

**Porta  Billing 100™**



**Web Reference**  
Maintenance Release 13

## Copyright notice & disclaimers

Copyright © 2000-2006 PortaOne, Inc. All rights reserved

**PortaBilling100 Web Reference, October 2006**

**Maintenance Release 13**

**V1.13.2**

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

Changes may be made periodically to the information in this publication. Such changes will be incorporated in new editions of the guide. The software described in this document is furnished under a license agreement, and may be used or copied only in accordance with the terms thereof. It is against the law to copy the software on any other medium, except as specifically provided in the license agreement. The licensee may make one copy of the software for backup purposes. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopied, recorded or otherwise, without the prior written permission of PortaOne, Inc.

The software license and limited warranty for the accompanying products are set forth in the information packet supplied with the product, and are incorporated herein by this reference. If you cannot locate the software license, contact your PortaOne representative for a copy.

All product names mentioned in this manual are for identification purposes only, and are either trademarks or registered trademarks of their respective owners.

Table of Contents

Document Objectives..... 5  
 How to Get Technical Assistance..... 5  
 Hardware and Software Requirements ..... 5

**1. Introduction.....6**

PortaBilling Security..... 8  
 Common Features..... 9

**2. System Management ..... 14**

Company Info..... 15  
 Access Levels ..... 20  
 User Management..... 26  
 Mailing List..... 31  
 Representatives..... 31  
 Templates..... 32  
 Destinations..... 39  
 Destination Group Sets ..... 43

**3. Networking..... 47**

Nodes..... 48  
 Route Categories ..... 51  
 Routing Plans ..... 51  
 Test Dialplan ..... 53  
 IP Phone Profiles ..... 53  
 IP Phone Inventory..... 55  
 Cisco ATA Expert ..... 56

**4. Adjusting Billing Parameters ..... 57**

Currencies ..... 58  
 Exchange Rates..... 60  
 Tariffs..... 61  
 Volume Discount Plans..... 73  
 Subscription plans..... 77  
 Products..... 80  
 Vendor Management..... 84  
 Connections..... 87  
 Customer Classes ..... 90  
 Customer Management ..... 93  
 Account Management ..... 105

**5. Help Desk .....117**

Call Trace ..... 118  
 Active Calls..... 120  
 SIP Log Viewer ..... 121  
 Account Info..... 124

**6. Statistics.....125**

System Load..... 127

---

Database Load.....	128
Connections.....	128
ASR.....	129
Cost/Revenue.....	132
Custom Reports .....	133
Vendor CDR Reports .....	138
Customer CDR Reports.....	138
Unresolved CDR Reports .....	139
Invoices.....	139

## 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 in-between minor releases. The online copy of this guide is always up-to-date, integrating the latest changes to the product. You can access the latest copy of this guide at: [www.portaone.com/support/documentation/](http://www.portaone.com/support/documentation/)

## Conventions

This publication uses the following conventions:

- Commands and keywords are given in **boldface**
- 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](mailto: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

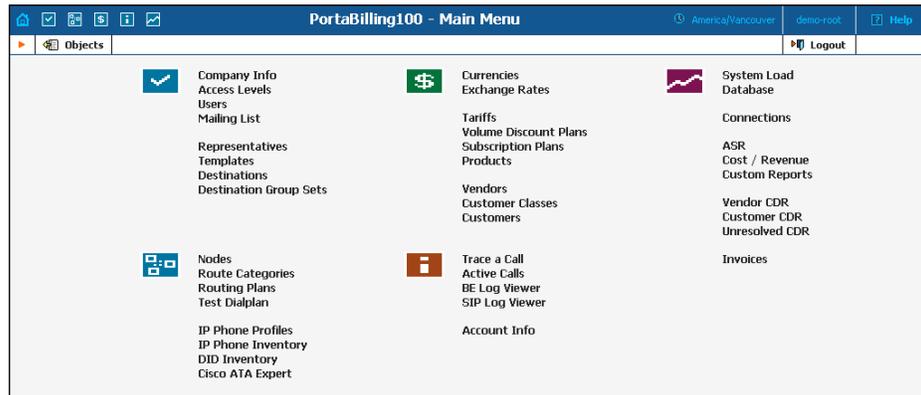


- OS: Windows 95-XP, UNIX or Mac OS
- **Browser:** IE 6.0, Mozilla 1.6, Netscape 7.1 or later. Cookies & Javascript must be enabled
- Spreadsheet processor (MS Excel)
- Display Settings:
  - Min. Screen Resolution: 1024 x 768
  - Color Palette: 16 bit color (minimum)

**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 PortaBilling home page is the main point of entry to all the system objects and tools. Divided into five functional blocks, the links below load pages containing tools for system management, VoIP networking, billing, helping customers, and generating statistics. Each second-level page contains a link back to the home page.



**The five functional blocks are:**



**Management**

Normal system maintenance tasks, such as adding administrative users and maintaining the destinations database.



**Networking**

Configuration of network components: registering new nodes (network endpoints) in the system; configuration of User Agent profiles.



**Billing**

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



**Help Desk**

Tasks available to help desk staff to assist in troubleshooting problems which clients may inquire about.



**Statistics**

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

- Inactivity logout
- Unconditional logout

## User Passwords:

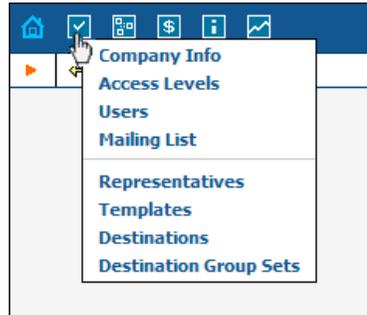
- The minimum password length is six (6) characters. In the case of long passwords, only a certain number of the leading characters will actually be used (however, at least eight (8) characters).
- Passwords include both alphabetical and numerical components.
- Passwords are stored under irreversible 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.
- 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

- Credit card information is displayed as 1234xxxxxxx567
- Credit card information is stored using the same encryption as for the Payment System password.

## Common Features

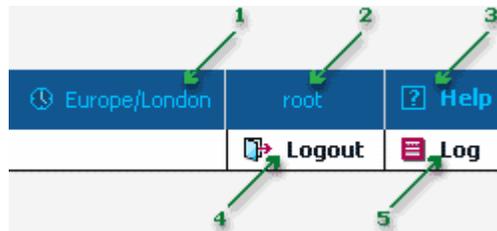
All of the functions available from the home page (main menu) are also available using the drop-down menus:



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

- Admin** - Shortcut to this interface; same 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. Clicking this link will pop up the Help window.
4. Logout button. Used to finish 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 pop up a window showing all logged activities performed on the current screen.

On the toolbar there is often also a list of the available actions relative to the current page:



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

### Delete an object in the database

If you see the icon  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 tariffs **Mera Systems** and **Prepaid** can be deleted, and the rest of tariffs are being used by some product or connection.



### Show Objects

The Objects icon is only available to the Root user; when selected it shows the object properties, as seen in the illustration below. These object properties can be used by the administrator while configuring access levels for certain users in the system. See the [Access Levels](#) section for more information.





### Sorting Tables

on	Connect Time	Disconnect Time	Duration, min:sec	Acc
atch es	24 Aug 2002 01:35:35	24 Aug 2002 01:35:35	0:00	
atch es	23 Aug 2002 20:51:50	23 Aug 2002 21:30:12	38:22	
atch	23 Aug 2002	23 Aug 2002		

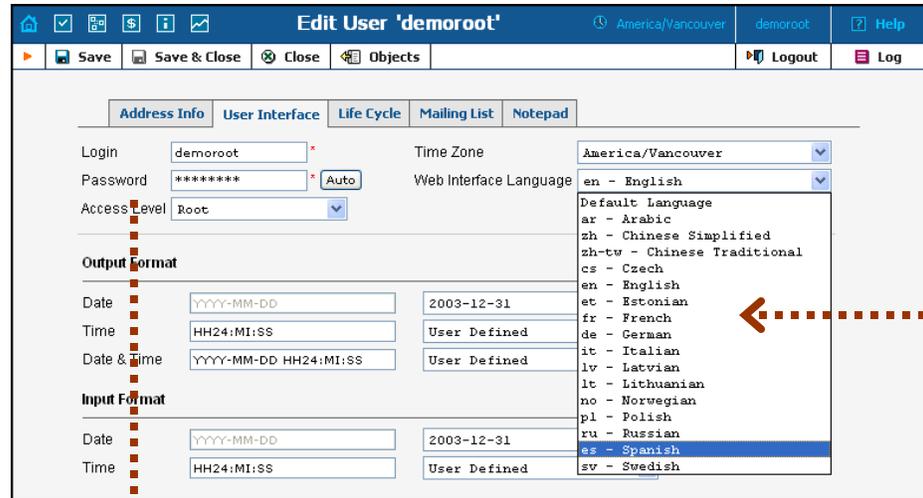
This feature is available for all CDR browsers, where it necessary to sort the displayed information according to different criteria. The table header cell with the orange triangle shows the sorted row. A triangle pointing downward indicates descending order, while a triangle pointing upward means ascending 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 of course does not 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.



**Edit User 'demoroot'** America/Vancouver demoroot Help

Save Save & Close Close Objects Logout Log

Address Info User Interface Life Cycle Mailing List Notepad

Login demoroot \* Time Zone America/Vancouver

Password \*\*\*\*\* \* Auto Web Interface Language en - English

Access Level Root

Output Format

Date YYYY-MM-DD 2003-12-31

Time HH24:MI:SS User Defined

Date & Time YYYY-MM-DD HH24:MI:SS User Defined

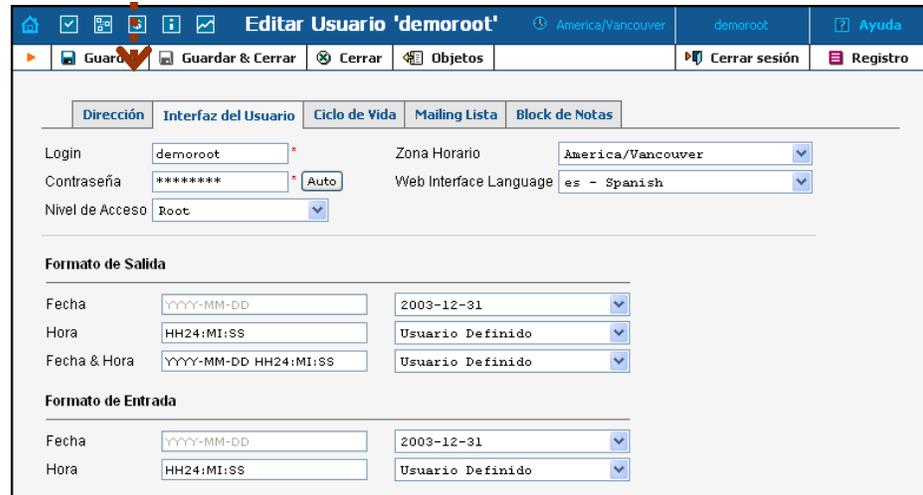
Input Format

Date YYYY-MM-DD 2003-12-31

Time HH24:MI:SS User Defined

Default Language

- ar - Arabic
- zh - Chinese Simplified
- zh-tw - Chinese Traditional
- cs - Czech
- en - English
- et - Estonian
- fr - French
- de - German
- it - Italian
- lv - Latvian
- lt - Lithuanian
- no - Norwegian
- pl - Polish
- ru - Russian
- es - Spanish
- sv - Swedish



**Editar Usuario 'demoroot'** America/Vancouver demoroot Ayuda

Guardar Guardar & Cerrar Cerrar Objetos Cerrar sesión Registro

Dirección Interfaz del Usuario Ciclo de Vida Mailing Lista Block de Notas

Login demoroot \* Zona Horario America/Vancouver

Contraseña \*\*\*\*\* \* Auto Web Interface Language es - Spanish

Nivel de Acceso Root

Formato de Salida

Fecha YYYY-MM-DD 2003-12-31

Hora HH24:MI:SS Usuario Definido

Fecha & Hora YYYY-MM-DD HH24:MI:SS Usuario Definido

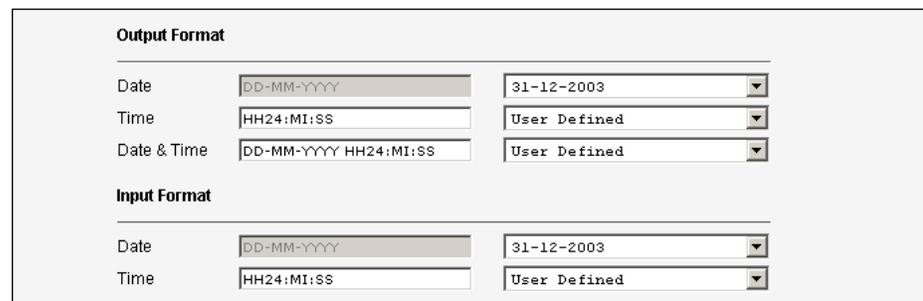
Formato de Entrada

Fecha YYYY-MM-DD 2003-12-31

Hora HH24:MI:SS Usuario Definido

### Date & Time Format

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



**Output Format**

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

Time HH24:MI:SS User Defined

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 which 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.

