	- 1				
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	Customer	Credit Car	d	List	Master	Card, Vis	a, American Ex	(p	No	×
	Customer	Driver's Lie	cense	Text				11	Yes	×
								Field Pro	perties	
									YYYY-MM-DD	
							👿 Fro	om Date		
							10 To	Date		
							👿 De	fault Date 2008	3-03-30	
								ОК	Cancel	

60

You can delete a custom field at any time. All records of its values will also be deleted then.

# **Access Levels**

# Introduction to the ACL System

Different types of users have different responsibilities within the billing system. Some users may not be allowed to use or see certain portions of the system. To this end, PortaBilling supports the concept of **Access Control Lists** (ACL). ACLs allow the PortaBilling100 administrator to decide, for example, that a particular sales representative can look at customers' data, but cannot create new customers.

ACLs allow you to control what users of your site can and cannot do. Without such restrictions, it is almost impossible to guarantee that users will see or change only the information that they are allowed to.

# **ACL Types**

An access level can be one of the following:

- Account
- CC Staff
- Component (cannot be assigned to users; used only as a building block to construct other access levels)

- Customer (to be applied to retail customers or sub-customers)
- Representative
- Reseller (to be applied to your resellers)
- User (access level for users of the admin interface)
- Vendor

These levels are composed of permissions and, optionally, other components. A permission is the lowest level of access control resources. It contains a set of permissions that are granted when using a component.

Newly created ACLs will be available in the select menu of the corresponding form when creating a new object or modifying an existing object's details. For instance, a User ACL will appear in the select menu of the **Add User** form (see below), a Customer ACL will be available when creating or editing a customer, and so on.

ຝ	v 🗄 🛊 i 📈	Add User	() America/Vancouver	demoroot	? Help
٨	🗟 Save 📓 Save & Close 🛞 Cl	ose 📲 Objects		💵 Logout	
	Address Info User Interf	ce Life Cycle Mailing Li	st		
	Login New	* Time Zone	Europe/Prague	*	
	Password	* Auto Web Interfa	ace Language en - English	*	
	Access Level Admin Admin Bookkeeper Output Forma Helpdesk No access				
	Date Root Test	2003-12	-31 💌		
	Time UM Admin	User De	fined 💙		
	Date & Time	24:MI:SS User De	fined 💌		
	Input Format				
	Date YYYY-MM-DD	2003-12	-31 💙		
	Time HH24:MI:SS	User De	fined 👻		

#### Permissions

A permission is the fundamental unit of exchange in the PortaBilling100 security model. Permissions are composed of an access type, whether or not this is an allowed action, the relevant object, and the relative attribute of the object.

Let's take the example of ASR reports. An access level called "Access to 'ASR' reports" is provided within the PortaBilling100 installation. It defines only one permission, which appears as in the following screenshot:

۵	v :• \$ :		Edit A	ccess Level		() America/Vancouver	demo-root	? Help
•	🔁 Add  🖬 Save	📓 Save & Close	🛞 Close 🛛 🖪 Depend	encies			M Logout	目 Log
	Compor	ent Group *	Reports	PB100 V Reports V	Type Hidden	Component		
	Edit Acc Re			Attribute *	Delete			

The "Access type" is set to "Read", and the permission to "Allow". This permission applies only to "WebForms" objects which have the attribute "ASR".

There are four possible access types:

- read view the specified resource
- update modify the resource
- insert create new instances of the resource type
- **delete** remove instances of the resource from the system

The field "Allow/Deny" defines whether this permission has been granted or withheld.

You should never have to provide fine-grain permission information yourself, as all possible permissions are already encapsulated in the components of your PortaBilling100 installation. For this reason, we will not discuss the "Object" and "Attribute" fields further in this section. However, it may be useful to know that wildcards can be used in these fields. For example, to allow Read access to all web pages, an ACL could be defined with the following permissions:

Access type:	"Read"
Allow/Deny:	"Allow"
Object:	"WebForms"
Attribute:	···*··

As may be guessed, the "\*" in the attribute field means "all attributes".

**NOTE:** Should you find it necessary to modify these basic components or create new ones, please contact PortaOne Support. We can provide you with a list of Object and Attribute resources, or otherwise assist you in maintaining ACLs.

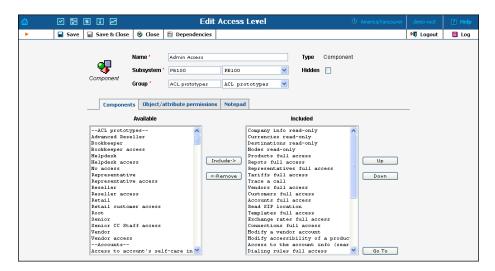
#### **Components and User ACLs**

Components will be made up of zero or more permissions, and can include other components (as dependencies). If access level ACLX includes access levels ACL1, ACL2 and ACL3 (or, in other words, is *derived* from ACL1, ACL2 and ACL3), then ACLX will contain all the

permissions defined in ACL1, ACL2 and ACL3 (along with all of the access levels they in turn are derived from).

What happens if there is a contradiction; for example, if ACL1 denies read access to Accounts.password, and ACL2 grants it? In such a case, the first available definition will be used. Thus, in the example above, access will be denied according to ACL1, which is first in the list of included access levels. In addition to these, a component has several other aspects.

When editing a component, you will first see a screen as in the following screenshot:



Including components as dependencies within other components gives the system its power. Here we see that the "Admin access" level is defined by over a dozen dependant components. Note that this component does not actually define a permission itself, but rather relies on the implementation of its dependants.

By deriving new components from existing components in the system, you can implement fine-grain access control and define User ACLs specific to your operational environment.

# ACLs for Sub-customers and Visibility

Normally you would not want reseller A to be able to use (or even see) ACLs for his sub-customers that were designed for reseller B. To ensure this, you can mark certain ACLs as visible only to a particular reseller.

# **ACL Subsystems**

In some cases, the same object and attribute can be interpreted differently according to the context. For instance, a reseller can access his own

customer information, or information about his sub-customer. Although in both cases he will work with the same physical fields in the database, he needs to have fundamentally different sets of permissions. This is accomplished using subsystems in the ACL definition. In this example, there would be two ACLs defining applicable operations with the **Customers.name** attribute (or other attributes of a customer). One of these ACLs will have the subsystem **PB100**, defining access in a global context, i.e. the reseller's access to his own information. The other ACL will have the subsystem **Sub-customers**, which defines the reseller's access to information about his sub-customers.

#### **Access Level Management Interface**

In this discussion of the ACL system, we have proceeded by starting with the fundamentals and building up your skills from there. Now we will discuss the entry point for ACL management. On the PortaBilling100 administrative interface you will find a link to "Access Levels". This link takes you to the Access Level Management main screen pictured below.

This screen is similar to many others in the PortaBilling100 system, including a search interface at the top and a results listing at the bottom. (By default, all ACLs are shown in a paged format on this screen.) You may search for ACLs using any combination of Name and Type.

In the results listing, you may also see the dependencies icon and delete icon. ACLs can only be deleted when they are not in use. If a component contains any included components, you will be able to click on the dependencies and see search results for all dependants. The following screenshot shows all dependants for "Accounts full access". Note that some of the dependants have their own dependencies.

🔉 🗹 🗈 🖲 🖬 🗹	Access Level Management					demo-root		
Add 🛞 Close							M Logout	目 Log
	Name	Subsystem	Group	Туре		_		
	Name	Jubayatem	ACL prototy	ANY V	Show	ACLS		
	Dependencies	Name	Subsystem	Group	Туре	Delete		
		Admin	PB100	ACL prototypes	2			
	<b>1</b>	Admin Access	PB100	ACL prototypes	÷			
		Advanced Reseller	PB100	ACL prototypes	2	×		
	<b>1</b>	Bookkeeper	PB100	ACL prototypes	2			
	<b>(71</b> )	Bookkeeper access	PB100	ACL prototypes	÷			
	<b>11</b>	Helpdesk	PB100	ACL prototypes	2			
	<b>(71</b> )	Helpdesk access	PB100	ACL prototypes	÷			
		No access	PB100	ACL prototypes	2	×		
		Representative	PB100	ACL prototypes	2	×		



We have already talked about the necessary parameters for creating or editing components, but we have not yet discussed component inclusion in detail. Each access level may have zero or more dependant components. These components are ordered, and likewise are applied in order until the first matching permission is reached.

In order to understand this better, we will use the previous example. Suppose a user is trying to view ASR reports. His access level must allow reading of "WebForms.ASR" (object "WebForms", attribute "ASR"). For the sake of simplicity, we will say that his access level includes "A", "B", and "C", where "B" allows this permission, but "C" explicitly denies it. In this case, the user's ability to view these reports is based on the ordering of these components. If "B" appears before "C", then it will work. In the opposite case, he will not have access.

This may sound complex, but in practice the user interface is quite simple. Two columns are shown on the "Components" tab of the edit screen for each access level. On the left, you have a list of the available components, while on the right are the included components. Between these two columns you have the "Include->" and "<-Remove" buttons, which move selected items between the two lists. As for ordering, the "Up" and "Down" buttons on the far right-hand side of the screen allow you to rearrange selected elements of the "Included" column. The "Go To" button opens the edit screen for the selected component.

#### Creating a New User ACL

From time to time you will find that the predefined user ACLs (Admin, Helpdesk, and so on) offer too few, or too many, restrictions for a particular class of user. In such a case, it is time to create a new user ACL.

The easiest method is to take an existing access level and create a new one modeled on it, and then modify it to fit your needs. You should examine the permissions granted to the model access level, and verify that you want to grant access to those resources. Next, you can include other components to suit your needs. As a style recommendation, we suggest that you first create a component containing the dependant components you wish to utilize. Finally, create a new user ACL which includes only this new component. Now you can assign this ACL to new users.

The PortaBilling100 ACL management system contains style conventions which you would be well-advised to follow:

- The name of a component should be descriptive, based on the actions which it allows. Examples are "Delete a node", "Currencies read-only", and "Access to Vendor Reports".
- Create a new group for any components or user ACLs which you define, so as to keep them separate from PortaBilling100's built-in ACLs.
- By convention, when defining a new user ACL (for example, "DemoUser"), we append "access" to the name of a component ("DemoUser access") to include any dependant components.

You should now have the skills necessary to implement the PortaBilling100 security model and customize it to suit your business environment.

# **Default User ACLs**

PortaBilling is supplied with the following predefined ACLs:

Name	Description			
Root	Super User, read and write access to all PortaBilling			
	objects			
Admin	Like Root user, but with some limitations:			
	- cannot create new users			
	- cannot modify company info			
	- read-only access to Destinations, Currencies, Nodes			
Bookkeeper	Read-only access to billing information (Tariffs,			
	Products); can change balances for			
	Accounts/Customers, block/unblock.; no access to			
	xDRs; access to reports.			
Helpdesk	Read-only access to billing information (Tariffs,			
	Products); can modify Customer and Account			
	parameters; access to Trace Call.			

# **Default Customer ACLs**

PortaBilling is supplied with the following predefined ACLs for customers (or sub-customers):

Name	Description
Retail	Access to xDRs, ability to change customer
	information, make online payments and access
	information about all accounts under this customer.

# **Default Reseller ACLs**

PortaBilling is supplied with the following predefined ACLs for resellers:

Name	Description	
Reseller	Ability to set up online payment processors, change	
	rates in the subscriber's tariff, modify parameters of	
	the subscriber's product, create sub-customers and	
	accounts under them, make online payments, and	
	create CC staff accounts.	
Advanced	Same as above, plus read-only access to customer's	
Reseller	own tariff (the tariff used by the PortaBilling owner to	
	charge the reseller).	

# **Default Customer Care ACLs**

PortaBilling is supplied with the following predefined ACLs for customer care administrators:

Name	Description
Customer Care	Ability to see customer/account information and
	change service parameters, give refunds (daily and
	transaction limits applied), and trace a call and see the
	call details.

# **Default Vendor ACLs**

PortaBilling is supplied with the following predefined ACLs for vendors:

Name	Description
Vendor	Access to CDR data and the vendor's information.

# **Default Representative ACLs**

PortaBilling is supplied with the following predefined ACLs for representatives:

Name	Description
Representative	Read-only access to customer information, customer's
	XDR records, and account information.

# **User Management**

The User Management screen shows existing users registered in the system, and also allows you to edit current user information or add and

delete users. To add a new user, select the Add button from the User Management screen. The user list table contains the following information and operations:

۵	<b>V</b> 🗈	5 i		User Management       O America/Vancouver			demo-root	🛛 Help
•	🛃 Add	🛞 Close	2				り Logout	📒 Log
		Login	Access Level	E-mail	Description	Status	Delete	
		demo-root	Screenshots	kzhilenko@portaone.com	User for screenshots taking		×	
		<u>helpdesk</u>	Helpdesk	helpdesk@portaone.com	Helpdesk staff		×	
		<u>keeper</u>	Bookkeeper	keeper@portaone.com			×	
		<u>kzhilenko</u>	Root	konstantin.zhilenko@portaone.com	Konstantin Zhilenko		×	
		<u>pb-root</u>	Root	monitor@portaone.com	ROOT - created on installation please change the	e password	×	

Column	Description			
Login	The username for login and user identification. The			
	username provides a link to the edit screen for that			
	particular user.			
Access Level	The privilege level or role assigned to the user. See the			
	Access Levels section for more information.			
E-mail	An e-mail contact for the user. For convenience, this			
	is provided as a link, so you can send an e-mail to the			
	user directly from this screen.			
Description	A short description associated with the user.			
Delete	A delete button appears next to all users except for			
	the Root user created on installation. This			
	permanently deletes the user from the system.			

# Add/Edit User

The Add User screen allows you to enter details to create a new user account. The Edit User screen allows you to change details for a particular user account.

#### **Address Info**

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•	🗟 Save 🗟 Save	& Close 🛞 Close	📲 Objects				💵 Logout	目 Log
	Address In	fo User Interface	Life Cycle M	ailing List	Notepa	ad		
	Company Name	PortaOne		Co	ntact	DeeJason		
	Mr./Ms./	Mr.	]	Ph	one			
	First Name	Dee	M.I.	Fa	x			
	Last Name	Jason	]	Alt.	Phone			
	Address	123 Hard Drive	<u> </u>	Alt.	Contact			
				E-r	mail	demoroot@portaone.com	×	
				_				
	Province/State	cz		De	scription	Doc and Demo root		
	Postal Code	128 00						
	City	Prague						
	Country/Region	Slovenia						

Mandatory fields for user contact information:

Field	Description	
Description	A short description of the user that will be visible on	
	the main User Management screen.	
E-Mail	An e-mail contact for this user.	

#### **User Interface**

ຝ	$\checkmark$	0	\$		Edi	t User 'o	lemoroot'		America/Vancouver	demoroot	? Help
۲		Save	🔙 Sa	we & Close	🛞 Close	📲 Objec	ts			💵 Logout	📒 Log
			Address	s Info User	<sup>•</sup> Interface	Life Cycle	Mailing List	Notepad			
	L0gin demoroot				×		Time Zone		America/Vancouver	~	
	Password ***			*****	* [	Auto	Web Interface	Language	en - English	~	
		Access Level Root				*					
		Output Format								-	
		Date YYYY-MM-DD				2003-12-3	1				
		Time HH24			:SS		User Defi	ned	~		
		Date & Time YYYY-MM-DD		I-DD HH24:1	MI:SS	User Defi	ned	*			
		Input Format									
		Date		YYYY-MM	I-DD		2003-12-3	1	*		
		Time		HH24:MI	:SS		User Defi	ned	*		

Field	Description
Login	The new user ID to be used at login and elsewhere
	throughout the system.
Password	The password for this login. A secure and easy-to-
	remember password may be automatically generated
	by pressing the "Auto" button.
Access Level	The privileges or role associated with this user. See the
	Access Levels section for more information.
Time Zone	The time zone in which this user will be operating.
Web Interface	The language to be used on the admin web interface
Language	for this user.

For a description of the input and output formats, please refer to the **Common Features** section.

#### Life Cycle

This allows the administrator to set up the user account's activation and expiration dates.

		\$ 1	3			Edit	t User 'd	lemoroot'			📕 Cale	nda	r - M	lozill	a				2	Help
•	🖬 Save	🖃 Save &	Close	🛞 Close	1					_	€2	004	€	] [	E	ugu	st	• >		Log
			Address	Info L	ser In	nterface	Life Cycle	Mailing List	Notepad									_		
		<b>1</b>	tination (	Doto lao								Мо	Tu	We	Th	Fr	Sa	Su		
	Activation Date 2004-02-20 YYYY-MM-DD								2	26	26 27 28 29 3	30	31 <u>1</u>	1						
		<b>10</b> E	opiration	Date		YYYY	-MM-DD					2	<u>3</u>	4	<u>5</u>	<u>6</u>	Z	8		
												<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	13	<u>14</u>	<u>15</u>		
												<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	20	<u>21</u>	22		
												<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	27	<u>28</u>	<u>29</u>		

The account will not expire if the Expiration Date field is left blank.

#### **Mailing List**

PortaBilling dispatches e-mail alerts (e.g. error messages and notifications) during normal production. E-mails are dispatched to each user according to the Mailing List settings.

₿	Image: Second	s i 🖂			Edit Use	'demo-r	oot'		④ Europe/Andorra	demo-root	2	Help
•	🖬 Save	📄 Save & Clo	se 🛞 Close	街 Objects						M Logout		Log
		_										
			Address Info	User Interface	Life Cycle	Mailing List	Notepad					
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			Adaptive ro	uting penalty thr	eshold reache	d						
			Adaptive ro	uting warning th	reshold reache	ed						
			CC Staff Er	rror Reports								
			Error in tra	nslation rule								
	Fraud detection (Ack / Rej / Err)											
	General billing misconfigurations											
	Merchant account error											
				in the Destinatio								
	Missing critical billing inform					it / Tariff)						
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	No remote IP authentication				n on your gatev	vay						
				to destination								
	Not defined or empty Called-Station-Id											
	Payment error											
	Profit monitor event detected											
	Replication problems											
	Task rejected					->						
	Time problems (NTP / Forn				nat/suspiciou	S)						
			] User Error	кероп								

To add different notifications for a specific user, check/uncheck one or more boxes on the left for the corresponding Subjects. The available alert types and their conditions of activation are as follows:

Alert Type	Description
Adaptive routing	The adaptive routing module detects that
penalty threshold	some quality parameters of the connection are
reached	below the specified acceptable level. The
	vendor is penalized, and this connection is
	temporarily moved to the bottom of the
	routing list.
Adaptive routing	The adaptive routing module detects that
warning threshold	some quality parameters of the connection are
reached	below the specified level.
CC Staff Error Reports	Customer care (your reseller's customer
	support) may discover a problem they are

	unable to solve themselves, and thus may need to escalate this problem to your support staff. When they send an error report from the CC web interface, it will be received by users
	subscribed to this mailing list.
Error in translation rule	A translation rule could not be properly applied, due to a programming error.
Fraud detection (Ack / Rej / Err)	Attempt to login more than once using the same debit account number.
General billing misconfiguration	A debit account made a call that cost more than its available funds; an unresolved call was detected (unresolved calls may be normal when they are on-net calls, but in most cases they indicate connection misconfiguration); and so on.
Merchant account error	An error was received from the online payment processor while trying to execute a transaction.
Mismatch in Destinations or Rates table	The cost of a call could not be determined, because no matching rate was found in the specific tariff.
Missing critical billing information (Account/ Tariff)	A call could not be billed due to missing information (e.g. unable to identify the account which is to be charged for the call).
No currency exchange rate found	Unable to do cost/revenue reconciliation for some calls, since no exchange rate is defined for the base currency and currency used for those calls.
No remote IP authentication on your gateway	It seems that your gateway accepts all incoming VoIP calls. See the " <i>Remote IP</i> <i>authentication</i> " section in Portabilling100 User Guide vol. I for more details.
No routes to destination	Customer attempted to place a call to a destination, which is covered by his tariff plan – but there are no valid routes for it in the system.
Not defined or empty Called-Station-ID	The Called-Station-ID (DNIS) field is empty in the request, so PortaBilling is unable to determine which number was dialed. This might happen due to a firmware problem on Quintum.
Payment error	Unable to perform periodic payment (credit card is blocked or no funds are available).
Profit monitor event detected	Sends an alert if the call cost (amount charged by a vendor) is greater than the revenue (amount charged to the customer).
Replication problems	Database replication may be performing

	poorly or not at all, so that CDRs for the most
	recent calls are absent from the slave database.
Task rejected	A deferred task (such as account generation)
	could not be run.
Time problems (NTP /	This alert may be generated if the time in the
Format / Suspicious)	accounting record is in the wrong format or
	seems suspicious (such as a point in the future,
	or one too far in the past).
User error report	Your customer support may discover a
	problem they are unable to solve themselves
	(e.g. only the network administrator can do it)
	and thus may need to escalate this problem to
	your technical staff. When they send an error
	report from the web interface, it will be
	received by the admin users subscribed to this
	mailing list.

## **Superusers**

"Ordinary" administrator-level users can be promoted to "superuser" status – this is done by adding their numeric IDs (i\_user) to the Superusers configuration variable in the Global section of portaadmin.conf. Superuser status permits certain operations that ordinary users do not have access to. One of the most important abilities of a superuser is switching between virtual environments. This is why superuser status cannot be configured via the web interface: by giving a virtual environment to someone, you allow him full control of that environment. However, he should not be able to re-configure his account to "jump" into another environment.

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Login into other env	1		
Admin			
Customers CC Staff		\$	Currencies Exchange Rates Tariffs
Accounts			Volume Discount Plans
Vendors	ves		Subscription Plans Products
Representatives			Vendors
Destination	n Group Sets		Connections
	·		Customer Classes
			Customers
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			192.168.0.241	Mikrotik/ROUTER	Moom-Mikrotik					
			192.168.0.88	Mikrotik/ROUTER	MikroTik					
						193.28.87.120	PortaOne/PortaBridge	ConfServer		
			193.28.87.35	PortaOne/Generic	PortaCallback					
			193.28.87.36	PortaOne/PortaSIP	PortaSIP					
			193.28.87.37	PortaOne/PortaUM	PortaUM					
			193.28.87.41	PortaOne/PortaSIP	PortaSIP - 193.28.87.41					
			207.52.37.45	Cisco/VOIP-GW	demo					
	9	natasha		No no	des found	natasha-root				
Þ	17	taurus	2.2.2.2	PortaOne/PortaSIP	taurus@portaone.com	taurus-root				
	46	performance	10.100.200.102	PortaOne/PortaSIP	BE_Node_003	performance-root				
			10.100.200.103	PortaOne/PortaSIP	BE_Node_004					
			10.100.200.104	PortaOne/PortaSIP	BE_Node_005					
			10.100.200.119	PortaOne/PortaSIP	BE_Node_002					
			10.100.200.122	PortaOne/PortaSIP	BE_Node_001					

# **Mailing List**

The Mailing List Management page allows you to define which e-mail alerts are to be sent to different users (see **Mailing List Subscription**).

🙆 🗹 🗃 😫 🖬 🗹	Mailing I	ist Management	demo-root		
S Close				💵 Logout	目 Log
	User	Subject			
	All users 💌	All types	*		
	User	Subject			
	demo-root	NONE			
	helpdesk	NONE			
	keeper	General billing misconfigurations			
	<u>kzhilenko</u>	Merchant account error			
		Mismatch in the Destinations or Rates table			
	pb-root	Replication problems			

Select a user from the **User** drop-down list to view which mailing lists a particular user is subscribed to. Select a mailing list from the **Subject** drop-down list to view all users subscribed to a particular mailing list.

# Representatives

You may need to track income associated with people with whom you have a business relationship. These people may sometimes be employees, while in other cases they are dealers, partners at a law firm, or independent contractors.

**NOTE:** Representatives do not participate in billing or revenue sharing. They are listed for information purposes only, as required when PortaBilling is integrated into back-office CRM for calculating commissions and the like.

Each sales representative is assigned initials. Their names and initials appear on sales forms, allowing you to associate specific sales reps with specific sales in order to track their income.

#### PORTA Billing 100°

☆ ⊻ № \$ :	Add Representative	C America/Vancouver demo-root I Hel
🕨 🖬 Save 📓 Save &	k Close 🛞 Close	▶町 Logout
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	Managed By         Search           JANY         Search           Initials         Hame         E-mail         Managed By         Status         Deleter           MK <u>Mrkola Kachan</u> BestDeal Reseller         X           PS <u>Peter Smith</u> Administrator only         X	

**NOTE:** Once a new representative is created, the **Currency** and **Managed By** properties cannot be changed.

# **Templates**

The purpose of templates is to maintain all data uploaded to and downloaded from the system. Templates automate the processing of user input and create customized output in various data and media formats.



Read more about using the templates functionality in the PortaBilling Template Guide, available for download from: www.portaone.com/support/documentation/

## Add a New Template

To add a new template, select the 🖸 Add button.

ຝ		\$ 🖬 🖂		Add	Template	demo-toor	? Help
•	🖬 Save	🗟 Save & Close	🛞 Close			💵 Logout	
				Name Type Media As Copy Of	Generic tariff upload		

Field	Description
Name	The logical name of the template object

Туре	One of the following:							
	- Invoice							
	- Tariff Upload							
	- Tariff Download							
Media	One of the following media types:							
	CSV – Comma Separated Values							
	XLS – Excel							
	Print format (HTML, PDF) – only applicable for							
	templates of the <b>Invoice</b> type							
As copy of	PortaBilling is supplied with a set of default templates for							
	each type of document, i.e. for both information upload							
	and download. Documents in print format, i.e. invoices,							
	can only be "downloaded" from the system.							
	After selecting <b>Type</b> and <b>Media</b> , the list will be							
	populated with the default template (always at the top of							
	the list); all existing templates with the current Type and							
	Media formats will be listed under the "" separator.							
Managed	By default – administrator only. The template can be							
By (only for	assigned to a reseller so that it is visible in the list of							
Туре	available invoices on the Customer Self-Provisioning web							
Invoice)	interface.							

To enter editing mode for this template, save your input using the **Save&Close** button. Next, select the template you would like to edit from the Templates window.

# **Edit Template**

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🕨 🗟 Save 🗟 Save &	Close 🛞 Close	街 Objects				📲 Logout	目 Log
Anne Defau CSV Type Tariff U	lt CSV Jpload		Media Timezone	CSV Auto		v	
Media Header Fie	lds Columns						
CSV Delimiter	, (comma)	<b>~</b>					
CSV Text qualifier	" (double quote	es) 💙					
No Header Header Data Start At Row	2						
No Fields	<b>~</b>						
Fields Data Start At Row	5						
Columns Data Start At Row	2						

Once a new template is saved, the document's Media, Type and Managed By properties cannot be changed.

Each Template object consists of several logical components. For example, the Invoice Template's components are Media, Header, Fields, and Footer.

The Media tab is present for all types of templates, and shows the media available for upload or download. For Tariff upload in CSV format, it is important to know what delimiter was used, whether there is a header, or in what row the tariff information starts. For Invoices, the Media tab contains a link to the PortaBilling Layout Designer, which allows you to customize the appearance of your invoices and receipts.

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	Excel	Name	Default X	LS		•	Media Timezone	Excel		~		T Logout		Log
	Medi	ia Header	Fields	Colum	ıs								_	
	Desci	ription	Source Colum			Forma	t		Other Format Rule		Post Processing Ru	le		
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	Off-Peak D	escription	B (2)	▼ Te:	t			~						
	Destination	n Group Set	C (3)	✓ Te:	t			~				_		
	Free Secor	nds	D (4)	▼ sec				~						
	Post Call S	Surcharge	E (5)	▼ 12:	4.12345			~				_		
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	Formula			123	4.10									
				1,2	34.10 4 4.12345									

The content of the Header, Fields, Columns, and Footer tabs is arranged in a similar way, and allows flexible mapping of information related to user documents and information in the PortaBilling Database.

Column	Description
Description	Description of template components.
Source Column	Defines the mapping of template information
	to the original/destination document.
Format	Data format. Choose a format from the list,
	or choose Other if the desired format is not
	available. Provide a format definition in the
	following field.
Other Format Rule	Perl code. Active only if Format = "Other:".
Post Processing Rule	Perl code.

## Layout Designer

The Layout Designer allows you to customize the appearance of all types of printed output in PortaBilling.

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🕨 🖉 Preview 🖬 Save 📓	Save & Close 🛞 Close				M	Logout	1
	age 1 of 5	, , ,  3 ,		15 , , , , , , , , , , , , , , , , , , ,	1	·	8
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	L	L	Terms	H Insert Row			
v	Previous Balance		Due Date	insert Col			
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5	Payments		24.08 USD	Bend Back		1	
	Charges this period		90.18 USD	Bring To Front		_	
-	Total due		85.49 USD	Clone × Delete			

#### Layout Designer (LD) Quick Start

To launch, click the **Layout Designer** button on the Media tab in the Template Management window. The sliding toolbar on the left side provides most of the controls for manipulating content in the editor window. There are three different states for most of the toolbar icons: normal, active, and not available.

Icon state	Description		
	Normal - Click to activate		
	Active - Click to deactivate		
	Not available		

Icon	Description
*	Add Picture: Click to select a picture (e.g. your company logo) from a file select window. Click the <b>Open</b> button to place the picture on the worksheet. To remove the picture, right-click on it and choose <b>Remove.</b> Another way of deleting a picture is to press <b>Delete</b> on your keyboard.
F	Lock Aspect: Fixes image proportions during scale operations.
Ø	<b>Preview:</b> Click to preview your work in a browser window.
	<b>Add Table:</b> Click to place a table on the worksheet. A table can be removed by using the context (right-click) menu or by

	pressing <b>Delete</b> on your keyboard. Click the table cell to make it active. To add another table, click on the worksheet to deactivate the gurrantly entire chiest. Read more shout tables below.
F	the currently active object. Read more about tables below. <b>Text Align:</b> A section of nine buttons used to align text in an active table cell.
Þ	Word Wrap
тТ	<b>Text controls:</b> The tools and selects from this section control font attributes such as font style (bold, italic, underline), font family (serif, sans-serif, cursive, fantasy, monospace), and font size.
T	<b>Foreground Color:</b> Change the text color by selecting from this list.
Τ	<b>Background Color:</b> Change the color of the active table cell by selecting from this list.
	<b>Border:</b> A section of six buttons for showing or hiding the border of the active table cell.
=	<b>Stroke:</b> A section of three controls for changing the active cell's border weight, style and color.
	Grid: On by default; click to turn off the grid.
	<b>Snap to Grid:</b> On by default; click to allow arbitrary positioning of elements on the worksheet.
	<b>Envelope Window:</b> Two half-transparent gray boxes displaying the positions of envelope windows; click to turn off.
5	Undo: Click to cancel the last action.
	<b>Save and Close:</b> For convenience in editing the bottom of the worksheet, these controls duplicate the main toolbar controls.



A straight line in the Layout Designer can be simulated by using a table with only one visible border.

## Table

The main Layout Designer object is the table, which is a placeholder for all inserted information. A table or a table cell within a table can be moved and scaled by dragging the cell handlers. Double-click a table or a cell within a table to enter cell editing mode, where you can type in or edit a cell's text. To change the attributes of a cell's text, make sure the cell is selected (8 black square handlers are visible) and set the text attributes in the toolbar on the left.



Changing the text attributes of a cell in the toolbar will affect all text in the current cell. To change the attributes of part of the text, enter cell editing mode (double-click), select that part of the text, and use the keyboard shortcuts listed below.

#### Context Menu

Header 🕨 🕨
Fields 🕨 🕨
Footer 🕨 🕨
増 Insert Row
🏙 Insert Col
🛎 Remove Row
🕅 Remove Col
🔁 Send Back
🔁 Bring To Front
🗅 Clone
× Delete

The context (right-click) menu provides you with greater control over tables and other objects, and allows certain data located in the PortaBilling database to be displayed in the table cell. To show the menu, right-click on a table or cell. The three top elements of the context menu correspond to the template components (tabs); in the case of an invoice, for example, these would be Header, Fields and Footer. Users can also set the order of all objects in the window and clone or delete selected objects.

Select one of the menu elements to activate a submenu containing a list of all the fields specified in the template editing window. The selected item will appear in the selected cell as the item's value. Double-click the cell to enter editing mode; the cell now displays the corresponding variable.

#### **Page/Print Setup**

The page context menu (right-click on the worksheet) provides access to the Web-Page Dialog for page, envelope and print setup.

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Paper size:	Letter	~		
Envelope:	\$9-9903	2 wnd 💌		
Margins-				
Left:	0.25in	Right	0.25in	
Top:	0.25in	Bottom:	0.25in	
Header:	0.25in	Footer:	0.25in	
		ОК	Cancel	



Open your browser prior to printing. In your browser's **File** menu, select **Page Setup**. In the dialog window, set up the paper size (A4 or Letter), delete all Header and Footer symbols, and set all margins to zero or a value close to zero.