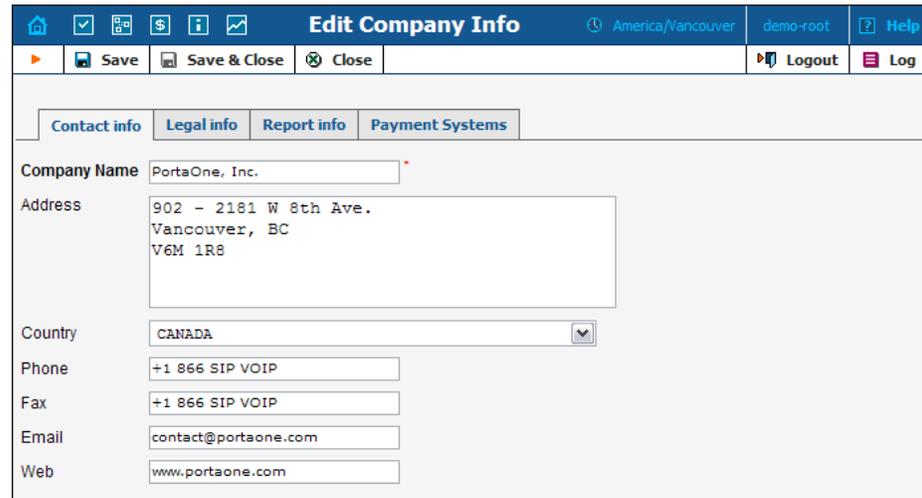
Specifier	Value	Description
<i>Date</i>		
<b>DD</b>	01-31	Day of the month
<b>D</b>	1-31	Day of the month without a leading 0
<b>MM</b>	01-12	Number of the month
<b>MON</b>	Jan-Dec	Name of the month
<b>MONTH</b>	January-December	Full name of the month
<b>YYYY</b>	2003 +	Year
<b>YY</b>	00-99	Last two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

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

# 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.

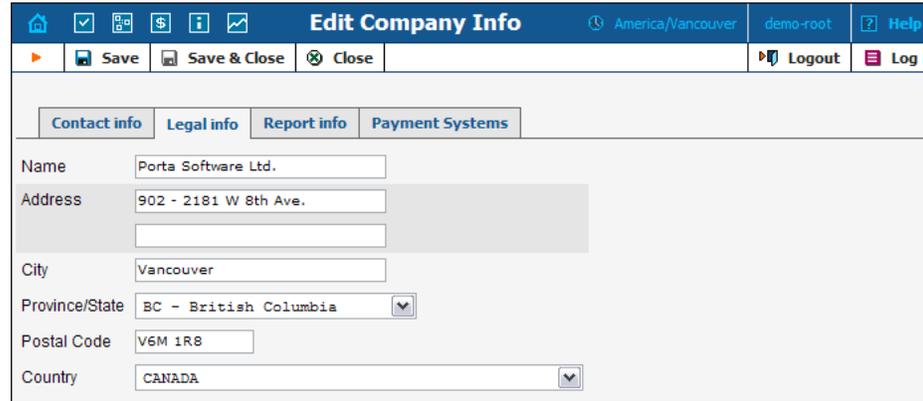


### Contact Info

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 would be the same as that which appears, for example, on your letterhead and business cards.

Field	Description
<b>Company Name</b>	The conventional form of your company's name. (For example, "EasyCall, Inc.")
<b>Address</b>	Street address of the company.
<b>Country</b>	The country may be selected from a drop-down list.
<b>Phone</b>	Primary telephone number for the company.
<b>Fax</b>	Primary fax number.
<b>E-mail</b>	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.
<b>Web</b>	Web address of the company.

### Legal Info



The screenshot shows the 'Edit Company Info' form with the 'Legal info' tab selected. The form contains the following fields and values:

- Name: Porta Software Ltd.
- Address: 902 - 2181 W 8th Ave.
- City: Vancouver
- Province/State: BC - British Columbia
- Postal Code: V6M 1R8
- Country: CANADA

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

### Report Info



The screenshot shows the 'Edit Company Info' form with the 'Report info' tab selected. The form contains the following fields and values:

- Time Zone: America/Vancouver
- Reconciliation Period: Weekly
- Tax ID: 6358725
- 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
<b>Time Zone</b>	Time zone in which global reports for the environment (e.g. Cost/Revenue Report) will be generated.
<b>Reconciliation Period</b>	One of the following: daily, weekly, bi-weekly or monthly. This will also set up the periodicity of the <b>Unresolved CDR Reports</b> . (See the <i>Statistics</i> section below.)
<b>TaxID</b>	Locally-designated tax number.
<b>Currency</b>	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 for receiving 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\* merchants, as shown below:

Name	Web Page
2CheckOut	<a href="http://www.2checkout.com">www.2checkout.com</a>
AuthorizeNet	<a href="http://www.authorize.net">www.authorize.net</a>
BankOfAmerica	<a href="http://www.bankofamerica.com/fmerchantservices">www.bankofamerica.com/fmerchantservices</a>
Beanstream	<a href="http://www.beanstream.com">www.beanstream.com</a>
Cardstream	<a href="http://www.cardstream.com">www.cardstream.com</a>
eSec	<a href="http://www.esec.com.au">www.esec.com.au</a>
iAuthorizer	<a href="http://www.iauthorizer.net">www.iauthorizer.net</a>
Ingenico	<a href="http://www.ingenico.com.au">www.ingenico.com.au</a>
LinkPoint	<a href="http://www.linkpoint.com">www.linkpoint.com</a>
Network1Financial	<a href="http://va.eftsecure.net">va.eftsecure.net</a>
PayflowPro	<a href="http://www.verisign.com/products/payment.html">www.verisign.com/products/payment.html</a>
SurePay	<a href="http://www.surepay.com">www.surepay.com</a>
TCLink	<a href="http://www.trustcommerce.com">www.trustcommerce.com</a>
VirtualNet	<a href="http://www.vitalps.com">www.vitalps.com</a>

\* Supported means that a corresponding Business::OnlinePayment plugin module is available at [www.cpan.org](http://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](mailto:support@portaone.com) for a current list of payment modules which have been thoroughly tested and can work “out of the box”, such as AuthorizeNet.

WorldPay Invisible	<a href="http://www.worldpay.com">www.worldpay.com</a>
Assist	<a href="http://www.assist.ru">www.assist.ru</a>
Moneybookers**	<a href="http://www.moneybookers.com">www.moneybookers.com</a>
PaymentExpress	<a href="http://www.paymentexpress.com">www.paymentexpress.com</a>
SecureHosting	<a href="http://www.securehosting.com">www.securehosting.com</a>

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  **Edit** and copy the information from the current row to the form above. Save changes using the  **Save** button. A recurring payment allows customers to set up periodical payments on this Payment System. Payment Systems with recurring payment enabled are indicated by this 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* chapter). Only after doing so can this Payment System be used for payments by the 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. At the same time, you can assign one system with VISA as the allowed method and another system with MasterCard as the allowed method to the currency USD. In a similar manner, 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 which is useful during the initial setup phase, when a merchant may want to test its setup without processing live card data.

### What is Payment Processor?

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 systems with External Authorization. It is not possible to carry out E-commerce Manual Transactions (E-commerce Charge and E-commerce Refund) on the customers with such payment system. Just Make Payment operation from the customer/account self-cares is supported in such cases. Also Recurring option (periodical payments) is not supported and must not be enabled therefore.

## 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. A 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 system to meet your own needs, and to provide a hosting environment which is appropriate for the choices you have made within the Payment Processor system.

## 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
- Representative
- User (access level for users of the admin interface)
- Vendor

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

The difference between a User ACL and other types is that a User ACL will appear as an Access Level when creating a new user or modifying an existing user's details.

## Permissions

Permission is the fundamental unit of exchange in the PortaBilling100 security model. Permissions are composed of the 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:

Edit	Access type	Allow/Deny	Object	Attribute	Delete
<input type="checkbox"/>	Read	Allow	WebForms	ASR	<input type="checkbox"/>

The "Access type" is set to "Read", and the permission is 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 from the system

The field “Allow/Deny” defines whether this permission is being 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 chapter. 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”.

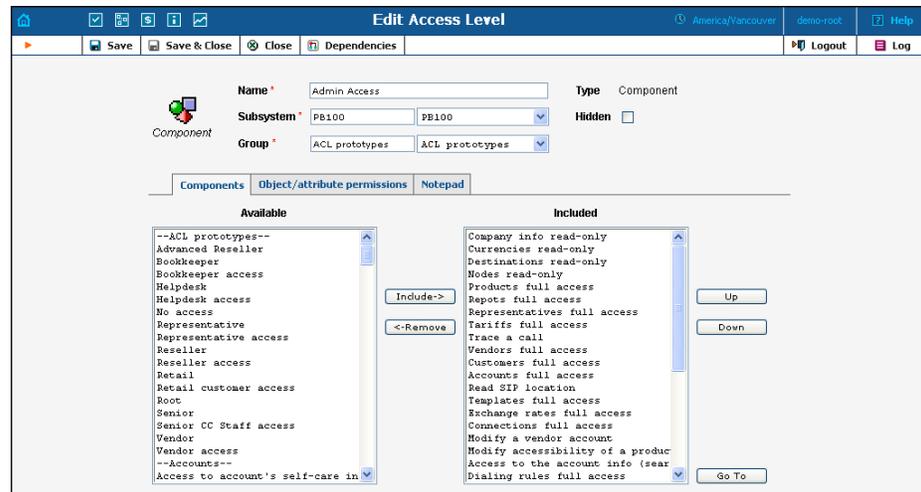
**NOTE:** Should you find it necessary to modify these basic components or create new ones, please contact PortaOne Support. We can provide you with a list of Object and Attribute resources, or otherwise assist you in maintaining ACLs.

## 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.

## ACL subsystems

In some cases the same object and attribute can be interpreted in a different context. For instance a reseller may access his own customer information or the information about his subcustomer. Although in both cases he works with the same physical fields in the database, he should have fundamentally different set of permissions. This is accomplished using the subsystem in ACL definition. In the example above there would be two ACLs, defining applicable operations with **Customers.name** attribute (or other attributes of a customer). One of these ACLs will have a subsystem **PB100** and it means it defines access in the global context – or reseller’s access to his own information. The other ACL will have a subsystem of **Subcustomers**, and this will define reseller’s access to the information about his subcustomers.

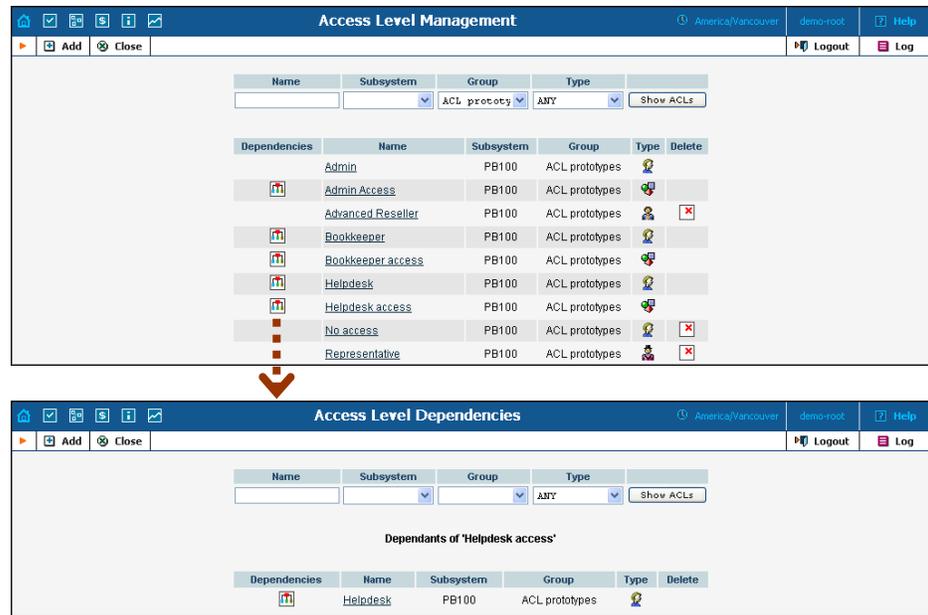
## Access Level Management Interface

We have approached this discussion of the ACL system 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.



We have already discussed 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.



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. Otherwise, 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; on the right are the components which are included. 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 modified 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
<b>Root</b>	Super User, read and write access to all PortaBilling objects
<b>Admin</b>	Like Root user, but with some limitations: - cannot create new users - cannot modify company info - read-only access to Destinations, Currencies, Nodes
<b>Bookkeeper</b>	Read-only access to billing information (Tariffs, Products); can change balances for Accounts/Customers, block/unblock.; no access to CDRs; access to reports.
<b>Helpdesk</b>	Read-only access to billing information (Tariffs, Products); can modify Customer and Account parameters; access to Trace Call.

## Default Customer ACLs

There are two major types of customers: your retail customers and your resellers. However, since they are both “customers”, they share the same ACL type. Of course, they need quite different sets of permissions (e.g. a reseller needs an extended self-care functionality). PortaBilling is supplied with the following predefined ACLs for customers:

Name	Description
<b>Retail</b>	Access to CDRs, ability to change customer information, make online payments and access information about all accounts under this customer.
<b>Reseller</b>	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, create CC staff accounts.
<b>Advanced Reseller</b>	Same as above, plus read-only access to customer’s own tariff (the tariff used by the PortaBilling owner to charge the reseller).



Do not assign a reseller ACL to a retail customer or vice versa – this will definitely have undesirable results.

## User Management

The User Management screen shows existing users registered in the system, and also allows you to edit current user information and to add and delete users. To add a new user, select the  **Add** button from the

pager. The user list table contains the following information and operations:

Login	Access Level	E-mail	Description	Status	Delete
<a href="#">demo-root</a>	Screenshots	<a href="mailto:zshilenko@portaone.com">zshilenko@portaone.com</a>	User for screenshots taking		
<a href="#">helpdesk</a>	Helpdesk	<a href="mailto:helpdesk@portaone.com">helpdesk@portaone.com</a>	Helpdesk staff		
<a href="#">keeper</a>	Bookkeeper	<a href="mailto:keeper@portaone.com">keeper@portaone.com</a>			
<a href="#">kzhilenko</a>	Root	<a href="mailto:konstantin.zhilenko@portaone.com">konstantin.zhilenko@portaone.com</a>	Konstantin Zhilenko		
<a href="#">pb-root</a>	Root	<a href="mailto:monitor@portaone.com">monitor@portaone.com</a>	ROOT - created on installation please change the password		

Column	Description
<b>Login</b>	The user name for login and user identification. The user name provides a link to the edit screen for that particular user.
<b>Access Level</b>	The privilege level or role assigned to the user. See the <a href="#">Access Levels</a> section for more information.
<b>E-mail</b>	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.
<b>Description</b>	A short description associated with the user.
<b>Delete</b>	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 the details to create a new user account. The Edit User screen allows you to change details for a particular user account.

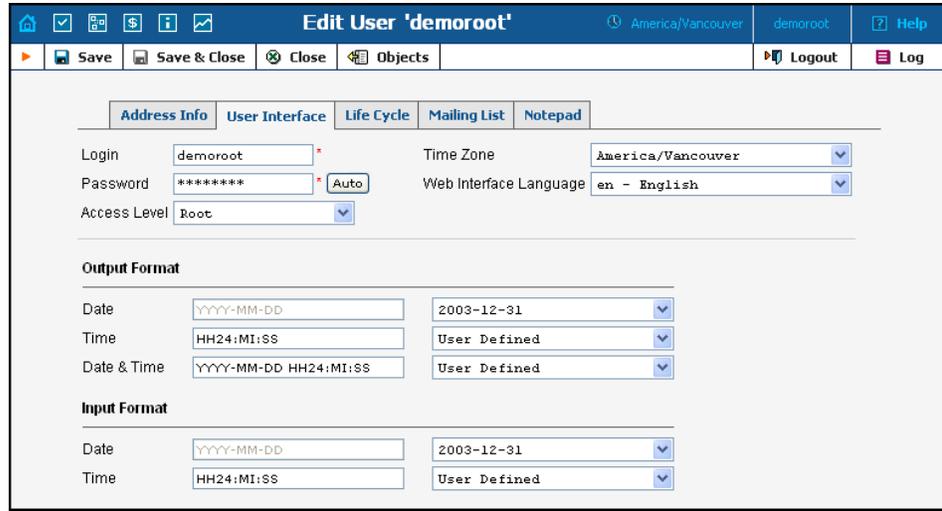
### Address Info

Edit User 'demoroot'	
<div style="display: flex; justify-content: space-between;"> <span>Save</span> <span>Save &amp; Close</span> <span>Close</span> <span>Objects</span> </div>	
<div style="display: flex; justify-content: space-between;"> <span>Address Info</span> <span>User Interface</span> <span>Life Cycle</span> <span>Mailing List</span> <span>Notepad</span> </div>	
Company Name <input type="text" value="PortaOne"/>	Contact <input type="text" value="DeeJason"/>
Mr./Ms./... <input type="text" value="Mr."/>	Phone <input type="text"/>
First Name <input type="text" value="Dee"/> M.I. <input type="text"/>	Fax <input type="text"/>
Last Name <input type="text" value="Jason"/>	Alt. Phone <input type="text"/>
Address <input type="text" value="123 Hard Drive"/>	Alt. Contact <input type="text"/>
Province/State <input type="text" value="CZ"/>	E-mail <input type="text" value="demoroot@portaone.com"/>
Postal Code <input type="text" value="128 00"/>	Description <input type="text" value="Doc and Demo root"/>
City <input type="text" value="Prague"/>	
Country/Region <input type="text" value="Slovenia"/>	

Mandatory fields for user contact information:

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

### User Interface

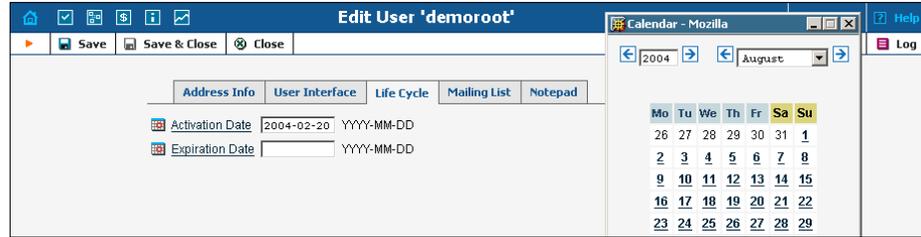


Field	Description
<b>Login</b>	The new user ID to be used at login and elsewhere throughout the system.
<b>Password</b>	The password for this login. A secure and easy to remember password may be automatically generated by pressing the “Auto” button.
<b>Access Level</b>	The privileges or role associated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

For a description of the input and output formats, please refer to the [Common Features](#) section.

### Life Cycle

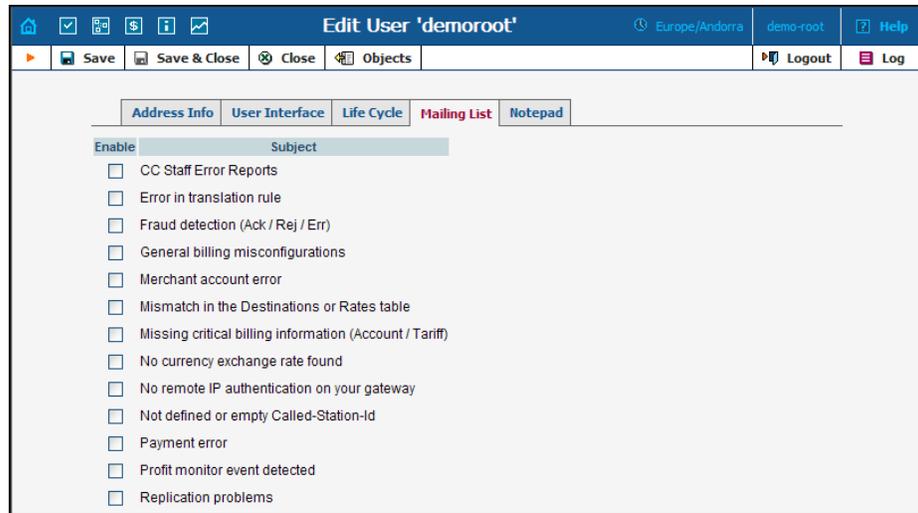
This allows the administrator to setup the user account’s activation and expiration dates.



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.



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

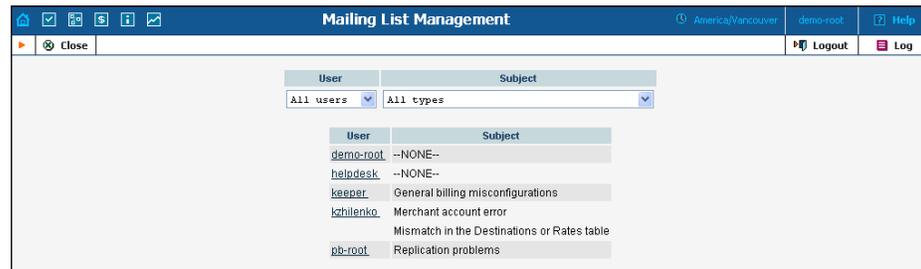
Alert Type	Description
CC Staff Error Reports	Customer care (your reseller’s customer support) may discover a problem they are unable to solve by themselves. So they may need to escalate this problem to your support people. When they send an error report from the CC web interface, it will be received 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	Debit account made a call costing more than its available funds; unresolved call was detected (unresolved calls may be normal when they are on-net calls, but in most cases they signal connection misconfiguration); etc.
Merchant account error	Error received from the online payment processor while trying to execute the 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 the cost/revenue reconciliation for some calls, since no exchange rate is defined for the base currency and currency used in those calls
No remote IP authentication on your gateway	It seems that your gateway accepts all incoming VoIP calls. See the “ <i>Remote IP authentication</i> ” chapter in the Portabilling100 User Guide vol. I for more details.
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 periodical payment (credit card is blocked or no funds are available).
Profit monitor event detected	Sends 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 CDRs for most recent calls are absent in the slave database.
Task rejected	A deferred task (such as Account generation) could not be run.
Time problems (NTP / Format / Suspicious)	This alert may be generated if we discover that the time in the 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 by themselves (e.g. only your network

administrator can do it). So they 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.

## 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](#))



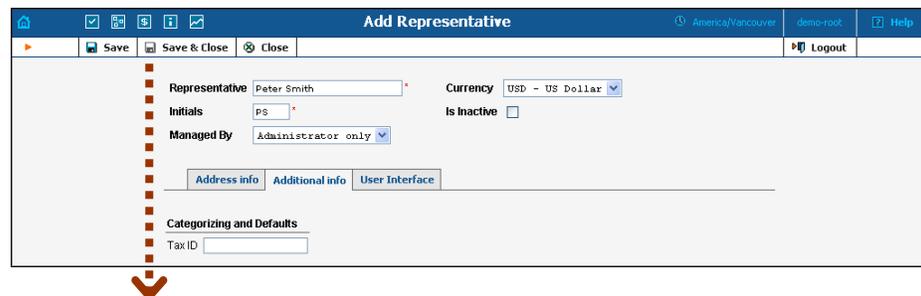
Select a user from the **User** drop-down list to view which mailing lists a particular user is subscribed to. Select a mailing list from the **Subject** drop-down list view all users subscribed to a particular mailing list.

## Representatives

Your business 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 may be a dealer, a partner at a law firm, or an independent contractor.

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

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.





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

## Templates

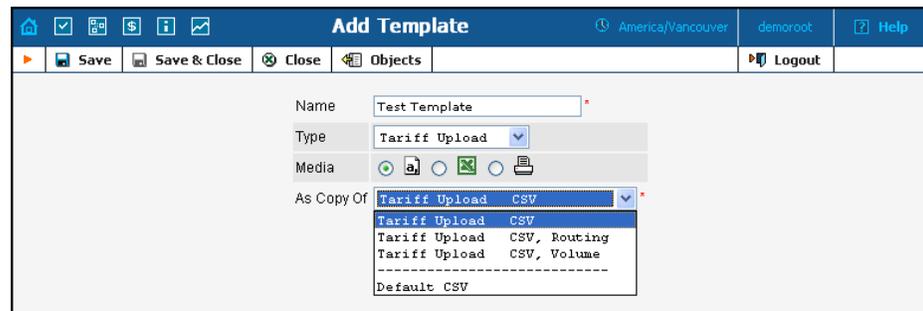
The purpose of templates is to maintain all data uploaded to and downloaded from the system. Templates automate the processing of user input and create customized output in various data and media formats.



Read more about using the Templates functionality in the PortaBilling Template Guide, available for download from:  
[www.portaone.com/support/documentation/](http://www.portaone.com/support/documentation/)

### Add a new template

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



Field	Description				
<b>Name</b>	The logical name of the template object				
<b>Type</b>	One of the following: - Invoice - Tariff Upload - Tariff Download				
<b>Media</b>	One of the following media types: <table border="1"> <tr> <td></td> <td>CSV – Comma Separated Values</td> </tr> <tr> <td></td> <td>XLS – Excel</td> </tr> </table>		CSV – Comma Separated Values		XLS – Excel
	CSV – Comma Separated Values				
	XLS – Excel				

	 Print format (HTML, PDF) – only applicable for templates of the <b>Invoice</b> type
<b>As copy of</b>	<p>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.</p> <p>After selecting <b>Type</b> and <b>Media</b>, the list will be populated with the default template (always on top of the list); all existing templates with the current Type and Media formats will be listed under the “-----” separator.</p>
<b>Managed By (in case of Type Invoice only)</b>	<p>By default – Administrator only. The template can be assigned to a reseller so that it is visible in the list of available invoices on the Customer Self-Provisioning web interface.</p>

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.