#### **Envelope Formats: America**

Envelope	Envelope Measurements	Window size	Window From Left	Window From Bottom
#6-3/4	3-5/8" x 6-1/2"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#7	3-3/4" x 6-3/4"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#7-3/4	3-7/8" x 7-1/2"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#8-5/8	3-5/8" x 8-5/8"	1" X 4"	1"	3 / 4"
#9	3-7/8" x 8-7/8"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#10	4-1/8" x 9-1/2"	1-1/8" X 4-1/2"	7/8"	1 / 2"

#11	4-1/2" x 10-3/8"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#12	4-3/4" x 11"	1-1/8" X 4-1/2"	7/8"	1 / 2"
#14	5" x 11-1/2"	1-1/8" X 4-1/2"	7/8"	1 / 2"

#### Double-window envelopes

Envelope	Window Size	Location	Placement				
	TOP WINDOW						
#9-9903	3 7/8" x 8 7/8"	From Left	3/8"				
	57/0 x 07/0	From Top	1/2"				
	BOTTOM WINDOW						
3 5/8" x 8 5/8"	1" x 4"	From Left	7/8"				
	1 * 4	From Bottom	5/8"				
	TOP WINDOW						
# 8-5/8	7/8" x 3-1/2"	From Left	5/8"				
	1/0 × 5-1/2	From Bottom	2 1/4"				
	BOTTOM WINDOW						
3 5/8" x 8 5/8"	1" x 4"	From Left	5/8"				
	1 ~ 4	From Bottom	5/8"				
	TOP WINDOW						
#9-13036	7/8" x 3-1/4"	From Left	3/8"				
	1/0 × 0 1/4	From Bottom	2-1/2"				
	BOTTOM WINDOW						
3 7/8 x 8 7/8"	1-1/8" x 4-1/2"	From Left	1/2"				
	1 1/0 X 4 1/2	From Bottom	7/16"				
	TOP WINDOW						
#9-13037	7/8" x 3-1/4"	From Left	3/8"				
		From Bottom	2-1/2"				
	BOTTOM WINDOW	BOTTOM WINDOW					
3 7/8 x 8 7/8"	1" x 4"	From Left	1/2"				
		From Bottom	3/4"				
	TOP WINDOW	1	1				
#9-13038	7/8" x 3-1/2"	From Left	3/8"				
		From Bottom	2-3/8"				
	BOTTOM WINDOW						
3 7/8 x 8 7/8"	1-1/8" x 4"	From Left	3/8"				
		From Bottom	5/8"				

**NOTE**: Envelope #9-9903 (3 7/8" x 8 7/8") is QuickBooks compatible.

#### **Envelope Formats: Europe**

Format	Size [mm]	Content Format		
C6	$114 \times 162$	A4 folded twice = $A6$		
DL	$110 \times 220$	A4 folded twice = $1/3$ A4		
$\begin{array}{ c c c c c c c c } \hline C6/C5 & 114 \times 229 & A4 \text{ folded t} \\ \hline \end{array}$		A4 folded twice = $1/3$ A4		
C5	$162 \times 229$	A4 folded once $=$ A5		
C4	$229 \times 324$	A4		

DIN 680 specifies that a transparent address window should be  $90 \times 45$  mm in size, and the window's left edge should be located 20 mm from the left edge of the envelope. For C6, DL, and C6/C5 envelopes, the bottom edge of the window should be 15 mm from the bottom edge of the envelope. For C4 envelopes, the top edge of the window should be either 27 or 45 mm from the top edge of the envelope.

#### **Keyboard Shortcuts**



Shortcut	Action
Arrow keys	Move objects with grid size increments.
Ctrl - arrow	Use to scale table cells or images with current grid size
key	increments.
	cell editing mode
Ctrl-A	Selects all objects in the Template window if nothing is selected, or selects all text in an active table cell.
Ctrl-C	Copy selected text.
Ctrl-V	Paste clipboard text starting from the current cursor position.
Ctrl-X	Cut highlighted text.
Ctrl-I	Change selected text style to Italic.
Ctrl-B	Change selected text style to <b>Bold</b> .
Ctrl-U	Change selected text style to <u>Underline</u> .
Ctrl-K	Hyperlink selected text (opens hyperlink editing dialog).

60

Netscape or Mozilla users may experience the lack of a movable cursor allowing them to select text from the keyboard in cell editing mode. Press the **F7** button to turn the edit cursor (caret browsing) on and off.

Users with a small screen resolution may enjoy the benefits of their browser's full-screen mode. Simply press the **F11** button to switch your Mozilla, Netscape or IE into full-screen mode.

# Services

Services in PortaBilling define the naming and billing parameters of the physical services you offer to customers. Each service is associated with a particular service type (which defines what the customer is actually doing – making a phone call, sending a message, using WiFi, etc.). Services allows you to specify which parameters are used to calculate charges and, finally, what the rates for each service are.

For your convenience, PortaBilling now provides a set of pre-defined services with all the required parameters. You can easily change an

existing service name to make it more descriptive for your administrators and customers; or you can define new services.

## **Add/Edit Services Online**

Click the Add button to add a new service. Services you create can be edited later by clicking the Edit icon. Standard PortaBilling services cannot be changed, and are shown in gray. Press the Save button to save your work when done.

	<b>~</b>	) 🗄 💲 🖬 🖂		Services					
	÷	Add 🖬 Save 🔚	Save & Close 🛛 🛞 C	lose < Objects			💐 Logo	Jt 目	Lo
ļ	Edit	Name *	Service Type *	Rating Base *	Base Unit *	Billing Unit *	Billing:Base Ratio	Delete	
		Business IP Centrex	Voice Calls 💌	session-time	second	minute	60	×	
		Conferencing	Conferencing	session-time	second	minute	60		
		Data Service [KB]	Data Service	quantity	byte	kilobyte	1024		
		Data Service [MB]	Data Service	quantity	byte	megabyte	1048576		
		Dial-up	Dial-up Internet	session-time	second	minute	60		
		Messaging Service	Messaging Service	quantity	message	message	1		
		Quantity Based	Quantity Based	quantity	pcs.	pcs.	1		
		Voice Calls	Voice Calls	session-time	second	minute	60		
		Wi-Fi	Wi-Fi	session-time	second	minute	60		

Column	Description
Name	Service type name (currently this is the only column
	which can be changed by the user).
Service Type	Choose the service type (physical service) supplied to
	the customer. See below for a description of the
	available service types.
Rating Base	Specification of which particular parameter is used to
	calculate charges, e.g. "session time", "amount of
	data transferred" and the like.
Base Unit	Abbreviation for units in which service use is
	measured (your network nodes will report values to
	billing in these units).
Billing Unit	Abbreviation for units used to calculate service
	charges. You will use these units to specify your rates,
	and usage details in xDRs will be shown in these
	units.
Billing:Base	If billing units are different from base units, this
Ratio	parameter defines how many base units make up one
	billing unit (for instance, 1024 bytes makes 1
	kilobyte). This parameter is extremely important, as it
	affects calculations in all xDRs for this service.
	If you decide to deploy a new service with a different
	ratio between units (e.g. 1 kilobyte equaling 1000
	bytes), a new service type must be created before you
	attempt to do any further configuration.

## **Supported Service Types**

Once installed, PortaBilling supports the service types shown in the table below. The Rating Base column refers to the applicable rating base options. S ("session-based") means that the service type is charged based on the duration of its use, while Q ("quantity-based") means that some other numerical parameter supplied by the network node is used, e.g. the amount of data transferred.

Name	Rating Base	Description
Conferencing	S	Rating conference calls via PortaBridge (or some other conferencing server).
Data Service	Q	Data transfers rated using the amount transferred as the billing parameter.
Dialup Internet	S	Dialup Internet access sessions, rated based on session duration.
Internet Access	S	Internet access sessions (DSL, PPPoE, etc.), rated based on session duration.
Messaging Service	Q	Rating messages (text, SMS, MMS, other) based on the number of messages sent.
Quantity- Based	Q	Generic quantity-based service type; can be used to apply charges for any service use expressible in numerical form (e.g. the number of pizzas ordered).
Session-Based	S	Generic time-based service type; it can be used to apply charges for any service use based on the length of time the service was accessed.
Voice Calls	S	Rating telephony calls (incoming or outgoing) made via PortaSIP, VoIP gateways or other equipment.
Wi-Fi	S	Wireless Internet access sessions, rated based on session duration.

# Destinations

Destinations are a list of all possible phone number prefixes to be used in your system, which will later be used in creating price lists (Tariffs). For convenience, destinations are grouped in alphabetical order by country.

In the case of a non-telephony service (e.g. video-on-demand), destinations define various service categories (e.g. VIDEO-NEWRELEASE and VIDEO-FOREIGN), and so a different rating may be defined. For some services (e.g. WiFi access) you would only need one destination for the whole service, since there is no further differentiation. Destinations may be edited and, if a destination is not being used in any tariff, it will also have a Delete button. Of course, it is not necessary to include every destination in a given price list; only enter the prefixes (destinations) used by this particular vendor or customer.

PortaBilling can support different numbering plans, but it is highly recommended to keep all of your destinations in the E.164 numbering space. The Destinations table contains the valid E.164 prefixes. Different standardization and governmental bodies control the E.164 numbering space, and some private numbering spaces also exist.

#### Click here to view the Official ITU Dialing Procedures document (PDF)

PortaBilling is supplied with a file containing a basic set of destinations. It covers all countries of the world and some of the major destinations in each country, linking prefix information to:

- o country (if applicable)
- o subdivision (if applicable)
- o description

Of course, you can edit the supplied destinations list according to your needs. Also, you can always add more destinations later, if needed.

## **Add/Edit Destinations Online**

To add new destinations, click the **Add** button. The **Save New**. icon will appear on the Destinations form. Enter the prefix and choose a country from the drop-down list. After selecting the country, the subdivision field will be refreshed. Choose a subdivision if necessary. Click the **Save New** icon to save the new destination.

۵		<u>.</u>	•				Destination	s							
	• A	dd	Save	8	Close	Download	🔳 Get defa	ult set		Upload			🕅 Logou	t 🔳	Log
	• 4	40			Prefix	Country	Description	► A	BC	DEFO	ніјкі	MNOPQF	1. S T U V W	ХҮХ	
	Edit		Prefix *			Count	Ŋ			Subdivi	sion	Des	cription	Delete	
					Not	Applicable	*	Not 1	Appl	icable		×		]	
		440			UNITE	ED KINGDOM						Mobile		×	
		4401			UNITE	ED KINGDOM								×	
		4402			UNITE	ED KINGDOM								×	
		4403			UNITE	ED KINGDOM						Mobile		×	
		4404			UNITE	ED KINGDOM						Mobile		×	
		4405			UNITE	ED KINGDOM						Mobile		×	
		4406			UNITE							Mobile		×	
		4407			UNITE	ED KINGDOM						Mobile		×	
		4408			UNITE	ED KINGDOM						Mobile		×	
		4409			UNITE	ED KINGDOM						Mobile		×	
		4409			UNITE	ED KINGDOM						Mobile		×	

To edit an existing destination, enter a prefix, country or description (i.e. proper, mobile, etc.) in the search field and click the corresponding

button. You can also select a country alphabetically from the top righthand part of the interface. Choose the destination you wish to edit from the list by clicking the **Edit** icon. The content of the row will be copied into the Destinations form above, and the **Save Edit** icon **E** will copied into the first column. Choose Subdivision from the refreshed drop

appear in the first column. Choose Subdivision from the refreshed dropdown list and type in the Description, if any. Save your work by clicking the **Save Edit** icon.

#### **Destination Access Levels**

User Type	Access Description
Root, or if ACL	Full access
includes Use	
country code	
during upload	
ACL which allows	Can perform all types of operations with
read/write	destinations <i>except</i> for manually specifying a
operations on	country during upload. If Admin uploads a new
Destinations, e.g.	destination, the system chooses the appropriate
Admin	country automatically, using the longest match
	from the available destinations.
all other types	Read-only

## **Destination Upload/Download Procedures**

#### Upload

The CSV file header contains the following fields: Action, Prefix, iso\_3166\_1\_a2, Description.

Field	Description
Action	Add or delete; encoded as "+" and "-" or "add" and
	"remove".
	Note: Only unused destinations that do not appear
	in the Rates table can be deleted. If the action is "+"
	and the prefix is already in Destinations, then the
	update action will be performed.
Prefix	Value to be stored in Destinations.
Two-letter ISO	Value to be stored in Destinations.iso_3166_1_a2.
Country Code	Note: Ignored if the uploader is not Root or does not
	have "Use country code during upload" in his ACL;
	in this case, the system chooses the appropriate
	country automatically, using the longest match from
	the available destinations. If the Country property is
	not applicable, then the value must be encoded as
	N/A. If the field is empty and the uploader's access

	level is Root, then the system chooses the
	appropriate country automatically, using the longest
	match from the available destinations.
Description	Value to be stored in Destinations.

#### **Download**

The CSV file header contains the following fields: Action, Prefix, Country Code (iso\_3166\_1\_a2), Description.

Field	Description
Action	Add or delete, encoded as "+".
Prefix	Missing prefix
All other fields	Empty

**NOTE:** For tariff uploads, new destinations will be e-mailed as a CVS attachment in an error report using the Destinations Upload format: Action, Prefix, Country Code (iso\_3166\_1\_a2), Description.

#### **Uploading Destinations**

The system is supplied with a predefined set of countries and the most common destinations for those countries. If required, new countries may be inserted into the database manually. When uploading new destinations, a super user can specify the country using its ISO country code. If empty, the system tries to find a country via existing destinations.

For example, if "16045" is uploaded, the system finds that "1604" is already in the database as "Canada". If it is not possible to find the country in this way, or if the country is "N/A", the destination will not be imported. An uploaded file with such a destination will be sent back for correction in a format suitable for upload.

#### ISO 3166-1 Country Codes

For more information on this standard, visit the **ISO 3166 Maintenance** Agency website.

The complete title of ISO 3166-1 is "Codes for the representation of names of countries and their subdivisions".

#### **Country Codes**

- ISO 3166-1 gives coded representations of more than 230 names of countries or areas dependent on a country.
- ISO 3166-1 contains a two-letter code (Alpha-2-code), a three-letter code (Alpha-3-code) and a three-digit numeric code, (Numeric-3-code) for every entry in its list of country names.

#### ISO 3166-1 does not code:

- o Names of languages (e.g. Gaelic)
- Names of nations or peoples (e.g. Dutch)
- Names of groups of countries (e.g. Scandinavia)
- o Names of continents (e.g. Asia)
- o Names of organizations (e.g. OAS, NAFTA, WHO)
- o Top-level Internet domains

#### **Applications**

ISO 3166-1 codes are used in many applications in all branches of industry, trade and statistics worldwide. One example of their use are the "code elements from ISO 4217" codes for currencies and funds, which are based on the ISO 3166-1 Alpha-2-Code (e.g. USD for US Dollars, where US comes from ISO 3166-1).

#### ISO 3166-2 Country Subdivision Codes

ISO 3166-2 "Country Subdivision Codes" establishes a code for the names of principal administrative subdivisions within countries coded in ISO 3166-1. ISO 3166-2 was published on December 15, 1998. The code elements used consist of the Alpha-2 code element from ISO 3166-1 followed by a separator and a further string of up to three alphanumeric characters.

The names of the subdivisions are given in more than one language if the country has more than one official language (and if the alternative language versions were available to ISO). In Uzbekistan, for example, there are two official languages, Uzbek (uz) and Russian (ru), so the subdivision names are also listed in these two languages. The Romanization systems used to convert the country subdivision list from non-Roman to Roman script (e.g. from Cyrillic, in the case of Uzbekistan) are also given. The abbreviations and language codes (ISO 639) used in the header preceding the subdivision list for each country are explained in annexes to the standard.

## **Destination Group Sets**

Very often a logical destination (e.g. Czech Republic – Mobile) will consist of multiple prefixes (420601, 420602, 420604, 420732 and so on). It would be quite inconvenient to repeat the same "create a new rate" operation for every individual prefix, since all of the price parameters are the same. Thus you could create a destination group "CZ-Mobile" and then perform "create a new rate" only once, with the rates for all of the prefixes being created automatically. However, since different carriers might include different prefixes in the "Czech Republic – Mobile" category, we need to be able to maintain different sets of destination groups.

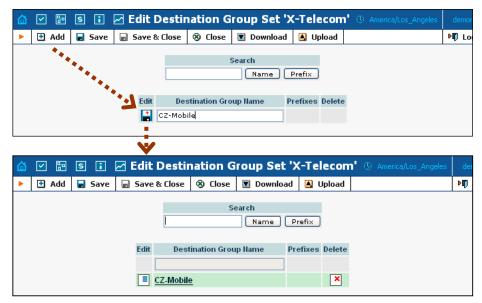
#### **Creating a New Destination Group Set**

To add a new destination group set, click the 🖆 Add button. The Save New 📑 icon will appear next to the name.

奋	<b>&gt;</b>	\$	i		Des	tination Group Sets	() America/Los_A	ngeles demoroot	? Help
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合		\$	ī		Des	tination Group Sets	③ America/Los_A	ngeles demoroot	? Help
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After the destination group set has been saved, click on the hyperlinked name to manage the destination groups included in this set.

#### **Creating a Destination Group**

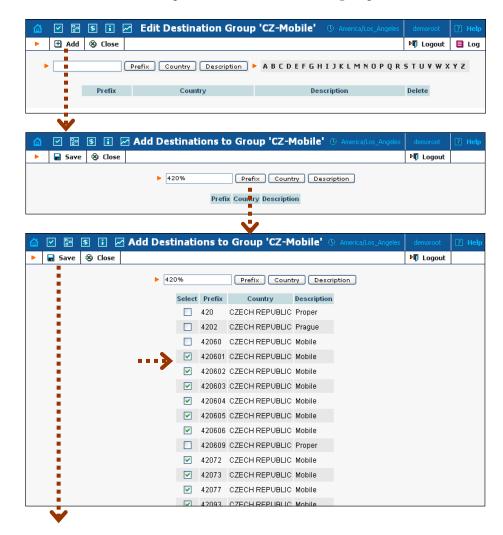


Column	Description							
Destination	Convenient short name for the destination group, e.g.							
Group Name	<b>UK-Mobile</b> . This will be used to enter new rates for							
	this group of destinations.							

Prefixes	List of prefixes included in this group. For a
	destination group with many prefixes, only the first
	few will be displayed. Click on <b>Destination Group</b>
	Name to see a complete list of destinations
	belonging to this group.

#### Managing Destinations (Prefixes) within a Group

Click on the hyperlinked destination group name to edit its contents. Click on **Add** to add more prefixes to the destination group.



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		420601	CZECH REPU	BLIC	N	lobile		×	
		420602	CZECH REPU	BLIC	N	lobile		×	
		420603	CZECH REPU	BLIC	h	lobile		×	
		420604	CZECH REPU	BLIC	N	lobile		×	
		420605	CZECH REPU	BLIC	N	lobile		×	
		420606	CZECH REPU	BLIC	N	lobile		×	
		42072	CZECH REPU	BLIC	N	lobile		×	
		42073	CZECH REPU	BLIC	N	lobile		×	
		42077	CZECH REPU	BLIC	N	lobile		×	
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-	CZ-Mob						20606, 42072, 42073, 4207		×

# **3.** Networking

# Nodes

The Node Management screen enables registration, removal and maintenance of the gateway list. Nodes are gateways which provide accounting records to PortaBilling or exchange authentication/ authorization requests with it. On this screen the user is provided with a list of all nodes currently registered.

The search form at the top of the screen allows filtration by any combination of H.323 ID, IP address and/or whether or not the node is a Radius client. Providing any of this information and selecting **Show Nodes** will refresh the Node listing according to the new filtration criteria.

ຝ			\$	i			Nod	le Manager	nent	ent <sup>®</sup> Europe/Andorra			demo-root	?	
•	•	Add	8	Clos	e							Þ	🗘 Logout		Log
						H32	23-ID	IP	RADIUS Clie	nt					
									○Yes ○No	💿 All 🔝	Show Nodes				
					N	lame	h323-id	IP	Manufacturer	Туре	RADIUS Client	Delete			
					<u>Mera</u>		192.168.0.1	192.168.0.1	Mera	MVTS	7				
					Cisco	GW	cisco	192.168.0.5	Cisco	VOIP-GW	2	×			
					Portal	JM	PortaUM	192.168.0.11	PortaOne	PortaUM	2	×			
					Quintu	um	Quintum	192.168.0.3	Quintum	VOIP-GW	7	×			
					Demo	PortaSIP	sip	192.168.0.10	PortaOne	PortaSIP	7				

To add a new node to the system, click **Add** in the toolbar. The following information is provided within the listing:

Column	Description						
Name	Logical name of the node. This is also a link to the						
	edit screen for the given node.						
h323-id	Registered H.323 ID of the node.						
IP	IP address of the node.						
Manufacturer	Choose "Cisco", "Quintum", "PortaOne" or another						
	from the drop-down list, depending on the						
	manufacturer of the equipment.						
Туре	Select what role the node plays in the network from						
	the drop-down list. The options are as follows						
	(according to Cisco naming conventions):						
	• VOIP-GW: the node functions as a gateway						
	• H323-GW: the node is an H.323 proxy						
	• H323-GK: the node is an H.323 gatekeeper						
	PortaSIP: PortaSIP server						
	PortaUM: PortaUM server						

•	MVTS: Mera Networks VoIP Softswitch

## Add/Edit Node

🙆 ⊻ 🖭 💲 [	1 🛛	Edit 'Quir	ntum' Node		demo-root	? Help
🕨 🖬 Save 📓	Save & Close 🛞 Close				▶¶ Logout	🖬 Log
Node Name Quintum	• epad					
h323-id	Quintum	•	Manufacturer	Quintum 💙		
VoIP Password	cisco * Auto	•	Туре	VOIP-GW 🕶		
NAS-IP-Address	192.168.0.3		RTP Proxying	Direct 💙		
Hostname	myhost		VoIP User-Name	User-Name 💙		
Domain	mydomain.com		Telephony User-Name	Calling-Station-Id		~
Auth. Transl. Rule 🕐			RADIUS Client			
			RADIUS Key	peb7ladt • Auto		
			RADIUS Source IP	192.168.0.3		
			RADIUS Dictionary	Quintum		

In order to register a new node in PortaBilling or edit an existing one, the following information must be provided:

Field	Description
Node Name	The logical name of the node for use within
	PortaBilling
Node ID	Node identifier used by the terminating node within
	your network of trusted nodes in order to identify the
	originating gateway which is attempting to send a call.
	Enter the ID used for this node. The default behavior
	is to authenticate a node by its IP address; however,
	this may be changed if you use your own custom
	application to handle incoming VoIP calls.
	This field is available only if "Node ID" is enabled in
	advanced features. If you are not sure what value to
	choose, enter the same value as in the NAS-IP-
	Address.
H323-ID	For a VoIP node, the H.323 ID is equivalent to a
	hostname for an internet server (e.g.
	maill.cyberdyne.com), namely, a descriptive, human-
	readable name used for identification purposes. Make
	sure the value you enter here matches the "hostname"
	parameter configured on the gateway, since that value
	is returned from this node in the h323-gw-id attribute,
	and the ability to match these values with data in
	billing significantly simplifies troubleshooting.
VoIP	The password which will be used for remote IP
Password	authentication of calls originated on this node. If you



	are using the Cisco default
NAG ID	app_remote_ip_authenticate, enter <b>cisco</b> here.
NAS-IP-	The IP address of the node.
Address	
Hostname	The internet hostname (without the domain).
Domain	The internet domain which the node is operating in.
Auth. Transl.	The authentication translation rule used to transform a
Rule	dialed phone number into the E.164 format used in
	PortaBilling. Node translation rules have become
	obsolete with the introduction of customer-based
	translation rules.
Manufacturer	Choose "Cisco", "Quintum", "PortaOne" or another
	from the drop-down list, depending on the
	manufacturer of the equipment.
Туре	Select what role the node plays in the network from
	the drop-down list. The options are as follows
	(according to Cisco naming conventions):
	• VOIP-GW: the node functions as a gateway
	• нз23-gw: the node is an H.323 proxy
	• H323-GK: the node is an H.323 gatekeeper
	PortaSIP: PortaSIP server
	• PortaUM: PortaUM server
	<ul> <li>MVTS: Mera Networks VoIP Softswitch</li> </ul>
	Note that only types applicable to the chosen manufacturer will be shown.
RTP	
Proxying	Describes the NAT traversal capabilities of this node:
Tioxymg	• Direct - RTP stream should be send directly to
	this node; RTP proxy should not be used.
	• Optimal - this node is capable of NAT
	traversal; no RTP proxying is required unless
	specifically requested.
	• OnNat - this node is not capable of NAT
	traversal; engage RTP proxy if the other party
	is behind the NAT.
	• Always – when sending a call to this node,
	always engage RTP proxy, so that no direct
	media stream goes to it.
VoIP User-	Defines which parameters (e.g. ANI, IP, DNIS, etc.)
Name	should be used to identify which account the call
	should be billed to. This applies to calls that arrived to
	this node from the IP network (values taken from the
	answer /VoID coll loc)
	answer/VoIP call leg).
	Note that this parameter is only applicable to Quintum
	Note that this parameter is only applicable to Quintum gateways.
Telephony User-Name	Note that this parameter is only applicable to Quintum

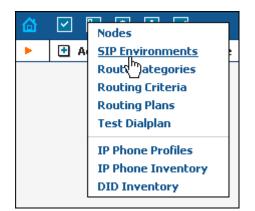
	should be billed to. This applies to calls that arrived to this node from PSTN (values taken from the answer/Telephony call leg).
	Note that this parameter is only applicable to Quintum gateways.
Radius Client	Check this box if the node will provide accounting records to the Radius server.
Radius Key	This input will be available only if the node has been designated as a Radius client. This is the authentication key for all Radius interactions. An easy-to-remember password may be generated automatically by selecting the <b>Auto</b> button.
Radius Source IP	More than one interface can be present on the node; specify the IP address of the one that communicates with the Radius server.

# **SIP Environments**

The **SIP Environments** page allows administrators to create and edit virtual PortaSIP instances on the SIP server using the web interface. On a single PortaSIP installation (one physical server, one license) you can run multiple virtual PortaSIP instances that can be used in a PortaBilling100 virtual environment.

The SIP Environments page can be accessed using the **Networking** drop-down menu.

**NOTE:** SIP Environments is only available to superusers (for more details, see the Superusers section).



To add a new PortaSIP instance, click **Add** in the toolbar, fill in the required information, then click the **Create** button.

## PORTA Billing 100°

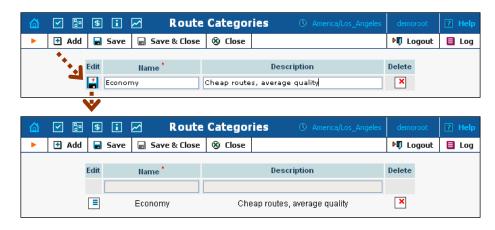
🙆 🗹 🗄 💲 🖬 🖌	SIP Environments	③ Europe/Kiev porta-s	support ? Help
▶ 🗄 Add 🛞 Close 🔉 Refresh	🛛 🖑 Objects	Þ¶) Lo	ogout 目 Log
Node IP Node Name	Status	Action	Log
1.2.3.4 PortaSIP - 1.2.3.4	Virtual PortaSIP server [1,2,3,4] is UP. warn: not found registrar statistics: 8 registered location(s). b2bus statistics: 0 call(s) in progress.	afresh Stop Restart S	B2BUA
1.2.3.5 PortaSIP - 1.2.3.5	Virtual PortaSIP server [1,2,3,5] is UP. warn: not found registrar statistics: 5 registered location(s). b2bus statistics: 0 call(s) in progress.	afresh Stop Restart S	BIP B2BUA
1.2.3.6 PortaSIP - 1.2.3.6	Virtual PortaSIP server [1,2,3,6] is UP, warn: not found registrar statistics: 0 registered location(s). b2bua statistics: 0 call(s) in progress.	afresh Stop Restart S	IP B2BUA
New Node & SIP Enviro	nment		
Node Name * Quintum			
H323-ID* Quintum			
VoIP Password * cisco			
NAS-IP-Address* 1,2,3,4			
RADIUS Key* a1b2c3d4			
SIP Server IP* 1.2.3.5			
Create Close			

Field	Description
Node Name	The logical name of the node for use within
	PortaBilling.
H323-ID	For a VoIP node, the H.323 ID is equivalent to the
	hostname for an internet server (e.g.
	mail1.cyberdyne.com), i.e. a descriptive, human-
	readable name used for identification purposes.
VoIP Password	The password to be used for remote IP
	authentication of calls originated on this node.
Nas-IP-	IP address of the node.
Address	
RADIUS Key	The authentication key for all Radius interactions.
SIP Server IP	IP of the SIP server

To create a new SIP instance on the SIP server side, you must provide an additional unique IP address (IP alias), since a gateway (node) may be registered to only one environment. You cannot have a node with the same IP address in two different environments.

# **Route Categories**

This screen allows you to define new categories into which you can divide your available routes. To create a new category, select **I** Add from the toolbar.



Column	Description
Name	Name of the route category. This is the name you will
	see in the select menu when assigning a route
	category for the rate.
Description	A description of this route category.

If you do not wish to define any custom route categories, the **Default** route category is always available.

# **Routing Criteria**

This screen allows you to predefine the quality requirements to be applied to your vendors. PortaBilling will continually measure the quality parameters and adjust the routing if these fall below the specified thresholds. Any vendor who fails to satisfy your quality requirements will go to the "penalty box" – the very bottom of the routing list. This means that the system will first try to terminate calls using other carriers (with a good quality rating). However, if all of them fail or are unavailable, the "penalized" carrier will have a chance to terminate the call. For more information about adaptive routing, see the **PortaBilling Administrator Guide**.

## Add/Edit Routing Criteria

To add new routing criterion, click **Add** in the toolbar. An existing routing criterion can be edited by clicking on its name in the list.



۵	<b>&gt;</b>	s i -	3		Ad	d Routir	ng Criteria					? He
Þ	🔒 Save	🛞 Close	📲 Object	s							🕅 Logout	
			Name <sup>•</sup> Descrij		SuperNet SuperNet SLAs		Sampling In Destination riteria Defaults		15 minute SuperNet	s •		
Ī	Minimum Ca	lls * Penalty	Time, min *	Thresh	old ASR, %	Min. PDD, m	ns Low PDD Calls,	% Max. PDD, r	ms High PDD Calls,%	ALOC, sec	Profit per Minute	, USD
	100	120		Warnir Penalt		100		3000		180 120	0.005	

Field	Description				
Name	The logical name of the routing criterion for use				
	within PortaBilling.				
Description	A description of the routing criteria.				
Sampling	Quality measurements will be computed for all calls				
Interval	within this interval. Smaller intervals will make the				
	system "quicker" to notice any change in a vendor's				
	quality, but there is also a higher chance that a short-				
	term problem on the vendor's side (which can be				
	fixed in a matter of minutes) will penalize his route				
	for a relatively long period of time.				
Destination	A destination group set; you can define routing				
Group Set	criteria for individual groups in this set.				

Using the **Criteria Defaults** table, specify the initial default values to be applied to routing criteria for specific destinations which you will create later on.

T: 11						
Field	Description					
Minimum	The minimum required amount of calls via a given					
Calls	connection within the sampling interval in order for					
	the statistics to be considered representative. If the					
	number of calls is below the specified value, the					
	quality parameters will not be matched against the					
	threshold, and no routing adjustments will be made.					
Penalty Time	The time interval for which a connection will be					
	"penalized" (put at the very bottom of the routing					
	list) if a given vendor does not meet the quality					
	criteria.					
The following threshold parameters require two values that define the warning and						
penalty thresholds, respectively. The warning threshold specifies when an alert will be						
sent to the administra	itor (but no changes in the routing will be done). The penalty					
threshold defines when	n the route should be penalized if the quality statistics are outside					
the threshold value.						
ASR	Average Success Rate: the number of successfully					
	connected calls divided by the total number of call					
	attempts.					
Min PDD, ms	Defines the minimum acceptable PDD (Post-Dial					

Delay), i.e. the time interval between the moment a

	connection request is sent to the vendor and the
	moment ring-back is received. Too low a PDD is
	suspicious, and in this case the vendor is probably
	doing "false ringing" to hide the long time it actually
	takes him to route the call.
Low PDD	Maximum acceptable percentage of calls with a PDD
calls, %	below the specified value.
Max PDD, ms	Defines the maximum acceptable PDD. Too high a
	PDD has a strong negative impact on your business,
	since during the delay time the end-user hears only
	silence, and generally assumes that there is a problem
	with the service.
High PDD	Maximum acceptable percentage of calls with a PDD
calls, %	above the specified value.
ALOC, sec	Average Length of Call
Profit per	Profit per Minute (expressed in the monetary units of
Minute	your base currency): the aggregated profit, i.e. the
	difference between the actual charged amounts in
	your customers' and vendors' CDRs.

Click the **Save** button to save your progress when done.

# Defining Routing Criteria for Individual Destination Groups

After the **Criteria Defaults** settings have been saved, click **Add** in the toolbar to define routing criteria for the specific destination group. An existing routing criterion can be edited by clicking the **Edit** icon on the row containing the details.

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Click the **Destination Groups** column header link to choose one of the groups defined in the **Destination Group Set** from a searchable list inside the pop-up window.

When adding new criteria – all the fields are initially "default" – the values you have defined as **Criteria Defaults** will be used. This allows you to quickly define criteria for multiple destination groups with minimum effort. If you wish to override the default value, simply enter a new value

in the field. If you wish to exclude a certain quality metric from the criteria (e.g. **Low PDD Calls**, in the example below), de-select the checkbox next to it.

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When the criteria have been saved, the quality parameters are presented as follows:

- Parameter values, which override the default ones, are shown in black;
- Default values applying to these criteria are shown in grey
- For quality metrics that are switched off, dashes (--) are displayed instead of values.

## **Tracking Connection Status**

When the value of a parameter reaches the predetermined threshold, the administrator receives an e-mail alert about the latest connection threats. Moreover, the administrator can track the current connection status on the **Tracking** page. This status is represented by different colors, as follows:

- GREY the number of calls is not enough to apply filtering differentiation;
- GREEN the route meets the quality requirements;
- • YELLOW the route is active, but some of its quality parameters are outside the warning thresholds;
- **G** BLOCKED this route is currently being penalized.

**NOTE:** The penalized route will be on the "penalty row" for a certain period of time, specified in the **Penalty Time** box and then will be unblocked automatically.

Alternately, you can click the **Unblock Now** button to unblock the penalized route manually.

• • RED – the route was manually unblocked; this status will remain unchanged till the next time interval for which the statistics will be computed.

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# **Routing Plans**

A routing plan is a combination of route categories in a specific order. It defines which categories of vendors will be available for termination and in what sequence.

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After a routing plan has been created, you can specify which route categories will be included in it. To add a new route category, select Add from the toolbar, then click the **Save New**. icon to save this row.

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You can change the route category order by choosing an **Order** number. Remember that if a route category is not included in the routing plan, a customer with this routing plan will not have access to such routes. Click the **Save** icon to make your changes take effect.

Please note that a larger value in the **Order** column pushes the given route category towards the top of the routing list (i.e. 99 is the first route category which will be tried).

#### **Profit Guarantee**

On this tab you can specify how the system chooses routes for call termination, in order to maximize your profits.

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If you switch off the "profit guarantee" in PortaBilling, it is possible that your carrier will charge you more than you have charged your customer. (Sometimes these situations can arise even with "profit guarantee" switched on, e.g. when a random surcharge was not triggered, or if you charged your customer for just a few seconds, but were charged by a vendor for a full minute, due to different time rounding increments).

Please note that the **Profit Guarantee** functionality only calculates the approximate profit you could earn, by comparing the price per minute used to charge the customer with the termination cost of each vendor. In this latest release, a new **Adaptive Routing** feature has been introduced, including a **PPM** (Profit Per Minute) control parameter. PPM is based on statistics for already completed calls. It calculates the amounts actually charged by considering all special rating elements which are applied to calls, such as fixed and relative surcharges, rounding intervals, and so on. As a result, it provides accurate profit figures that will help you to maximize profits in the future. For information about how to set up the PPM control parameter, see the previous section, "Routing Criteria".



GO

When the **Profit Guarantee** functionality is activated, "unsuccessful" vendors will be removed by the billing engine from the routing list during real-time route calculation. This differs from when you specify the **PPM** control parameter on the **Routing Criteria** page. The latter only moves problematic vendors to the "penalty box", i.e. the very bottom of the routing list. This ensures that the system will first try to terminate the call via other carriers (with good call quality). However, if they all fail or become unavailable, the "penalized" carrier will have a chance to terminate the call.

Field	Description
Send Real-time	Turn this option on in order to receive real-time
Alerts about	email alerts whenever a customer (with this routing
Calls with	plan assigned) makes a call on which you lose money.
Losses	
Choose Only	When calculating a routing list for a customer with
<b>Routes Which</b>	this routing plan, compare the price used to charge
Guarantee	the customer with the termination cost of each
Profit	vendor. If the vendor's costs are higher than the
	customer's rate, exclude the vendor from the list (see
	note below).
Minimum	Allows you to create a more aggressive profit
Absolute Profit	guarantee route selection: the vendor's cost per
	minute must be lower than the customer's rate by at
	least the amount specified. (Amounts are specified in
	your base currency).
Minimum	In some cases, specifying the amount of profit per
<b>Relative Profit</b>	minute does not yield the desired results, e.g. for risky

	destinations such as Somalia you would like to get at
	least \$0.10 per minute, yet \$0.10 on calls to the US is
	simply not feasible, since you charge your customers
	only \$0.05/minute. In this case, you can use a relative
	threshold, so that for expensive destinations the
	profit must be high, while for low-cost destinations a
	small profit is acceptable.
Combination	You can specify that a route must satisfy both
of Absolute	conditions, i.e. both absolute and relative profit, or at
and Relative	least one.
Profit	
Parameters	
Round-robin	If you would like to share the load among several
between	carriers where the difference in cost is insignificant
Routes with	(e.g. carrier A charges you \$0.023 and carrier B
Cost	\$0.025), specify the maximum allowed threshold for
Difference	two carriers to be granted the same priority in LCR.
under	

PortaBilling allows at least two different price per minute values for rating (potentially, you can have an unlimited set of different prices applied within the same call when you use a rating formula). For comparison purposes, however, only one specific value should be used. PortaBilling uses the value of the **Price\_Next** parameter for profit guarantee calculations. In order for the profit guarantee to work properly when you use rate formulas to charge your customers, make sure that you populate **Price\_Next** in the customer's rates with a meaningful value.

# **Test Dialplan**

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This screen allows users to test a dialplan for a specific telephone number or certain destinations at any moment in time.

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1	1604	CANADA	British Columbia	0.07000 USD	Cheap	8	Ν	<u>192.168.0.25</u>	MCI Vendor	MCI VoIP- >Vendor	CT Tariff
2	1604	CANADA	British Columbia	0.08000 USD	Economy	7	Ν	<u>192.168.0.30</u>	X-Telecom	X-Telecom	Mera Systems
3	1604	CANADA	British Columbia	0.25000 USD	Premium	5	Ν	<u>192.168.0.66</u>	Best VoIP	Premium VolP- >Vendor	<u>Best</u> <u>Quality</u>

To test a dialplan, type a number in the Phone Number field. The search can be performed in real time: select the 0 stopwatch icon or click the date input format link to set a date using the pop-up calendar.

Column	Description
Ctrl#	Sequential number of this route.
Destination	Matching destination from the corresponding tariff.
Country	Country where the tested destination is located.
Description	Destination description.
Price	Next interval price for the given destination (per
	minute).
Route	Route category for this route. See the Route Categories
Category	section for more info.
Preference	Routing preference for this destination. See the Call
	Routing section of the PortaBilling User Guide for
	more info.
Huntstop	If one of the routes has huntstop enabled, then all
	routes with a lower preference will be ignored.
Route to	The node (or remote gateway IP) where the call will be
	routed. Click the link to open the connection screen.
Vendor	Call terminating vendor.
Connection	Description of the vendor connection.
Tariff	The tariff used to bill this call. Click the link to open the
	tariff screen.

# **IP Phone Profiles**

IP phone profiles and the IP phone inventory allow service providers to reconfigure a large number of end-user devices before sending them to customers, as well as those already on a customer's premises. Instead of entering the same values for codec, server address and the like into each of a thousand user agents, you can simply create a profile which will describe all of these parameters. After that, PortaBilling automatically creates a configuration file for each user agent using account-specific parameters such as ID or password, which it will then fetch (for instance, from a TFTP server) and update.

If you decide later to change the address of the SIP server, you need only update it once in the profile in order for new configuration files to be built for each user agent. The user agents will then fetch them next time they go online. The config file is specific to each user agent since it contains information such as username and password, and so the user agent must fetch his own designated config file.

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#### Profile list mode:

Column	Description
Name	Logical name of the profile.
Туре	Telephone adaptor or SIP phone.
Effective	Date and time when the profile becomes effective.
From	
Managed By	Administrator only (default) means that this profile
	will be used for your direct customers and is accessible
	only to your administrators. Select a PortaBilling
	reseller to assign this profile for use by a particular
	reseller.
Discontinued	Indicates that the current profile is no longer in use.
Description	Short text description of the profile.
Delete	The delete icon is only visible when the current profile's
	effective date has not arrived yet.

#### Add Profile mode:

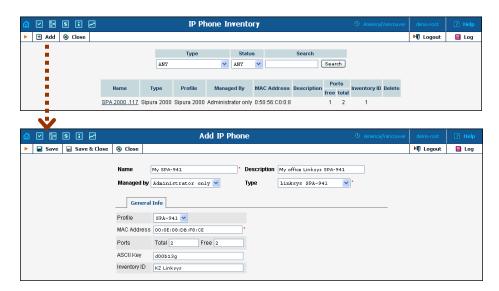
Column	Description
As copy of	Similar to templates; a user can create new profiles
	using previously created ones, so there is no need to re-
	enter a large amount of information.

Effective	Set the time when the profile is to become effective.
From	Click the stopwatch icon for the profile to become
	effective immediately.

In Edit mode, the Profile Management screen will differ depending on the UA.

# **IP Phone Inventory**

The IP phone inventory allows you to keep track of IP devices (SIP phones, SIP ATAs, etc.) which are distributed to your customers. You will assign a profile that defines general configuration settings for each device (preferred codecs, address of the SIP server, etc). You can then assign a specific account (basically representing a phone number) to a specific port (phone line) on the IP phone. PortaBilling will create a config file for auto-provisioning all of these devices, thus allowing you to easily manage thousands of user IP phones remotely.



Field	Description
Name	IP phone name.
Description	Short description.
Managed by	Administrator only (default) means that this IP
	device will be used for your direct customers and is
	accessible only to your administrators. Select a
	PortaBilling reseller to assign this IP device for use by
	a particular reseller.
Туре	One of the available device types (e.g. Cisco ATA,
	Sipura, etc.).
Profile	Select one of the defined IP phone profiles.
MAC Address	MAC Address of the IP phone.

Ports	Number of the IP phone ports (phone lines).					
ASCII Key	The key which is used to encrypt the configuration					
	information.					
Inventory ID	An ID which allows you to identify this device in the					
	external system (e.g. your warehouse management					
	application).					

# **DID Inventory**

DID inventory allows you to keep track of phone numbers (DIDs) that you purchase from various telco partners for distribution to your customers or resellers. In order to see the DID numbers currently available in the database, choose **DID Inventory** in the Management section of the admin interface, specify the search filters, and click **Search**. You can search for DIDs which:

- match a specific phone number pattern, e.g. enter 1800% to find all 1-800 numbers;
- belong to a particular owner batch (to search for unallocated DIDs, choose **NONE**);
- belong to a specific vendor batch;
- are in use (there is an account using this DID) or are free (not used by any account).



**Hint:** Often a business will request a phone number that can be "spelled out" so customers can remember it easily (for instance 1-866-SIP-VOIP). You can search for such easy-to-remember phone numbers by entering the letter string in the **DID Number** field. For example, in order to search for all 1-800 numbers containing VOIP in them, enter 1800%VOIP.

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							4420855534	158		VOXBONE-UK					×	]		
					∎		4420855534	159		VOXBONE-UK					×	1		
					∎		4420855534	160		VOXBONE-UK					×	]		

Column	Description					
DID Number	Phone number.					
Owner Batch	Name of owner batch this DID is assigned to (if					
	empty, the DID is unallocated).					
Vendor Batch	Name of vendor batch this DID belongs to.					
Account	If the $\square$ icon is shown in this column, this DID is					
	currently being used by an account. Click on the icon					
	to access the account information.					
Free since	For DIDs used in the past but now available, the date					
	when they became available is displayed.					
Description	Comments about a particular DID number.					

# **Vendor Batches**

When you receive a set of phone numbers from a vendor, they will be registered in PortaBilling as a vendor DID batch. Vendor batches allow you to keep track of which phone numbers were purchased from which vendors. (Every number entered into the DID inventory must reside in a certain vendor batch). The vendor batch also contains various administration parameters, e.g. a description of which country and city these numbers are from.

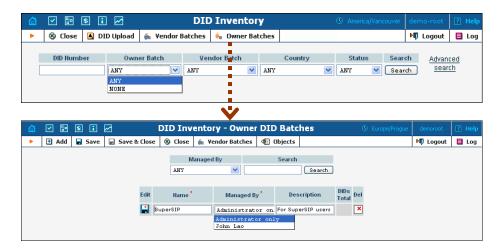
🙆 🗹 🗄 🕏 🖬	DID	Inventory			demo-root	🕐 Help
🕨 🛞 Close 👗 DID Upload	🐞 ¥endor Batches	🛓 Owner Batches			🕅 Logout	📒 Log
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	🙆 🗹 🗟 🗊 🖉 DID Inventory - Vendor DID Batches 🕓 Europe/Prague														
• [	🔁 Add	🖬 Save	🔒 Save & C	lose 🛞 Cla	se	💺 Owne	r Batches	5 4	🛾 Objects				M	🖡 Logout	📒 Log
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	[	VOXBO	NE-UK	Voxbone		UNITED	KINGDON	A		L	ondon area		<b>a</b> 13		

To add a new vendor batch, first select **Wendor Batches** in the toolbar, then click **Add** in the toolbar. The **Country**, **Area Code**, **Area Code Description**, and **Description** columns are optional, and serve only to simplify management of multiple batches. When you are done entering data, click the **Save New** icon to save this row.

## **Owner Batches**

After the DIDs have been entered into the system, you can create owner batches and allocate some of the numbers to them. An owner batch contains numbers to be provided to an end-user by a particular reseller or your administrators. The purpose of owner batches is to keep track of how numbers are used internally.



To add a new owner batch, first select **i Owner Batches** in the toolbar, then click **I Add** in the toolbar.

Column	Description								
Name	Unique name of the batch.								
Managed By	Designates who will be using the DID numbers in								
	this batch. If you plan for the numbers to be used by								
	your administrators for direct customers, choose								
	Administrator only. If you plan to make these								
	numbers available to a reseller, select the reseller's								
	name here.								
Description	Comments about this batch.								

When you are done entering the data, click the **Save New** icon to save this row.

## Importing Numbers into the DID Inventory

You can upload DID numbers from a CSV file. The structure of the CSV file should be as shown in the picture below: the first column contains the phone number, the second contains the vendor batch name, and the third contains an optional description.

<b>×</b> /	Microsoft Exce	l - dids.csv	
	<u>E</u> ile <u>E</u> dit ⊻iew	<u>I</u> nsert F <u>o</u> rmat <u>T</u> ools	<u>D</u> ata <u>W</u> indow <u>H</u> elp
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1	12 2 2 5 1	3 X 🛛 🖥 🛍 🕬	Reply with <u>C</u> hanges End
	C5 🗸 🗸	🟂 Easy-to-remember	
	A	В	С
1	Phone #	Batch	Description
2	442085553450	VOXBONE-UK	
3	442085553451	VOXBONE-UK	
4	442085553452	VOXBONE-UK	
5	442085553453	VOXBONE-UK	Easy-to-remember
6	442085553454	VOXBONE-UK	
7	442085553455	VOXBONE-UK	
8	442085553456	VOXBONE-UK	
9	442085553457	VOXBONE-UK	Recently used
10	442085553458	VOXBONE-UK	
11	442085553459	VOXBONE-UK	
10	442085553460	VOVROME LIZ	

**NOTE:** The first row in the file is skipped, since it usually contains column titles and not actual data.

To upload a DID file, first select A DID Upload in the toolbar, then specify the file location (you can use the Browse button to select a file in the explorer window), and then click A Save & Close in the toolbar.

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•	🛞 Close	DI	ID Upload	🌲 Vendor I	Batches	💺 Owner Ba	tches					💐 Logout	目 Log
	DID Numl	ber 📕		er Batch	Ve	ndor Batch		Country	Sta	itus	Searc		
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			ANY										
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📧 🗌 442085553460 VOXBONE-UK	DID Humber     Owner Batc       Assign Vendor DID Batch       VOCEOUR       Assign Ow       The page       NORE       O Delete from       Apply to       Set	Vender Batch     Country       ANY     ANY       Edit     X       Edit     100 Humber       Ware Batch     Vender Batch       Image: State State     VoxBoNE-UK       at https://hzslave-test.portaone.co       ipload operation successfully finished. See email for deta       CK       Image: State State State       Image: State S	ANY Cearch Search Search Search Recount Free since Description Do Free since Description Do Free Search Free Free	

A popup window will inform you of the import results.

# **Managing DID Number Allocation**

On the main screen of the DID inventory you can view DID numbers that match certain criteria (e.g. all numbers in a specific vendor batch). You can then perform number allocation for some of these numbers. This includes:

- re-assigning a vendor batch for some numbers (this may be required if you decide to change the way you organize your vendor batches, or if some DID numbers are now provided by a different vendor);
- allocating numbers to an owner batch, or returning them to the unallocated pool;
- deleting DIDs from the DID inventory.

These operations may be applied to all numbers matching the original search, only to the first N DIDs among them, or only to those you manually select.

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•	8	Close		) Uple	oad	é. V	/endor Batch	es	Ú,	Owr	er Batches	<b>4</b>	Objects						り Logout	目 Log
			DID	Numl	ber		Owner Bat	ch			Vendor Batcl	ı	C	ountry	Status	S	Sear	:h ∌	Advanced	
						A	NY		*	AN	7	*	ANY	*	ANY	~	Sear	ch -	search	
			~					E	dit	х	DID Number	0w	ner Batch	Vendor Batch	Account	Free	since	Descrip	tion Del	
			0		gn vei BONE-		DID Batch		=	<b>V</b>	44208555343	34		VOXBONE-UK				Premium	×	
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			۲		erSI				≡		4420855534	50		VOXBONE-UK					×	
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			0	Dele	te iror		entory		Ξ		4420855534	52		VOXBONE-UK		2007	11-25		×	
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								E	Ξ		4420855534	59		VOXBONE-UK					×	
									Ξ		44208555346	60		VOXBONE-UK					×	

# $\mathbf{\overline{X}}$

**Hint:** If you would like to assign the first N unused numbers from some vendor batch to an owner batch, specify the vendor batch and the **Free** status in the search condition, then apply an assign operation to the **First N** numbers. If you just select DIDs from a vendor batch and then assign the first N to an owner batch, you might also re-assign to it some numbers which are already in another owner batch.

Press **Apply** to submit the changes. After the update is completed, a popup window will inform you of the results.

# **4** Adjusting Billing Parameters

# Currencies

The **Currencies** page allows you to define a method for determining exchange rates between currencies. Supported methods include explicitly defined exchange rates or the use of external services such as yahoo.com or xe.com.



**NOTE**: Before relying on an external exchange rate service, read its terms of use thoroughly, as the rates it provides are usually given at a delay of at least fifteen minutes from the actual values.

To define an exchange rate source for a currency, first click 🖬 Add in the toolbar.





From the Exchange Rate Source drop-down list, choose "Manual", "yahoo.com", or "xe.com". (The specific exchange rate is defined on the Exchange Rates page, available from the PortaBilling home page.)

The next drop-down list shows all payment systems registered by the system's administrator. Choose one which will be responsible for all payments in this currency using the payment methods chosen for it. If this is not required, select an empty value. It is possible to add multiple combinations of the same currency with different payment systems; in this case, all of them will use the same exchange rate source.

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		USD	840	US Dollar	2	dollar	cent	Manual	MyAuthorizeNet	UISA	1.00	0000	
					Choos	sing XE.	COM as excha	ange rate source you a	gree to the <u>XE.COM Terms of</u>	<u>Use</u>			

Please note that it is not allowed to have several (more than one) systems assigned to the same currency using the same payment method. Because of charges for the use of online payment systems, it is recommended that a non-zero value be entered in the Maximum Allowed Payment field.

Column	Description
ISO 4217	
alpha	Official three-letter currency code (e.g. USD).
num	Numeric currency code according to ISO standard.
Name	Commonly used name of the currency.
Dec. digits	Maximum number of decimal places allowed by the
_	currency, e.g. for US dollars or euros it will be 2,
	since the smallest unit is one cent $(0.01)$ , while for
	yen it will be 0, because an amount in yens can only
	be a whole integer.
Major	The main currency unit, e.g. dollar.
Minor	The lesser currency unit (if applicable), e.g. cent.
Exchange	Defines the method of entering the exchange rate for
Rate Source	this currency: updated either manually by an
	administrator, or by PortaBilling from exchange rate
	sites such as xe.com or yahoo.com.
	For an existing row in the table, click on the
	underlined xe.com or yahoo.com line in a column to
	immediately fetch the current exchange rate.
Payment	Selects an online payment processor to process
System	payments in this currency.
Payment	Read-only column; lists all available payment
Method	methods (e.g. VISA) for the selected payment system.
Minimum	The smallest allowed amount for an online payment
Payment	(in the corresponding currency), in order to prevent
	service abuse.

60

Select **Save** or click the **Save** icon in the Edit field to make your changes take effect.

The ISO 4217 currency code is normally composed of a country's twocharacter ISO 3166 country code plus an extra character denoting the currency unit. For example, the code for Canadian Dollars is simply Canada's two-character ISO 3166 code ("CA") plus a one-character currency designator ("D"). Currency unit names (major and minor) are not defined in ISO 4217, and are listed in the table only for user convenience. Visit **BSI Currency Code Service (ISO 4217 Maintenance Agency) website http://www.bsi-global.com/** for more information.

# **Exchange Rates**

All exchange rates used within the system are listed. The **Effective** dropdown list allows you to define whether only current exchange rates ("Now") or all exchange rates ever used ("->Now") will be shown. The following information is provided in the exchange rate listing:

🙆 🗹 📴	s : 🖌	Ex	change Rates			America/Vancouver	demo-root	? Help
🕨 💽 Add	🖬 Save 🛛 🔒 Save & Close	🛞 Close 🏼 🎄 Update					MJ Logout	目 Log
			Effect Now	tive V				
		Edit Name	Exchange Rate, USD *	Source	Timestamp	x		
		🔳 Australian Dollar	1 AUD = 0.75000	Manual Entry	2006-10-05 05:01:44			
		euro	1 EUR = 1.27081	XE.com	2006-10-05 04:59:12			
		Pound Sterling	1 GBP = 1.88169	XE.com	2006-10-05 04:59:15			
		🔳 Kuwaiti Dinar	1 KWD = 3.45790	Yahoo.com	2006-10-05 04:59:17			
		Hryvnia	1 UAH = 0.19840	Yahoo.com	2006-10-05 04:59:19			
		US Dollar	1 USD = 1.00000	Yahoo.com	2006-10-05 04:59:19			

Field	Description
Edit	Click the <b>Edit</b> () icon to modify the given exchange
	rate. Select <b>Save</b> or click the <b>Save</b> icon in the Edit
	field to make your changes take effect.
Name	The currency unit name (for example, "Canadian
	Dollar").
Exchange	Currency exchange rate. Defines the number of units of
Rate	the base currency equal to one unit of the foreign
	currency. (For example, with British Pounds as the
	foreign currency and U.S. Dollars as the base currency,
	the base currency units would be "1.5326" and the value
	of this column would be "1 GBP = 1.5326")
Source	Shows the exchange rate source for the given currency
	as defined on the <b>Currency</b> page.
Timestamp	The effective date for the given currency. Newer
	exchange rates supersede older ones.

To add a new exchange rate, click the **Add** button; this will start a new row in the table header. Select the currency from the list, and enter the exchange rate. Click the **Edit** icon to modify an existing exchange rate.

This will copy the content of the current row into the table header. The source will be changed to Manual. Enter the new exchange rate, then select either **Save Edit**, **Save** or **Save&Close** to save changes.

# Tariffs

A tariff is a collection of individual rates, a rate being a per-destination price. Each tariff has its own set of rates. Call billing is based on billing units. You can define two billing units for each destination: the first billing unit (interval) and the next billing unit (interval). Billing unit precision is one second, and the minimum length of each unit is likewise one second.

Typical billing unit configurations include 60/6 (the first unit, i.e. the minimum charged call duration, is one minute, and subsequent intervals are one-tenth of a minute, i.e. six seconds) and 1/1 (per-second billing).

	<b>~</b>		\$	<b>i</b>				Tar	iff Ma	na	gement		0	America/Vancouver	dem	o-toor	? He
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	F	Pre-pai	id car	rds			USD	Customer	Voice Ca	alls	Administrator only		Prepaid ca	rds			
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	9	SIP Sub	bscri	bers - I	ncom	ing	USD	Customer	Voice Ca	alls	Administrator only		SIP Subsc	ribers - Incoming			
	I	ermin	ation	servic	es		USD	Customer	Voice Ca	alls	Administrator only		Terminatio	n services		×	
	Y	ViFi					USD	Customer	Wi-Fi		Administrator only						

The main Tariff Management screen shows a list of all existing tariffs. Tariffs can be located using the Search form, by selecting a reseller from the drop-down list, or choosing the tariff's name. To edit a tariff, click on its name in the list. Click the Edit Rate  $\blacksquare$  icon to edit individual rates for the given tariff. The Delete  $\blacksquare$  icon will be visible only when the tariff is not in use (not assigned to any customer or vendor and not being used in any product's accessibility), and enables permanent deletion of the given tariff.

# Add/Edit Tariff

To add a new tariff to the system, select 🖿 Add to go to the Add Tariff screen. Existing tariffs can be edited by clicking on the tariff's name in the list.

6	Image: Section 1.	9 🖬 🖂				Add Tarifi	i					(9) Europe/Prague	demoraat	12 Help
•	ave 🖥	🚽 Save & Close	O Close     O Close     O	Objects									N Logout	🛢 Log
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					eneral Info	strator only 💌					_			
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				Destinatio	ion Group Set									
				Free Seco	onds	0								
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				Login Fee		0								
				Connect		0								
				Round Ch	harged Amount	XXXXXXX XXXXXX								
				Default Fo	ormula				16					
				Short Des	scription	EasyCall outgoing								
				Descriptio		What we charge cu <u>EasyCall</u> product								

Field	Description
Name	The logical name for the tariff object.
Currency	Indicates the currency in which pricing information is
	defined. All pricing information for a single tariff must
	be defined in the same currency.
Applied To	Designates whether this tariff will be used to charge
	your customers or resellers or to calculate costs
	associated with your vendors. You must select a value
	here to get access to certain fields that are available only
	for a specific type of tariff.
Service	Select the service for which this tariff will be used (by
	default the <b>Voice Calls</b> service type will be selected).
Managed By	(Only available for tariffs of the <b>Customer</b> type).
	Allows you to designate this tariff as managed by the
	administrator only (so this tariff will be applied to your
	direct customers), or by a specific reseller (so this tariff
	will be used to charge the reseller's sub-customers).
Routing	(Only available for tariffs of the <b>Vendor</b> type). The
	tariff contains information about the carrier's routing
	preferences, in addition to the usual cost data.
Off-Peak	Off-peak period definition; click the wizard icon 🖄 to
Period	launch the period format definition wizard; click the test
	icon 🦉 to run the off-peak period test.
Off-Peak	Human-readable description of the off-peak period (e.g.
Description	"From 21:00 until 09:00, Working Days"). This field is
-	automatically filled in by the wizard.
Destination	A set of destination groups (UK-Mobile, CZ-Mobile,
Group Set	etc.) you would like to use for more convenient rate
	entry.
Free	Number of free seconds granted for each call. In order
Seconds	to claim free seconds, the length of the call must be at

	least one billing unit (i.e. the first interval; see the 'Enter
	Rates' section above).
Post Call	Increases the total call cost by the given value.
Surcharge	
Login Fee	Amount to be charged immediately after the first user
	authentication.
Connect Fee	Amount to be charged for each successful call, in
	addition to other charges.
Round	Pattern that defines the rounding of a charged amount
Charged	in an individual xDR. This pattern takes the form
Amount	XXX000. An X (to the left) means that the digit in this
	position will be left unchanged, while a zero (to the
	right) means that this position will be rounded. For
	example, XXXXX.XX000 means that the amount will
	be rounded up to two decimal places, so that 1.2345
	becomes 1.24. Note that rounding is always done
	upwards.
Default	Default call rating formula applied to new rates. Note
Formula	that the value of this parameter is only used when a new
	rate is inserted. Modification of this parameter has no
	effect on existing rates.
Short	While the name of a tariff is for your internal use, and is
Description	usually created according to your internal rules, you can
	also add a name meaningful to your reseller. For
	example, for the tariff name aABC-SmartCall-USD-
	1800, the short description will be Smart call using a
	toll-free number.
Description	Tariff description.
· · · · · ·	· •

Free Seconds, Connect Fee and Post-Call Surcharge are only applied when the default rating method is used. For more about different call rating methods, see the **PortaBilling Administrator Guide**.

## **Off-Peak Period Definition Wizard**

		Off-I	Peak Period Definition	
•	🛞 Close			1
	◯ Call: ◯ Call1	rate is used if starts during the off-peak period finishes during the off-peak period starts and finishes during the off-peak d	PERIOD: From 01:00 until 04:00, Workdays	
			startstop:hr(1-3) wd(mo-fr )	
			Cancel Skip Next >	

The Off-Peak Period wizard provides users with a flexible tool for defining the off-peak period of any tariff. On a sequence of screens, the

user may select a time interval, day of the week, day of the month, and month; multiple select is allowed. The following example illustrates the process of creating an off-peak period that starts at 6pm every day and lasts until 6am the next morning. Another off-peak interval is on weekends. We will also include some holidays, i.e. January 1st and December 24-26.

In the first screen, select 6pm in the **From** column, and 6am in the **Until** column. Now click the **Next** button. The two text areas on the right of the screen give the user a display of the current period definition. The top text area displays a verbal definition of the period -- From 6:00pm until 6:00am, and the bottom one contains this same information in a format that can be parsed by PortaBilling -- hr{6pm-5am}. This sets up the first period; in order to continue, skip the following screens by pressing the **Skip** or **Next** button until the "Period definition completed" message is displayed, then press the **Add** button to add another definition to this period. The wizard now returns to the first screen.

**NOTE:** Time::Period treats all formula elements as "inclusive". Thus, in the example above, 6pm to 6am will be represented as hr{6pm-5am}. This is perfectly correct, since 5am actually means "all of the 5th hour – 05:00:00 ... 05:59:59".

Now for the weekends: pressing the **Skip** or **Next** button, go to the second screen and select *Weekend*, or, holding down the <Ctrl> key, select *Saturday* and *Sunday* from the list. Select the **Next** button and skip until the "Period definition completed" message is displayed. Press the **Add** button to add another definition to this period.

To include January 1st in the off-peak period definition, skip to the Day of Month screen, and select 1. Click the **Next** button. Now select *January*, click **Next**, skipping forward to the next screen. Follow the same steps to select the December 24-26 interval. Hold the <Ctrl> key down to select multiple entries.

On the next screen, you can choose how the system will charge calls which overlap with your off-peak period, i.e. cover both peak and offpeak time. There are three options you can choose from:

- If the call starts in the off-peak period, it will be charged using offpeak rates (even if part of the call was made during peak time). This method is the easiest and most transparent for end-user authorization of outgoing calls.
- If the call finishes during the off-peak period, it will be charged using off-peak rates; it does not matter whether it starts within the off-peak period or not.
- Or, the off-peak rate will only be used if the call both started and finished during the off-peak period. In this case, any call which partly extends into the peak period will be charged at the peak rate.

To evaluate your work, look at the top text area. The following text should be displayed:

```
From 6:00pm until 6:00am
    any day of any month
OR Sunday and Saturday
    of any month
OR 1
    of January
OR 24-26
    of December
```

If the definition is correct, click the **Finish** button.

#### **Test the Off-peak Period**

If you are unsure whether you have created a correct off-peak period definition, you may use the test utility to check if a specific moment in time fits into the period or not. In order to run the off-peak period test, either click the <sup>[C]</sup> icon in the tariff information window, or use the **Test Period** button on the last page of the off-peak period wizard.

				Test	Period				?	
•		Save	📓 Save (	& Close	🛞 Close					
			d Time e	O 1	YYYY-MM-DD		HH24:MI			
	L	Date and	1 Time	2007-12	2-10		02:00			
	F	Period		startstop	p:hr{1-3} wd	l{m	o-fr}	2		
	F	Period D	escription	From Wor	): 01:00 un kdays any mont		1 04:00,			
					Test!					

Now simply enter any time/date and click the Test button to check whether this moment fits into the off-peak period definition.

#### Web Upload/Download

Choose appropriate templates for web upload/download of tariffs. Read more about this in the **Templates** section.

#### **E-mail Upload**

	80	\$	i				Ed	lit 'P	repaid	Card	ds' 1	<b>Fariff</b>									
٠	Add		Save		Save &	Close	8 (	Close	👿 Dow	nload		Upload		Rates		Test			🕅 Logou	ut 📕	Lo
,	Name	•	Pre	paid	Cards			*	Currency	USD	1										
	Applie	ed To	Cus	tome	r				Service	Voice	e Call	s									
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E	Edit Ty	Gene	eral Inf	0	Web U	bload &		nload	Email	y*				er A ts		uplo	ad ((	Disabled	Delete		

Tariffs can be uploaded to the system from an e-mail received with an attached document in either CSV or XLS format.

Field	Description
Edit	Click the Edit icon to copy the current row in the form
	above for editing.
Туре	Uploaded document type, either CSV or XLS file.
From	Sender's e-mail; to prevent unauthorized access, only
	trusted e-mail will be allowed.
Key	Security key; tariff will be accepted only if the correct
	key is specified in the message's subject line or body.
Template	Select a template to map information in the uploaded
	file using PortaBilling. Read more in the Templates
	section.
Disabled	Disable receipt of tariffs from this source.
Delete	Click the delete icon to remove this source.

**NOTE:** Due to the security risk, the processing of incoming e-mails is disabled by default. To reactivate, enable e-mail forwarding to the mail processing script in the /etc/aliases file on your slave server.

## Rates

#### **Peak and Off-peak Prices**

It is possible to have two different sets of prices, one for peak and one for off-peak time. A call is always billed using one rate or another; this also applies to calls which start in the off-peak period and end in the peak period, or vice versa, i.e. there is no proration. See above regarding how you to define whether the peak or off-peak rate should be used in this situation. By default, everything is considered peak time.

Off-peak periods are defined using a powerful and flexible Time::Period module. The Off-Peak Period Wizard is also available to help you construct a period definition in an easy manner.