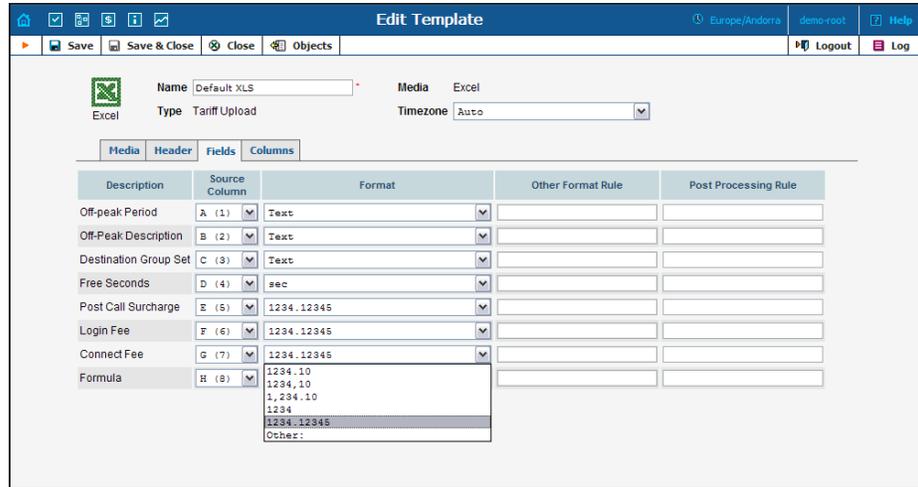
## Edit Template

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 at 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.

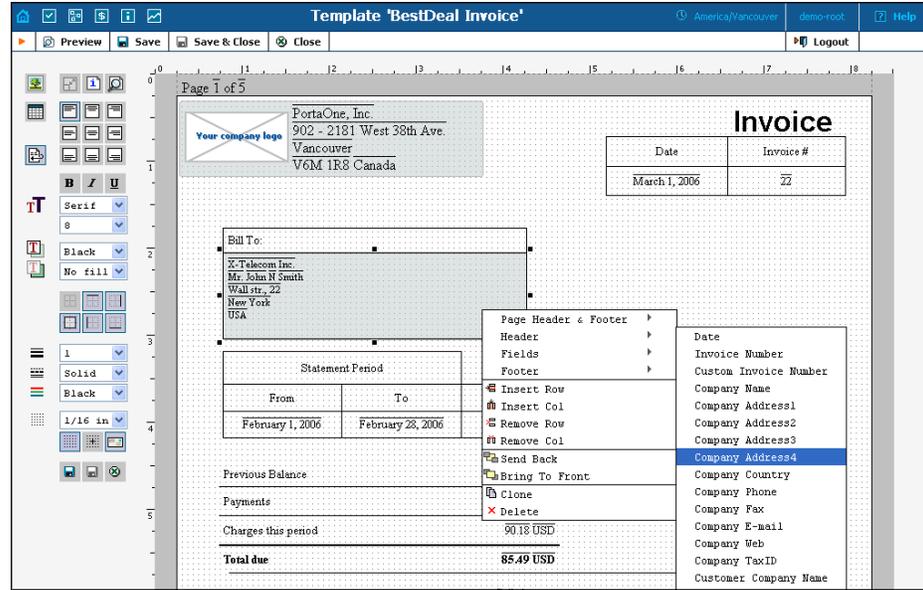


The content of the Header, Fields, Columns, and Footer tabs is arranged in a similar way, and allows flexible mapping of information related to user documents and information in the PortaBilling Database.

Column	Description
<b>Description</b>	Description of Template Components
<b>Source Column</b>	Defines the mapping of template information to the original/destination document.
<b>Format</b>	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.
<b>Other Format Rule</b>	Perl code. Active only if Format = "Other:".
<b>Post Processing Rule</b>	Perl code.

## Layout designer

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



**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 3 different states for most of the toolbar icons: normal, active, and not available.

Icon state	Description
	<b>Normal</b> - Click to activate
	<b>Active</b> - Click to deactivate
	<b>Not available</b>

Icon	Description
	<b>Add Picture.</b> 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.
	<b>Lock Aspect.</b> Fixes image proportions during scale operations.
	<b>Preview.</b> Click to preview your work in a browser window.
	<b>Add Table.</b> Click to put 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 the worksheet to de-activate the currently active object. Read more about tables below.
	<b>Text Align.</b> A section of 9 buttons used to align text in an active

	table cell.
	<b>Word Wrap.</b>
	<b>Text controls.</b> 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.
	<b>Foreground Color.</b> Change the text color by selecting from this list.
	<b>Background Color.</b> Change the color of the active table cell by selecting from this list.
	<b>Border.</b> A section of 6 buttons for showing or hiding the border of the active table cell.
	<b>Stroke.</b> A section of 3 controls for changing the active cell's border weight, style and color.
	<b>Grid.</b> 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.
	<b>Undo.</b> 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.

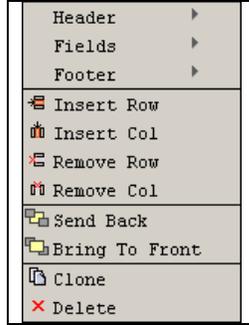
### Table

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

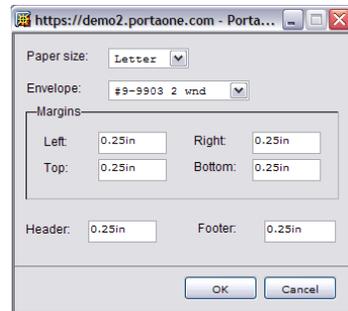


The context (right-click) menu provides you with greater control over tables and other objects, and allows certain data located in the PortaBilling database to be displayed in the table cell. Right-click on a table or cell. The three top elements of the context menu correspond to the template components (tabs); for 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.



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
#9-9903	TOP WINDOW		
	3 7/8" x 8 7/8"	From Left	3/8"
		From Top	1/2"
3 5/8" x 8 5/8"	BOTTOM WINDOW		
	1" x 4"	From Left	7/8"
		From Bottom	5/8"
# 8-5/8	TOP WINDOW		
	7/8" x 3-1/2"	From Left	5/8"
		From Bottom	2 1/4"
3 5/8" x 8 5/8"	BOTTOM WINDOW		
	1" x 4"	From Left	5/8"
		From Bottom	5/8"
#9-13036	TOP WINDOW		
	7/8" x 3-1/4"	From Left	3/8"
		From Bottom	2-1/2"
3 7/8 x 8 7/8"	BOTTOM WINDOW		
	1-1/8" x 4-1/2"	From Left	1/2"
		From Bottom	7/16"
#9-13037	TOP WINDOW		
	7/8" x 3-1/4"	From Left	3/8"
		From Bottom	2-1/2"
3 7/8 x 8 7/8"	BOTTOM WINDOW		
	1" x 4"	From Left	1/2"
		From Bottom	3/4"
#9-13038	TOP WINDOW		
	7/8" x 3-1/2"	From Left	3/8"
		From Bottom	2-3/8"
3 7/8 x 8 7/8"	BOTTOM WINDOW		
	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
<b>C6</b>	114 × 162	A4 folded twice = A6
<b>DL</b>	110 × 220	A4 folded twice = 1/3 A4
<b>C6/C5</b>	114 × 229	A4 folded twice = 1/3 A4
<b>C5</b>	162 × 229	A4 folded once = A5
<b>C4</b>	229 × 324	A4

DIN 680 specifies that a transparent address window should be 90 × 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
<b>Arrow keys</b>	Move objects with grid size increments
<b>Ctrl - arrow key</b>	Use to scale table cells or images with current grid size increments
<i>cell editing mode</i>	
<b>Ctrl-A</b>	Selects all objects in the Template window if nothing is selected, or selects all text in an active table cell
<b>Ctrl-C</b>	Copy selected text
<b>Ctrl-V</b>	Paste clipboard text starting from the current cursor position
<b>Ctrl-X</b>	Cut highlighted text
<b>Ctrl-I</b>	Change selected text style to <i>Italic</i>
<b>Ctrl-B</b>	Change selected text style to <b>Bold</b>
<b>Ctrl-U</b>	Change selected text style to <u>Underline</u>
<b>Ctrl-K</b>	Hyperlink selected text (opens hyperlink editing dialog)



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 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.

## Destinations

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

Destinations may be edited and, if a destination is not being used in any tariff, it will also have a 'delete' button. It is, of course, 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 \(PDF\)](#)

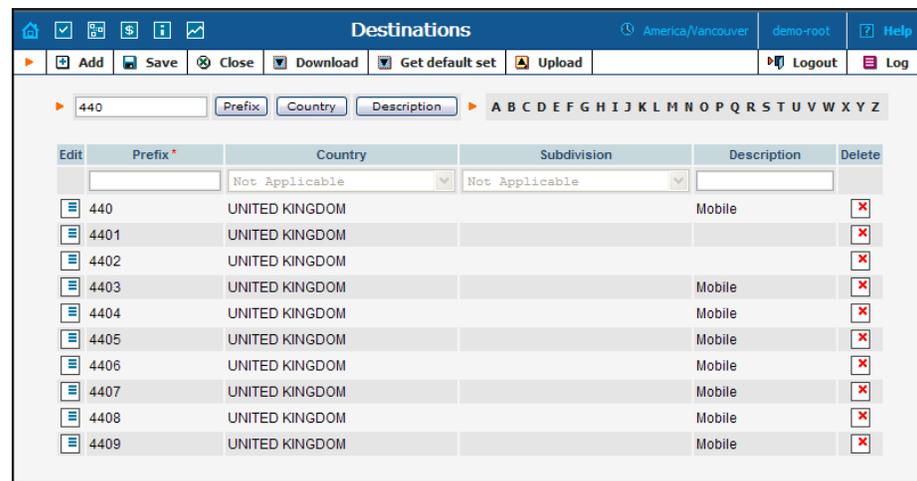
PortaBilling is supplied with an essential Destinations database containing reliable information collected from authoritative sources, and linking prefix information to:

- Country (if applicable)
- Subdivision (if applicable)
- 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, select 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.



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 right part of the interface. Choose the destination you want 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  will appear in the first column. Choose Subdivision from the refreshed drop-down 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 <b>Use country code during upload</b>	
ACL which allows read/write operations on Destinations, e.g. <b>Admin</b>	Can perform all types of operations with destinations <i>except</i> for manually specifying a country during upload. If Admin uploads a new destination, the system chooses the appropriate country automatically, using the longest match from the available destinations.
<b>all other types</b>	Read-only

## Destinations upload / download procedures

### Upload

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

Field	Description
<b>Action</b>	add or delete; encoded as '+' and '-' or 'add' or 'remove' <b>Note:</b> 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.
<b>Prefix</b>	Value to be stored in Destinations.destination.
<b>Country two-letter ISO code</b>	Value to be stored in Destinations.iso_3166_1_a2. <b>Note:</b> <i>Ignored</i> if the uploader is not Root or does not have the "Use country code during upload" included 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.
<b>Description</b>	Value to be stored in Destinations.description.

### Download

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

Field	Description
<b>Action</b>	add or delete encoded as '+'
<b>Prefix</b>	Missing prefix
<b>All other fields</b>	Empty

**NOTE:** For tariff uploads, new destinations will be e-mailed as a CVS attachment to an error report using “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 are inserted into the database manually. When uploading new destinations, a superuser 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 country is “N/A”, the destination will not be imported. An uploaded file with such destinations 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:**

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

## Applications

The ISO 3166-1 codes are used in many applications in all branches of industry, trade and statistics worldwide. Here are some examples of their use: the “code elements from ISO 4217” codes for currencies and funds 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

The ISO 3166-2 “Country Subdivision Code” 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.

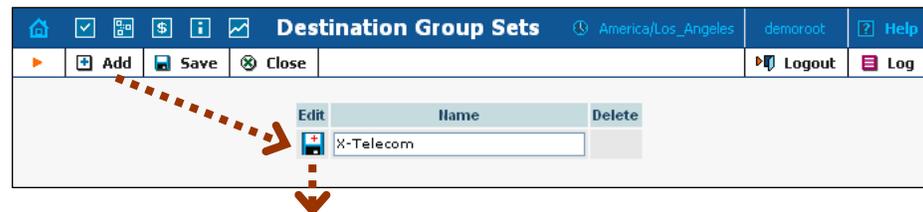
The names of the subdivisions are given in more than one language if the country has more than one official language (and if the alternative language versions were available to ISO). In Uzbekistan, for example, there are two official languages, Uzbek (uz) and Russian (ru), so the subdivision names are 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 others). It could 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 can create a destination group “CZ-Mobile” and then perform “create a new rate” only once, and the rates for all of the prefixes will be 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, select the  **Add** button. The **Save New**  icon will appear next to the Name.