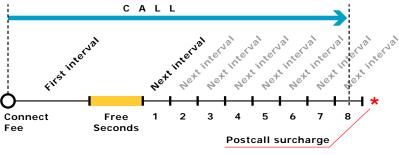




Figure 4-1 demonstrates how calls are charged. A **Connect Fee** is charged immediately upon connection, and all calls shorter than *First Interval\_1* will be rounded to **First interval** seconds. Free seconds are granted after the *First interval*, so this part of the call is not charged. Calls longer than (*First interval+Free Seconds*) will be rounded up to multiple **Next interval** seconds. After that, a **Post Call Surcharge** is applied. The call illustrated in the figure above will be charged using the following formula:

```
Amount_Charged = ( Connect_Fee +
   First_Interval * Price_First/60 +
   8 * Next_Interval * Price_N/60) * (1+Post_Call_Surcharge/100)
```

Parameters such as **First interval**, **Next interval**, **Price First** and **Price Next** can be specified per destination. **Connect Fee**, **Free Seconds** and **Post Call Surcharge** are defined on a per-tariff basis, and so are the same for all destinations in the tariff.

#### **Managing Rates Online**

Managing rates online is very convenient for maintaining existing rate tables and for reference purposes. In the case of new price lists or major updates, the offline method is better.

₫	V 🖫 💲	i 🗹	'SIP Pho	ne Subse	cribers' ta	riff rates	e	America/Vancouver	demo-toor	? Help
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		Country		Interval,	second	Price, USE	)/ minute	O Effective		
Edit	Destination *	Description		First *	Next* First* N		Next *	YYYY-MM-DD HH24:MI:55*	1/2 🗑 🧲	Delete
			Peak Off-Peak							
=	1604	CANADA British Columbia	Peak Off-Peak	30 30	6 6	0.02000 0.01500	0.02000 0.01500	2007-06-25 07:05:32		
	VOICEONNET	Not Applicable SIP to SIP destination	Peak Off-Peak	30 30	6 6	0.00000 0.00000	0.00000 0.00000	2007-12-10 06:35:59		
	38067	UKRAINE Mobile	Peak Off-Peak	1 1	1 1	0.12000 0.11000	0.12000 0.11000	2007-06-22 07:06:41		

On the Tariff Management page, click the 🔳 Rates icon for a tariff.

The filter at the top of the screen allows you to view rates depending on their Effective From date or Destination. The **Effective From** drop-down list allows you define whether only current rates ("Now") or all rates ever used ("->Now") will be shown.

To edit an existing rate, click the  $\square$  (**Edit**) icon next to it to copy rate details into the form. Note that if a tariff contains peak and off-peak rates there will be two rows of fields: the top one is for peak rates, and the bottom one is for off-peak rates.

Usually you will enter rate data for each destination separately. However, if the tariff has a **Destination Group Set** defined, by clicking on **G** in the Destination column header you can switch into Destination Group mode. Now you can enter a destination group name (e.g. UK-Mobile) instead of a prefix, and the system will automatically create rates for all of the destinations in that group.

Field	Description
Destination	Destination prefix. May be entered directly, e.g. "47" for
	Norway; or you can access the destinations directory by
	clicking the Destination link. In the destinations
	directory pop-up window, you can search for the
	desired prefix by country name.
Country	Country corresponding to the current destination.
First interval	First billing unit in seconds.
Next interval	Next billing unit in seconds.
Price first	Per minute price for first interval.
Price next	Per minute price for next interval.
Off-peak	First billing unit in seconds for off-peak time.
First interval	
Off-peak	Next billing unit in seconds for off-peak time.
Next interval	
Off-peak	Per minute price for first interval in off-peak time.
Price first	
Off-peak	Per minute price for next interval in off-peak time.
Price next	
Effective	Exact time when the rate becomes effective. Click the $\mathbb{O}$
Time	icon to make the rate effective immediately. Click the
	<b>DD-MM-YYYY</b> link to set up the desired date using the
	pop-up calendar.
·Fx	Indicates if this rate uses a call rating formula. The 🌆
	icon indicates that there is no formula, thus old-style
	rating is used. The <b>1</b> icon indicates that the rate already
	has a formula defined. Click on the icon to invoke the

	call rating formula wizard.						
Rate	Hidden. This means that the rate is excessive (e.g.						
Properties	there are usually more than 500 rates for Argentina						
	mobile because of different prefixes). This flag does not						
	affect usage of the rate by the billing engine. It simply						
	indicates that this rate may be omitted when making a						
	list of rates for the end user.						
	<b>Discontinued</b> . Note that marking a rate as						
	discontinued takes effect immediately; you cannot						
	discontinue a rate sometime in the future						
	<b>Forbidden</b> . This means that no calls are authorized						
	for this particular destination.						
Delete	Click the delete icon to delete this rate. Only rates which						
	are not yet active can be deleted.						

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	55	BRAZIL Proper	Peak Off-Peak	Default Economy	5 5		1 1	1 1	0.30000 0.10700	0.40000 0.20000	2007-12-10 06:46:02			

The following columns are available only for tariffs of the **Routing** type:

Field	Description
Route	Route category, selected from among those already
Category	defined. If you do not wish to use different route
	categories, use the <b>Default</b> one.
Preference	Routing priority for this destination. 10 is the highest
	priority, 0 is the lowest (i.e. do not use this destination
	for routing at all).
Huntstop	If turned on, the billing engine will not try any routes
	for other vendors with a lower preference.

Click the **Save** icon to save your changes.



**NOTE:** Off-peak fields appear only if an off-peak period has been defined for the tariff.

#### **Call Rating Formula Wizard**

Because of the extreme flexibility of the call rating formula, it has a quite complex syntax. To avoid possible errors, the call rating formula wizard allows you to design a call rating formula easily.

The top table allows you to edit rate parameters (such as interval or price per minute) directly; below it, the current formula is displayed (read-only); and, finally, there are three tabs for managing different formula parameters:

#### **Global:**

• **Do not bill calls shorter than** - For a detailed description of this feature, see the **PortaBilling Administrator Guide**.

•	🖬 Save	📓 Save & Clos	se 🛞 Close					
Interval, sec. Price, USD/min Off-Peak								
	Interv	al, sec.	Price,	USD/min	Interv	al, sec.	Price,	USD/min
F	First*	Next*	First*	Next*	First*	Next*	First*	Next*
1		1	0.30000 0.40000		1 1		0.10000	0.20000
ormu	lla: MIN=5 SEQ=i	nt1xNxprice1	&intNxNxpri	zeN				~
Global Rating Sequence Add Duration								

#### **Rating Sequence:**

Here you can construct the actual call charge plan by defining a sequence of time intervals and surcharges.

									4'		? Help
•	🖬 Sa	ve	📄 Save & Clos	e 🛞 Close							
	Int	erval,	sec.	Price, USD/min		Interv	Off- al, sec.				
	First *		Next*	First *	Next *	First *	Next*	First*	USD/min Next *		
1		1		0.30000	0.40000	1	1	0.10000	0.20000		
Forr	nula: MII SE(		t1xNxprice1	<pre>&amp;intNxNxpric</pre>	eN						
	Global	Ra	ing Sequence	Add Duration							
F	Ava terval Tixed Sut telative all Dis-	Surd	ge harge	Unli Dura Cus Firs Nex Price Cus Firs	tom   tion  tion  tion  tion  tinterval  tinterval	times he end of the call sec.		of First int		First price USD/min Next price USD/min	
					Include	Remove					

- 1. Choose the element type from the list on the left (Available).
- 2. Fill in the element parameters (such as interval duration, price, etc.).
- 3. Click the **Include** button to add this element to the formula.

#### **Add Duration:**

**NOTE:** This option must be enabled in the config; by doing so, you accept the responsibility for any legal issues related to use of this billing feature.

Rate Formu							a Wizard f	or '420 CZE	CH REPUBL	IC'		
•	🗈 Ado	l 🔒 Save	🗟 5ave & (	:lose 🛞	Close	街 Objec	ts					
								06	Peak			
	Interval, sec.			Price,	USD/min		Inter	val, sec.		USD/min		
	First *	Next	*	First *	N	ext *	First *	Next *	First *	Next *		
30		6	0.20	000	0.2000							
Form	nula: <sub>Al</sub>	D=#300:20&			0.2000	00	30	6	0.20000	0.20000		
Form	Globa		600:10&12			00	30	6	0.20000	0.20000		
		l Rating Seq	600:10&12	200:5&0	1	00	30	6	0.20000	0.20000		
	Globa t Up/Dn	l Rating Seq	600:10&12 uence Ad sec. Ex	200:5&0	1	00	30	6	0.20000	0.20000		
Edi	Globa t Up/Dn	l Rating Seq	600:10«12 uence Ad sec. Ex nds	00: 5x0 Id Duration dend By, %	Delete		30	6	0.20000	0.20000	]	
Edi	Globa t Up/Dn v	I Rating Seq Interval, First 300 seco	uence Ad sec. Ex nds seconds	d Duration tend By, %	Delete		30	6	0.20000	0.20000	]	

- Interval, sec. The duration of a specific call interval to which "add duration" should be applied. Initially there will be only one row in the Add Duration table, defining the rule to be applied to the whole call. Click the Add button to add a rule for another interval. Intervals are interpreted according to the order in which they appear in the table, e.g. the first row covers the *first* 300 seconds, the second row covers the following 300 seconds, and so on.
- Extend By, % Defines how the call duration for this interval should be changed (increase in percentage; a 0 value means that the call duration should not change).

#### **Managing Rates Offline**

The rates table may be prepared using a spreadsheet processor (e.g. MS Excel) and easily imported into PortaBilling. This is very convenient if you are going to make many changes. For example, you might increase all prices by 10%. To upload your rates file, proceed as follows:

- 1. On the Tariff Management page, click on the tariff name.
- 2. In the Edit Tariff window, click the 🗳 Upload .CSV icon.
- 3. In the Upload Rates window, click Browse...
- 4. Locate the Tariff-sample.csv, then click Open.
- 5. In the Upload Rates window, click Upload.
- 6. In the Edit Tariff window, click Close.

You can verify your work using the Rates feature.

## **Test Call Rating**

This screen allows testing of the call rating formula and shows the resulting cost and duration of the call. The formula can be used both

ways: either to calculate the call's cost given its duration, or to see how long a call ought to last given its cost.

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	Og Cose       Pip Logoit         Date and Time       O YYYY-MM-DD       HH24:MI:SS         Phone number       44625524678       Result of the testing         Simulate call charges based on the call duration       Simulate authorization based on the available funds       Real charge history: +1x1x0.1+599x1x0.2         Call duration       10:00       HH:MI:SS, MI:SS or SS       Test								(0.2
6	y 🖫 💲 🚺		Test Cal	l Rating					? Help
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		O YYYY-MM- 2006-05-19 44625524678 charges based on porization based or 10	23:37:26	:MI:SS	Formul Expand Real cr Annour	ed Formula edit time:	ng a: MIN = 1 SEQ = 50 min. 0 sec. (3/ time: 50 min. 0 y: +1x1x0.1+2999	000 sec.) sec. (3000 se	
		Test	-				e history: +1x1x0.1		

Field	Description			
Date and Time	The date and time when the call is initiated.			
	Click on C icon to set the current time. The			
	"YYYY-MM-DD" opens a calendar that can			
	be used to select a date.			
Phone number	The phone number to call.			
Call duration	Estimated call duration.			
Available funds	Estimated available funds.			
	Results of the testing			
Formula	The rate formula used for the given			
	destination.			
Expanded Formula	The rate formula with the real interval and			
	price values.			
If the formula c	valculates the call cost based on its duration			
Charged amount	Charged amount for test call			
Real charge history	A short description of how the <b>Charged</b>			
	amount was calculated			
If the formula calcu	lates the call duration based on available funds			
Real credit time	The true maximum call duration.			

Announced credit	The announced maximum call duration.
time	
Real charge history	A short description of how the <b>Real credit</b>
	time was calculated.
Announced charge	A short description of how the <b>Announced</b>
history	credit time was calculated.

# **xDR Re-rating**

The xDR-rating page allows you to fix the most common problem: incorrect pricing information entered into a tariff. This may happen, if, for example, someone sends you the wrong pricelist, or your administrator simply clicks the wrong button, resulting in incorrect charges in the database.

To run the re-rating task, click the **I xDR Re-rating** button on the Tariffs page.

🙆 🗹 📰 🕏 🖬		Tariff I	Management		🕚 Europe/K	iev porta-support	? Help
🕨 🖪 Add 🛞 Close	e 🔋 xDR Re-ratin	g				📲 Logout	目 Log
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Name	Currency Appli	ed To Servi	ce Managed By	Routing	Descripti	ion Rates	Delete
<u>vDIDVWV - incoming</u>	SD Ver	dor Voice C	Calls	No			
<u>vExcellidata - Interop</u>	SD Ver	dor Voice C	Calls	Yes	Vendor Excellidat	ta 🔳	
	~						
6 🗹 📴 🕏		xDR I	Re-rating	0	Europe/Kiev p	orta-support	? Help
🕨 🗟 Create Ta	isk 🛞 Close				1	🛡 Logout	目 Log
	Tariff Type	Customer			1		
	Wrong Tariff	X_Rate_D	irect		<b>v</b>		
	Correct Tariff	Example	Customer Tariff		v		
	Customer	A11			v		
	From Date	20-06-200	DD-MM-YYYY 00	:00:00	HH:Mi:SS		
	🧾 <u>To Date</u>	Now	DD-MM-YYYY		HH:Mi:SS *		
	Rates Effective	💿 at the t	ime of re-rating 🔘	at the ti	me of call		
		0	Create Task				

Field	Description
Tariff Type	Select a specific type of tariff. Can be of the
	following type: Customer, Reseller or
	Vendor.
Wrong Tariff	Select the "original" tariff with incorrect
	pricing information entered.
Correct Tariff	Select the tariff with correct pricing
	information entered. This tariff should be of

	the same type as the <b>Wrong Tariff</b> one.
Customer/Reseller/	Select the specific customer, reseller or vendor
Vendor	due to the <b>Tariff Type</b> specified to narrow
	the set of xDRs to be processed.
From Date	Specify the start of the time interval for xDRs
	to be re-rated. Click the 🕮 icon to set up the
	desired date using the pop-up calendar.
To Date	Specify the end of the time interval for xDRs
	to be re-rated. Click the 🛄 icon to set up the
	desired date using the pop-up calendar.
Rates Effective	Choose the time when the rates associated
	with <b>Correct Tariff</b> become effective.

Click the **Create Task** button to launch the re-rating task.

#### **Re-rating and Volume Discount Counters**

If volume discounts are used when calculating call charges, it is no longer possible to treat such calls separately from others, since the way one call is charged affects all other calls made subsequently. For instance, if a call is charged \$5, this is the amount added to the volume discount counter. If the charged amount is then changed to \$1 during re-rating, this will affect all other calls in the same destination group, since they can now be charged at a different discount rate.

To overcome possible confusion when volume discount counters are involved in re-rating, this process should always be run from a specific moment in the past (when the error occurred) to the present moment. In this case, all discount counters will be rolled back before recalculation actually starts, and then updated with each re-rated call.

**NOTE:** Re-rating with volume discount counters only works with XDRs generated following an upgrade to the MR16 version, since older versions of XDR data do not have the full information required to roll back volume counters.

# Volume Discount Plans

Volume discount plans allows you to dynamically modify your rates depending on how much traffic a customer has already sent you. For instance, after he makes calls for 200 minutes (charged at the normal rate) he will get a 10% discount for every minute he calls over this limit.

A discount plan includes one or more discount schemes applicable to a certain destination group. "First 200 minutes for free, then normal rate with 10% discount over 500 minutes" is one such discount scheme, and it

may be applied to the destination group "Asia", which includes China, Hong Kong, Singapore, Thailand and other countries.

	oot <b>? Help</b>
► 🗄 Add 🛞 Close 🕅 Loge	jout 目 Log
Managed By Search	
ANY V Search	
Name Currency Managed By Description Delete	
Europe free 500 min USD Administrator only Europe first 500 minutes for free 🛛 🗙	
Russia 3% USD Administrator only Russia 3% for Spring 2006	
United States 5% USD Administrator only United States 5%	

Use the main Discount Plan Management screen to list all existing plans. Plans can be located using the search form, by selecting a reseller from the drop-down list, or entering the plan's name. To edit a discount plan, click on its name in the list. The Delete icon will be visible only when a discount plan is not in use (not assigned to any customer, account or product), and enables permanent deletion of the discount plan.

## Add/Edit a Discount Plan

To add a new discount plan to the system, select Add to go to the discount plan creation screen. An existing discount plan can be edited by clicking on its name in the list.

₫	<b>V</b>	\$				Add Dis	count Plan		() Europe/Prague	demoroot	🕑 Help
•	🖬 Save	🖬 Sa	ve & Close	🛞 Close	🖑 Objec	s				🕅 Logout	
			Plan Name Managed I	By Admini	strator on	Ly V	Currency USD	- US Dollar	¥		
			Gene	eral Info							
			Destinatio	n Group Set		EasyCall 📉	<ul> <li>*</li> </ul>				
			Counter R	eset		Once in bi	lling period 💌	z			
			Destinatio	n Group Loo	kup Type	-	stination As Rate Of Rate Destination				
			Descriptio	n			scounts, bundle all product	ed with			

Field	Description				
Name	The logical name of the discount plan object.				
Currency	Indicates which currency is used for billing calculations.				
_	All discounts in a plan are to be defined in this currency.				
	A discount plan can only be assigned to customers,				
	accounts and products using the same currency.				
Managed By	By default – administrator only. The plan can be				
	assigned to a reseller (Managed by NNN) so that it is				
	manageable from the Customer Self-Provisioning web				
	interface.				

Destination	Discounts can be defined for individual groups (e.g.
Group Set	US&Canada, Asia, Western Europe) within this set.
	Once chosen during discount plan creation, they cannot
	be changed later on.
Counter	Each discount has internal counters associated with a
Reset	corresponding account or customer. These counters
	store the current value in minutes (or charged amount)
	of calls made to a specific destination group. The
	counters go up according to the customer's or account's
	billing.
	• Never means the plan counters will never be
	reset (zeroed). This is convenient if you wish to
	provide a special promotion such as "500 free
	minutes of calls to Western Europe". In this
	case, the counter will always go up, and the
	normal rate will be applied after it reaches 500
	minutes.
	• Once in billing period means the counters of
	the plan will be reset when the customer's next
	billing period begins. If you have defined a "first
	500 minutes for free" discount, then the
	customer will have 500 free minutes in every
	billing period (month, week, etc.).
	Once chosen, this setting cannot be changed later on.
Lookup	• Same Destination As Rate – This requires
Туре	exactly the same prefix as the one in the tariff to
	be used in the destination group for the volume
	discount definition.
	• By Prefix Of Rate Destination – This provides
	more flexible matching, but puts more load on
	the billing engine.
	See the details below regarding the different matching
	models.
Description	Short description of discount plan.

#### **Phone Number Matching in Discount Plans**

When volume discounts are involved alongside "normal" rating as per the tariff plan, the billing engine must obviously match the ID of the service used (e.g. the phone number dialed) with one of the destination groups used in the volume discount definition.

The fastest and the most efficient way is to check whether the destination in the customer's tariff applicable to this call is included in any destination groups in the volume discount plan, and then keep using this volume discount. For instance, if a customer makes a phone call to 4206025551234 and a matching rate is defined in his tariff for 420602 (Czech Republic, Mobile), the billing engine will search whether any discounts in the volume discount plan are assigned to a destination group containing 420602.

But what if you would like to include the whole Czech Republic in your volume discount? One option would be to simply list all applicable prefixes (420, 4202, 420602, etc.) in a destination group, then use this group in the volume discount definition. Alternatively, you could use the other discount plan lookup option – "by prefix". In this case, the billing engine will look not for the exact same prefix, but rather for a destination group which contains a **matching** prefix. So if a call is made to 4206025551234 and there is a 420602 rate applied in the tariff, the billing engine will search for a destination group in the volume discount plan that includes a prefix matching 420602; such matching prefixes could be 420602, 420, or even 4. In this case you could just enter 420 in your volume discount definition, and it will then be used for calls rated by different tariff rates (e.g. 4202 and 420602).

Such extensive lookups put a higher load on the billing engine, so they should be used with caution, and only in volume discount plans where they are truly needed.

# Defining Discounts for Individual Destination Groups

After a volume discount plan has been saved, the Discounts tab will become available. To add a new discount to the plan, click the **Add** button. An existing discount can be edited by clicking the **Edit** icon on the row containing its details.

۵	<b>&gt;</b>	5			E	dit 'EasyCa	all' Discount P	lan			
•	🔁 Add	🖬 Save	🖃 Sa	ve & Close	🛞 Close	街 Objects				🕅 Logout	E Lo
Plan Name EasyCall Currency USD Managed By Administrator only General Info Discounts											
	General	Info Dis	counts								
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Edit				Service Calls	•	Volume, m	Type *	Discount Schen	ne 💋	Exclusive D	elete

Field	Description
Destination	Enter the name of a destination group manually, or click
Group	the column header link ( <b>Destination Group</b> ) to choose
	a group from a searchable list inside the pop-up
	window.
Service	Choose a specific service (voice calls, messaging, data
	transfer, etc.) that this volume discount will apply to.
	You can bundle discounts for multiple services into the
	same volume discount plan.
Туре	Select the threshold type: will you use thresholds based
	on the charged amount, or on the total call time?

	<ul> <li>Amount means the threshold is measured in currency units (e.g. USD), and the counters will go up by the amount which the customer should have been charged for the call before the volume discount was applied.</li> <li>Volume means the unit is minutes, and the counters will go up by the same value as the charged call duration. Note the difference between <i>call duration</i> and <i>charged call duration</i>. For instance, if a rate specifies 5 minutes rounding and a customer has spoken for 3 minutes 42 seconds, he will be charged for 5 minutes and the counter will go up by 5 minutes as well.</li> </ul>
Exclusive	Defines whether an account should be granted exclusive free calls, i.e. calls to which a 100% discount is applied (these calls do not affect the customer's counters). See the <b>PortaBilling Administrator Guide</b> for more details.
Discount	Since the discount formula is complex, you cannot edit
Scheme	it directly. Click on the column header or the 22 icon in order to launch the discount definition wizard (see the section below).

# **Discount Definition Wizard**

The discount wizard provides users with a flexible tool for defining threshold values and corresponding discount values. A threshold defines the maximum counter value (call duration or charged amount) within which the current discount may still be applied. If the last available discount is to be applied regardless of the counter value (e.g. first 200 minutes – normal rate, up to 500 minutes – 10% discount, and 20% discount after that) then this last discount will be created with a special unlimited threshold.

	Discount Wizard							? Help	
•	🔁 Add	🖬 Save	🔒 Save & Clo	se 🛞 Close					
			Edit	Threshold, r	nin*	Discount, % *	Delete		
			📑 Unlin	nited	Unlimited	20	×		
				200		0	×		
				500		10	×		
				Unlimited	I	20	×		

Field	Description
Threshold	The threshold value is measured either in currency units
	or time units (minutes), according to the type of discount. The value entered must be numeric (with a period allowed) and greater than zero. To provide a

	special unlimited value for the threshold, check the				
	Unlimited box. You cannot have two discount rows				
	with the same threshold values.				
Discount	The percentage discount value must be numeric (with a				
	period allowed) in the 0 – 100 range. A 0% discount				
	means "standard rate applied", while a 100% discount				
	means "free call".				

The billing engine decides which discount is to be applied, depending on whether the counter for the given destination has reached one of the defined thresholds. Note that the "charged amount" counters record charges as they are defined in the tariff, i.e. before a volume discount is applied. If there is no "Unlimited" threshold discount, and the counter exceeds the last (i.e. biggest) threshold, any further calls will be billed according to the standard tariff rate.

#### For example:

Discount type - Volume, minutes

The discount is defined as 0..100 - 50%; 100..200 - 20%; 200..unlimited - 10%

The first 100 minutes are billed at a 50% discount (half the price specified in the tariff), the next 100 minutes are billed at a 20% discount, and thereafter all calls receive a 10% discount.

The discount is defined as 0..100 - 100% The first 100 minutes are free; all minutes above that are billed at the tariff rate.

Discount type - Amount, USD. The tariff rate for the given destination is a flat 0.5 USD per minute.

The discount is defined as 0..10.00 - 0%; 10.00..20.00 - 10%; 20.00..unlimited - 20%

When the customer begins making calls, each call is charged according at the normal rate until the total charged amount exceeds \$10.00. After that, the customer is given a 10% discount on calls.

**NOTE:** Let's look at a situation in which a customer's balance is \$10.00 (and the volume discount counter is also \$10.00). The customer makes a 30-minute call, and the tariff rate is \$0.20/min. The call is charged as 30 \* 0.20 - 10% = \$5.40, and this value is stored in the CDR for the call. Thus the customer's balance will be modified by \$5.40, to become 15.40. At the same time, the volume discount counter will go up by the amount without the discount. Thus the counter will go up by \$6, to become \$16.00.

# **Subscription Plans**

Subscription plans enable automation of recurring non-call related charges applied to your customers: for instance, basic monthly fees or fees for additional services such as voicemail or hardware rental.

ຝ	Image: Second	\$	<b>i</b>	🛛 Subscri	ption P	lan M	anagen	nent 🖲 America,		demo-root	? Help
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		I	raveller	's Plus	USD	Adminis	trator only	Traveller's Plus		×	
		V	/oice Ma	ail	USD	Adminis	trator only	Voice Mail - 1 FRE	E month	×	

Use the main Subscription Plan Management screen to list all existing plans.

## Add/Edit a Subscription Plan

To add a new subscription plan to the system, select Add to go to the subscription plan creation screen. An existing subscription plan can be edited by clicking on its name in the list.

₫	y 🔚 💲 🖬 🖂	Add Subscription Plan	America/Vancouver	demo-root	? Help
•	🖬 Save 📓 Save & Close	🛞 Close		🕅 Logout	
	Name Traveller's Plus Managed By Administrator				
	General Info Periodic Fe	es			
	Invoice Line Description	Traveller's Plus			
	Subscription Is Activated	Upon the account's first usage 🛛 👻			
	Activation Fee	0 USD			
	Minimum Subscription Period	12 Months			
	Early Cancellation Penalty	100 USD*			
	Subscription Charges Applied	At the end of the billing period 💙			
	Round Charged Amount	XXXXX.XX000			
	Description	Traveller's Plus			

Field	Description				
Name	The logical name of the subscription plan object.				
Managed By					
	assigned to a reseller (Managed by NNN) so that it is				
	manageable from the Customer Self-Provisioning web				

	interface.
Currency	Indicates which currency is used for billing calculations.
	All fee amounts in the plan are to be defined in this
	currency. A subscription plan can only be assigned to
	customers, accounts and products using the same
	currency.

#### **General Info tab**

Field	Description					
Invoice Line	The subscription plan name as the end-user will see it					
Description	on the invoice.					
Subscription	Specifies from which date subscription charges will					
Is Activated	apply:					
	• At the given start date – the first billed day is the					
	subscription start date.					
	• At the account's first usage – charges are applied					
	only from the later of the subscription start date					
	or the account first usage date.					
Activation	A one-time fee applied when the subscription is					
Fee	activated.					
Minimum	Time interval (in months) during which the subscription					
Subscription	must remain uninterrupted so as to avoid penalties.					
Period						
Early	A one-time fee applied if the subscription is cancelled					
Cancellation	earlier than the minimum subscription period.					
Penalty						
Subscription	Defines the way subscription charges are applied to a					
Charges	customer's account:					
Applied	• At the end of the billing period - The customer					
	is charged the full subscription fee at the end of					
	the billing period.					
	• Progressively - A prorated service charge is applied on a day-by-day basis, depending on the					
	time the service was used during this period. For example, if the monthly subscription fee is					
	\$9.99, a progressive charge of \$0.33 will be					
	made daily, so that on the 10 <sup>th</sup> day the					
	subscription charges will total \$3.33.					
	• In advance - Subscription charges are applied in					
	a such way that when a billing period is closed,					
	the customer is charged for N consecutive					
	billing periods following the current one. For					
	instance, if N is set to 2, and the customer has a					
	monthly billing period, subscription charges for					
	May and June will be made when the April					
	billing period is closed.					

Periods In	Only available for subscription plans charged in			
Advance	advance; specifies for how many periods advance			
	charges should be made.			
Round	A pattern that defines the rounding of the amount			
Charged	charged for a billing period (e.g. when the monthly			
Amount	subscription amount is \$10.00, but the service was only			
	used for 10 days, it is desirable to round the applicable			
	charge of \$3.33333). This pattern takes the form			
	XXX000. An X (to the left) means that the digit(s) in			
	this position will be left unchanged, while a zero (to the			
	right) means that this position will be rounded. For			
	example, XXXXX.XX000 means that the amount will			
	be rounded up to two decimal places, so that 1.2345			
	becomes 1.24. Note that rounding is always done			
	upwards.			
Description	An extended description of this subscription plan.			

#### **Periodic Fees tab**

In this tab you may define recurring fees which are applied to your customers while a subscription is active, as well as special promotion periods. The rate structure is organized as a table, where columns define the rates for different billing periods, and table rows specify the rates for different phases of the customer's lifetime. The table of periodic fees must include at least one row (marked **Default Rate**) which specifies the normal rates applied by default. If you wish to define a special promotion (e.g. a reduced rate for the first three months), you may insert an extra row into the table to cover this period.

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•	🕂 Add	🖬 Save 📓	Save & Close	S Close						▶¶) L	ogout	🖬 Log
	Name     Traveller's Plus     Currency     USD       Managed By     Administrator only       General Info     Periodic Fees											
				Monthly	y Billing	Bi-week	ly Billing	Weekl	y Billing	Daily	Billing	
Ed	Edit Up/Down Default/promotional rate		iotional rate	N *	Fee, USD*	N *	Fee, USD*	N *	Fee, USD*	N *	Fee, USD*	Delete
		First N billing	periods	1	0	2	0	4	0	30	0	×
		Following N b	illing periods	6	4.99	12	2.89	26	1.36	180	0.25	×
=		Default Rate		unlimited	9.99	unlimited	5.49	unlimited	2.99	unlimited	0.49	
	Monthly Billing         Bi-weekly Billing         Weekly Billing         Daily Billing           1 month(s):         0 USD         12 bi-week(s):         0 USD         14 week(s):         0 USD         130 day(s):         0 USD           27 month(s):         4.99 USD         314 bi-week(s):         2.89 USD         530 week(s):         1.36 USD         31210 day(s):         0.25 USD           8unlimited:         9.99 USD         15unlimited:         5.49 USD         31unlimited:         2.99 USD         211unlimited:         0.49 USD											

Field	Description
Default/Promotional	Specifies whether this is a rate which applies for a
rate	certain initial period, which rate which follows it
	(additional promotion), or if it is a default rate.
Ν	Promotion span – the number of billing periods

	covered by this fee.
Fee	Amount of the fee.

After you have edited a specific row, click **Save** to confirm that you have finished editing this row. (You still need to save the whole form – use **Save** in the toolbar for this.)



For your convenience, the periodic fee table in Edit mode provides autopopulation of the fields:

- If you type a value in one of the span (**N**) columns, a re-calculated value will be entered automatically in all other empty columns. For instance, say you plan to define a special promotion for the first month. If you type 1 in the **N** column under the **Monthly** billing period, the **N** columns for Bi-Weekly, Weekly and Daily billing periods will be automatically filled with 2, 4 and 30 respectively.
- If you type a value in one of the **Fee** columns, a re-calculated value will be entered automatically in all other empty columns. For instance, when defining a special promotion for the first month as mentioned above, if you type 9.99 in the **Fee** column under the **Monthly** billing period, the **Fee** columns for Bi-Weekly, Weekly and Daily billing periods will be automatically filled with 4.995, 2.331 and 0.333 respectively.

Also, below the table in which you enter periodic fees you may see another table providing an extended explanation of the fee structure.

# Products

A product is a combination of services that you provide to a customer for a price. For example, you decide to sell calling cards with 10 cents/minute calls to the Czech Republic for calls to a local access number in New York, and 15 cents/minute + 50-cent connection fee for calls to a tollfree line. In this case, your product will include two types of service:

- access via the local New York number, and
- access via the toll-free line,

with price parameters associated with each service.

Accessibility is the main component of a product definition. It specifies where your customers are allowed to use a service and how they should be charged for it. Accessibility allows you to specify the following parameters which define an access point:

- 1. The type of service provided.
- 2. The node on which the service is used. What exactly does "node" mean in this context? If, for example, a customer calls to gateway A, enters his PIN, and makes an outgoing call which is terminated

on gateway B, is he using a service on node A, node B, or both? The correct answer is that the service is regarded as having been provided at the point where authorization was performed. In this example, since PIN authorization is performed on node A, it is node A which must be listed in the accessibility.

- 3. Identification of the access code (method) on that node. This parameter allows you to use different rate plans for the same service. For example, you may choose a rate plan according to the PSTN access number (local or toll-free) that the customer has dialed. Or you may use different rate plans for outgoing, incoming and forwarded calls in your IP calls service. (While for services such as prepaid cards the access code is a number, for other services any string may be used, so long as it is one provided by the application handling the call).
- 4. Originating line information (this is applicable only to the voice call service, where the call originates on the PSTN network). You can separate accessibility entries based on originating line information (e.g. whether the call was made from a home phone or a pay phone). Make sure your telecom provider supplies you with this information in the call setup.