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

**Edit Destination Group 'CZ-Mobile'** America/Los\_Angeles demoroot Help

**Add** **Close**

Prefix Country Description ▶ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Prefix	Country	Description	Delete
--------	---------	-------------	--------

**Add Destinations to Group 'CZ-Mobile'** America/Los\_Angeles demoroot Help

**Save** **Close**

420% Prefix Country Description

Prefix Country Description

**Add Destinations to Group 'CZ-Mobile'** America/Los\_Angeles demoroot Help

**Save** **Close**

420% Prefix Country Description

Select	Prefix	Country	Description
<input type="checkbox"/>	420	CZECH REPUBLIC	Proper
<input type="checkbox"/>	4202	CZECH REPUBLIC	Prague
<input type="checkbox"/>	42060	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420601	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420602	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420603	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420604	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420605	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	420606	CZECH REPUBLIC	Mobile
<input type="checkbox"/>	420609	CZECH REPUBLIC	Proper
<input checked="" type="checkbox"/>	42072	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	42073	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	42077	CZECH REPUBLIC	Mobile
<input checked="" type="checkbox"/>	42093	CZECH REPUBLIC	Mobile

**Edit Destination Group 'CZ-Mobile'** America/Los\_Angeles demoroot Help

**Add** **Close**

Prefix Country Description ▶ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Prefix	Country	Description	Delete
420601	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
420602	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
420603	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
420604	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
420605	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
420606	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
42072	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
42073	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
42077	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
42093	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>
42096	CZECH REPUBLIC	Mobile	<input checked="" type="checkbox"/>

America/Los\_Angeles demoroot Help
Edit Destination Group Set 'X-Telecom'

Logout Log
Add Save Save & Close Close Download Upload

Search

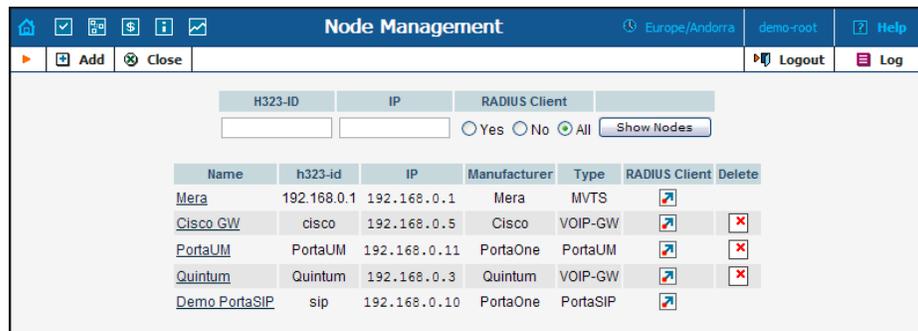
Edit	Destination Group Name	Prefixes	Delete
	<input style="width: 90%;" type="text"/>		
	CZ-Mobile	420601, 420602, 420603, 420604, 420605, 420606, 42072, 42073, 42077, 42093, 42096	

# 3. Networking

## Nodes

The Node Management screen enables registration, removal and maintenance of the gateway list. Nodes are those gateways which will 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.

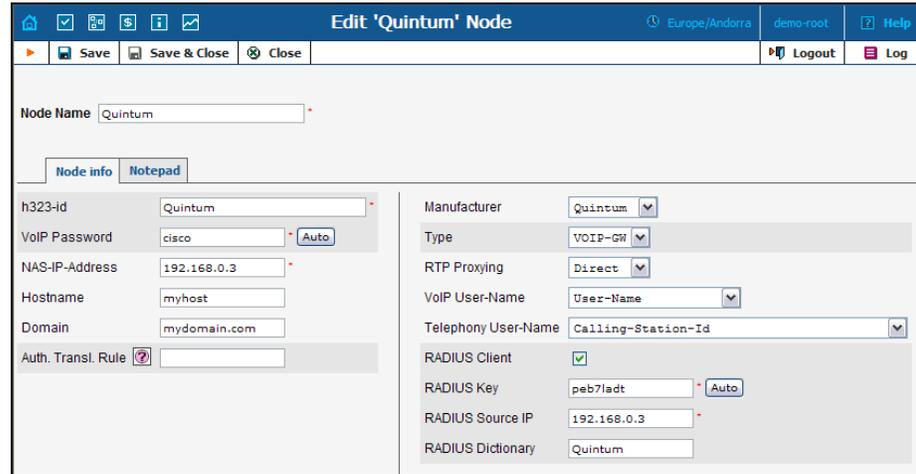
The search form at the top of the screen allows filtration by any combination of H.323 ID, IP address and/or whether or not the node is a Radius client. Providing any of these pieces of information and selecting **Show Nodes** will refresh the Node listing according to the new filtration criteria.



To add a new node to the system, select **Add** from the Panel. The following information is provided within the listing:

Column	Description
<b>Name</b>	Logical name of the node. This is also a link to the edit screen for the given node.
<b>h323-id</b>	Registered H.323 ID of the node.
<b>IP</b>	IP address of the node.
<b>Manufacturer</b>	Choose “Cisco”, “Quintum”, “PortaOne” or another from the drop-down list, depending on the manufacturer of the equipment.
<b>Type</b>	Select what role the node plays in the network from the drop-down list. The options are as follows (according to Cisco naming conventions): <ul style="list-style-type: none"> <li>• VOIP-GW: the node functions as a gateway</li> <li>• H323-GW: the node is an H.323 proxy</li> <li>• H323-GK: the node is an H.323 gatekeeper</li> <li>• PortaSIP: PortaSIP server</li> <li>• PortaUM: PortaUM server</li> <li>• MVTS: Mera Networks VoIP Softswitch</li> </ul>

## Add/Edit Node



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



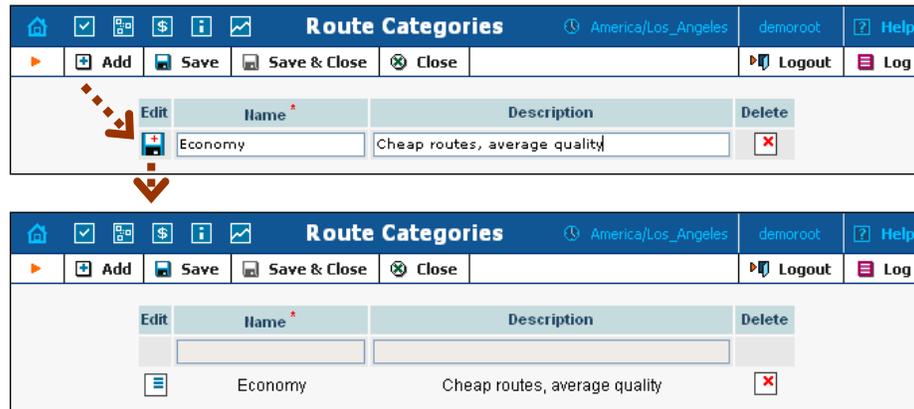
Field	Description
<b>Node Name</b>	The logical name of the node for use within PortaBilling
<b>Node ID</b>	Node identifier used by the terminating node within your network of trusted nodes to identify the originating gateway which is attempting to send a call. Please enter the ID which is used for this node. The default behavior is to authenticate a node by its IP address; however, this can be changed if you use your own custom application to handle incoming VoIP calls. This field is only available if “Node ID” is turned on in advanced features. If you are not sure what value to choose, enter <b>the same value as in the NAS-IP-Address</b> .
<b>h323-id</b>	The H.323 ID which the gateway is configured to use. A correct H.323 ID is important if you use node authentication (normally via GK) and proxy/GK billing. Even if you do not use GK/proxy billing, make sure the value you put here matches the “hostname” parameter configured on the gateway, since this value is returned from this node in the h323-gw-id attribute, and the ability to match these values with the data in the billing significantly simplifies troubleshooting.
<b>VoIP password</b>	The password which will be used for remote IP authentication of calls originated on this node. If you are using the Cisco default app_remote_ip_authenticate, put <b>cisco</b> here.
<b>NAS-IP-Address</b>	The IP address of the node.

<b>Hostname</b>	The internet hostname (without the domain).
<b>Domain</b>	The internet domain the node is operating in.
<b>Auth. Transl. Rule</b>	Authentication translation rule, used to transform the dialed phone number into the E.164 format used in PortaBilling.
<b>Manufacturer</b>	Choose “Cisco”, “Quintum”, “PortaOne” or another from the drop-down list, depending on the manufacturer of the equipment.
<b>Type</b>	Select what role the node plays in the network from the drop-down list. The options are as follows (according to Cisco naming conventions): <ul style="list-style-type: none"> <li>• VOIP-GW: the node functions as a gateway</li> <li>• H323-GW: the node is an H.323 proxy</li> <li>• H323-GK: the node is an H.323 gatekeeper</li> <li>• portaSIP: PortaSIP server</li> <li>• portaUM: PortaUM server</li> <li>• MVTs: Mera Networks VoIP Softswitch</li> </ul> <p>Note that only types applicable to the chosen manufacturer will be shown.</p>
<b>RTP Proxying</b>	Describes NAT traversal capabilities of this node: <ul style="list-style-type: none"> <li>• Direct - RTP stream should be send directly to this node, RTP proxy should not be used</li> <li>• Optimal - this node is capable of NAT traversal; no RTP proxying is required unless specifically requested</li> <li>• OnNat - this node is not capable of NAT traversal; engage RTP proxy if the other party is behind the NAT</li> <li>• Always – when sending a call to this node always engage RTP proxy, so no direct media stream will go to it</li> </ul>
<b>VoIP User-Name</b>	Defines which parameters (e.g. ANI, IP, DNIS, etc.) should be used to identify to which account the call should be billed. Applies to calls which arrived to this node from the IP network (values are taken from the answer/VoIP call leg). Note that this parameter is only applicable to Quintum gateways.
<b>Telephony User-Name</b>	Defines which parameters (e.g. ANI, port ID, DNIS, etc.) should be used to identify to which account the call should be billed. Applies to calls which arrived to this node from PSTN (values are taken from the answer/Telephony call leg). Note that this parameter is only applicable to Quintum gateways.
<b>Radius Client</b>	Check the box if the node will be providing accounting

	records to the Radius server.
<b>Radius Key</b>	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 automatically generated by selecting the <b>Auto</b> button.
<b>Radius Source IP</b>	More than one interface can be present on the node, specifying the IP address of the one that communicates with the Radius server

## Route Categories

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



Column	Description
<b>Name</b>	Name of route category. This is the name you will see in the select menu when assigning a route category for the rate.
<b>Description</b>	Description of this route category.

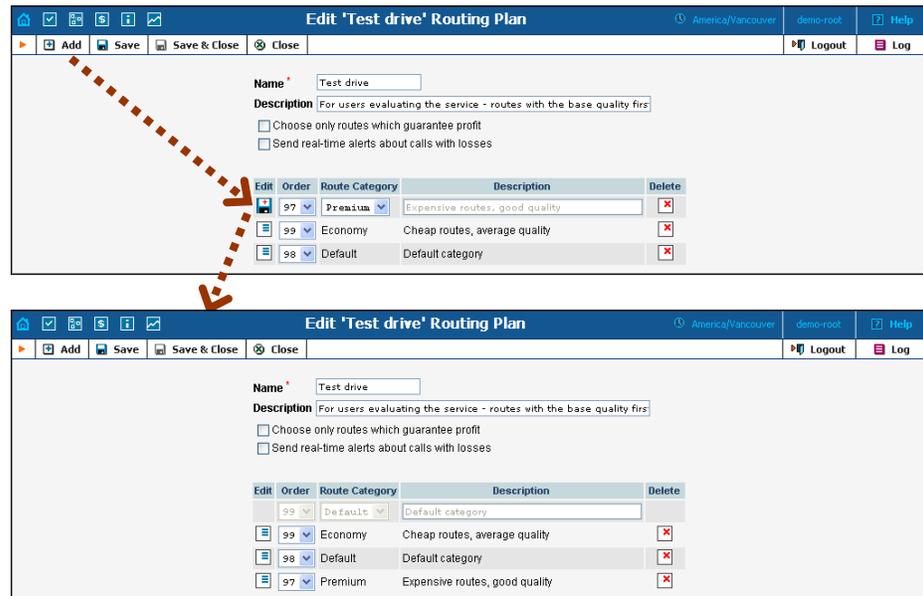
If you do not define any custom route categories, a **Default** route category is always available.

## 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 which sequence.



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



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

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

## Test Dialplan

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



#	Destination	Country	Description	Price	Route Category	Preference	Huntstop	Route to	Vendor	Connection	Tariff
1	1604	CANADA	British Columbia	0.07000 USD	Cheap	8	N	<a href="#">192.168.0.25</a>	MCI Vendor	MCI VoIP->Vendor	<a href="#">CT Tariff</a>
2	1604	CANADA	British Columbia	0.08000 USD	Economy	7	N	<a href="#">192.168.0.30</a>	X-Telecom	X-Telecom	<a href="#">Mera Systems</a>
3	1604	CANADA	British Columbia	0.25000 USD	Premium	5	N	<a href="#">192.168.0.66</a>	Best VoIP	Premium VoIP->Vendor	<a href="#">Best Quality</a>

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

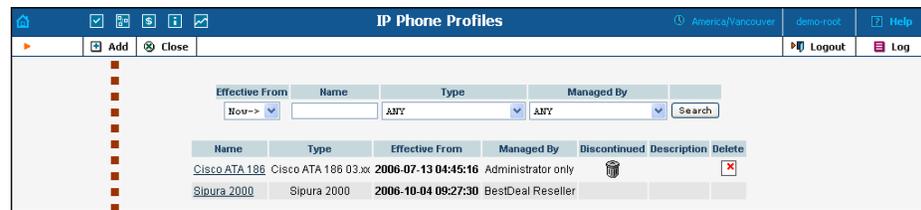
Column	Description
<b>Ctrl#</b>	Sequential number of this route.
<b>Destination</b>	Matching destination from the corresponding tariff.
<b>Country</b>	Country where the tested destination is located.
<b>Description</b>	Destination description.
<b>Price</b>	Next interval price for the given destination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

## IP Phone Profiles

IP Phone Profiles and the IP Phones 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 the 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.