🙆 🗹 📴 🕏 🖬 🖂	Add Product		? Help
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	all USD - US Dollar V nistrator only V Maintenance Fee		
Breakage			
Overdraft Protection	Debit accounts only		
Account Default ACL	Account self-care		
Default Discount Plan	None		
Info URL			
Description			

The basic information for defining a product is as follows:

Field	Description
Product	The logical designation of the product.
Name	
Currency	The currency in which the product will be maintained.
	To edit a currency, delete all accessibility entries for this
	product.
Managed By	Administrator only (default) means that this product
	will be used for your direct customers and is accessible
	only to your administrators. Select a PortaBilling reseller
	to assign this product for use by a particular reseller.

Breakage Overdraft Protection	<ul> <li>This value should be set by the administrator based on the currency and minimum price per minute. It is used in Account Management to obtain a summary of "depleted" (practically unusable) accounts.</li> <li>How it works: An account user could have a very small balance, e.g. 0.015. This is not enough to make calls to most destinations, except perhaps calls to technical support and certain local calls. Thus, even though the account's balance is not yet zero, the account is basically unusable (and the customer will probably never use it). The administrator is interested in how many accounts are in this state, i.e. how many accounts are depleted.</li> <li>None – When the locking of funds is requested, this will be done separately for each session, and will not affect other sessions; so, effectively, there will be no "locked" funds. This method provides backward compatibility with "Fraud Protection Off" mode in previous releases. For obvious reasons, it is not recommended for general use.</li> <li>Debit accounts only – Fund locking is done only for debit accounts. This is identical to PortaBilling's default behavior in Maintenance Release 18 and older.</li> <li>All accounts – Fund locking is done for all account types.</li> </ul>
Account	Which ACL should be assigned to new accounts created
Default ACL	with this product.
Default	Which Discount Plan will be used with all the product's
Discount	accounts by default.
Plan	
Info URL	URL to an external website describing product features.
	Customers can access it by clicking on the Product
	Info link in the main menu of their self-care interface.
Description	Product description.

#### **Maintenance Fee**

In most cases, you will use subscription plans rather than maintenance fees to apply periodic charges to your customers.

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Field	Description
Period	Defines how often to apply the maintenance fee. The
	maintenance fee will be charged on the first day after an
	account is used for the first time, or on the date
	specified in the Maintenance Charging option, and
	thereafter according to a specified period, e.g. every
	week.
Fee	Only defined when a maintenance period is set; the
	amount to charge any account using this product
	according to the schedule defined by the maintenance
	period.
Effective	Defines when the maintenance fee starts to be applied.
From	

# **Product Accessibility**

Accessibility defines where users of this product can use the service, and how they will be charged for it.

# **Tariff per Access Point**

By default, you define different ways of charging for your service based on the way the service is accessed (a combination of parameters such as node, access code, etc.). For example, when a user calls your gateway via a toll-free access number, a different (more expensive) tariff will be applied than if he were calling via a local access number.



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**NOTE:** The Accessibility tab is invisible in Add New mode, and will appear only when editing an existing product.

## To add a new Accessibility entry:

- 1. Click the **Add** button to access the **Add Accessibility** screen.
- 2. Choose a **Service**.
- 3. Choose a **Node** where the service will be provided.
- 4. Type in the **Access Code** value (if required) and select the appropriate value from the **Info Digits** menu.
- 5. In the Default Tariff drop-down list, you can choose a specific tariff that should applied to the customer.
  For the Voice Calls service, you can also choose the special entry Assign Tariff per Routing Plan, in order to define additional tariff routing plan combinations. A specific tariff will be applied based on which routing plan was used for a particular call.
- 6. Click the **Save** button.

## **Assign Tariffs per Routing Plan**

For a voice call service, you can also choose to apply a different tariff based on which routing plan (i.e. which set of vendors – cheaper or more expensive ones) was used to terminate the call to the PSTN network. Thus if a customer chooses to use premium routes, he will be charged more, while if he uses a routing plan that includes low-cost carriers, he will be charged less.

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Switching from the "simple" use of one tariff for outgoing calls, regardless of the routing plan, is a step that requires attention to detail. You are already able to assign any routing plan to any customer; and in MR19 all accounts will automatically be assigned the same routing plan that was previously assigned to their customer. If the administrator now reconfigures the product to use "tariff per routing plan", but does not take into consideration that some customers had a particular routing plan assigned to them, and thus omits that routing plan from the accessibility, an unpleasant situation may arise. Now when a customer with an account whose routing plan has been omitted tries to make a phone call without specifying a selection code, the call will be rejected, since the product's accessibility effectively says: "We don't want customers of this product to use this routing plan!". In order to prevent this happening through an operator error, PortaBilling pre-populates the table for routing plan/tariff

mapping with **all** the routing plans currently assigned to accounts of this product. You then have a clear overview of all the routing plans that are being used, and can decide which tariff should be applied to each of them.

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# To edit the Accessibility list:

- 1. Click the (Edit) button
- 2. Choose the service, node, info-digits and tariff from the dropdown lists
- 3. Type in the Access Code value, if any
- 4. Click the **Save** button

### **Subscriptions**

This tab allows you to define a list of subscription plans which are mandatory for this product, so that these subscriptions will be automatically applied to every account to which this product will be assigned.

"	🖂 Edi	t 'SmartCall Prepaid' Product	America/Vancouver	demo-root	
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**NOTE:** The Subscriptions tab is invisible in Add New mode, and will appear only when editing an existing product.

## To add a new Subscription entry:

- 1. click the 🖸 Add button
- 2. choose a subscription plan from the drop-down lists
- 3. click the **Save** button

## **Online Signup**

Online signup allows automated creation of accounts (and customers, if necessary) when an end-user fills in a subscription form and payment card information and then, having successfully completed the subscription process, receives the credentials necessary to make phone calls.

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🕨 🖬 Save 📓 Save & C	se 🛞 Close 🖉 Rate Lookup	📲 Logout 🗧 Log
Manag G HTTP_	eral Info Maintenance Fee Online Signup Accessibility Subscriptions Notepad FERER https://demo.portaone.com/subscribe.html Module	

Numerous online signup frontends can be developed using a combination of the "HTTP\_REFERER" and "Validation Module" fields.

Read about "How to configure online web signup" in the **PortaBilling** Administrator Guide.

### **Service Features**

You can define the default values of service attributes for all accounts which this product will be assigned to (naturally, you can override them at the account level later on).

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		luct N aged		artCall Pre ninistrator			* 0	Currency US	ЗD						
		Gen	eral Info	Mainten	ance O	nline S	Signup Ac	cessibility	Subs	scriptions	Notepad	Service Features			
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## **Clone Product**

Product configuration is an important step, since you need to specify all the accessibility entries properly in order to ensure the correct functionality. To minimize the amount of work required to create new products, PortaBilling100 allows you to create them as clones of existing ones. In this case, PortaBilling100 will copy all the tariffs used in an old product and generate a replica of it. The new product will have exactly the same accessibility entries, except that they will now refer to the newly created tariffs.

Administrators can clone all existing products within the environment, while resellers are limited to cloning only those products they have access to. Any modifications in the newly created product will not affect tariff or rate data configuration within the old product.

To clone a specific product, click the 🖻 **Clone** button in the toolbar on the Edit Product page. Give the new product a name, then click the **Save** button.

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Product Name SIP Managed By Admi	accounts nistrator only	*	Currency USE				
General Info	Maintenance	Online Signup	Accessibility	Subscriptions	Notepad		
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₲ ⊻ 🖱 🕏 [	i 🖌 🛛	Clone 'SIP a	accounts' P	roduct	() America/Vancouve	r demo-toor	? Help

	Image: Second	\$ 1	Clone	'SIP accounts' Product		P Help
•	🖬 Save	📓 Save & Close	🛞 Close		💵 Logout	
				Name <sup>*</sup> SIP accounts (cloned)		

**NOTE:** Cloning may take a significant amount of time, depending on the amount of data involved. The new product will appear in the product list only after the cloning is complete.

# **Vendor Management**

Vendors are your service providers, e.g. termination partners or incoming toll-free line providers. Every time a call travels from your network to a vendor (via telephony or VoIP) there is a cost associated with it, and at this point PortaBilling will charge the account and customer for the call, as well as calculate your termination costs.

On the Vendor Management screen, you can view a list of all registered vendors. This list provides the following information and activities:

6	<b>&gt;</b>	<b>s</b> i		Vendo	or Manag	ement					? Help
•	🔁 Add	🛞 Close	📲 Objects							M Logout	目 Log
					Sear						
						Sea	rch				
			xDRs	Name	Connections	Currency	Balance	E-mail	Delete		
			$\square$	Arbinet	2	USD	0.00000				
				<u>iBasis</u>	🔀 1	USD	0.00000				
			P	SIP-to-SIP calls	🔀 1	USD	0.00000				
				Voxbone	🔀 1	USD	0.00000				

Column	Description
xDRs	Click the View ( ) icon to go to the xDR view page for
	this vendor.
Name	The vendor's name.
Connections	Click the connections $(\mathbb{X})$ icon to be taken to the
	connections management page for this vendor. The
	number next to the icon shows the number of
	connections defined for this vendor.
	Read more in the Connections section below.
Currency	The currency in which the vendor's account is
	maintained and paid.
Balance	The vendor's current balance.
E-mail	E-mail contact for the given vendor.
Delete	Click the delete (X) icon to remove the vendor. The
	delete button will only appear if there are no xDRs or
	connections defined for the vendor.

# Add/Edit Vendor

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•	🖬 Save 📓 Save	& Close 🛞 Close				M Logout	
	Vendor Name 🛛	-Telecom	*	Currency Opening Balance	USD - US Dollar 💌	*	
	Address In	nfo Additional Info	User Interface				
	Company Name Mr./Ms./ First Name Last Name Address	11 Broadway, #	M.I	Contact 917-55 Phone 917-55 Fax Alt. Phone Alt. Contact C E-mail billing@	5-1234		
	Province/State	NY					
	Postal Code	01202					
	City	New York					
	Country/Region	USA					

The Add Vendor page allows definition of a new client entity within PortaBilling. The information required is split into two tabbed sections: Address Info and Additional Info. The Edit Vendor page also contains the Notepad tab for making notes. The following information is required at the top of the form:

Field	Description
Vendor Name	Defines the vendor name as it will appear within the
	PortaBilling system. This is distinct from the
	Company Name field in the Address Info tab.
Currency	A currency must be specified by selecting it from the
	drop-down list of available currencies.
Opening	The starting balance for the vendor.
Balance	-

The information in all the other tabs is optional, and need not be specified when creating a vendor.

## Maintenance

The Maintenance tab allows the administrator to correct a vendor's balance.

Field	Description
Action	Manual charge: Use this transaction to adjust
	the vendor's balance in case of non-call related
	charges from the vendor. For instance, if the
	vendor is charging you for an equipment
	purchase.

	Manual refund: Use this transaction if you
	have received credit to your account. For
	instance, if you complained about the vendor's
	service quality and have agreed for certain
	funds to be credited toward future services.
Amount	Amount to charge/refund.
Visible comment	A comment on this transaction visible to the
	vendor in the xDR browser.
Internal comment	An internal comment on this transaction; not
	visible in the xDR browser, and only accessible
	directly from the database.

# **Additional Info**

Field	Description
Billing Period	Defines the frequency of invoicing for this vendor.
Offset Balance	Defines the customer for automatically offsetting the
with Customer	vendor's balance (if this vendor also sends you traffic,
	i.e. he is also your customer). You may only choose a
	reseller or retail customer defined with the same
	currency.
Minimum	When the balance reaches the threshold value, the
Amount to	current vendor's balance will be applied as credit to
Offset	the chosen customer and reduced to zero. xDR
	records for both the vendor and the customer will be
	created for this transaction.

# **User Interface**

The User Interface tab content is identical to that described in the User Interface subsection of the User Management section of this guide.

# Accounts

When you send traffic to the vendor's network, both parties are interested in securing the connection so that no one else can send traffic to the vendor, as this would then be billed to your account. When using SIP, it is possible to do this in a very convenient and secure way: by using digest authentication. In this case, the vendor will provide you with a username/password, which will be used to authorize every outgoing call from your network to this vendor. Here you can enter information about such accounts, so that they can be provided automatically by billing to the SIP server.

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•	🔁 Add	🖬 Save	: 📄 Save	& Close 🛞 Close	🔳 xDRs	💥 Connections				🕅 Logout	目 Log
Vendor Name MCI Vendor Opening Balance 0.00000 USD Balance 18.58369 USD											
	Address 1	nfo M	aintenance	Additional Info	User Interfa	Accounts	Notepad				
Edit		Name *		Login *		Passwor	d	Delete			
=	Jim Turner jimvoip			********	*	×					
		Paul Allo	t	pallot		********	*	×			

# Connections

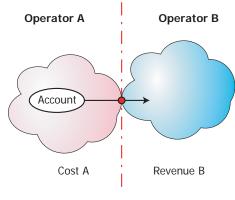
# Definitions

### Network

VoIP network - one or more VoIP entities that belong to a single operator.

# Connection

Point of change of network ownership. Defined as a set of physical and logical parameters i.e. IP, Port, Timeslot, Call Type, Call Direction, etc.



Cost A = Revenue B

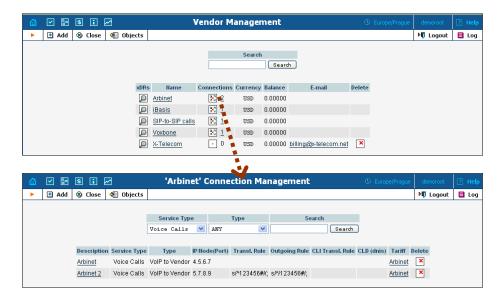
# Operator

Network owner. Responsible for internetworking and wholesale in its network.

A connection defines the point where a call travels between the networks of two operators, one of whom is a PortaBilling owner. At this point, we will create an xDR for the vendor (the other operator) describing our costs. Also, if this was an outgoing call, we will create xDRs for both the account and the customer. You can access connection information directly from the main menu. In this case, all connections defined in the system will be displayed.

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<ul> <li>S Clo</li> </ul>	se 🛛 🐗 Objects									► Logout	📒 Lo
		Vendo	r	Serv	rice Type	Туре		Search			
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Description	n Vendor	Service Type	Ту	pe	IP/Node(Port)	Transl. Rule	Outgoing Rule	CLI Transl. Rule	CLD (dnis)	Tariff	Delete
<u>Arbinet</u>	Arbinet	Voice Calls	VoIP to	Vendor	4.5.6.7					Arbinet	×
<u>Arbinet</u> <u>Arbinet 2</u>	Arbinet Arbinet	Voice Calls Voice Calls		Vendor Vendor		s/^123456#//;	s/%123456#/;			Arbinet Arbinet	×
			VoIP to	Vendor		s/^123456#//;	s/%/123456#/;				
Arbinet 2	Arbinet	Voice Calls Voice Calls	VoIP to VoIP to	Vendor Vendor	5.7.8.9	s/^123456#//;	s/4123456#/;			Arbinet	×

Alternatively, you can access a list of connections for a particular vendor. To do so, click the  $\mathbb{R}$  icon next to the vendor name in the vendor list, or click  $\mathbb{R}$  **Connections** in the toolbar on the vendor info screen.



To edit a connection, simply click on the connection description in the table. To add a new connection, first go to the list of connections for a specific vendor, then select **Add**.

۵	y 🗄 💲 i 🖌	Add Connectio	on for 'X-Telecom'	③ Europe/Prague	demoroot	? Help
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		Description	X-Telecom termination	×		
		Service Type	Voice Calls 🛛 👻	×		
		Туре	PSTN to Vendor 🛛 👻	×		
		Node	Cisco-GW 💌	×		
		Port	ISDN 0%			
		Tariff	X-Telecom 💌	×		
		Capacity	30	×		
		Hide CLI Mode	Clear caller info 🛛 💌			
		Translation Rule	s/^011//;	🎾 🕐		
		Outgoing Rule		0		
		CLI Translation Rule				

Field	Description
Description	A logical description of the connection.
Service Type	The type of service this connection is used to transport (voice calls, Internet connectivity, etc.).
	<b>NOTE:</b> While services are used to represent and bill your customers' activities to them, you use service types to define a connection, since in this case it is important to know what actual (physical) service was provided.
Туре	<ul> <li>The type of this connection. The available types depend on the service type chosen above. For the Voice Calls service, the applicable types are: <ul> <li>PSTN from Vendor - Vendor-related expenses for delivering calls from your customers to your network (e.g. toll-free lines) via a PSTN trunk to your gateway.</li> <li>VoIP from Vendor - Vendor-related expenses for delivering calls from your customers to your network (e.g. foreign DIDs) via VoIP to your SIP server.</li> <li>PSTN to Vendor - Your expenses for terminating calls on a vendor's network via a PSTN trunk on your gateway.</li> </ul> </li> <li>VoIP to Vendor - Your expenses for terminating calls on a vendor's network by sending them over an IP network to his gateway or proxy.</li> </ul>

Other available fields on the **Add Connection** form vary depending on the service type and type of connection chosen.

₫	<b>&gt;</b>	\$ : 🖂	Add	Connectio	on for 'X-Telecom'			demoroot	? Help
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				Description	X-Telecom termination	×			
				Service Type	Voice Calls	*			
				Туре	PSTN to Vendor	*			
				Node	Cisco-GW	<ul> <li>*</li> </ul>			
				Port	ISDN 0%				
				Tariff	X-Telecom	*			
				Capacity	30	*			
				Hide CLI Mode	Clear caller info 💦 🎽	1			
			Tr	anslation Rule	s/^011//;	2	]		
				Outgoing Rule		(?)			
			CLI Tr	anslation Rule		<b>&gt;</b>	]		

Field	Description
Node	Name of the node used for this connection. Not
	available for "VoIP to Vendor" connections.
Port	Only on PSTN-related connections. The specified port
	for PSTN origination or termination. The port can be
	set using wildcards:
	"_' - match any symbol
	"%' - match any sequence of symbols
	The wildcard symbols <b>**</b> and <b>??</b> should not be used.
Tariff	The tariff used to calculate the cost of terminating calls
	via this connection.
Capacity	The number of simultaneous sessions this connection
	can support. This parameter is only used to correctly
	scale the load graph for the connection, and not for
	actual call handling – this is done by the gateway itself.
The following	column is only available for "PSTN from Vendor" connections:
CLD	Specifies the access number the customer dialed in
	order to reach your network.
Info Digits	Info Digits is ISDN Originating Line Information sent
	by the gateway, which allows accounts to be billed
	depending on where the call is originated from. Simply
	associate the corresponding tariff with any OLI in
	Accessibility.
	Please note that the gateway should be configured to
	support OLI.
	g column is only available for 'PSTN to Vendor" connections:
Hide CLI	Describes how outgoing calls for which privacy has
Mode	been requested by the caller should be displayed to the
	vendor.
	• Clear caller info – PortaSwitch will remove all
	information about the caller from the call
	initiation info sent to the vendor.

# Connections with Voice Calls Service Type and PSTN Type

	• Use private headers – The outgoing call
	initiation request will contain special flags
	1 1 0
	requesting the vendor to hide the caller
	information from the call recipient.
Translation	Rule applied to convert a number from a vendor-
Rule	specific format into the unified format used in billing.
	Click the wizard icon 🖄 to launch the Dialing Rules
	wizard; click the test icon 😰 to pop up the Test Rule
	window.
Outgoing	If necessary, a received number can be modified before
Rule	sending it to the vendor (for example, if a tech prefix is
	required). This is only applicable if the node which
	routes the call retrieves routing information from
	PortaBilling (e.g. PortaSIP or MVTS). This will be filled
	in automatically if you use the Dialing Rules wizard.
CLI	Translates the CLI (ANI) to a vendor-specific format
Translation	when routing a call to the vendor's network.
Rule	_

# Connections with Voice Calls Service Type and VoIP Type

☆ ☑ ☜ ☜ 🖬 🖌 🛛	Add Connection for 'iBasis'	Europe/Prague     Euro	demo-root	? Help
🕨 🝙 Save 📓 Save & Close 🛞 Close			▶¶ Logout	目 Log
	nation to iBasis <b>* Type</b> VoIP to Vendor • Calls <b>*</b>			
General Info				
Routing Protocol	H323 SIP			
Routing Criteria	New criteria 💙			
Remote IP	192.168.0.100 *			
RTP Proxying	Optimal 💙			
Tariff	Vendor tariff 💉 💌			
Capacity	100 *			
Hide CLI Mode	Clear caller info 💙			
Vendor Account	None			
Translation Rule	s/^123456#//; 📝 👰			
Outgoing Rule	s/^123456#//;			
CLI Translation Rule				

Field	Description		
The followin	The following column is only available for "VoIP to Vendor" connections:		
Routing	Defines what routing criteria will be applied to this		
Criteria	connection.		
Remote IP	IP of the remote gateway. The value in this field should		
	take one of the following forms:		
	• An IP address, e.g. 23.45.67.89		
	• An IP address and port, e.g. 34.56.78.90:5062.		

	This is required if the remote gateway uses a
	port different from the standard one.
	<ul> <li>Special keywords any or SIP-UA</li> </ul>
	• Prefix with IP address and port, in the form
	PREFIX: <prefix>[@[<gwname>/]<ip>[:<por< th=""></por<></ip></gwname></prefix>
	t>]]; e.g. prefix:1234@1.2.3.4:5061;
	Such a combination of prefix-based and IP-
	based connection is used for both prefix-based
	billing and routing. This may happen if the same
	gateway without Radius capability is used to
	terminate calls to several vendors.
RTP	Describes the NAT traversal capabilities of the remote
Proxying	gateway:
	• Direct - RTP stream should be sent directly to
	this node; RTP proxy should not be used.
	• Optimal - This node is capable of NAT
	traversal; no RTP proxying is required unless
	specifically requested.
	• OnNat - This node is not capable of NAT
	traversal; engage RTP proxy if the other party is
	behind NAT.
	• Always - When sending a call to this node,
	always engage RTP proxy, so that no media
	stream goes to it directly.
Tariff	The tariff used to calculate the cost of terminating calls
	via this connection.
Capacity	The number of simultaneous sessions the connection
	can support. This parameter is used only to correctly
	scale the load graph for the connection, and not for actual call handling – this is done by the gateway itself.
Hide CLI	Describes how outgoing calls for which the caller has
Mode	requested privacy are to be displayed to the vendor.
Mode	Clear caller info – PortaSwitch will remove all
	information about the caller from the call
	initiation info sent to the vendor.
	• Use private headers – The outgoing call initiation request will contain special flags
	initiation request will contain special flags requesting the vendor to hide the caller
	information from the call recipient.
Vendor	Defines which username/password should be used for
Account	authorization of calls via this connection.
Translation	Rule applied to convert a number from a vendor-
Rule	specific format into the unified format used in billing.
	Click the wizard icon $\mathbf{\tilde{Z}}$ to launch the Dialing Rules
	wizard; click the test icon 🗹 to pop up the Test Rule
	wizard; click the test icon with to pop up the Test Kule window.
1	willdow.

Outgoing	If necessary, a received number can be modified before	
Rule	sending it to the vendor (e.g. if a tech prefix is required).	
	This only applies if the node which routes the call	
	retrieves routing information from PortaBilling (e.g.	
	PortaSIP or MVTS). This will be filled in automatically	
	if you use the Dialing Rules wizard.	
CLI	Translates the CLI (ANI) to a vendor-specific format	
Translation	when routing a call to the vendor's network.	
Rule	_	

The following two columns are visible only if you are using multiple protocols in your system and have the ShowConnectionProtocol feature enabled. By default this option is turned off, and every connection is assumed to be SIP-capable only.

Field	Description
H323	Check if this connection is capable of handling H323 calls.
SIP	Check if this connection is capable of handling SIP calls.

# **Connection Load**

PortaBilling automatically updates load graphs based on the number of calls going through a connection. To access the load graph for a specific connection, open the connection details page and click the **Load** icon in the toolbar.

# **Customer Classes**

A customer class is a definition of various properties (e.g. invoice terms) which can be easily applied to a large number of customers.

On the Customer Class Management screen, you can view a list of all currently defined classes. This list provides the following information:

🏠 🗹 🗃 😫 🖬 🖌 🤇	Customer Class M	anagement 🕚 America/Vancouv		? Help
► Add ⊗ Close			M Logout	📕 Log
	Managed by	Search		
	ANY	Search		
Nai	me Managed by	Description	Delete	
Enterpris	ise Administrator on	y Enterprise Customer Class		
Europea	an Union Administrator on	y European Union Customer Class	×	
North Ar	merican Administrator on	y North American Customer Class		
Retail	Administrator on	y Retail Customer Class	×	

Column	Description	
Name	The name of a specific customer class	
Managed by	Administrator only (default) means that this class will	
	be used for your direct customers, and is accessible only	
	to your administrators. Select a PortaBilling reseller to	
	assign this class for use by a particular reseller.	
Description	A logical description of this customer class.	

# Add/Edit Customer Class

The Add Customer Class page allows you to define a new customer class within PortaBilling.

_ ☑	1 📰	§ i 🖌	Add Customer Class	S Europe/Prague	demoroot	? Help
•	Save	🗟 Save & Close 🛞 Close 🭕	] Objects		▶¶ Logout	
		Name Retail SIP General Info Taxation	* Managed by Administrator	only 💌		
		Send Statistics	Summary Only			
		Invoice Template	Basic invoice (with call details 💙			
		Terms	Due on receipt			
		Send Invoices				
		Invoice Grace Period	21 Days			
		Invoice Notification Intervals	10,5,3 Days			
		Invoice Re-send Intervals	2,7 Days			
		Re-collect Intervals	1,6 Days			
		Suspension Time	14 Days			
		Suspension Warning Time	4 Days			
		Closing Time	28 Days			
		Charge Credit Card When The Billing Period Is Closed				
		Description	For our retail customers, using SIP services			

The following parameters are available:

Field	Description		
Name	Name of the specific customer class.		
Managed by	Administrator only (default) means that this class		
	will be used for your direct customers, and is		
	accessible only to your administrators. Select a		
	PortaBilling reseller to assign this class for use by a		
	particular reseller.		
The following specifies various parameters to be assigned by default to customers within			
this customer class:			
Send Statistics	Defines what kind of xDR statistics should be		
	delivered to the customer by email:		
	• Full Statistics – Send a CSV file with a		
	complete list of xDRs.		

	• Summary Only – Do not send a full list of xDRs, only a brief summary.
	<ul> <li>Do Not Send – Do not send any statistics by email.</li> </ul>
	For more details see <i>Additional Info</i> in the <i>Add/Edit</i> <i>Customer</i> section.
Invoice Template	Choose either "Do not create invoice" (in this case no invoices will be created, only CSV xDR statistics) or a particular invoice template.
Terms	Description of the invoice terms for a customer to be printed on the invoice.
Send Invoices	Defines whether a PDF copy of the invoice should automatically be sent to the customer when a new invoice is created.
Invoice Grace Period	Invoice terms, i.e. how many days after invoice generation payment is expected.
Invoice Notification Intervals	Comma-separated list of numbers; each number represents a number of days prior to the invoice due date when a notification regarding an unpaid invoice should be sent. For instance, 14,7,3 means that the customer should receive a notification 14, 7 and 3 days before the due date. (Obviously, if the customer pays after the first notification, no further notifications will be sent). Leave this field empty to disable notifications completely.
Invoice Re- Send Intervals	Comma-separated list of numbers; each number represents a number of days after the invoice due date when a notification regarding the overdue invoice should be sent. For instance, 0,7,14 means that the customer will receive a notification on the due date and then 1 and 2 weeks later. (Obviously, if the customer pays after the first notification, no further notifications will be sent). Leave this field empty to disable notifications completely.
Re-collect Intervals	Comma-separated list of numbers; each number represents a number of days after the invoice due date when an attempt should be made to charge a customer's credit card for the invoice amount due. For instance, 0,3,10 means that PortaBilling will attempt to charge the customer's credit card on file on the due date and then 3 and 10 days later. (Obviously, if one of the charge attempts succeeds, no further attempts will be made). Leave this field empty to disable re-collect attempts completely.

Suspension	How many days after the due date will the	
Time		
Time	customer's services be suspended if the invoice is still	
	unpaid. Leave this field empty to disable service	
	suspension.	
Suspension	How many days after the due date should notification	
Warning Time	of possible suspension of services be sent to the	
	customer. Leave this field empty to disable such	
	notification.	
Closing Time	How many days after the due date will the customer's	
	account be closed if the invoice is still unpaid. Leave	
	this field empty to disable automatic account closing.	
	Note that, if defined, the Suspension Warning	
	Time must be less than the Suspension Time, and	
	the Suspension Time must be less than the Closing	
	Time.	
Charge Credit	Automatically charge the customer's credit card on	
Card When	file for the full amount due when his billing period is	
Billing Period	closed – as a result, an invoice will be created with a	
Is Closed	zero amount due.	
Description	A logical description of this customer class.	

# **Customer Management**

On the Customer Management screen, you can view a list of all registered customers, or use search filters to display a specific set of customers only.

Filter value	Description	
ANY	All customers registered in the system	
Direct Customers	Customers directly owned by your company	
	(who have a business relationship with you,	
	receive bills from you, and pay to your	
	accounts). This may include both resellers and	
	retail customers.	
All Resellers	Only customers of the reseller type.	
All Retail	All retail customers; this includes your own	
	retail customers and those of your resellers.	
Direct Retail	Only retail customers who are owned by your	
	company.	
Sub-customers of	All sub-customers of a specific reseller.	
Reseller NNN	_	
Representative	Only customers related to a specific	
	representative.	
Search	Filter by name and contact details. When you	
	enter a value in the search field, all customers	
	who have the search string in their customer	

	name, company name, first/last name or
	contact info (e.g. state, city, country, zip code,
	phone, email, login) will be displayed.
Advanced Search	Allows you to specify complex search
	conditions (see more info below)

The screen provides the following information and activities:

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	Q	Callshop# 1	<u>15</u>		USD	Reseller		0.00000			
	$\mathcal{A}$	John Doe	Ð		USD	Retail		0.00000			
	Q	<u>John Lao</u>	<b>5</b>		USD	Reseller		0.00000			
	$\mathcal{A}$	Mary Smith	, and the second		USD	Retail	50.00000	3.73000	mary.smith@hotmail.com		

Column	Description
xDRs	Click the View ( ) icon to go to the xDR view
	page.
Name	The customer's name.
Owned By	The name of the reseller owning the customer (none
	are displayed if the <b>Direct Customers</b> filter is
	applied).
Accounts/	Click the Accounts 🗊 icon to go to the Account
Sub-customers	Management screen (for retail customers) or the
	sub-customers icon 🏶 for the Sub-customers
	Management screen (for resellers).
	If there are no accounts under the customer, the
	icon is changed accordingly to $\square$ , so that you can
	easily see this. The same applies to resellers; in this
	case the "no sub-customers" icon 🕾 is shown.
Currency	The currency in which the customer's account is
	maintained and billed.
Туре	The customer may be either a reseller or a retail
	customer.
Credit Limit	The credit limit applicable to the customer's account
	(if any).
Balance	The customer's current balance.
E-mail	E-mail contact for this customer.
Status	The status of the customer's account.
	The 🚨 icon will appear if the customer's credit has
	been exceeded. The customer blocked 🗢 icon
	means that all accounts of this customer have been
	administratively blocked. The 🌌 icon means all

	services to this customer have been suspended
	1
	because of an overdue invoice, and the 📁 icon
	means that this customer was closed.
	The frozen 🍀 icon means that periodic payments
	for this customer have been suspended due to
	repeated errors (for instance, the customer canceled
	his credit card and did not enter the information for
	his new card in PortaBilling).
Delete	Click the delete $(\textcircled{\times})$ icon to remove the customer.
	The delete icon will only appear if there are no
	xDRs, accounts or sub-customers owned by the
	customer, or other entities (products, tariffs, etc.)
	managed by the customer.

# **Advanced Search**

In advanced search mode, you can specify an unlimited number of search conditions. Every condition applies to a particular field (e.g. customer's ZIP code). Click on 🗈 Add a new search condition to add another condition.

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	10	Mary Smit	າ 🗔		USD	Retail	50.00000	3 7 3 0 0 0	mary.smith@hotmail.com			

Operation	Description
Is	The value of the field in the customer information
	must match the search criteria exactly.
Begins with	The value of the field in the customer information
	must start with the specified value (e.g. if you enter
	the filter value "John", customers with the names
	"John" and "Johnny" will be selected).
Contains	The value of the field in the customer information
	must contain the specified value somewhere (e.g. if
	you enter the filter value "Eric", customers with the
	names "Eric", "Erica", "Maverick" and "American"
	will be selected).
Is empty	The corresponding field in the customer information
	must be empty.

All search operations are case-insensitive, so you can enter "Eric" as a search criteria and, even if the customer's name was originally entered as "eric" or "ERIC", you will still see him in the list.

All conditions work in conjunction, so in the case of multiple search criteria the customer's record must satisfy all of them in order to appear in the result list.



During a search operation using auxiliary fields (e.g. fax) or the "contains" comparison, the database cannot use indexes. This will result in a full table scan, meaning an increased load on the server and a longer time to produce the final result. Please avoid using such search operations if not necessary.

By clicking on **Back to simple search** you can switch the form to its original mode.

# Add/Edit Customer

The Add Customer page allows you to define a new client entity within PortaBilling. The information required is divided into four tabbed sections: Address Info, Additional Info, Payment Info, and Self-Care Info. The information on the top of the form is required . Information on all the other tabs is optional, and need not be provided when creating the customer. Once created, the customer cannot be changed from a retailer to a reseller, or moved under another reseller.

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Field	Description
Customer	Defines the customer name as it will appear in the
Name	PortaBilling system. This is distinct from the

	Company Name field in the Address Info tab.
Blocked	Blocks all accounts of this Customer.
Currency	The currency must be specified by selecting it from the
	drop-down list of available currencies. Once saved, the
	currency cannot be changed.
Opening	The starting balance for this customer.
Balance	
Туре	This can be either "Reseller" or "Retail".
Customer	The customer class assigned to this customer.
Class	_

# **Address Info**

The Address Info tab provides most of the commonly required contact information. Also note that you may enable your account manager to receive a copy of every e-mail sent to the customer by entering his e-mail address in the **BCC** field.

# Maintenance

The Maintenance tab allows the administrator to correct a customer's balance (this tab is only available in **Edit Customer** mode).

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Field	Description
Action	Manual Charge: Debit (increase) the customer's
	balance in PortaBilling100; for instance, if you are
	selling SIP phones to a customer. This means the
	balance will be changed so that the customer is able
	to make fewer calls.
	Manual Refund: Credit (decrease) the customer's
	credit balance in PortaBilling100; for instance, if the
	customer files a complaint and you agree to give
	him credit toward future service use. This means

	the balance will be changed so that the customer is
	able to make more calls.
	E-Commerce Charge: Transfers a given amount
	from a customer's e-commerce account to a
	company merchant account and issues credit
	toward the customer's balance in PortaBilling100.
	E-Commerce Refund: Transfers a given amount
	from a company merchant account to a customer's
	e-commerce account; for instance, if a customer
	files a complaint and you agree to a refund.
	Authorization Only: Verifies whether the
	customer's e-commerce account is valid and
	reserves a given amount. This will return a
	transaction ID, which may be used later in a
	capture payment transaction. This transaction will
	not affect the customer's balance in
	PortaBilling100, nor the customer's e-commerce
	account. Note: the transaction ID will be written to
	the customer's Notepad entry.
	Capture Payment: Transfers a given amount from
	a customer's e-commerce account to a company
	merchant account and issues credit toward the
	customer's balance in PortaBilling100. This requires
	the transaction ID obtained via an Authorization
	Only transaction. The amount must be equal to or
	less than that in the corresponding Authorization
	Only transaction.
	Manual Payment: Credits the customer's balance.
	Use this when receiving payment from the
	customer. Manual payment allows the customer to
	make more calls.
	Promotional Credit: Credits the customer's
	balance. Use this when giving the customer credit
	toward future service due to a sales promotion. A
	promotional credit allows the customer to make
	more calls.
Amount	Amount to charge/refund.
Visible	A comment on this transaction visible to the
Comment	administrator as well as the customer, in the xDR
	browser or on the invoice.
Internal	An internal comment on this transaction; not
Comment	visible in the xDR browser, and accessible only
-	from the database directly.
	J

# **Additional Info**

	<b>*</b>					Edit Cı	ustomer							
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Field	Description
Discount Plan	Volume discount plan to be applied to this customer.
Subscription	Amount of discount applied by default to all
Discount Rate	subscriptions of this customer (assigned either directly
	to a customer or to one of his accounts).
Representative	Assigns a representative to this customer. See the
	Representatives section for more information.
Tax ID	Customer's tax ID.
Callshop	Defines whether callshop features (timer, receipt, etc.)
Enabled	are available. Not available for direct retail customers.
	To use the callshop functionality with accounts of a
	particular sub-customer, you should first enable this
	option for the reseller, then enable it for the sub-
	customer as well.
<b>Creation Date</b>	The date and time the customer was created (read-
	only).
Billing Period	Defines the frequency of invoicing for this customer.
Next Billing	Read-only field; displays the date when the customer's
Date	current billing will be closed (and invoice and statistics
	generated).
Shift Billing	Applicable only for "monthly anniversary" and 30-day
Date	billing periods; allows you to set the billing date to a
	different day of the month in the future (see below for
	more details).
Send Statistics	Defines what kind of xDR statistics should be
	delivered to the customer by email:
	• Customer class default – Use the settings for
	the customer class.
	• Full Statistics – Send a CSV file with a
	complete list of xDRs.
	• Summary Only – Do not send a full list of
	xDRs, only a brief summary
	• Do Not Send – Do not send any statistics by

	email.
Invoice	Defines the invoice template for this customer.
Template	Choose <b>Customer class default</b> in order to apply the
	invoice template defined for this class, and so avoid
	defining an invoice template for each customer
	specifically. See the Templates section for more
	information.
Send Invoices	Defines whether new invoices should be delivered to
	the customer by email. Customer class default – Use
	the settings for the customer class.

Regarding statistics, the default choice is **Full Statistics**, whereby the customer receives an e-mail after the billing period has closed, including an attached CSV file containing all the calls made by his accounts. If invoices are generated for this customer and invoice delivery is enabled, an invoice will also be attached to the e-mail. The CSV file containing all the calls may be rather large, so it is possible to use the **Summary Only** option. In this case, the customer receives only a brief summary of calls by e-mail. Finally, it is possible to disable e-mail statistics by choosing the **Do Not Send** option. Note that these options only affect the delivery of xDR files by email. The actual statistics files will always be generated and accessible for download from the administrator interface or customer self-care.

Shifting the billing date may be required if, for instance, your customer has a monthly anniversary billing cycle in which his billing period closes on the 3<sup>rd</sup> day of each month. Since this may be inconvenient either for customers or your administrators (who are busy with corporate reports during the first week of the month), it may be desirable to change the billing date to some other day of the month. In this case, you can specify a new date between today's date and the date when the current billing period will close. Upon reaching this date, an "intermediate" invoice will be created (covering the period from the end of the previous billing period to that date), and subsequent billing will start from that date in the normal way.

# **Payment Info**

The Payment Info screen defines customer payment characteristics. In addition to customary payment information (e.g. preferred payment method, credit card number), there is also a **Credit Limit** field. If left empty, no credit limit is enforced. Otherwise, if Radius authentication is enabled, calls exceeding the limit can be denied. Also, if a **Balance Warning Threshold** is defined and the customer balance reaches this value (defined either as an amount or as a percentage of a positive **Credit Limit** value), an alarm e-mail will be sent to the customer owners (i.e. the system administrators if the customer is direct, or else the reseller).

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The **Preferred Payment Method** drop-down contains a list of available payment methods. Some of these, e.g. Cash and Cheque, are "virtual" methods that do not allow manual e-commerce transactions from the administrator interface, payments from customer self-care, or running periodic payments. Any other online methods will be available only if a payment system with such methods has been defined, and is assigned to the same currency as the customer's currency. Other Payment Info fields depend on the currently selected **Preferred Payment Method**, and may vary accordingly.

**NOTE:** There are a few payment systems which use external authorization. If such a system has been chosen as a preferred method, no other payment information details may be entered. This is because the payment processor does not allow the system to store and reuse customer payment credentials. For example, if you add a payment system with the Moneybookers payment processor and VISA payment method, and then assign it to the currency USD, customers defined in the USD currency and using VISA as their preferred payment method will not be able to enter their payment credentials. Therefore, it will not be possible to run periodic payments for them or make manual e-commerce transactions with them.

**NOTE:** Only resellers, direct retail customers, and their accounts are allowed to use a company's payment systems and payment methods for e-commerce payments, both manual and periodic. A reseller should define his own payment systems and assign these to the appropriate currencies in his self-care, so that those payment systems will be used by his sub-customers and their accounts.

#### **Retention Restrictions**



**IMPORTANT!** A merchant may not use account and transaction information for any purpose other than assisting completion of a payment card transaction, or as specifically required by law. Merchants may collect a payment card number and expiration date independently of a payment card transaction only with the express consent of the cardholder. A merchant may only retain this information for the sole purpose of facilitating future payment transactions. A merchant must not provide this information to any other person, except for the sole purpose of assisting completion of a payment card transaction.

You may click the **Invoices** button in the toolbar to quickly access the list of all customer's invoices.

### **User Interface**

The login and password information for Customer Self-Care refer to the credentials required on the self-care web page. An easy-to-remember yet secure password may be generated automatically by clicking the **Auto** button.

Check the "Periodic payment management enabled" option to enable the customer himself to manage periodic payments on the Customer Self-Care interface (this does not prevent the administrator from editing this information!). The **Periodic Payment** tab will appear only if the customer's currency can be processed by at least one of the existing payment systems, and if the customer's preferred payment method has been set to any available online method which allows storage of his payment credentials.

Check the "Dialing rules management enabled" option to enable the customer himself to manage dialing rules on the Customer Self-Care interface. This option is not available for resellers.

#### Date & Time Format

PortaBilling allows the administrator to define both input and output date and time formats for each customer registered in the system.

By making changes to the date and/or time format on this page, customers will be able to enter dates and times in the desired format throughout the entire PortaBilling100 Customer Self-Provisioning Interface, on invoices, and so on (see the screenshot below).

See the **User Management** section for examples of date and time format usage.

# PORTA Billing 100°

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## **Periodic Payments**

**NOTE:** The Periodic Payment tab will appear only if a suitable payment system has been set up, and the appropriate online payment method has been selected as the customer's preferred payment method.

Periodic payment management allows the administrator and customers to set up the following parameters for automated periodic payments. All registered payments for a customer are listed. The **Effective** drop-down list allows you to define whether only current payments ("Now") or all payments ever processed ("->Now") will be shown.

Choose ("Now->") to see "future" payments, or "All" to list all payments. ("Now") is the default value for this filter. The information in the chart below is provided in the payments listing. To add a new payment, click the **Add** button.

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Field	Description
Amount	Specify a fixed amount to be paid, or click the Pay

	Balance icon (not available when the frequency is
	balance-driven) to pay the current balance with a
	certain periodicity.
Frequency	Balance-driven, weekly, or monthly.
Balance	Only available when the frequency is balance-driven.
Threshold	Payment will be triggered when the balance is higher
	than the specified threshold.
From, To	Dates when the payment will remain active. Click the
Date	stopwatch I icon to make the payment active
	immediately.

## **Service Features**

Using this tab, the administrator can activate/deactivate various features of the services provided to customers. Note that features are defined per *service type* (the physical service provided to the user) rather than per *service* (the name used in the billing configuration and "visible" to the end-user). Thus if you decide tomorrow to bundle your VoIP services under a different name, and create a new service called "Internet Telephony" rather than the old name, "Voice Call", you do not actually have to change the configuration settings for any of your customers.

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Service Type Conferencing Data Service Dial-up Internet Messadino Service Internet Access Quantity Based Session Based Voice Calls Incoming Calls Outpoing Calls Outpoing Calls	Voice VPN No Legal Intercept No Call Parking No Park Prefix Release Prefix RTP Proxy Us Music On Hold Non	e Default			

The **Service Type** links on the left allow you to specify for which service type you would like to define parameters.

# Parameters for the Voice Calls Service Type

Field	Description
Voice VPN	Charge calls between IP phones in this IP Centrex
	according to a special pre-defined rate, rather than
	using the destination phone number to look up the
	rate.

Legal	Intercept all incoming and outgoing calls of this
Intercept	customer for law enforcement purposes.
Call Parking	Enable call parking for this customer's IP Centrex.
Park Prefix	Only appears if <b>Call Parking</b> is activated; allows you to
	specify a key combination to park a call.
Release	Only appears if <b>Call Parking</b> is activated; allows you to
Prefix	specify a key combination to dial from the original
	phone which parked a call in order to remove the call
	from parked status and continue the conversation.
First Login	When a new account (phone number) in this IP
Greeting	Centrex environment is provisioned and registers for
_	the first time, call this phone back and play a pre-
	recorded voice message confirming service activation,
	giving information about various available options, and
	so on.
RTP Proxy	Specifies the RTP proxying policy for this particular
	customer. For a description of possible values, see the
	Connections with Voice Calls Service Type and VoIP Type
	section.
Music On	Defines the music on hold to be used with the IP
Hold	Centrex environment. Choose None to disable this
	feature, or select the default setting for the customer.
	To upload your own music, select a file on your local
	file system using the Browse button. To rename the
	music, enter the desired name in the Music Name field;
	otherwise the local file name will be used. The
	uploaded music will replace the previous entry in the
	list, and is usually enabled within 10 minutes.

# Parameters for the Incoming Calls Service Type

Field	Description
Voice VPN	For incoming calls from phones within the IP Centrex
Distinctive	environment, use a ring pattern different from the
Ring	default one.
Group	Activates the Group Pickup feature, which allows
Pickup	phones in the same IP Centrex environment (all
	accounts under the same customer) to answer each
	other's calls by dialing a Group Pickup Prefix on their
	phones.
Group	Only appears if Group Pickup is activated. Specify the
Pickup Prefix	special code for picking up calls here.

Set CLI to       For outgoing calls, always override the CLI (ANI) value supplied by the IP phone. This is done to prevent service abuse via CLI (ANI) number spoofing. The available options are: <ul> <li>Original CLI – Do not alter the CLI.</li> <li>Account ID – Replace the CLI with the username (phone number) value used for authorization of the call.</li> <li>Centrex Number – Use a different phone number for CLI (see below).</li> </ul> <li>Centrex</li> <li>When Set CLI mode has been activated for outgoing calls to off-net destinations (PSTN network), this field can be used to assign one of the other phone numbers in the same IP Centrex environment as the CLI. This is typically done so that calls between extensions within an IP Centrex environment (IP phones of this customer) will carry the caller's original CLI, while calls to PSTN numbers will display a reception/switchboard number as the CLI. Hint: click on the Centrex Number field label to invoke a pop-up window, where you can browse through the customer's available accounts.</li> <li>Hide CLI</li> <li>Prefix to be dialed before an outgoing number in order to prevent the called party from seeing your phone number.</li> <li>Show CLI</li> <li>Prefix to be dialed before an outgoing number in order to allow the called party to see your phone number.</li> <li>Engage real-time checks of the number of concurrent outgoing calls made by accounts under this customer.</li> <li>Calls</li> <li>Max number</li> <li>Allow only a specific number of concurrent calls for accounts of this is available. (This reduces the risk of account overdrafts.)</li> <li>Call Paging /</li> <li>Enable the intercom feature for accounts under this customer.</li> <li>Paging /</li> <li>Only appears if Paging/Intercom has been activated; Intercom</li>	Field	Description
<ul> <li>Account ID – Replace the CLI with the username (phone number) value used for authorization of the call.</li> <li>Centrex Number – Use a different phone number for CLI (see below).</li> <li>Centrex</li> <li>When Set CLI mode has been activated for outgoing calls to off-net destinations (PSTN network), this field can be used to assign one of the other phone numbers in the same IP Centrex environment as the CLI. This is typically done so that calls between extensions within an IP Centrex environment (IP phones of this customer) will carry the caller's original CLI, while calls to PSTN numbers will display a reception/switchboard number as the CLI. Hint: click on the Centrex Number field label to invoke a pop-up window, where you can browse through the customer's available accounts.</li> <li>Hide CLI</li> <li>Remove CLI (ANI) information for outgoing calls.</li> <li>Hide CLI</li> <li>Prefix to be dialed before an outgoing number in order to prevent the called party from seeing your phone number.</li> <li>Limit</li> <li>Engage real-time checks of the number of concurrent outgoing calls made by accounts under this customer.</li> <li>Max number</li> <li>Allow only a specific number of concurrent calls for accounts of this customer.</li> <li>Minimum</li> <li>When a new call starts, ensure that at least this amount of funds is available. (This reduces the risk of account overdarfts.)</li> <li>Paging /</li> <li>Enable the intercom feature for accounts under this customer.</li> </ul>	Set CLI to	supplied by the IP phone. This is done to prevent service abuse via CLI (ANI) number spoofing. The
username (phone number) value used for authorization of the call.• Centrex Number – Use a different phone number for CLI (see below).Centrex NumberWhen Set CLI mode has been activated for outgoing 		• <b>Original CLI</b> – Do not alter the CLI.
number for CLI (see below).Centrex NumberWhen Set CLI mode has been activated for outgoing calls to off-net destinations (PSTN network), this field can be used to assign one of the other phone numbers in the same IP Centrex environment as the CLI. This is typically done so that calls between extensions within an IP Centrex environment (IP phones of this customer) will carry the caller's original CLI, while calls to PSTN numbers will display a reception/switchboard number as the CLI. Hint: click on the Centrex Number field label to invoke a pop-up window, where you can browse through the customer's available accounts.Hide CLIRemove CLI (ANI) information for outgoing calls.Hide CLIPrefix to be dialed before an outgoing number in order number.Show CLIPrefix to be dialed before an outgoing number in order number.Show CLIPrefix to be dialed party from seeing your phone number.Max number of accounts of this customer.Allow only a specific number of concurrent outgoing calls made by accounts under this customer.Minimum FundsWhen a new call starts, ensure that at least this amount of funds is available. (This reduces the risk of account overdrafts.)Mainimum Faging / IntercomEnable the intercom feature for accounts under this customer.Paging / IntercomEnable the intercom feature for accounts under this customer.		username (phone number) value used for
Centrex NumberWhen Set CLI mode has been activated for outgoing calls to off-net destinations (PSTN network), this field can be used to assign one of the other phone numbers in the same IP Centrex environment as the CLI. This is typically done so that calls between extensions within an IP Centrex environment (IP phones of this customer) will carry the caller's original CLI, while calls to PSTN numbers will display a reception/switchboard number as the CLI. Hint: click on the Centrex Number field label to invoke a pop-up window, where you can browse through the customer's available accounts.Hide CLIRemove CLI (ANI) information for outgoing calls.Hide CLIPrefix to be dialed before an outgoing number in order to prevent the called party from seeing your phone number.Show CLIPrefix to be dialed before an outgoing number in order to allow the called party to see your phone number.LimitEngage real-time checks of the number of concurrent outgoing calls made by accounts under this customer.Max number of accounts of this customer.Allow only a specific number of concurrent calls for accounts of this customer.Minimum Funds Reserved Per or CallWhen a new call starts, ensure that at least this amount of funds is available. (This reduces the risk of account overdrafts.)Paging / IntercomEnable the intercom feature for accounts under this customer.		
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Intercomcustomer.Paging /Only appears if Paging/Intercom has been activated;	Funds Reserved Per	of funds is available. (This reduces the risk of account
<b>Intercom</b> allows you to specify a key combination to answer a call		,
Prefixon someone else's extension.	Intercom Prefix	allows you to specify a key combination to answer a call on someone else's extension.

# Parameters for the Outgoing Calls Service Type

## **Dialing Rules**

Using this tab, the administrator can define how phone numbers are dialed by users in this customer's IP Centrex environment.

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🕨 🖬 Save 📓 Save & Close 🛞 Close	🔋 xDRs 🛛 Accour	its 🗐 🗐 E-Payments	Log 📋 Invoices	🔀 Terminate	街 Objects	📲 Logout	目 Log
Customer Name John Doe	* Opening E Balance	alance 0.00000 US					
Type Retail	Customer			*			
Taxation Abbreviated Dialing S	ubscriptions Notepad	Service Features	Permitted SIP Prov	ties			
Address Info Maintenance U	Jser Interface Dialing	Rules Additiona	Info Payment I	nfo			
			-				
Enable Dialing Rules 🗸 🗸	l l	Dialing Rules Wizar					
Load Sample	North America, B	C, 10 digit dial	ng				
Routing plan selection enabled							
Apply these dialing rules to the number th	hat follows the selection (	ode 🗹					
Your country code	1						
Your area code(s)	604,778						
Always dial the area code as a part of the	e number						
Prefix for accessing the outside phone ne	etwork						
Prefix for domestic calls, but outside of yo	Prefix for domestic calls, but outside of your area code (e.g. 1, 0)						
International dialing prefix (e.g. 011, 00, 0	International dialing prefix (e.g. 011, 00, 0011)						
Emergency numbers (e.g. 911, 112)		911					
Exceptions (e.g. *98)		411					
National Exceptions (e.g. *98)							
Local dialing number length							
Convert ANI (CLI) for incoming calls into t	this dialing format						

By default, a new customer will have dialing rules disabled. This means that the system regards calls arriving from him as being in the E.164 format. If you wish to define the way in which your customer dials phone numbers, you can use the **Enable Dialing Rules** option. This will allow you to enter various dial plan parameters such as an international dialing prefix or area code. You may type your own number translation rules instead (as Perl regular expressions) if you select the **Use Custom Translation Rules** option.

To define the phone number format which is used by this customer's accounts, click **Dialing Rules Wizard** to activate the wizard.

		Dialin	g Rules Wizard
🕨 🖬 Save	🗟 Save & Close 🛞 Close		
	Routing plan selection enabled		
	Apply these dialing rules to the number tha follows the selection code	t 🔽	
	Your country code		Sample Settings
	Your area code(s)		Australia, Sydney
	Always dial the area code as a part of the number		Europe, Czech Rep., always dial using the areacode Burope, Czech Rep., local and domestic dialing (obsolete)
	Prefix for accessing the outside phone net	vork	North America, 10 digit dialing North America, BC, 10 digit dialing
	Prefix for domestic calls, but outside of you area code (e.g. 1, 0)	r	North America, WA, 7 digit dialing
	International dialing prefix (e.g. 011, 00, 00	11)	
	Emergency numbers (e.g. 911, 112)		Clear Reset Load Sample
	Exceptions (e.g. *98)		
	National Exceptions (e.g. *98)		
	Local dialing number length		
	Convert ANI (CLI) for incoming calls into thi dialing format	s 🔲	
	Check Yourself		
	To call <b>1234567</b> outside of your office, but v area you dial	vithin the same	1234567
	To call long distance 5 1234567 (within you	ır country) you dial	5 1234567
	To call <b>1 405 1234567</b> internationally you d	ial	1 405 1234567

The upper part of the wizard screen allows you to enter important dialing parameters, such as your international dialing prefix. Several sample settings are provided for your convenience. For instance, in order to load sample settings for "traditional" North American dialing, select "North America, WA, 7 digit number dialing" and click **Load Sample**. Click **Clear** to reset all parameters. Click **Reset** to revert to the last saved settings.

In the bottom part of the wizard screen you can check whether you have described the numbering format correctly. Make sure for all three examples provided (local, domestic and international call) that this is the way you want to dial the numbers.

## **Abbreviated Dialing**

Here the customer may define a list of phone extensions for his IP Centrex environment, plus create abbreviated dialing for external phone numbers. The **Abbreviated Dialing** feature works with both SIP and H.323, with adequate support from either the SIP Server or Cisco TCL IVR.

A PortaBilling customer can set up dialing rules as an international prefix, outside prefix, direct number (e.g. 911), or abbreviated dialing for his accounts.

**NOTE:** To be able to add extensions / abbreviated numbers, you should enter the maximum length of anticipated digits (e.g. 3 in the case of 123-like numbers) in the **Abbreviated Number Length** field.

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Abbreviated Number Length 3										
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		17			Amanda's			-		

To add a new abbreviated dialing number, click the 🖻 Add button and enter the following information:

Field	Description
Abbreviated #	The number the end-user will dial on his phone
	(extension number).
# to Dial	The number that the call will be forwarded to. You
	may enter the ID of one of the customer's accounts
	(use the 🗊 icon for a pop-up window where you can
	see all of them) or any phone number.
	If you leave this field blank, then the abbreviated
	number is considered to be a direct number, or "dial as
	is". This is useful for making sure that special numbers
	(e.g. 112) are never converted by other translation
	rules.
	Note: Phone numbers must be entered in the E.164
	format.
Description	Description of this abbreviated number, e.g.
	"Andrew's IP phone".
SIP	If # to Dial represents the ID of one of the customer's
	accounts, you will see the SIP "lamp" icon here. It will
	light up if the account is currently being used by a SIP
	UA to register with the SIP server; otherwise it will be
	gray.

# **Taxation**

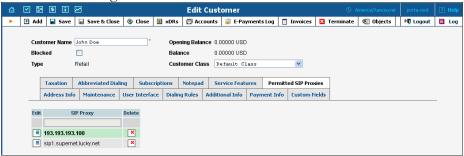
On this tab you can choose which plugin module will be used to make tax calculations and set up parameters that affect taxation.

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		Address Info	Main	tenance	User Interfa	ace Dialing Ru	les Addi	ional Info	Pay	ment Info	Custom Fie	lds		_
	Tao	xation Plug-In	BillS	oft, Unite	d States	~								
	Тур	ре	0	Default (	) Business	O Residential								
	Inc	orporated City	Area 🧿	Default 🤇	) Inside	O Outside								
	Exe	empt From		Federal Ta State Taxe County Ta Local Taxe	s xes									

Since these parameters depend on the specific taxation module and your local tax laws, please consult your tax attorney for details regarding their use.

# **Permitted SIP proxies**

On this tab you can choose to which external SIP proxies customer can forward calls using "SIP URI forward" feature.



# **Add/Edit Reseller**

The Add Reseller page allows you to create a new reseller. The form is very similar to that for Add Customer, as described above. See below for a description of additional fields not available in the Add Customer form.

# **Additional Info**

Field	Description					
Default Tariff	When you are subsequently creating products					
for Voice Calls	managed by this reseller, this tariff will be assigned by					
	default for calculating charges to him for calls made					
	by his sub-customers using this product. This					
	provides backward compatibility with the reseller					
	functionality in PortaBilling prior to Maintenance					
	Release 16, since you will now use different tariffs to					
	charge resellers based on the product or the					

accessibility entry within a product.

## Add/Edit Customer under a Reseller

This is essentially the same as management of customers as described above, the sole difference being that you can only create sub-customers of the Retail type.

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				Туре	e			Repre	esentat	ive	Search				Advanced			
	Jo	hn Re	seller			~	ANY						Search			searc	h	
				CDRs	Name	Acc	ounts	Currency	Туре	Credit limit	Balance	E-mail	Status	Delete				
				$\mathcal{Q}$	Mary Distributor	1		USD	Retail		0.00000			×				

# **Account Management**

An account is a user of a product such as prepaid cards, voucher-based cards, or credit calling plans. Each account in PortaBilling is associated with a customer. The Account Management screen, accessible from the Customer interface by clicking the **Accounts** button, shows you a query screen for listing existing accounts.

## **Account Listing**

#### **Search Filter**

There may be a very large number of accounts in the system, so it is advisable to limit your search using the filter functionality.

Field	Description
Account ID	The primary identification for this account; an
	alphanumeric string.
	Note: the % wildcard symbol may be used.
Batch	Logical name for a group of accounts. Select from a list
	of all the customer's batches to enable the batch update
	pane.
Ctrl#	Enter control numbers and/or number ranges separated
	by commas (for example: 1,3,8-12).
SIP Status	Default – ANY; this function allows you to display either
	logged-in or logged-out accounts only.

#### **Batch Update Pane**

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				Accou	nt ID		Batch		Ctrl		Ctrl #	SIP Status			Advance	ed						
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Field	Descri	ption											
Account ID	The primary identification	n of this account; an											
	alphanumeric string.	alphanumeric string.											
Ctrl#	Enter control numbers and/or number ranges separated												
	by commas (for example: 1,3,8-12).												
	ACCOUNTS												
Status	▲ Zero balance ▲ Expired												
	Not active	😑 Blocked											
	🛕 Credit exceeded	Customer blocked (see											
		Edit Customer)											
Ctrl#	Click using Ctrl#, or enter	control numbers and/or											
	number ranges separated by commas (for example: 1,3,8-												
	12).												

The batch update pane can be activated by selecting a batch in the filter at the top of the interface, or by selecting the batch name from the list of customers' accounts. The basic functionality of this update pane allows users to specify which attributes of all accounts in the results set should be modified. For example, in order to increase the balance of all accounts by 10 USD, users should:

- Check the box next to **Refund/Charge** to indicate that this is one of the updates that should occur,
- o Enter "10" next to **Refund**,
- Click the **Update Batch** button at the bottom, and
- Approve the changes when the confirmation dialog appears.

When the page refreshes, the changes will be reflected in the result listing.

**NOTE:** If you perform a balance adjustment *before* an account is used, it will be regarded as a change to the opening balance, and will not be reflected in the CDRs. For example, if you create a prepaid account worth \$10, then realize you have actually sold it to the customer for \$20, and so add the extra \$10 to the card, it will look to the customer as if the card originally had \$20 on it.

#### **Advanced Search**

In advanced search mode you can specify an unlimited number of search conditions and the system will fetch the relevant accounts. Click on **• Add a new search condition** to add another condition.

ຝ	<b>&gt;</b>	🔹 🖬 🖂 Acc	counts of Retail C	ustomer 'A	BC Shuttle Ltd	. O America/Vancouver	demo-root	? Help
•	🔁 Add	Account Generation	ator 🛞 Close				<b>I</b> Logout	
		Account ID	Batch	Ctrl #	SIP Status		Baskta	
		Account ID	ANY ¥	Cur#	ANY Y	Show Accounts	<u>Back to</u> mple search	
		Add a new search of	condition	Advance	ed Search Criteria			
		Phone	Begins wi	<b>v</b> 1604		×		
		Contact	🖌 Is empty	~		×		
		Company Name	Y Is	ABC Shuttl	e Ltd	×		
		Login	Contains	✓ 123		×		

Operation	Description
Is	The value of the field in the customer information
	must match the search criteria exactly.
Begins with	The value of the field in the customer information
	must start with the specified value (e.g. if you enter
	the filter value "John", customers with the names
	"John" and "Johnny" will be selected).
Contains	The value of the field in the customer information
	must contain the specified value somewhere (e.g. if
	you enter the filter value "Eric", customers with the
	names "Eric", "Erica", "Maverick" and "American"
	will be selected).
Is empty	The corresponding field in the customer
	information must be empty.

All search operations are case-insensitive, so you can enter "Eric" as a search criteria and, even if the customer's name was originally entered as "eric" or "ERIC", you will still see him in the list.

All conditions work in conjunction, so in the case of multiple search criteria the customer's record must satisfy all of them in order to appear in the result list.

During a search operation using auxiliary fields (e.g. fax) or the "contains" comparison, the database cannot use indexes. This will result in a full table scan, meaning an increased load on the server and a longer time to

produce the final result. Please avoid using such search operations if not necessary.

By clicking on **Back to simple search** you can switch the form to its original mode.

## Account Info / Add Account

To add a new account, select **Add**. For bulk account generation, select **Account Generator**.

The Account Info page provided for the administrator is similar to the Add Account interface; however, some account details are read-only. The administrator is unable to modify Type, Batch, Control Number and Opening Balance. When making changes, the administrator can use the Notepad tab to provide a comment detailing the reason for these changes (for example, "product changed, credited \$50").

Changes can be confirmed by selecting **Save** or **Save&Close**.

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		Account I	nfo Main	enance I	User Interface	Subscriber	Aliases	Additional Info	Custom Fields	1		
		Customer	SIP Accourt	<u>nts</u>		Credit Limit			USD			
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		E-mail				Non Call Re	elated Charg	es I	0.67000 USD			
		Batch	b1									
		Control Number	1									

Field	Description
Account ID	The primary identification of this account. The ID is
	read-only by default; you can modify it by clicking the
	Edit ID 🗳 icon. The maximum allowed ID length is 32
	characters.
Blocked	Specifies whether the account is blocked or unblocked.
	If this is checked, the account will be unusable; it is
	usually unblocked automatically when the account is
	used for the first time.
Product	The product providing pricing plans for this account.
Balance	The balance for this account.
User Agent	If this account is currently used by a SIP UA to register
	with the SIP server, the user agent identification info is
	displayed.
Contact	The URI of the user agent used by the SIP Proxy to
	contact the IP phone.

#### **Account Info**

Туре	The account type may be "Debit", "Credit", or "Voucher". Debit is usually associated with prepaid cards. Credit is an account that will be invoiced for incurred costs. Voucher accounts are "refill coupons" for other types of accounts.
Credit Limit	Only available when the account type is set to "Credit". Defines the credit allowance in the account's currency.
VoIP	The password used to authenticate any calls made using
Password	this account.
E-mail	If an account has e-mail info associated with it, the owner of the account can reset the password for self- care access, and the new password will be sent to this e- mail address.
Batch	Accounts are grouped into batches. If a new batch name is provided in the text field, a new batch will be created when you add the account. Otherwise, an existing batch should be selected from the drop-down list.
Control	Read-only. The sequential number of the account in the
Number	current batch. Batch name and control number uniquely identify an account, and are often used for prepaid calling cards.
Zero	Applicable only for debit accounts; specifies when the
Balance Date	account has used up all of its available funds.
Opening	The opening balance for this account.
Balance	
Refunds	The amount refunded to the account owner.
Non-Call	Charges not directly associated with calls the account has
Related	made; for instance, a maintenance fee or login fee.
Charges	

#### Maintenance

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Field									De	escripti	on			

	I
Action	Manual Charge: The debit account balance in
	PortaBilling100; for instance, if you are selling SIP
	phones to a customer. This means the balance will be
	changed so that the account is able to make fewer calls.
	Manual Refund: The credit account balance in
	PortaBilling100; for instance, if the account files a
	complaint and you agree to give credit toward future
	service use. This means the balance will be changed so
	that the account is able to make more calls.
	<b>E-Commerce Charge:</b> Transfers a given amount from
	an account's e-commerce account to a company
	merchant account and issues credit toward the account's
	balance in PortaBilling100.
	<b>E-Commerce Refund:</b> Transfers a given amount from
	a company merchant account to an account's e-
	commerce account; for instance, if a customer/account
	files a complaint and you agree to a refund. This
	transaction will not affect the account's balance in
	PortaBilling100.
	Authorization Only: Verifies whether the account's e-
	commerce account is valid and reserves a given amount.
	This will return a transaction ID, which may be used
	later in a capture payment transaction. This transaction
	will not affect the account's balance in PortaBilling100,
	nor the account's e-commerce account.
	<b>Capture Payment:</b> Transfers a given amount from an
	account's e-commerce account to a company merchant
	account and issues credit toward the account's balance in
	PortaBilling100. This requires the transaction ID
	obtained via an authorization only transaction. The
	amount must be equal to or less than that in the
	corresponding authorization only transaction.
	Manual Payment: Credits the account balance. Use this
	when receiving payment from the account owner.
	Manual payment will allow the account to make more
	calls.
	<b>Promotional Credit:</b> Credits the account balance. Use
	this when you are giving the account owner a credit
	toward future service due to a sales promotion. A
	1
	promotional credit will allow the account to make more calls.
Amount	
Amount Vieible	Amount to charge/refund.
Visible	A comment on this transaction visible to the customer
Comment	in the xDR browser.
Internal	An internal comment on this transaction; not visible in
Comment	the xDR browser, and accessible only from the database
	directly.