**Profile list mode:**

Column	Description
<b>Name</b>	Logical name of the profile.
<b>Type</b>	Telephone adaptor or SIP phone.
<b>Effective From</b>	Date and time when the profile becomes effective.
<b>Managed By</b>	<b>Administrator only</b> (default) means that this profile

	will be used for your direct customers and will be accessible only to your administrators. Select a PortaBilling reseller to assign this profile for use by a particular reseller.
<b>Discontinued</b>	Indicates that the current profile is no longer in use.
<b>Description</b>	Short text description of the profile.
<b>Delete</b>	The delete icon is only visible when the current profile's effective date has not started yet.

**Add Profile mode:**

Column	Description
<b>As copy of</b>	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.
<b>Effective From</b>	Set the time when the profile is to become effective. 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 Phones inventory allows you to keep track of your IP devices (SIP phones, SIP ATAs, etc.) which are distributed to customers. You will assign a profile that defines general configuration settings for each device (e.g. preferred codecs, address of the SIP server, etc). Then you can assign a specific account (in effect 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.



Name	Type	Profile	Managed By	MAC Address	Description	Ports free total	Inventory ID	Delete
SPA 2000_117	Sipura 2000	Sipura 2000	Administrator only	0:50:56:C0:0:8		1 2	1	

The screenshot shows a web-based configuration interface for adding an IP phone. The title bar reads 'Add IP Phone'. The main content area includes the following fields:

- Name:** My SPA-941
- Description:** My office Linksys SPA-941
- Managed by:** Administrator only
- Type:** Linksys SPA-941
- General Info:**
  - Profile:** SPA-941
  - MAC Address:** 00:0E:08:D8:F8:CE
  - Ports:** Total 2, Free 2
  - ASCII Key:** d00b13g
  - Inventory ID:** K2 Linksys

Field	Description
<b>Name</b>	IP Phone name
<b>Description</b>	Short description.
<b>Managed by</b>	<b>Administrator only</b> (default) means that this IP device will be used for your direct customers and will be accessible only to your administrators. Select a PortaBilling reseller to assign this IP device for use by a particular reseller.
<b>Type</b>	One of the available device types (e.g. Cisco ATA, Sipura, etc.).
<b>Profile</b>	Select one of defined IP Phone profiles.
<b>MAC Address</b>	MAC Address of the IP Phone.
<b>Ports</b>	Number of the IP Phone ports (phone lines).
<b>ASCII Key</b>	Key which is used to encrypt the configuration information.
<b>Inventory ID</b>	An ID which allows to identify this device in the external system (e.g. your warehouse management application)

## Cisco ATA Expert

This utility allows you to browse configuration parameters for supported UA devices in a user-friendly format. For example, instead of entering the values 0, 1, 2, 3 and so forth for codec selection, you can pick names such as “G.729” from the select menu. This is convenient for single-time configuration of a device, or for troubleshooting.

The screenshot shows a login window titled 'Cisco ATA Expert Login'. It contains the following fields and controls:

- IP:** 192.168.0.100
- UI Password:** [masked with asterisks]
- Login:** A button to submit the login information.

To edit configuration parameters, enter a UA IP address and password. The resulting screen will be similar to the UA Profile Management screen in the previous section.

# 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 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.

Edit	ISO 4217	Name	Dec. digits	Major	Minor	Exchange Rate Source	Payment System	Payment Method	Minimum Payment	Delete
	alpha num									

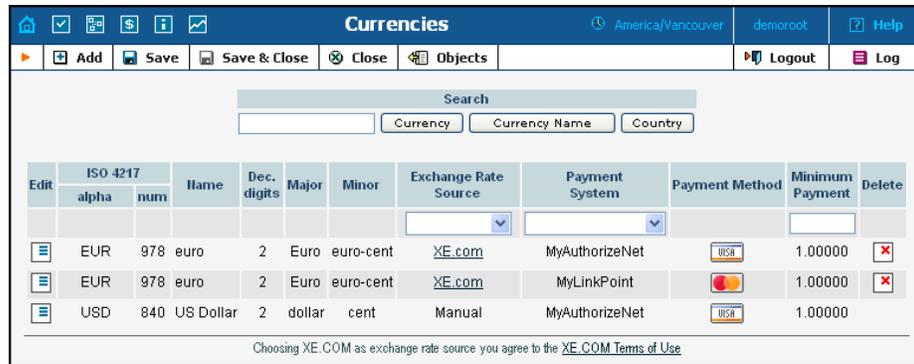
Choosing XE.COM as exchange rate source you agree to the [XE.COM Terms of Use](#)

Edit	ISO 4217	Name	Dec. digits	Major	Minor	Exchange Rate Source	Payment System	Payment Method	Minimum Payment	Delete
	alpha num									
	EUR					XE.com	AuthorizeNet		5	

Choosing XE.COM as exchange rate source you agree to the [XE.COM Terms of Use](#)

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.



Edit	ISO 4217		Name	Dec. digits	Major	Minor	Exchange Rate Source	Payment System	Payment Method	Minimum Payment	Delete
	alpha	num									
	EUR	978	euro	2	Euro	euro-cent	<u>XE.com</u>	MyAuthorizeNet		1.00000	
	EUR	978	euro	2	Euro	euro-cent	<u>XE.com</u>	MyLinkPoint		1.00000	
	USD	840	US Dollar	2	dollar	cent	Manual	MyAuthorizeNet		1.00000	

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



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 two-character 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/](http://www.bsi-global.com/) for more information.

## Exchange Rates

All exchange rates used within the system are listed. The **Effective** drop-down 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:



The screenshot shows a web application window titled "Exchange Rates". It has a menu bar with "Add", "Save", "Save & Close", "Close", and "Update". There are also "Logout" and "Log" buttons. A dropdown menu for "Effective" is set to "Now". Below the menu is a table with the following data:

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
<b>Edit</b>	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.
<b>Name</b>	The currency unit name (for example, “Canadian Dollar”).
<b>Exchange Rate</b>	Currency exchange rate. Defines the number of units of 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”)
<b>Source</b>	Shows the exchange rate source for the given currency. The exchange rate source for the given currency is defined on the <b>Currency</b> page.
<b>Timestamp</b>	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.

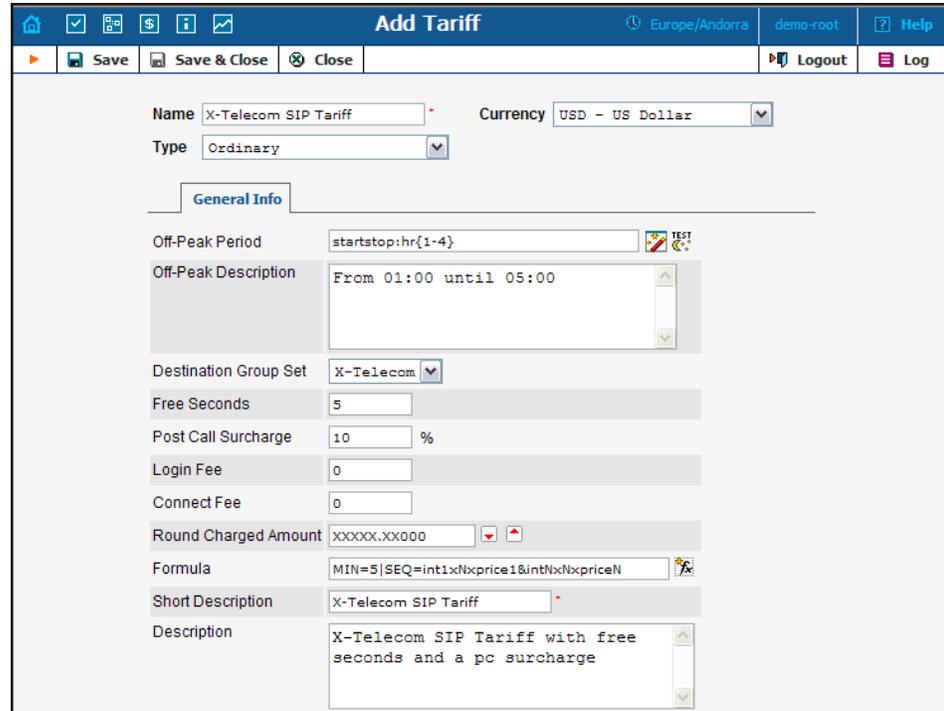
Typical billing unit configurations include 60/6 (the first unit, i.e. the minimum charged call duration, is one minute, and subsequent intervals are one-tenth of a minute, i.e. six seconds) and 1/1 (per-second billing).



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  icon to edit individual rates for the given tariff. The Delete  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), allowing 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.



The screenshot shows the 'Add Tariff' web interface. At the top, there are navigation icons and a title bar with 'Add Tariff', 'Europe/Andorra', 'demo-root', and 'Help'. Below the title bar are buttons for 'Save', 'Save & Close', 'Close', 'Logout', and 'Log'. The main form area contains the following fields:

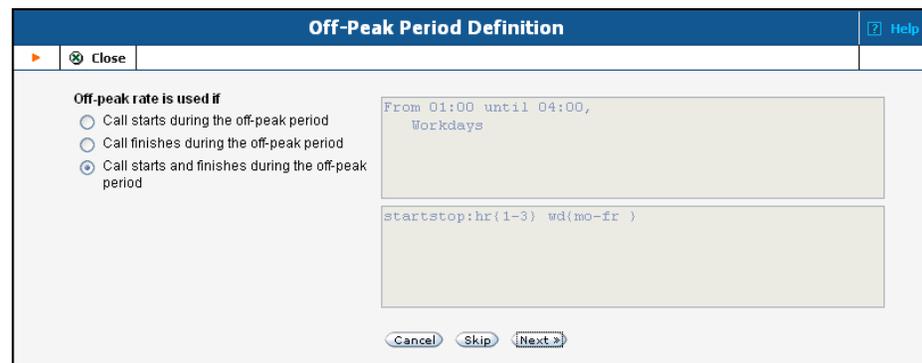
- Name:** X-Telecom SIP Tariff
- Currency:** USD - US Dollar
- Type:** Ordinary
- General Info:**
  - Off-Peak Period:** startstop:hr{1-4} (with a wizard icon)
  - Off-Peak Description:** From 01:00 until 05:00
  - Destination Group Set:** X-Telecom
  - Free Seconds:** 5
  - Post Call Surcharge:** 10 %
  - Login Fee:** 0
  - Connect Fee:** 0
  - Round Charged Amount:** XXXXX.XX000
  - Formula:** MIN=5|SEQ=int1xNxprice1&intNxNxpriceN
  - Short Description:** X-Telecom SIP Tariff
  - Description:** X-Telecom SIP Tariff with free seconds and a pc surcharge

Field	Description
<b>Name</b>	The logical name for the tariff object.
<b>Type</b>	By default – <b>Ordinary</b> . The tariff can be assigned to a reseller ( <b>Managed by NNN</b> ), so that it is manageable from the Customer Self-Provisioning web interface. <b>Routing</b> means this tariff includes special extensions for routing information.
<b>Currency</b>	Indicates the currency in which pricing information is defined. All pricing information for a single tariff must be defined in the same currency.
<b>Off-Peak Period</b>	Off-peak period definition; click the wizard icon  to launch the period format definition wizard; click the test icon  to run the off-peak period test.
<b>Off-Peak Description</b>	Human-readable description of the off-peak period (e.g. “From 21:00 until 09:00, Working Days”). This field is automatically filled in by the wizard.
<b>Destination Group Set</b>	A set of destination groups (UK-Mobile, CZ-Mobile, etc.) you would like to use for more convenient rate entry.
<b>Free seconds</b>	Number of free seconds granted for each call. In order to claim free seconds, the length of the call must be at least one billing unit (first interval; see the ‘Enter Rates’ section above).
<b>Post Call Surcharge</b>	Increases the total call cost by the given value.
<b>Login Fee</b>	Amount to be charged immediately after the first user authentication.

<b>Connect Fee</b>	Amount to be charged for each successful call, in addition to other charges.
<b>Round Charged Amount</b>	Pattern that defines the rounding of a charged amount in an individual CDR. This pattern takes the form XXX000. An X on the left means that the digit(s) in this position should be left unchanged, while a zero on the right means that this position will be rounded. For example, XXXXX.XX000 means that amounts will be rounded up to two decimal places, so that 1.2345 becomes 1.24; note that rounding is <b>always</b> upwards.
<b>Formula</b>	Default call rating formula to be applied to new rates. Note 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.
<b>Short Description</b>	While the name of a tariff is for your internal use, and normally is created according to your internal rules, you can also add a name meaningful to your reseller. For example, for the tariff name <b>aABC-SmartCall-USD-1800</b> , the short description will be <b>Smart call using a toll-free number</b> .
<b>Description</b>	Tariff description.

Free Seconds, Connect Fee and Post-Call Surcharge are only applied when the default rating method is used – see more about different call rating methods in [PortaBilling Administrator Guide](#).