#### **User Interface**

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Login	Account login for the account user interface. Click the
	Account ID button to make the login identical to the
	Account ID.
Password	User interface password for the account.
Access	Access level assigned to the account.
Level	
Time Zone	Time zone for the account.
Web	Displays the account user interface in a particular
Interface	language.
Language	

#### **Subscriber**

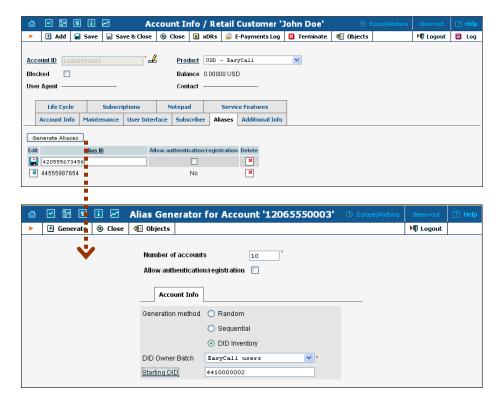
The Subscriber tab provides most of the commonly required contact information for the account's owner.

#### Aliases

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Alias ID	Contains alternative IDs for this account.
Allow	Defines whether this ID can be used independently
authentication/	for authentication and registration (e.g. having two IP
registration	phones concurrently registered to PortaSwitch, one
	using the main account ID and the other using an
	alias) or, alternatively, it can only be used to forward
	calls to the main account (since only it can register).

If you need to create multiple aliases (e.g. a customer with his own IP PBX who buys a range of DIDs to be forwarded there) you can use the Alias Generator to produce aliases in a similar way as with the Account Generator.



NOTE: that aliases are generated as a background task, so it may take a few minutes before they appear in Account Info.

## PORTA **Silling** 100°

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#### **Additional Info**

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IP Phone,	Indicates the IP phone and associated port assigned to						
IP Phone	the account. Default – not set.						
Port							
E-	Allows the account's owner to make online payments or						
commerce	set up periodic payments on the account self-care page.						
Enabled	Note: Configuring the account to enable online						
	payments (both manual and periodic) is done in exactly						
	the same way as for customers. First you should set up a						
	suitable payment system.						
Discount	Assign a discount plan to this account. When a new						
Plan	account is created, it will be assigned by default a						
	discount plan associated with the account's product.						

### Life Cycle

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			Account Inf	o Mair	tenance	User Interface	Subscr	riber Aliases	Additional Info	Custom Fields	-		
			Activation Date Expiration Date Time		3-17	YYYY-MM-DD	Issue Date First Usag Last Usag Last Rech	je 2008-03-17 je 2008-05-26	7				

Activation	The date from which the account is usable.
Date	
Expiration	The date from which the account will be unusable. If
Date	you do not want the account to expire, leave this field
	blank.
	Note: This date is assumed to be in the billing server's
	time zone, not the account's.
Lifetime	Relative to the activation date, the account will expire on
	first usage date + lifetime days. If you do not want to
	use this feature, leave the field blank.
Issue Date	The date when the account was created.
First Usage,	The date when the account was in use for the very
Last Usage	first/last time.
Last	Specifies the last time the account was recharged using a
Recharge	voucher (either via the self-care page or IVR).

#### **Service Features**

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_		ce Typ	e	_	Associate	d Number						
Ve		e Calls			Legal Inte	rcept	Customer's	default	~			
	_		<u>q Calls</u> q Calls		RTP Prox	/	Customer's	default	*			
					Music On	Hold Cust	comer's def	ault	~			

You have the option of expressly specifying the value of a given parameter or using the "Customer default" option. In the latter case, this parameter is assumed to be the value defined in the customer's configuration (the global value for this IP Centrex).

Field	Description
	The Voice Calls section
Associated	Specifies the number to be sent back to the IVR in an
Number	authorization confirmation. For example, this might be a
	redirect to a technical support number in an IVR
	application. Another example might be a quick-dial
	number for prepaid accounts. (In this case, the redirect
	number may be maintained via web self-provisioning.)
Legal	Intercept all incoming and outgoing calls of this customer
Intercept	for law enforcement purposes.

r								
RTP Proxy	Specifies the RTP proxying policy for this particular customer. For a description of possible values, see the <i>Connections with Voice Calls Service Type and VoIP Type</i> section.							
Music On HoldDefines the music on hold to be used with the account Choose None to disable this feature, or select the defi setting for the account's customer. To upload your or music, select a file on your local file system using the Browse button. To rename the music, enter the desire name in the Music Name field; otherwise the local file name will be used. The uploaded music will replace th previous entry in the list, and is usually enabled within minutes.								
	The Incoming Calls section							
UM Enabled	Allows the account user to access the unified messaging system. See the <b>PortaUM Administrator Guide</b> for more details.							
	Please note that if an account has <b>UM Enabled</b> activated, there will be an additional link next to it on the administrator interface: Manage UM Account. By clicking on this you will go automatically to the account's UM administration pages. This is extremely useful for helpdesk people, since they can quickly check the configuration of an account's auto-attendant, call queues, and the like. Also note that it may take a few minutes before an account is fully provisioned in PortaUM. Thus if you click on the link immediately after activating <b>UM</b>							
<b>T</b> 1	Enabled, it most likely will not work yet.							
Forward Mode	<ul> <li>Assigns a call forwarding mode to this account:</li> <li>No Forwarding: Disables call forwarding entirely.</li> <li>Follow-me: Enables standard follow-me forwarding.</li> <li>Advanced Forwarding: Activates advanced call forwarding mode.</li> <li>Forward to SIP URI: Replaces the Follow-me</li> </ul>							
	<ul> <li>tab with a simplified Forward tab, where you can enter a forwarding destination as a CLD@IP.</li> <li>Forward to CLD: A simplified type of forwarding where you specify a single phone number to which calls will be sent.</li> </ul>							
Maximum Forwards	When you select follow-me or advanced call forwarding, you must also provide a value for the <b>Maximum</b> <b>Forwards</b> parameter, so as to limit the number of concurrently active forwarding destinations allowed. Please note that you do not have to limit the total							

	number of phone numbers entered, but rather the number of phone numbers active at any given moment of time. For instance, a user may have a list of 20 numbers, each active in its own time period, some temporarily turned off, and so on. When call forwarding is done, PortaBilling will compute a list of numbers which may be used at that moment, and choose only the first N in the list, where N is the number specified in <b>Maximum Forwards</b> .
Timeout, sec	How long the IP phone will ring before a call goes to follow-me numbers (if any) or voicemail.
Call Processing Enabled	Enables selective call processing / conditional call forwarding features.
Default Answering Mode	Specifies the method of processing incoming calls to this account if selective call processing has been disabled, or if none of the selective call processing rules apply.
Voice VPN Distinctive Ring	For incoming calls from phones within the IP Centrex environment, use a ring pattern different from the default one.
Present Caller Info	Display caller info on incoming calls.
Disable Call Waiting	Forcibly disables call waiting (even if it has been enabled on the phone).
	The Outgoing Calls section
Set CLI To	Account ID: for outgoing calls, always override the CLI (ANI) value supplied by the IP phone with the username value used for authorization. This is done to prevent service abuse via CLI (ANI) number spoofing. Centrex Number: Use a different phone number for CLI (see below).
Centrex Number	When <b>Set CLI</b> mode has been activated for outgoing calls to off-net destinations (PSTN network), this field can be used to assign one of the other phone numbers in the same IP Centrex environment as the CLI. This is typically done so that calls between extensions within an IP Centrex environment (IP phones of this customer)
	will carry the caller's original CLI, while calls to PSTN numbers will display a reception/switchboard number as the CLI. Hint: click on the Centrex Number field label to invoke a pop-up window, where you can browse through the customer's available accounts.

Language	
Favorite Numbers	Allows you to define a list of phone numbers for this
Enabled	account, so that calls made to these numbers by the
Enabled	owner of the account will be charged according to a special FAV rate.
E911	Activate emergency services for this account
Hide CLI	Remove CLI (ANI) information for outgoing calls.
Hide CLI	Prefix to be dialed before an outgoing number in order
Prefix	to prevent the called party from seeing your phone
	number.
Show CLI	Prefix to be dialed before an outgoing number in order
Prefix	to allow the called party to see your phone number.
Call	Activates the Call Barring feature (a new Call Barring tab
Barring	will appear, where you can configure destinations which
Enabled	this user is not allowed to call).
Default	The routing plan to be used for outgoing calls when the
Routing	end-user dials a number without using a specific selection
Plan	code.

#### Follow-me

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Order  As listed CRandom Simultaneous												
Edit	Up / Down	Nan	ne *	Destin	ation *	Keep Original	CLI ()	Active 🧭 👯	Timeout, sec	<sup>*</sup> Off Delete		

This tab is only available when **Forward Mode** on **Service Features** tab is set to **Follow-me** or **Advanced Forwarding**.

Order	Specifies the order for redirecting a call.
	As listed: call every active follow-me number from the
	first (topmost) number to the last, until the call is
	answered.
	Simultaneous: call every active follow-me number from
	the list at the same time until the call is answered.
	Random: use a random order.
Edit	Click the Edit 🔳 icon to edit the follow-me number
	details. To add a new number to the list, click the 🖿 Add
	button.
Up, Down	Click these buttons to move a row before the previous

	one or after the next one in the list.
Name	The name of the follow-me number (e.g. "Mobile Phone").
Destination	Specify a number for redirecting calls, formatted according to the customer dialing rules.
Кеер	(This field is only available in Advanced Forwarding
Original CLD	mode.) When forwarding a call to another account, this ensures that the originally dialed number is still present in the call information. A remote IP PBX, which registers only a single account (phone number) to
	PortaSwitch, but receives incoming calls to multiple phone numbers (all of which are forwarded to the main account), can then correctly deliver these calls to internal extensions.
Кеер	If switched on (by default), a call is forwarded with the
Original	CLI of the original caller. So if A calls B, but the call is
CLI	forwarded to C, C will see that it is A who is calling.
	The alternative is to put B's phone number in the CLI of
	the forwarded call. This is a popular feature for multi- tenant attendants. Phone numbers for company A
	(18005554545) and company B $(12025556767)$ are then
	forwarded to the same secretary, who can see the actual
	DID dialed by the customer on her phone, and answer
	accordingly.
SIP Proxy	(This field is only available in Advanced Forwarding
	mode.) Enables you to choose one of the SIP proxies
	defined in the <b>Permitted SIP Proxies</b> properties for the customer.
Active	Defines the period when the number is active, i.e. is
neuve	allowed to receive a forwarded call. Click the <b>Active</b> link
	or wizard 🔀 icon to create the first period definition or
	add the next one using the Period Wizard (this is
	virtually the same as the Off-peak Period Wizard in Edit
	Tariff). Click the Always button in the wizard to make
	the follow-me number active permanently. Click the
	Test Period Kei icon to run a period test.
Timeout	Specify the amount of seconds to wait until a call is
	answered. Following timeout, the call will be redirected
Off	to the next follow-me number or disconnected.
Off	Check this option to temporarily disable forwarding to a follow-me number.

#### Forward

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			Life Cyc	:le	Subscriptions			Notepad		e Features	Forward			
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	CLD Timeout, sec			•	]									
	Keep Original CLD													

This tab is only available when **Forward Mode** on **Service Features** tab is set to **Forward to SIP URI** or **Forward to CLD**.

CLD/SIP	Here you will enter CLD or two parts of the SIP URI:						
URI	• The CLD part may contain only digits, the						
	letters A-D, and the signs # and *.						
	• The address part should contain a valid IP						
	address (four numbers separated by dots, e.g.						
	12.34.56.78)						
Timeout	Specify the amount of seconds to wait until a call						
	answered. Following timeout, the call will be redirected						
	to the next follow-me number or disconnected.						
Keep	Allows you to preserve the originally dialed number						
Original	during forwarding. This is useful when forwarding a call						
CLD	to a remote IP PBX. For more details, see the <b>PortaSIP</b>						
	Administrator Guide.						

#### **Call Processing**

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lfa call d	does not match any of the abo	ve rules, it will be processe	ed in the following way: Ri	ng, forward, voicemail.			

This tab allows you to define a list of rules for handling incoming calls to this account. It is only available when **Call Processing Enabled** box is checked on **Service Features** tab.

From	Allows you to select a condition applicable to an					
	incoming phone number (phone number of a person					
	trying to contact you). Click on the column header with					
	the corresponding rule to invoke the wizard, which will					

	enable you to define a new rule or change an existing
	one.
То	Allows you to select a condition applicable to a dialed
	phone number (one of your phone numbers that a
	person trying to contact you has dialed).
Time	Allows you to select a condition applicable to the time
Window	when a call is made.
Action	Specifies which actions should be taken if a particular
	phone call satisfies the conditions for this rule.
Off	Allows you to temporarily disable a rule without actually
	deleting it (so it can be used later on).

#### **Volume Discounts**



Destination	Information about discounts used and remaining is
Group	shown, grouped by Destination Group names. Each
	name represents one group included in the volume
	discount plan assigned to the account.
Threshold	The threshold value for the currently used discount
	level. When an account's internal counter reaches this
	value, the next level discount will start to be applied
	according to the discount scheme. When the counter
	reaches the last numeric threshold value, it will be shown
	here. N/A means that there is no numeric threshold
	defined in the scheme, or no scheme has been defined at
	all.
Used	The current value of the account's counter associated
	with this destination group.
Remaining	The amount remaining before the threshold value.
Current	The value of the discount currently applied to the
Discount	account.
Next	The value of the next level discount.
Discount	
Level	
Discount	Click the information 😰 icon for a textual
Info	representation of the discount scheme.

#### **Subscriptions**

2	2	\$	:			Ace	ount I	nfo / Re	tail Custo	mer 'SIP #	Account	s'		America/V	ancouver d	demo-to:
• A	١dd	9	Save	🚽 Save &	Close	🛞 Close	E xDR	s 🙀 E-Pa	yments Log	🔀 Terminate					•	🖣 Logou
							_									
		A	Accour	nt ID 00010			🖉 Р	roduct US	- SIP acco	unts 🎦	¥					
		B	Blocke	d 🗌			B	alance 0.74	150 USD							
		U	User A	gent Linksy	s/SPA94	1-5.1.8	c	ontact sip:	000100@193.3	8.87.193:41104	t .					
			_										_			
			Life Cycle			Subscriptio	ons	Notepad	Servio	Service Features		Call Processing				
		_	A	ccount Info	Maint	tenance	User Inter	rface Sub	scriber Alia	ses Addition	al Info C	ustom Fields				
			Edit	ŝı	ibscripti	on	Discou	unt Rate, %	Start Date*	Activation Date	Finish Date	Billed To	Obligatory	Close Delete		
				ing Subscrip			01350	and roaded in	Junt Date	Activition bate	1 main Date	Direct To	oblightory	CIUSE DEIELE		
			Penu	ng sanscrip	uons											
			Active	• Subscriptie	ins											
			🔳 ki	os subscript	on				2008-04-11	2008-04-11		2008-04-30	()			

This tab displays the subscription plans currently applied to this account. Subscriptions are divided into three groups

- **Pending Subscriptions** displays subscriptions which are not active yet (i.e. they will be activated sometime in the future).
- Active Subscriptions displays currently activated (and billed) subscription plans.
- **Closed Subscriptions** displays subscriptions which have already been closed.

Subscription	Choose one of the available subscription plans from the
	list.
Discount	Enter a discount rate for this subscription. If you leave
Rate, %	this field empty, it means that the discount rate defined
	in the customer information should be applied. If you
	enter any value, it will override the customer discount
	rate. 0 means no discount (i.e. the rate defined in the
	subscription plan is applied).
Start Date	Enter the desired subscription activation date:
	immediately, or sometime in the future.
Activation	(Read-only) Displays the date when the subscription was
Date	activated.
Finish Date	Enter the date when this subscription should be
	automatically canceled.
Billed To	(Read-only) The date to which subscription charges have
	already been applied.
Mandatory	A flag indicating that this subscription comes from the
	account's product, and so cannot be closed until the
	account has this product assigned to it.
Close	Allows you to close one of the optional subscriptions.

#### **Call Barring**

۵	<b>&gt;</b>	\$ i 🖂 /	Account Ir	nfo / Re	tail Custo	mer 'Joh	n Doe'	() Europe/And	orra demo-root	? Help
•	属 Save	🗟 Save & Clos	e 🛞 Close	🔳 xDRs	🗐 E-Payme	nts Log  🛚	Terminate	街 Objects	🕨 🕅 Logout	目 Log
Account ID         12065550003         Product         USD - BasyCall           Blocked         Balance         0.00000 USD           User Agent         Contact										
	Life Cycle	Subscript	ions No	otepad	Service F	eatures	Follow	Me		
Ac	count Info	Maintenance	User Interface	Subscri	ber Aliases	Additional I	nfo Call B	arring		
	Account Info     Maintenance     User Interface     Subscriber     Aliases     Additional Info     Call Barring       Premium numbers     ✓       Toll-free numbers     □									

This tab is only available when the **Call Barring** feature for **Voice Calls/Outgoing** has been activated on the **Service Features** tab. Here you can enable call barring for specific classes of phone numbers.

#### **Account Generator**

The Account Generator should be used when large numbers of accounts are to be generated (for example, when issuing prepaid cards) so that individual accounts need not be entered manually. The account IDs will be generated either sequentially or randomly, as will the web password, so as to prevent possible defrauding. The generation process will run offline, so that the accounts are not visible from the Account Management page until the process is complete. The customer will then receive an e-mail notification regarding completion of the task, as well as another e-mail listing all the accounts in CSV format, including the values "Batch", "Control Number" (a sequential index), "PIN" (account ID), "Web login" (by default identical to the account ID) and "Password" (web password).

	<b>&gt;</b>	\$	🗈 🖂 A	ccount Genera	ator for Reta	il Custo	mer 'EasyCall	Ltd.' @	demo-toor	? Help
٨	🔁 Ger	erate	🛞 Close						🕅 Logout	
		Numi Bloci	ber of accou	<b>its</b> 1000	Product Opening Balance		asyCall pre-paid	C: 🍸		
		BIUCI	seu		Opening Balance	10				
			Account Info	User Interface	Additional Info	Life Cycle	Service Features	]		
		Type		💿 Debit 🔘 Credit	○ Voucher					
		Gene	ration metho	I 💿 Random						
				🔿 Sequential						
				<ul> <li>DID Inventory</li> </ul>						
		ID Pre	efix	1234						
		ID Le	ngth	12 *						
		VoIP I	Password	🔘 Empty						
				💿 Auto Generated						
				🔿 Auto Generated	Digits Only					
		Batch		Easycall-2007-12	New batch	× *				

The Account Generator interface is very similar to Add Account, with the following exceptions:

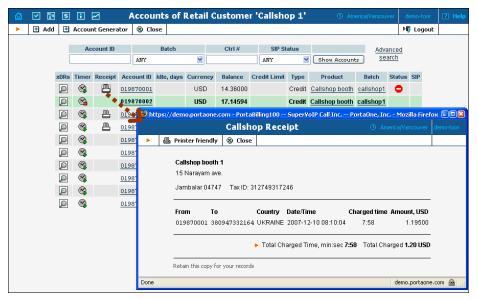
Field	Description
Number of Accounts	The number of accounts to be generated.
(replacing Account ID)	
	Account Info tab
Generation method	Random will produce unique unpredictable
	account IDs with a specified length and prefix.
	Sequential will create accounts with
	incremental IDs, e.g. if the starting ID is
	specified as 55540000, it will create accounts
	55540000, 55540001, 55540002 and so on; see
	below for more details.
	DID Inventory will generate accounts by
	assigning account IDs from the available
	DIDs in a specific DID batch; the user has the
	option of choosing the starting DID.
ID prefix	Preset leading digits in the account ID; leave
	empty to make the account ID totally random.
ID length	Total ID length, including ID prefix.
Starting ID	Only available in sequential generation, and
	always numeric.
VoIP Password	Can be generated automatically, or left empty
	to allow end-users to login using account ID
	only (typically used for prepaid cards). The
	"Auto-generated digits only" option allows
	you to create sufficiently secure passwords
	(with a specified password length) consisting
	of digits only, so that they can be entered from
	a phone's touchpad.
	User Interface tab
Login	Can be set as identical to the account ID, or
	left empty to disable access to the account
	self-provisioning interface.
Password	Can be generated automatically, or left empty
	to allow end-users to login using account ID
	only.

#### **Assigning an Account ID**

Choose Random if you want a relatively small amount of unpredictable IDs within a large enough range of possible numbers. Please note that "random" means not only "generated randomly" but also "difficult to guess"; therefore, the ratio between the number of generated PINs and the number of total possible PINs should be sufficiently low. For instance, PortaBilling will refuse to generate 5,000 PINs with ID prefix

33333 and ID length 9, because in this case there are 10,000 possible PINs; if we generate 5,000 actual pins, there is a 50% chance of using someone else's PIN just by entering one wrong digit. Thus, in the example above, the PIN length should be set at 10 or even 11 digits (with a 5% or 0.5% chance of guessing the PIN, respectively). Note that random account PINs are never generated with leading zeroes, as these zeroes could be truncated when working with PIN data in programs like Microsoft Excel.

Choose Sequential if you want to generate a large number of accounts at once. You can choose the starting ID for the first account to be generated, and the system will generate IDs sequentially by an increment of one. If a given account ID is already used, it will be skipped and the system will continue until it generates the specified number of accounts. For example, if you requested 100 accounts with the starting ID prefix "1000000", and there are already three accounts within the defined range (1000010, 1000011, 1000012), the first generated ID will be 1000000, the second 1000001, and the last 1000103. Account ID length is always the same for all generated accounts. So if there is not enough room to generate the specified number of accounts (e.g. you request 1,000 accounts with starting ID 999900), generation will not begin and a warning e-mail will be sent immediately.



## **Callshop Features**

The account list screen can be used by a callshop operator to track calls made in callshop cabins, to block an account after a call has been placed, and to print receipts for services provided. When a user wants to place a call, the operator clicks the Start Timer icon, which automatically unblocks the account. After the call, when the user is ready to pay, the

operator clicks the Stop Timer <sup>(C)</sup> icon, and the Print Receipt icon appears. Clicking this icon will initialize the receipt pop-up.

**NOTE:** Callshop features are not available for accounts of direct retail customers. In order to enable these features for accounts of a reseller's sub-customer, both the reseller and the sub-customer must have "Callshop enabled" on.

# **E-payments Log**

This form is not directly accessible from the main menu, since it should be accessed in the specific context of:

- the whole environment (accessible from **Company Info**) this allows you to see charge attempts for any direct customer;
- a specific customer (accessible from **Customer Info**) this allows you to monitor charge attempts related to a particular customer;
- a specific account (accessible from **Account Info**) this allows you to monitor charge attempts related to a particular account.

Adjust the search parameters to see a list of all transaction attempts (by default, only transactions for the current day will be displayed, so the values in the From/To fields may need to be changed) and then press the **Search** button.

i 🗹			E-I	Payment	ts Log			
E Objects								I
	From, MM/DD/0001	I I. MM DD MMM	Test Mode	Payma	nt System Pa	yment Status	Search	
	03/28/2007	05/28/2007	YNL 👗	ANY	🖌 🖌	Y 💌	Search	
	Pages: 1 2 Total: 2							
	🗉 ID 🔻 🛛 Date / Tin	e Customer / Accou	int C Amount	Currency	Payment Meth	od 🔅 Payment System	CTest C Status	
	82 05/14/2007 18	56:18   🔒 <u>Call Parking</u>	1	USD	BBH 12xxxxxx9	📅 2CheckOut DD	Succeeded	
	81 05/14/2007 13	52:46 🍦 EVB SIP Calls	4	USD	4007xxxxx00	27 🤭 TestProcessor	@1151 Succeeded	
	80 05/14/2007 13	52:42 🍦 EVB SIP Calls	4	USD	4007xxxxx00	27 🤭 TestProcessor	@itst Succeeded	
	79 05/14/2007 13	52:39   EVB SIP Calls	4.07	USD	<b>4007xxxxx</b> 00	27 😁 TestProcessor	@1131 <u>Succeeded</u>	
	78 05/10/2007 13	56:19 🍦 <u>Call Parking</u>	124.17	USD	部記 1xxxxx307	📅 2CheckOut DD	@1131 Succeeded	
	77 05/10/2007 12	19:35 🍦 Call Parking	3.23	USD	1xxxxx307	🎅 2CheckOut DD	Gaist Succeeded	
	76 05/10/2007 12	17:03 <u>Call Parking</u>	3.23	USD	BBB 1xxxxx307	📅 2CheckOut DD	Succeeded	
	75 05/10/2007 12	06:03 🍦 <u>Call Parking</u>	3.23	USD	BBR 1xxxxx307	😁 2CheckOut DD	Gillin Succeeded	
	74 05/10/2007 11	51:14 🍦 Call Parking	55.56	USD	1xxxxx307	😁 2CheckOut DD	Gatst Succeeded	
	73 05/10/2007 11	50:30 🍦 Call Parking	-55.58	USD	1xxxxx307	🎅 2CheckOut DD	Gauss Succeeded	
	72 05/10/2007 11	48:46  🋔 <u>Call Parking</u>	-54.56	USD	BBH 1xxxxx307	📅 2CheckOut DD	Failed	
	71 05/10/2007 11	46:36 🍦 Call Parking	-21.01	USD	1x0000(307	🈁 TestProcessor	@1131 Succeeded	
	70 05/10/2007 11	45:25 🍦 <u>Call Parking</u>	123.13	USD	1xxxxx307	🕂 TestProcessor	Authorized	
	69 05/10/2007 11	44:43   Call Parking	123.13	USD	BBB 1x000x307	😁 2CheckOut DD	Failed	
	68 05/10/2007 11	44:22   🔒 Call Parking	-123	USD	1xxxxx307	📅 2CheckOut DD	Failed	
	67 05/10/2007 11	44:11 🌲 Call Parking	-12.13	USD	ERE 1xxxxx307	😁 2CheckOut DD	Failed	
	66 05/10/2007 11	43.66 🍦 Call Parking	-123	USD	1xxxxx307	😁 2CheckOut DD	Failed	
	65 05/10/2007 11:	42:54 🛔 Call Parking	-54.55	USD	BBB 1x000x307	7 2CheckOut DD	Failed	

Column	Description	
<b>Date/Time</b> Specifies when the charge attempt occurred.		
Customer/Account	Specifies to which customer or account the charge	
	was applied.	
Amount	Gives the total amount of the transaction.	
Currency	Specifies the currency used in the transaction.	
Payment Method	The icon on the left specifies which type of	

Payment System	<ul> <li>payment method was used (e.g. VISA or MasterCard); the actual card/account number is displayed in the "safe" form (some of the digits are masked by an x).</li> <li>Specifies the payment system used to carry out this</li> </ul>					
T ayment System	transaction.					
Test	Indicates whether this transaction was done in "test" mode.					
Status	<ul> <li>Indicates the result of the transaction:</li> <li>Succeeded – the transaction was successful, funds were transferred.</li> <li>Failed – the transaction has failed (click on Failed to get further information, such as the error code or a response from the remote payment processor).</li> <li>Authorized – a "check funds" transaction was successful (but no actual charges were applied to the credit card and no balance modification in the billing was done).</li> <li>Incomplete - when using payment systems with "external authorization" it is possible that a transaction was interrupted (e.g. user has pressed the "cancel" button when entering credit card info on the remote processor website).</li> </ul>					

# **5.** Help Desk

# Call Trace

The call tracing utility allows you to determine the characteristics of a specific call when you know the **h323-conf-id** or the **destination**, which may be specified exactly, or using a wildcard. (For example, all calls to England may be specified as "44%" in the destination field). A date range for the search must be specified; however, it is highly recommended to set it to the smallest range necessary, in order to reduce waiting time and server load. Ideally, the search window should contain one day only.

To initiate a query, click the **Trace Call** button. If no results appear, try broadening the query. When the results appear, locate the desired call within the result set. If there are too many results, they will be divided across pages, although in this case it is advisable to narrow the query.

	- 10	s i 🗹		Call Trace  () America/Vancouver									
	🕉 Close	🖷 Objects										N) Loga	ut
H323-conf.id       Destination %       ① 10 min.         Image: 1 2 3 4 5 6 7 8 9 10 11 ≥ 1 Totak: 17       Image: 1 2 3 4 5 6 7 8 9 10 11 ≥ 1 Totak: 17													
View	Error Report	÷ CLI(ani)	¢ CLD(dnis)	Country	Description	Connect Time	Disconnect Time	<ul> <li>Duration, min:sec</li> </ul>	÷ Amount	+ Account	÷ Customer	+ Vendor	Disconnect Reason
P	E	44810747061	16047576761		North America	2006-10-06 10:13:02	2006-10-06 10:15:03	2:01	0.05042 USD	x-telecom	X-Telecom	VoIP Solutions	Normal call clearing
P	E	19563646551	380457644772	UKRAINE	Proper	2006-10-06 10:08:34	2006-10-06 10:08:34	0:00	0 USD	56.78.90.1	Carrier Exchange	SuperNet	User busy
Q	E	38760324998	16040211301		North America	2006-10-06 10:07:29	2006-10-06 10:07:29	0:00	0 USD	56.78.90.1	Carrier Exchange	VoIP Solutions	Temporary failu
P	E	92227808616	380497714137	UKRAINE	Proper	2006-10-06 10:06:53	2006-10-06 10:06:53	0:00	0 USD	56.78.90.1	Carrier Exchange	VoIP Solutions	Normal call clearing
P	E	82454291708	380449493612	UKRAINE	Proper	2006-10-06 10:04:33	2006-10-06 10:15:00	10:27	0.94050 USD	56.78.90.1	Carrier Exchange	VoIP Solutions	Normal call clearing
P	E	88073228656	380294255778	UKRAINE	Proper	2006-10-06 10:04:28	2006-10-06 10:04:28	0:00	0 USD	100004	Callshop# 15	SuperNet	User busy
Q	E	41287423679	380041355050	UKRAINE	Proper	2006-10-06 10:04:16	2006-10-06 10:04:16	0:00	0 USD	100003	Callshop# 15	SuperNet	Temporary failu
$\square$	E	96521391662	16040789435		North America	2006-10-06 10:03:38	2006-10-06 10:05:59	2:21	0.02350 USD	56.78.90.1	Carrier Exchange	SuperNet	Normal call clearing
P	E	73618227004	16045068948		North America	2006-10-06 10:02:37	2006-10-06 10:10:25	7:48	0.19500 USD	x-telecom	X-Telecom	VoIP Solutions	Normal call clearing
Q	E	55219438665	420994484518	CZECH REPUBLIC	Proper	2006-10-06	2006-10-06	2:28	0.17267 USD	56.78.90.1	Carrier Exchange	VoIP Solutions	Normal call

The result listing shows the origination number, the number dialed, the destination location, connect and disconnect times, duration, account and customer (in the case of product usage), vendor (in the case of normal vendor termination), and the call status while disconnecting, which is color-coded according to the table below. Select the View () icon to go to a detailed page describing the call.

#### **Possible Reasons for Disconnect:**

Reason	Color	Reason	Color
Normal completed call		Calling side error	
Normal uncompleted call		Called side error	

Call progress code Network error
----------------------------------

## **Call Trace Detail**

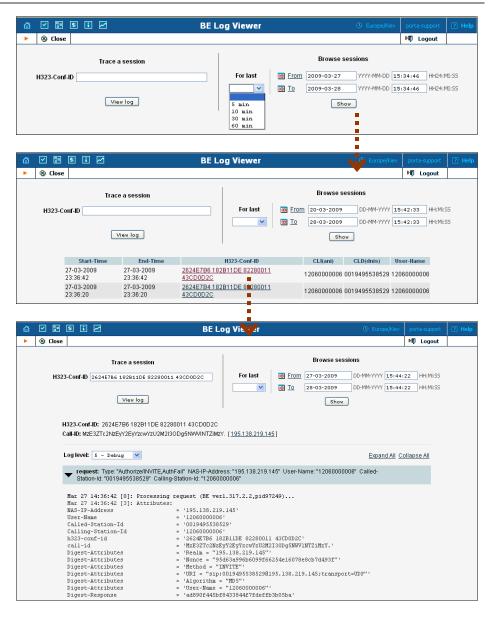
The detailed Call Trace Results page shows additional call details, such as the h323-conf-id for the call and the setup time, as well as a detailed breakdown of the charges applied to each entity (accounts, resellers, and vendors). You may view the connection details for a particular vendor by selecting the Connection 💓 icon. On the subsequent Connection detail page, you may view all connections for a particular vendor by clicking the Connections 🛐 icon.