### Off-Peak Period Definition Wizard



The Off-Peak Period wizard provides users with a flexible tool for defining the off-peak period of any tariff. Via 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 “inclusive”. So in the example above 6pm to 6am will be represented as hr{6pm-5am} – this is absolutely 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 border on your off-peak period, i.e. they cover both peak and off-peak time. There are three options you can choose from:

- If the call starts in the off-peak period, it will be charged using off-peak 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 if it starts within the period or not.
- Or, the off-peak rate will only be used if the call started and finished during the off-peak period. Thus, any call which partly extends into the peak period will be charged at the peak rate.

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

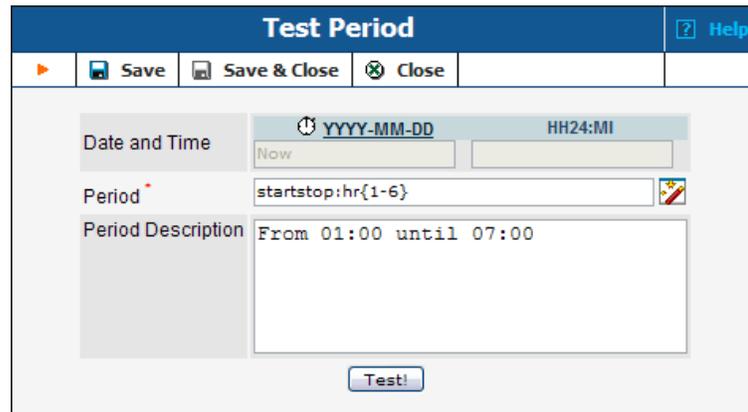
```
From 6:00pm until 6:00am
  any day of any month
OR Sunday and Saturday
  of any month
OR 1
  of January
```

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  icon in the tariff information window, or use the **Test Period** button on the last page of the off-peak period wizard.



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



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

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

**NOTE:** Due to the security risk, the processing of incoming e-mails is turned off 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 peak, or vice versa, i.e. there is no pro-ration. See above regarding how you can 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.

Charging the call (old-style method)

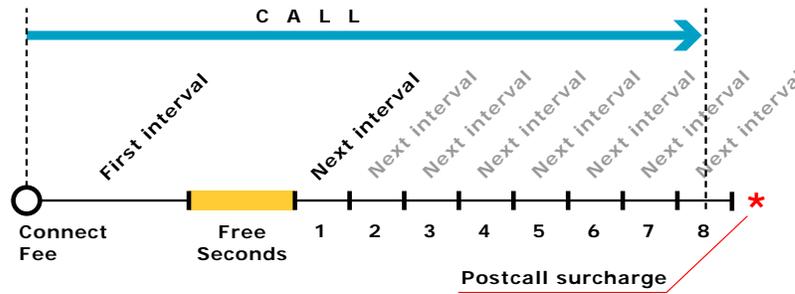


Figure 4-1

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.

Effective From										Destination			
Now											Prefix	Group	Country
Edit	Destination *	Country	Description	Interval, sec.		Price, USD/min		Effective From	Delete				
				First *	Next *	First *	Next *						
				Peak				YYYY-MM-DD *					
				Off-Peak				HH24:MI:SS *					
	420	CZECH REPUBLIC	Proper	Peak	1	1	0.12000	0.12000	2004-07-30				
				Off-Peak	1	1	0.11000	0.11000	22:32:08				
	4202	CZECH REPUBLIC	Prague	Peak	1	1	0.11000	0.11000	2004-07-30				
				Off-Peak	1	1	0.06000	0.06000	22:32:17				
	420601	CZECH REPUBLIC	Mobile	Peak	1	1	0.23000	0.23000	2004-07-30				
				Off-Peak	1	1	0.20000	0.20000	22:33:09				

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  (**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
<b>Destination</b>	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.
<b>Country</b>	Country corresponding to the current destination.
<b>First interval</b>	First billing unit in seconds.
<b>Next interval</b>	Next billing unit in seconds.
<b>Price first</b>	Per minute price for first interval.
<b>Price next</b>	Per minute price for next interval.
<b>Off-peak First interval</b>	First billing unit in seconds for off-peak time.
<b>Off-peak Next interval</b>	Next billing unit in seconds for off-peak time.
<b>Off-peak Price first</b>	Per minute price for first interval in off-peak time.
<b>Off-peak Price next</b>	Per minute price for next interval in off-peak time.
<b>Effective Time</b>	Exact time when the rate becomes effective. Click the  icon to make the rate effective immediately. Click the <b>DD-MM-YYYY</b> link to set up the desired date using a pop-up calendar.
	Indicates if this rate uses a call rating formula. The  icon indicates that there is no formula, thus old-style rating is used. The  icon indicates that the rate already has a formula defined. Click on the icon to invoke the call

	rating formula wizard.
<b>Rates properties</b>	<p> <b>Hidden.</b> This means that the rate is excessive (e.g. 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.</p> <p> <b>Discontinued.</b> Note that marking a rate as discontinued takes effect immediately; you cannot discontinue a rate sometime in the future</p> <p> <b>Forbidden.</b> This means that no calls are authorized for this particular destination.</p>
<b>Delete</b>	Click the delete icon to delete this rate. Only rates which are not yet active can be deleted.



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

Field	Description
<b>Route Category</b>	Route category, selected from among those already defined. If you do not wish to use different route categories, use the <b>Default</b> one.
<b>Preference</b>	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).
<b>Huntstop</b>	If turned on, the billing engine will not try any routes for other vendors with a lower preference.

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



**NOTE:** Off-peak fields appear only if a 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:

Interval, sec.		Price, USD/min		Off-Peak			
First *	Next *	First *	Next *	Interval, sec.		Price, USD/min	
1	1	0.30000	0.40000	1	1	0.10000	0.20000

Formula: MIN=5 |  
SEQ=int1xNxprice1&intNxNxpriceN

Global Rating Sequence Add Duration

Do not bill calls shorter than 5 sec.

Global:

- o **Do not bill calls shorter than** - See a detailed description of this feature in the [PortaBilling Administrator Guide](#).

Interval, sec.		Price, USD/min		Off-Peak			
First *	Next *	First *	Next *	Interval, sec.		Price, USD/min	
1	1	0.30000	0.40000	1	1	0.10000	0.20000

Formula: MIN=5 |  
SEQ=int1xNxprice1&intNxNxpriceN

Global Rating Sequence Add Duration

**Available**

- Interval
- Fixed Surcharge
- Relative Surcharge
- Call Disconnect

**Count \***

Custom  times

Unlimited  until the end of the call

**Duration \***

Custom  sec.

First Interval

Next Interval

**Price \***

Custom  USD

First Price

Next Price

Rating Sequence

N intervals of First interval seconds, First price USD/min  
N intervals of Next interval seconds, Next price USD/min

Include Remove

Rating Sequence:

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

1. Choose the element type from the list at 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.

Rate Formula Wizard for '446 UNITED KINGDOM' ? Help

Interval, sec.		Price, USD/min		Off-Peak			
First *	Next *	First *	Next *	Interval, sec.	Price, USD/min	Interval, sec.	Price, USD/min
First *	Next *	First *	Next *	First *	Next *	First *	Next *
1	1	0.30000	0.40000	1	1	0.10000	0.20000

Formula: MIN=5 |  
ADD=#100:0&300:3&900:5&8 |  
SEQ=int1xNxprice1&intNxNxpriceN

Edit	Duration Less Than, sec.	Increase call duration *, %	Delete
	<input type="text"/> <input type="checkbox"/> Default	<input type="text"/>	
	100	0	
	300	3	
	900	5	
	longer than 900	8	

### 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.

- **Duration Less Than, sec.** – Threshold for increasing call duration. The system will choose the entry with the maximum applicable threshold. Thus, if there are entries with 180, 300, 900 and longer than 900 seconds (see above), and a call is made for 7 minutes, the third entry will be applied. **“longer than”** is a special case, and it means “any other call duration”; there must always be such an entry in the formula.
- **Increase call duration** – Defines how the call duration should be changed (increase in percentage; a 0 value means that the call duration should not change). Note that for several entries with an increasing threshold, the percentage values must increase as well. Thus you can have the following entries: 180:0%, 300:3%, 900:5%, longer than 900:8%; but you cannot have: 180:5%, 300:4%, longer than 900:3%.

### 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 calculating the call's cost given its duration, or calculating how long a call should last given its cost.

**Edit 'Mera Systems' Tariff** America/Vancouver demo-root Help

Save Save & Close Close Download Upload Rates Test Logout Log

Name: Mera Systems Currency: USD  
 Type: Routing

General Info Web Upload & Download Email Upload Notepad

Off-Peak Period: startstop:hr{1-3} TEST  
 Off-Peak Description: From 01:00 until 04:00

**Test Call Rating** America/Vancouver demo-root Help

Close Logout

Date and Time: 2006-05-19 23:37:26  
 Phone number: 44625524678

Simulate call charges based on the call duration  
 Simulate authorization based on the available funds

Call duration: 10:00 HH:MI:SS, MI:SS or SS Test

**Result of the testing**  
 Formula:  
 Expanded Formula: MIN = 1|SEQ = 1x1x0.1 & 1xNx0.2  
 Charged amount: 1.99834 USD  
 Real charge history: +1x1x0.1+599x1x0.2

**Test Call Rating** America/Vancouver demo-root Help

Close Logout

Date and Time: 2006-05-19 23:37:26  
 Phone number: 44625524678

Simulate call charges based on the call duration  
 Simulate authorization based on the available funds

Available funds: 10 USD Test

**Result of the testing**  
 Formula:  
 Expanded Formula: MIN = 1|SEQ = 1x1x0.1 & 1xNx0.2  
 Real credit time: 50 min. 0 sec. (3000 sec.)  
 Announced credit time: 50 min. 0 sec. (3000 sec.)  
 Real charge history: +1x1x0.1+2999x1x0.2  
 Announced charge history: +1x1x0.1+2999x1x0.2

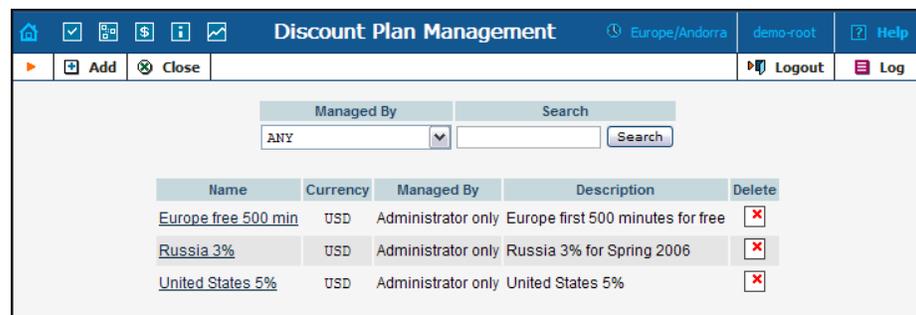
Field	Description
Date and Time	The date and time when the call is initiated. Click on  icon to set the current time. The "YYYY-MM-DD" opens a calendar that can be used to select a date.
Phone number	The phone number to call.
Call duration	Estimated call duration.
Available funds	Estimated available funds.
<b>Results of the testing</b>	
Formula	The rate formula used for the given destination.
Expanded Formula	The rate formula with the real interval and price values.
<i>If the formula calculates the call cost based on its duration</i>	
Charged amount	Charged amount for test call

<b>Real charge history</b>	A short description of how the <b>Charged amount</b> was calculated
<i>If the formula calculates the call duration based on available funds</i>	
<b>Real credit time</b>	The true maximum call duration.
<b>Announced Credit Time</b>	The announced maximum call duration.
<b>Real charge history</b>	A short description of how the <b>Real credit time</b> was calculated.
<b>Announced charge history</b>	A short description of how the <b>Announced credit time</b> was calculated.

## 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.



The screenshot shows the 'Discount Plan Management' interface. At the top, there are navigation icons and a title bar with 'Discount Plan Management', 'Europe/Andorra', 'demo-root', and 'Help'. Below the title bar are 'Add' and 'Close' buttons. A search section includes a 'Managed By' dropdown menu set to 'ANY' and a 'Search' input field with a 'Search' button. The main content is a table with the following data:

Name	Currency	Managed By	Description	Delete
<a href="#">Europe free 500 min</a>	USD	Administrator only	Europe first 500 minutes for free	
<a href="#">Russia 3%</a>	USD	Administrator only	Russia 3% for Spring 2006	
<a href="#">United States 5%</a>	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 the discount plan is not in use (not assigned to any customer, account or product), allowing 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 its name in the list.

The screenshot shows a web application window titled "Add Discount Plan". The interface includes a top navigation bar with icons for home, save, save & close, close, and help. Below the navigation bar are buttons for "Save", "Save & Close", "Close", and "Logout". The main form area contains several input fields: "Plan Name" with the value "Europe free 500 min", "Currency" with a dropdown menu showing "USD - US Dollar", "Managed By" with a dropdown menu showing "Administrator only", "Destination Group Set" with a dropdown menu showing "Europe", "Counter Reset" with a dropdown menu showing "Once in billing period", and a "Description" text area containing "Europe first 500 minutes for free". A "General Info" tab is visible above the description field.