🙆 🗹 📰	s i 🗠				(	Call Tra	ice Res	ults					er pb-ro	ot	
S Close	e 🔳 Error Re	eport 🗎	View loo	, <b>4</b>	Objects								NU Log	jout	
		H323-cor	nf-id	00462	FC9 00462	FC9 00462	FC9 0000	20D8	Setup	time, sec	10				
				-			count	Customer	1	on, sec Vendor		ser			
					UTC	America		Callshop#15 America/Vancouve	r Ameri		America/				
		Connect						2006-10-06 10:14:12 2006-10-06 10:16:58							
		DISCONNE	ct nme	2006-1	0-06 17:16:5	0 2006-10-0	10:10:50	2008-10-06 10:16:56	2006-11	0+06 10:16:56	2006-10-0	0 10:10:50			
						ACC	COUNTS								
Account	CLI(ani)	CLD(dni	s) Co	ountry	Descripti	on Setu	p Time, mi	n:sec Charged time	, min:sea	Charged an	nount, USD	His	tory	Disco	nnect Reasor
<u>100004</u>	4378866357	1 16046043	3539 CA	NADA	British Colu	mbia	0:10	2:48		0.28	000	1x6x0.1	+27x6x0.1	Norm	al call clearing
						RES	ELLERS								
Customer	CLI(ani)	CLD(dni	s) Co	ountry	Descripti	on Setu	p Time, mi	n:sec Charged time	, min:sea	Charged an	nount, USD	His	tory	Disco	nnect Reasor
Callshop#1	5 4378866357	1 16046043	3539		North Ame	rica	0:10	3:00		0.15	000	1x60x0.05	+2x60x0.05	Norm	al call clearing
						VEN	DORS								
Co. Vendor	CLI(ani)	CLD(dnis)	Cour	ntry De	escription	Setup Time	e, min:sec	Charged time, min:s			Hist	-	Disconnect	Reasor	1
SuperNet	43788663571	160460435	39	Nor	rth America	0:1	0	2:46	0.02	2767 USD 1	1x1x0.01+1	65x1x0.01	Normal call o	learing	1
V															
' ☑	: •				Edit 's	uperN	et' Co	nnection		® 4	America/Va	ncouver	demo-roc	t	? Help
🕨 🖬 Sa	ive 🗟 Sav	ve & Close	. 8	Close	🚮 Loa	d 📲 1	Objects						▶Ø Logo	ut	目 Log
					ſ	Descriptio	n super	Net		*					
					Se	ervice Typ	e Voice	Calls							
						Ту	<b>e</b> VolP t	o Vendor							
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	Capacity									]"					
								r caller info	~	1					
	Vendor Account							*							
						slation Ru				2					
					Ou	tgoing Ru	le			0					
					CLI Trans	slation Ru	le			<b>&gt;</b>					

#### **View Billing Engine Logs**

The **Log Viewer** page allows you to see a list of all sessions (voice calls, Internet access, etc.) processed by the billing engine, and to examine a detailed processing log for each of them, if required.

#### PORTA Billing 100°



Field	Description
H323-Conf-ID	The H323-Conf-ID of a call.
For last	Display all sessions in a recent time period.
From, To	Choose a specific time period.

If you do not know the H323-Conf-ID for a call you have just made, you can use the right side of the form to display all call attempts made within a certain interval (this will also include failed call attempts, which makes it extremely useful for troubleshooting problems when you are unable to make outgoing calls, e.g. due to an authorization failure).

You will see a list of call attempts, with the call initiation time, H323-Conf-ID and CLI/CLD for each; click on the underlined H323-Conf-ID to see the billing engine log for it.

## **Active Calls**

The Active Calls page shows calls that are currently in progress or have been completed recently. It indicates the time the call started, the elapsed call duration, and who is making the call, and describes which gateways the call is going through.

Since the total number of simultaneous calls in your system can be quite large, you can display only a certain subset of all calls, by setting a filter for:

- **Customer** name of the customer who is making a call;
- Vendor carrier to whom the call has been terminated;
- Node element of your network (PortaSIP server, gateway, etc.) the call is going through (e.g. you would like to see all calls originating on your Cisco AS5300 gateway in New York);
- **Call duration** only displays calls lasting for more than a certain number of minutes.



Field	Description
Account	Account ID of the call originator.
Customer	Customer who originated the call.
Connect time	The Call-ID used to trace callback calls when one logical call consists of several independent SIP calls.
Disconnect time	Empty if the call is still in progress.
Duration	The total call duration.
CLI	Calling station ID (ANI) for the

	originator.
CLD	Called station ID (DNIS) – the destination number.
Vendor	Carrier used for call termination.
Connection	Specific connection for this vendor.
Checkbox	By ticking this checkbox for a particular call, you can group several active calls into a single group for further operations (e.g. remove them from the active call registry)

The line below these fields shows a schematic call flow diagram.

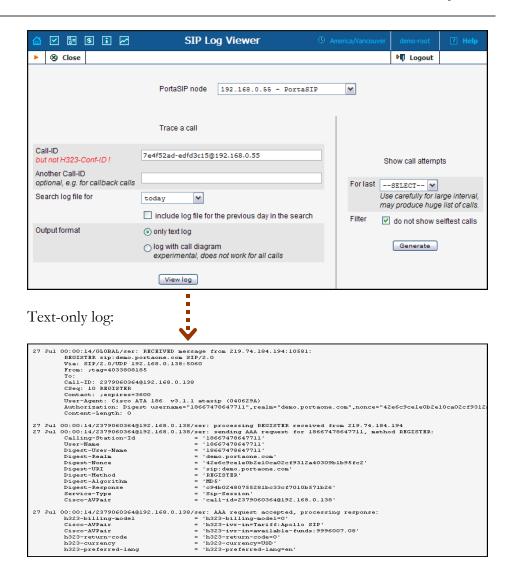
Sometimes a call displayed in the active calls registry may have already been disconnected (the most common reason for this being that one of your gateways was rebooted and calls were cut off, although billing never received accounting records about this). In this case, you are able to clean up such "stalled" calls from the web.

**NOTE:** A cleanup operation only affects billing's internal registry of active calls, and will not disconnect a call that is still in progress.

If you want to delete such calls, just mark all of them (using the checkbox in the column on the far right) and press the "Cleanup calls presentation" button. The "Call duration greater than, min." option allows you to autoselect calls with a duration greater than the entered value, so that you can quickly select suspiciously long calls.

# **SIP Log Viewer**

The SIP Log Viewer page allows you to view billing logs of PortaSIP calls. You need to know the Call-ID of the specific call in order to trace it. If you do not know the call-id (e.g. you just made a phone call from a SIP phone and it failed), you can display all call attempts for a recent period and locate the call-id of "your" call according to CLD or other parameters.



Log with call diagram:

14:10:17 rtpproxy: pre-mining caller's aggress with 70.58.128.185:15455	
14:10:17   <- (B? 200/I) / INVITE@	
14:10:17  <- (B? 200/I) ♪ INVITE@	
14:10:17   @-> (B? 200/I) 100 trying>	
14:10:17 @-> (B? 200/I) 100 Trying>	
14:10:17 @-> (Ba 200/I) 180 Ringing>	
14:10:17   @-> (Ba 200/I) 180 Ringing>	
14:10:17    <- (Aa 102/I) 180 Ringing@	
14:10:17  <- (Aa 102/I) 180 Ringing@	
14:10:20 @-> (Ba 200/I) ♪ 200 0R>1	
$ 4_{\pm}:0_{\pm}:0_{\pm} $ (B <sub>2</sub> 200/T) $P$ 200 (K −−−−−−−)      4_{\pm}:0_{\pm}:0_{\pm}  (B <sub>2</sub> 200/K) $A$ (K −−−−−−−)    4_{\pm}:0_{\pm}:0_{\pm}   4_{\pm}:0_{\pm}:0_{\pm}	
14:10:20 rtpprov: pre-filing calles's ddress with 70.68.128.186:16458	
4:10:20  ( $4:10:20 $ ) ( $4:1$	
14:10:20 <- (Åa 102/I) ♪ 200 0K@	
14:10:20 <- (Ba 200/A) ACK	
14:10:20 9-> (Aa 102/A) ACK	
14:10:20   /// /// /// /// ///////////////////	
14:10:22 @-> (Aa 103/B) BYE>)	
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14:10:22   (<- (ka 103/B) 200 0K@	
14:10:22  <- (Aa 103/B) 200 0K@	
14:10:22   R-> Accounting>	
14:10:22 rtpproxy: RTP stats: 78 in from callee. 79 in from caller	
14:10:22 rtpproxy: session on ports 35132/35134 is cleaned up 14:10:22 (- (Ba 201/9) BFT	
14:10:22  <- (Ba 201/B) BYB	
14:10:22   B-> Accounting>	
14-10-22   <= (Ba 201/B) BYR	
17 May 14:10:17/GLOBAL/ser: RECEIVED message from 70.68.128.186:34714:	
INVITE sip:400@216.231.44.34 SIP/2.0	
Via: SIP/2.0/UDP 192.168.0.53:5061;branch=z9hG4bK-4a8856d4	
From: autoprov 401 <sip:12060000401@216.231.44.34>;tag=13d16d295842930co1</sip:12060000401@216.231.44.34>	
To: <≋ip:4000216.231.44.34≻	
Call-ID: 21e0c92d-42c946d80192.168.0.53	
CSec: 101 INVITE	
Max-Forwards: 70	
Contact: autoprov 401 <sip:120600004010192.168.0.53:5061></sip:120600004010192.168.0.53:5061>	
Expires: 240	
User-Agent: Linksys/PAP2-3.1.7(LSd)	
Content-Length: 428	
Allow: ACK, BYE, CANCEL, INFO, INVITE, NOTIFY, OPTIONS, REFER	

Field	Description
SIP Environment	The PortaSIP node (virtual SIP instance)
	whose log files will be processed.
Call-ID	The SIP Call-ID (typical format is
	XXXXX@some.domain or XXXX@IP).
Another Call-ID	The Call-ID used to trace callback calls
	when one logical call consists of several
	independent SIP calls.
Search log file for	The day when the call was made.
Include log file for the	This option extends the search by adding
previous day in the	the previous day.
search	
Output format	Raw text log, or with diagram.
Show call attempts for	Displays all call attempts on this node, so
last	that you can find the call-id for a call and
	use it to obtain log information.

# Account Info

The Account Info page is provided for Help Desk staff responsible for answering questions from account holders. The interface requires the account holder to give the Help Desk an account ID or a batch and control number. The Help Desk operator can also browse xDRs for this account by selecting the Browse xDRs icon.

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¢	🖲 Close	:														1	🕅 Logout	
1	ñ.c.	ount	n	0	ustomer			Batch		0	trl #	5	iP Statu	0			Advance	a
	Hot	ound		BasyCa.		~	ANY	Duten	~	v	arm	ANY		• •	Show Acco	unts	search	u
		xDRs	Ac	count ID	ldle, days	Curre	ency	Balance	Credit Lir	nit Ty	pe	Pr	oduct		Batch	Status	SIP	
		Q	1206	51234568		US	D	17.84581		Cre	edit	SIP Subscr	ibers		<u>easycall</u>			
		$\mathcal{Q}$	1200	612345681		US	D	3.31129		Cre	edit	SmartCall -	resider	ntial SI	easycall	•		
		$\mathbf{P}$	1206	51239876		US	D	0.00000		Cre	edit	SmartCall -	resider	itial SIF	easycall			
		P	1206	51239877		US	D	351.56001		Cre	edit	Retail SIP			easycall			
			1604	41231007						Alia	as							
		P	1604	41231018		US	D	0.00000		Cre	edit	Wholesale	XCHG-	Gold	easycall			
		$\mathbf{P}$	1604	41234567		US	D	10.00000		De	bit	SIP Subscr	ibers		easycall			
		P	1604	41234568	160	US	D	14.68056	20.000	00 Cre	edit	SIP Subscr	ibers		easycall	▲		
		$\mathbf{P}$	1604	41234569		US	D	0.00000		De	bit	SIP Subscr	ibers		<u>easycall</u>	<u> </u>		
		$\mathbf{P}$	1604	41234570		US	D	0.00000	10.000	00 Cre	edit	SIP Subscr	ibers		<u>easycall</u>			
		$\mathbf{P}$	1604	43102255		US	D	10.34800	10.000	00 Cre	edit	SIP Subscr	ibers		<u>easycall</u>	Δ		
		$\mathbf{P}$	1604	46282508		US	D	10.34800	10.000	00 Cre	edit	SIP Subscr	ibers		<u>easycall</u>	▲		
		$\mathbf{P}$	1604	46831234		US	D	10.34800	10.000	00 Cre	edit	SIP Subscr	ibers		<u>easycall</u>	Δ		
		P	7773	700088	1	US	D	0.00000		Cre	edit	SIP Subscr	ibers		<u>easycall</u>		0	
		$\mathbf{P}$	7773	700089		US	D	0.00000		Cre	edit	SIP Subscr	ibers		easycall			

Once specified, clicking on **Account ID** will take the user to the Account Info for that account.

6	<b>&gt;</b>	\$	i 🖂 ,	Account	Info /	Retail Cı	istome	r 'EasyCa	ll Lto	d. () America/Vancouver	demo-toor	? Help
•	🖬 Save		Save & Close	🛞 Close	🔳 xDRs	🙀 E-Payı	ments Log	🔀 Termin	ate		🕅 Logout	目 Log
Biod	Account ID     120612345681     Product     USD - SmartCall - residem       Blocked     Image: Contact - contact     Balance 3.31129 USD       User Agent     Contact - contact											
		Life Cy	rcle	9	ubscription	าร		Notepad				
	Accoun	t Info	Maintenanc	e User Int	erface 9	Subscriber	Aliases	Additional I	nfo			
Type VolF E-m Bate	Passwo ail	Cre rd coe eas	syCall <u>Ltd.</u> 9dit 5digec sycall	Auto	F	Credit Limit Opening Bala Refunds Non Call Rela		35	0.0	USD 00000 USD 00000 USD 31129 USD		

The majority of account details on the Account Info page are read-only. This interface is similar to the one accessible via the customer's Accounts. Help Desk staff has the ability to modify only Web Password, VoIP Password, Account Balance, Time Zone, Redirect Number, Blocked Status, and Preferred Language. When making such changes, Help Desk staff should also provide a comment detailing the reason for these changes (for example, "user unable to call due to network outage, credited \$5"). Changes may be confirmed by clicking Save or Save&Close.

# **6.** Statistics

### Graphs

The default timeframe for all graphs is 30 hours. The dates above the graph are the boundary timeframe for the current graph. If the graph is shown in more than one color, a legend for color use will be displayed below the graph. If there are two graphs, captions will be provided on the left. The use of navigation is explained in the table below.

Icon	Description
Q	<b>Zoom Out.</b> Click the icon or the top part of the graph to see a 50% longer time interval.
Ð	<b>Zoom In.</b> Click the icon or the bottom part of the graph to see a 50% shorter time interval and a more detailed graph.
$\diamond$	<b>Back in time.</b> Click the icon or the left part of the graph to move back in time by 50% of the current timeframe.
\$	<b>Forward in time.</b> Click the icon or the right part of the graph to move forward in time by 50% of the current timeframe.

## Reports

The middle portion of the report screen is a one-year calendar.

PortaBilling keeps reports for one year, after which they are removed from the system. The current month is displayed in the bottom right-hand corner of the calendar.

Look at the following diagram of a calendar:



- 1. If present, this arrow notifies the user that a report for this month is available for download by clicking the month link.
- 2. Three-letter abbreviation for the month, followed by the year.

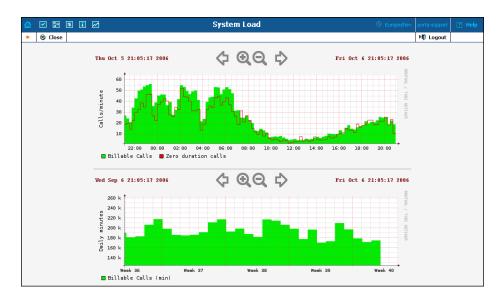
- 3. If present, this arrow notifies the user that two semi-monthly reports are available for download by clicking the links on the right.
- 4. Click this icon to download statistics for the first half of the month.
- 5. Click this icon to download statistics for the second half of the month.
- 6. The number of the week in the current year. No report was generated for this week, so there is no link.
- 7. Same as 6, but here a report has been generated and may be downloaded by clicking the link.
- 8. The day of the month. No report has been generated, so the link is inactive.
- 9. Days with linked reports are bolded and underscored. Click to download the report.

If a report is available, the corresponding link is bolded and underscored.

NOTE: Links are not displayed if reports have not been configured.

# System Load

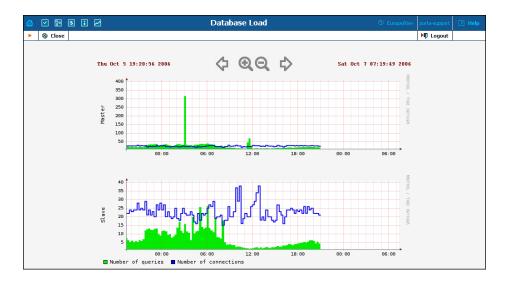
The **System Load** graph provides a general overview of the billing system status in terms of the number of call attempts per minute and the total volume of calls per day.



The **Calls/minute** graph at the top shows the number of calls, and is broken down into "Billable" and "Zero Duration" calls. The **Daily minutes** graph shows the total call volume (in minutes) that passes through your system per day.

## Database

The Database Load graph shows the load (in number of queries) and the number of active threads on the master and slave databases. This information may be useful in the event that database interactions seem slow, or for other debugging scenarios.



## Connections

The Connection Load screen provides the user with access to load graphs for all connections set up in the system. To view the graph, select the vendor to whom the connection being searched has been assigned from the list on the left side of the screen. Also, the search feature may be used by entering the vendor's name in the search field and clicking the **Search** button. For a search wildcard, the symbol '%' can be used.

After locating the vendor, all connections related to him will be displayed on the right side of the screen, grouped similarly as on the Connection Management screen: PSTN from Vendor, VoIP from Vendor, PSTN to Vendor, and VoIP to Vendor. Click the description under the corresponding connection type to view the Load Graph for a given connection.



Defined in terms of connection threshold, the connection utilization graph shows the saturation of your connections, as well as the setup time and ASR.

# ASR

The Vendor ASR reports screen gives the user easy access to downloads of all ASR reports that have been defined for a vendor. Reports for the desired vendor may be found by selecting the vendor from a list on the left side of the screen, or by entering the vendor's name in the search field and clicking the **Search** button. The wildcard symbol "%' may also be used for the search.

#### **Download Options**

The default report download format is CSV. Check the box next to the **ZIP** vicon to download zipped CSV files.

#### **Statistics**

#### PORTA Billing 100°

			Vendor /	ASR reports	6					porta-support		
•	🛞 Close 🛛 Custom Qu	iery								📲 Logout		
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## **Custom Query**

The Custom Query utility, which can be accessed by clicking the **Custom Query** Dutton, enables you to view ASR and cost/revenue information for all calls going from selected customer(s) to selected vendor(s). This query can also be filtered by destination and a precise time interval. The Split selector allows the report to be divided into hourly and daily intervals.

Select a customer or vendor, or a destination (which may be specified exactly), or use a wildcard. (For example, all calls to England may be specified as "44%" in the destination field.) A date and time range for the search must be specified. To initiate the query, click the **Show results** button.

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							ALL		13758	5859	65573:15	42.59	11:11	9272.29	l i	

The results table contains two rows, one each for the customer and the vendor.

- o Calls
- o Billable Calls
- o Duration, min:sec
- o ASR (Average Success Rate)
- o ALOC (Average Length of Call), min:sec
- o Cost/Revenue, in the PortaBilling owner's currency

The Custom Query utility is a tool for monitoring various parameters of your current call flow. It should **not** be used to obtain billing statistics for a particular vendor (use the xDR statistics for the corresponding vendor), and should **never** be used to obtain information such as "total minutes for a particular customer". Since this report operates with the vendor's xDR, it will provide figures according to the vendor's time rounding, not the customer's. This can make a significant difference (e.g. your vendor uses 1 second rounding, while customers are billed on a per-minute basis).

## **Cost/Revenue**

The Cost/Revenue reports screen allows users to easily download all Cost/Revenue reports that have been generated in the system. Reports are grouped by the following call types:

- By customer and destination, subtotal per country (default)
- o By customer and destination, subtotal per customer
- By customer and destination, subtotal per country
- o By vendor and destination, subtotal per vendor
- o By destination

The active selection is highlighted in green.

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	UNITED STATES	California	22	1.65841	4691	43	1.10124		2.75965	
	UNITED STATES	Texas New York	22	0.21031	618 621	39	0.13965		0.34996	
	UNITED STATES	New York	32	0.20831	621	13	0.13832		0.34663	<b>[</b>
	UNITED STATES	Illinois	32	0.4879	1358	24	0.17030		0.97440	
	UNITED STATES	New Jersey	122	0.4075	288	87	0.06783		0.16998	_
	UNITED STATES	Massachusetts	24	0.05207	124	123	0.03458		0.08665	
	UNITED STATES	Kentucky	42	0.15623	466	21	0.10374		0.25997	
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# **Custom Reports**

The Custom Reports section allows you to manage and execute custom report queries.

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On the initial Custom Reports screen, you can view already existing reports. To execute one of them and see the result immediately, click the

**Run** icon for a particular report. Click the **Run Queue** button in the toolbar to see information about scheduled report execution.

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			demo-toor	First Dial MP countries	2007-12-18 00:00:00	Weekly	2007-12-11 06:19:01	Waiting	-	×	

Click Add to create a new report by choosing the type of report (one of the pre-defined types) and whether this report should be created as a clone of some existing report (inheriting all parameters defined in that report), or just as a blank copy. Press Save to proceed in defining the report.

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Save Solution Solu			M) Logout	
	Type Host Popular Destinations V As copy of DEFAULT QUERY V			
	Description This report displays ten the most popular destinations in which calls were made for specified customer in the specified time limit. This report chooses the customer's or account's CDRs and sums CDR charged_amount, CDR, charged_time and simutaneously counts the quantity of calls for each separate country. The result ist is sorted in accordance with sorting method on Output Formats Tab. Input Parameters: Customer, From date, To date Output Fields: Country, Calls, Minutes, Cost Default ordering (descent) by Country			
	Edit "New Query" query	③ America/Vancouver	demo-toor	? Help
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On the Edit query page, you can alter various parameters of this query. Click the **Run HTML** button in the toolbar to run the query and immediately see the result in your web browser.

#### **Query Info Tab**

Field	Description
Send Report To	If this check box is ticked, after every query
Owner	execution the user who executes the report
	will receive a copy of the report result by
	email. (Make sure you have defined your email
	address in the user settings.)
Send Copy To	Send a copy of the report result to another
	email address.
Description	General description of this report.

#### **Input Parameters Tab**

The contents of this tab are based on a particular report, and allow you to manage report parameters, e.g. for "Most popular destinations" you are able to specify the date range and customers.

For input parameters which contain date/time values, there are two methods of entering values:

- You can type in a specific value, e.g. "01-Jan-2007"; this value will always stay the same for any report execution.
- You can specify a moment in time as an offset from the scheduled report execution date. For instance, you can set up the "Customer's most popular destinations" report to run every night at 5 am, and specify that it should cover an interval from 21 hours to 10 hours **prior** to the report time. As a result, you will always receive a report that includes calls made by the customer during business hours on the previous day. Parameters may also be populated automatically with a date **after** the actual report time: for instance, every Monday you can run a report to obtain a list of invoices that will become overdue during the next seven days.

#### **Output Formats Tab**

This tab includes two separate areas: Output Format, where you can define how the values of columns should be presented in the report, and Data Sorting, where you define how the report data should be sorted.

Column	Description
Column	Name of the report column.
Visible	Whether this column should be included in
	the report. If you uncheck this option, the
	given column will simply be skipped in the report result.
Format	Formatting of the column data (e.g. whether
	the total number of minutes should be
	displayed as 380 or 380:00).
Post Processing	This field functions like the post-processing
Rule	rules in templates (for more details, see the
	PortaBilling Templates Guide). It allows you to
	modify the actual value extracted from the
	database before it is shown in the report. For
	instance, if the value in the database gives the
	total number of seconds, you can divide it by
	60 to display the value in minutes to the user.
Suppress Dup	If activated, duplicate column values in
	adjacent rows will not be displayed – see the
	example below.

The Suppress Duplicates option allows you to make your reports more readable by removing excess information. Compare the two datasheets below, in which the same data is shown, but where the right one has Suppress Duplicates enabled for certain columns.

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4	CZECH REPUBLIC	420602	Mobile	4295:00		4			420602		4295:00	
5	CZECH REPUBLIC	420603	Mobile	14823:00		5			420603		14823:00	
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Column	Description
Column	Name of the report column.
Sort	Specifies the sorting mode for this column:
	• 🛃 - Data is sorted in ascending order
	(i.e. Andrew will be at the top of the
	list, and <b>Zack</b> at the bottom).
	<ul> <li>A - Data is sorted in descending</li> </ul>
	order (i.e. <b>Zack</b> will be at the top of
	the list, and <b>Andrew</b> at the bottom).
	• — - This column is not used for data
	sorting at all.
Up/Dn	If there are multiple columns used in sorting,
	their order is very important. Here you can
	arrange the sequence of the sort columns. For
	instance, if you want to sort data first by
	country name and then by the number of
	minutes, use the $rightarrow$ and $rightarrow$ arrows to move the
	<b>Country</b> column above the <b>Minutes</b> column.

#### **Run Queue Tab**

This tab allows you to schedule automatic report execution (single time or periodic) in the future, and to see when a report was last generated. Click the **Add** button in the toolbar to add a new entry.

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			2007-1	2-18 00:00:00	Weekly	2007-12-11 06:	19:01 Wa	iting		×				

Column	Description
Start Time	Date and time when the report should be produced.
Periodic	Specifies whether the report should only be produced once, or generated every day, week or month.
Last Run	The date when the report was last executed (if applicable).
Status	<ul> <li>Current status of the report:</li> <li>Waiting – Report execution has not started yet, and is scheduled for the future.</li> <li>Completed – The report was to be executed only once, and this has already been done.</li> <li>Running – The report is being currently produced.</li> </ul>
Suspend	Allows you to temporarily disable report execution (but not delete the entry from the report schedule). This may be convenient if you are leaving for vacation and would like to avoid having reports piling up in your inbox during your absence.

**NOTE:** Start Time specifies only the "preferred" start time for the report. Report execution will not start earlier than the specified time, but it may start later if there are some other conflicting tasks at the specified time. For instance, if two reports are scheduled to be executed at 06:00, only one of them will start at that time, while the other will start only after the first one has finished.

#### **Reports Tab**

This tab allows you to browse results for the ten previous report executions. Thus, if you did not save the original result, you do not have to run the reports over again. Click the sicon to see the corresponding file.

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## Vendor xDR Reports

The Vendor reports screen allows users to easily download all reports that have been defined for a vendor. Reports for the desired vendor may be found by selecting the vendor from the list on the left side of the screen, or by entering the vendor's name in the search field and clicking the **Search** button. The wildcard symbol "%' may also be used.

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## **Unresolved xDR Reports**

The "Unresolved calls" reports screen is accessible from the Vendor xDR. It allows users to easily download all available reports for calls which were not identified as crossing any connection to a vendor. The report periodicity can be set up on the **Company Info** screen -> Report Info Tab -> Reconciliation Period.

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# Mo Tu We ThFr <mark>Sa</mark> Su	#Mo TuWe ThFr <mark>Sa Su</mark>	#MoTuWeThFr <mark>SaSu</mark>	# Mo Tu We ThFr <mark>Sa</mark> Su		
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<b>19</b> 7 8 9 10 11 12 13	<b>23</b> 4 5 6 7 8 9 10	27 2 3 4 5 6 7 8	32 6 7 8 9 10 11 12		
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			1 31		

# **Customer xDR Reports**

The Customer reports screen allows users to easily download all reports that have been defined for a customer. Reports for the desired customer may be found by selecting from the list of existing customers on the left side of the screen, or by entering the customer's name in the search field and clicking the **Search** button. The wildcard symbol "%" may also be used.

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Search     ABC Shuttle Ltd.     Callshop 1     Callshop Owner     David Weish     EasyCall Ltd.     Jason Born     John - Prepaid     Mary Smith     Paul Weekes	Jan 2007         # Mo Tu We Th Fr Sa Su           1         1         2         3         4         5         6           2         8         9         10         11         12         3         4         5         6         7           3         15         16         17         18         19         20         21         4         22         23         24         25         26         7         26         5         30         31         5         5         5         30         31         5 <t< th=""><th>► Feb 2007 # Mo Tu We Th Fr Sa Su 5 1 2 3 4 6 5 6 7 8 9 10 11 7 12 13 14 15 16 17 18 8 19 20 21 22 23 24 25 9 26 27 28 ► Jun 2007</th><th>Mar 2007         Debit           # Mo Tu We Th Fx Sa Su         9         1         2         3         4           9         5         6         7         8         9         10         11           11         12         13         14         15         16         17         18           12         19         20         21         22         32         24         25           13         26         27         28         29         30         31           Jul 2007</th><th><ul> <li>Apr 2007</li> <li># No Tu Ye Ti</li> <li>13</li> <li>14 2 3 4</li> <li>15 9 10 11 1</li> <li>16 16 17 18 1</li> <li>17 23 24 25 2</li> <li>18 30</li> <li>Aug 2007</li> </ul></th><th>hFr Sa Su 1 5 6 7 8 2 13 14 15 9 20 21 22 6 27 28 29</th><th></th></t<>	► Feb 2007 # Mo Tu We Th Fr Sa Su 5 1 2 3 4 6 5 6 7 8 9 10 11 7 12 13 14 15 16 17 18 8 19 20 21 22 23 24 25 9 26 27 28 ► Jun 2007	Mar 2007         Debit           # Mo Tu We Th Fx Sa Su         9         1         2         3         4           9         5         6         7         8         9         10         11           11         12         13         14         15         16         17         18           12         19         20         21         22         32         24         25           13         26         27         28         29         30         31           Jul 2007	<ul> <li>Apr 2007</li> <li># No Tu Ye Ti</li> <li>13</li> <li>14 2 3 4</li> <li>15 9 10 11 1</li> <li>16 16 17 18 1</li> <li>17 23 24 25 2</li> <li>18 30</li> <li>Aug 2007</li> </ul>	hFr Sa Su 1 5 6 7 8 2 13 14 15 9 20 21 22 6 27 28 29	
<u>Raj Kumar</u> <u>Shuffle SmartCall SRL</u> SmartNet	# Ho Tu We         Th Fr. Sa Su           18         1         2         3         4         5         6           19         7         8         9         10         11         12         13           20         14         15         16         17         18         19         20           21         21         22         23         24         25         26         27           22         28         29         30         31         5         5	# Mo         Tu We         Th Fr         Sa         Su           22         -         -         1         2         3           23         4         5         6         7         8         9         10           24         11         12         13         14         15         16         17           26         18         19         20         22         22         22         22         24         24           26         25         26         27         28         29         30	# Mo         Tu We         Th Fr         Sa         Su           26         1         1         1         1         1           27         2         3         4         5         6         7         8           28         9         10         11         12         13         14         15           29         16         17         18         19         20         21         22           30         23         24         25         26         27         28         29           31         30         31	# Mo         Tu We         Ti           31         1         1           32         6         7         8           33         13         14         15         1           34         20         21         22         2           35         27         28         29         3	2 3 4 5 9 10 11 12 6 17 18 19 3 24 25 26	
	► <u>Sep 2007</u> <b># Ko Tu We Th Fr Sa Su</b> 35 1 2 36 3 4 5 6 7 8 9 37 10 11 12 13 14 15 16 38 17 16 19 20 21 22 23 39 24 25 26 27 28 29 <u>30</u>	Oct         2007           # Mo Tu lie Th Fr         Sa Su           40         1         2         3         4         5         6         7           41         8         9         10         11         12         13         14           42         15         16         17         18         19         20         21           43         22         23         24         25         26         27         28           44         29         30         34         5         6         7         28	Nov         2007           # Mo Tu We Th Fr Sa Su         1         2         3         4           44         1         2         3         4           45         5         6         7         8         9         10         11           46         12         13         14         15         16         17         18           47         19         20         21         22         23         24         25           48         26         27         28         28         30         16	Dec 2007           # Mo         Tu We         Ti           48	1 2 6 7 8 9 3 14 15 16 0 21 22 23	

# Invoices

The Invoices screen allows the administrator to view all invoices generated by the system in the current environment. The desired invoice can be found by its number. Groups of invoices can be searched by selecting a customer and a date range.

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Select the **Preview** icon in the result list to view or print the selected

invoice. The **Closed** icon appears when an invoice has been delivered to the customer and cannot be changed. An invoice is considered delivered when the customer receives an e-mail with the invoice attached, or clicks the View icon in the Invoice section of the Customer Self-Provisioning interface. If the invoice is not locked, it will be automatically updated if the balance changes (re-costing of calls, for example); otherwise, a new invoice with a re-costing adjustment will be generated. You can change the status of an invoice manually by clicking the status icon.

The Re-create icon allows you to recreate an invoice. By clicking this icon you can schedule invoice recreation. This will not affect any changes except the invoice date, due date, layout attributes, customer and/or company info, and PDF file renewal. Invoice recreation is useful when you want to renew an invoice date, or have made some changes to a particular invoice template, or if certain customer or company attributes have been changed.