Field	Description
<b>Name</b>	The logical name of the discount plan object.
<b>Managed By</b>	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.
<b>Currency</b>	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.
<b>Destination Group Set</b>	Discounts can be defined for individual groups (e.g. US&Canada, Asia, Western Europe) within this set. Once chosen during discount plan creation, they cannot be changed later on.
<b>Counter Reset at</b>	<p>Each discount has internal counters associated with a 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 or account’s billing.</p> <ul style="list-style-type: none"> <li>• <b>Never</b> 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.</li> <li>• <b>Billing-period</b> means the counters of the plan will be reset when the customer’s next billing period begins. If you have defined a discount “first 500 minutes for free”, then the customer will have 500 free minutes in every billing period (month, week, etc.).</li> </ul> <p>Once chosen, this setting cannot be changed later on.</p>
<b>Description</b>	Short description of discount plan.

## 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.



Field	Description
<b>Destination Group</b>	Enter the name of a destination group manually, or click the column header link ( <b>Destination Group</b> ) to choose a group from a searchable list inside the pop-up window.
<b>Type</b>	<p>Select the threshold type: will you use thresholds based on the charged amount, or on the total call time?</p> <ul style="list-style-type: none"> <li>• <b>Amount</b> 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>• <b>Volume</b> 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>
<b>Discount scheme</b>	Since the discount formula is complex, you cannot edit it directly. Click on the column header or the  icon in order to launch the discount definition wizard (see the chapter 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.



Field	Description
<b>Threshold</b>	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 <b>Unlimited</b> box. You cannot have two discount rows with the same threshold values.
<b>Discount</b>	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 the 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 would be billed according to the standard tariff rate.

**For example:**

Discount type - Volume, minutes

Discount is defined as 0..100 - 50%; 100..200 - 20%; 200..unlimited - 10%  
 The first 100 minutes are billed at a 50% discount (half-price from what is specified in the tariff), the next 100 minutes are billed at a 20% discount, and thereafter all calls receive a 10% discount.

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.

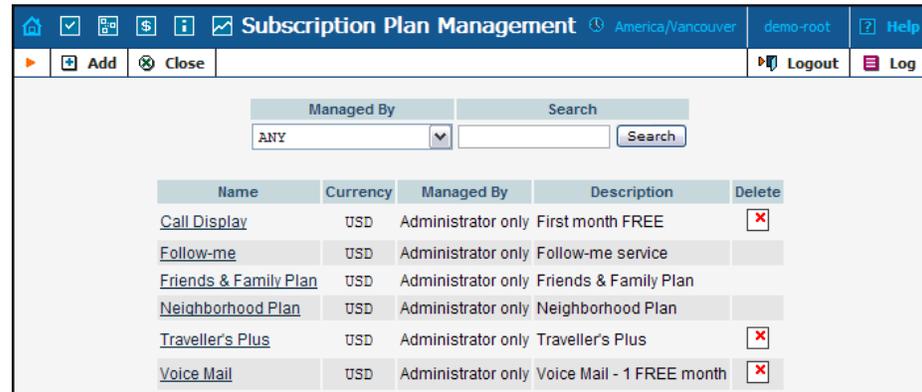
Discount is defined as 0..10.00 - 0%; 10.00..20.00 - 10%; 20.00..unlimited - 20%

The customer begins making calls, and 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 allow to automate 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.



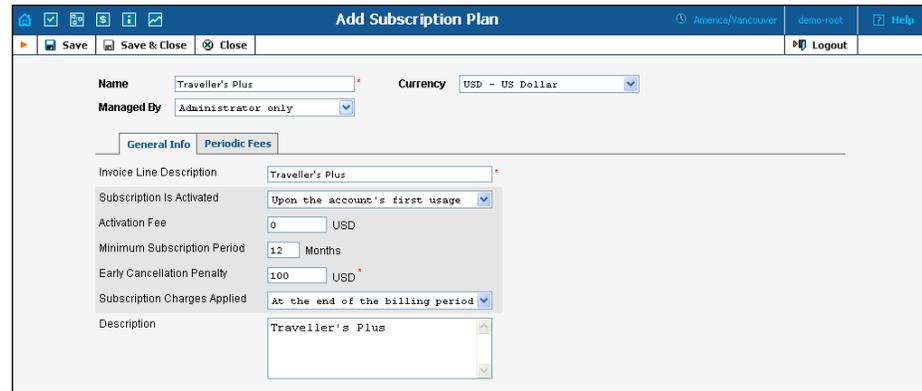
The screenshot shows the 'Subscription Plan Management' interface. At the top, there are navigation icons (Home, Checkmark, Add, Close, Logout, Log) and a search bar. Below the search bar is a table with the following data:

Name	Currency	Managed By	Description	Delete
<a href="#">Call Display</a>	USD	Administrator only	First month FREE	<input type="checkbox"/>
<a href="#">Follow-me</a>	USD	Administrator only	Follow-me service	<input type="checkbox"/>
<a href="#">Friends &amp; Family Plan</a>	USD	Administrator only	Friends & Family Plan	<input type="checkbox"/>
<a href="#">Neighborhood Plan</a>	USD	Administrator only	Neighborhood Plan	<input type="checkbox"/>
<a href="#">Traveller's Plus</a>	USD	Administrator only	Traveller's Plus	<input checked="" type="checkbox"/>
<a href="#">Voice Mail</a>	USD	Administrator only	Voice Mail - 1 FREE month	<input checked="" type="checkbox"/>

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 its name in the list.



Field	Description
<b>Name</b>	The logical name of the subscription plan object.
<b>Managed By</b>	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.
<b>Currency</b>	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
<b>Invoice Line Description</b>	The subscription plan name as the end-user will see it on the invoice,
<b>Subscription Is Activated</b>	Specifies from which date subscription charges will apply: <ul style="list-style-type: none"> <li>At the given start date – the first billed day is the subscription start date</li> <li>Upon the account’s first usage – charges are applied only starting from the later of the subscription start date and account first usage date</li> </ul>
<b>Activation Fee</b>	One-time fee applied when the subscription is activated.
<b>Minimum Subscription Period</b>	Time interval (in months) during which the subscription must stay uninterrupted to avoid penalties.
<b>Early Cancellation</b>	One-time fee applied if the subscription is cancelled earlier than the minimum subscription period.

<b>Penalty</b>	
<b>Subscription Charges Applied</b>	Defines whether the customer will be assessed subscriptions fees in bulk at the end of his billing period, or every day he will be charged the amount, prorated to the time the service was used during this period. E.g. if the monthly subscription fee is \$9.99 in case of progressively applied subscription every day in the billing period the customer will be charged additional \$0.33, so on 10 <sup>th</sup> the total amount of charges for this subscription will be \$3.33.
<b>Description</b>	Extended description of this subscription plan



Edit	Up/Down	Default/promotional rate	Monthly Billing		Bi-weekly Billing		Weekly Billing		Daily Billing		Delete
			N *	Fee, USD *	N *	Fee, USD *	N *	Fee, USD *	N *	Fee, USD *	
<input type="checkbox"/>	<input type="checkbox"/>	First N billing periods	1	0	2	0	4	0	30	0	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Following N billing periods	6	4.99	12	2.89	26	1.36	180	0.25	<input type="checkbox"/>
<input type="checkbox"/>		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	1..2 bi-week(s): 0 USD	1..4 week(s): 0 USD	1..30 day(s): 0 USD
2..7 month(s): 4.99 USD	3..14 bi-week(s): 2.89 USD	5..30 week(s): 1.36 USD	31..210 day(s): 0.25 USD
8..unlimited: 9.99 USD	15..unlimited: 5.49 USD	31..unlimited: 2.99 USD	211..unlimited: 0.49 USD

### Periodic Fees tab

In this tab you may define recurring fees which are applied to your customers while the subscription is active and special promotion periods. The rate structure is organized as a table, where columns define rates for different billing periods, and table rows specify 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. reduced rate for the first three months) you may insert an extra row into the table, which will cover this period.

Field	Description
<b>Default/Promotional rate</b>	Specifies the span of this rate: whether it is a rate which applies for a certain initial period, rate which follows it (additional promotion) or a default rate
<b>N</b>	Promotion span – the number of billing periods covered by this fee
<b>Fee</b>	The fee amount

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



For your convenience in the edit mode the periodic fee table provides auto-population of the fields:

- If you type a value in one of the span (**N**) columns, the re-calculated value will be automatically placed into all other empty columns. For instance, 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 values of 2, 4 and 30 respectively.
- If you type a value in one of the **Fee** columns, the re-calculated value will be automatically placed into all other empty columns. For instance, you keep defining a special promotion for the first month 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 values of 4.995, 2.331 and 0.333 respectively.

Also below the table where you enter the periodic fees you may see another table, which provides 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 toll-free 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 three parameters to define an access point:

1. The gateway on which the service is used. What is the exact meaning of “gateway” in this context? For example, if a customer calls to gateway A, enters his PIN, and makes an outgoing call which is terminated on gateway B, is he using the service of gateway A, or B, or both? The correct answer is that the service is said to be provided at the point where authorization is performed.

In the example above, since PIN authorization is performed on gateway A, then it is gateway A which must be listed in the accessibility.

2. Identification of the access number (method) on that gateway. This parameter allows you to use different types of services on the same gateway, for example, according to the access number the customer has dialed. (Access number is a very common case; in fact, you can use any string so long as it is provided by the application which handles the call).
3. Originating line information. You can separate accessibility entries based on originating line information (e.g. if 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.

The basic information for defining a product is as follows:

Field	Description
<b>Product Name</b>	The logical designation of the product.
<b>Currency</b>	The currency in which the product will be maintained. To edit a currency, delete all accessibility entries for this product.
<b>Managed by</b>	<b>Administrator only</b> (default) means that this product will be used for your direct customers and will be accessible only to your administrators. Select a PortaBilling reseller to assign this product for use by a particular reseller.
<b>Breakage</b>	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. 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.
<b>Account Default ACL</b>	Which ACL should be assigned to new accounts created with this product.
<b>Default Discount Plan</b>	Which Discount Plan will be used with all the product's accounts by default.
<b>Info URL</b>	URL to an external website describing product features. Customers can access it by clicking on the <b>Product Info</b> link in the main menu of their self-care interface.
<b>Description</b>	Product description.

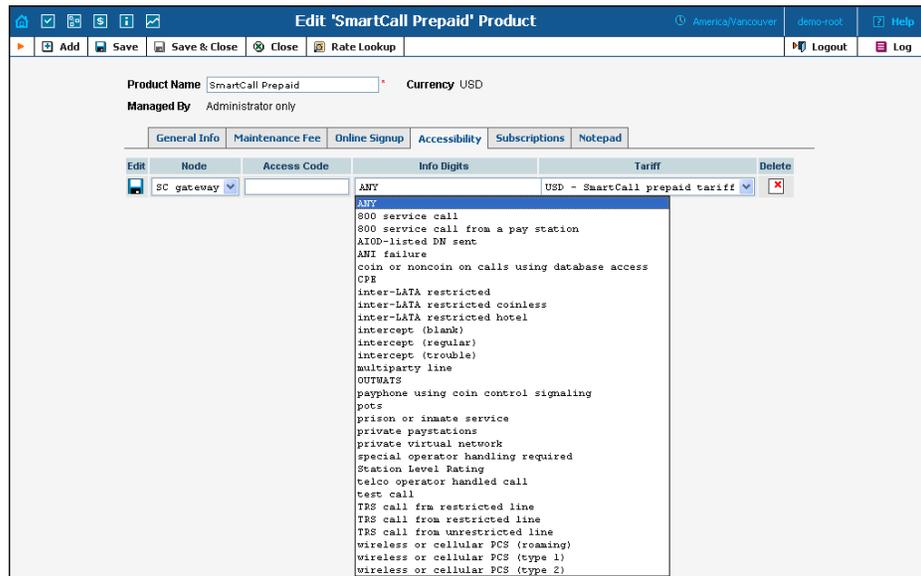
### Maintenance Fee



The screenshot shows a web form titled "Add Product". At the top, there are navigation icons and a "Save" button. Below that, the "Product Name" is "SmartCall Prepaid" and the "Currency" is "USD - US Dollar". The "Managed By" dropdown is set to "Administrator only". There are two tabs: "General Info" and "Maintenance Fee", with the latter being active. Under the "Maintenance Fee" tab, the "Period" is set to "Weekly", the "Fee" is "0.05", and the "Effective From" option is set to "Immediately".

Field	Description
<b>Period</b>	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.
<b>Fee</b>	Only defined when the Maintenance Period is set; the amount to charge any account using this product according to the schedule defined by the Maintenance Period.
<b>Effective From</b>	Defines when the Maintenance Fee starts to be applied.

## Accessibility



**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
2. choose a node and tariff from the drop-down lists
3. type in the Access Code value, if any
4. click the  **Save** button

### To edit the Accessibility list:

1. click the  (**Edit**) button
2. choose a node and tariff from the drop-down lists
3. type in the Access Code value, if any
4. click the  **Save** button

### Accessibility by Access Code feature requires:

- Authorization of each account prior to a call.
- PortaBilling proprietary attribute must be passed in the authentication request. This can be done by modifying your TCL call control scripts.

## Subscriptions

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



**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.



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](#).

## Vendor Management

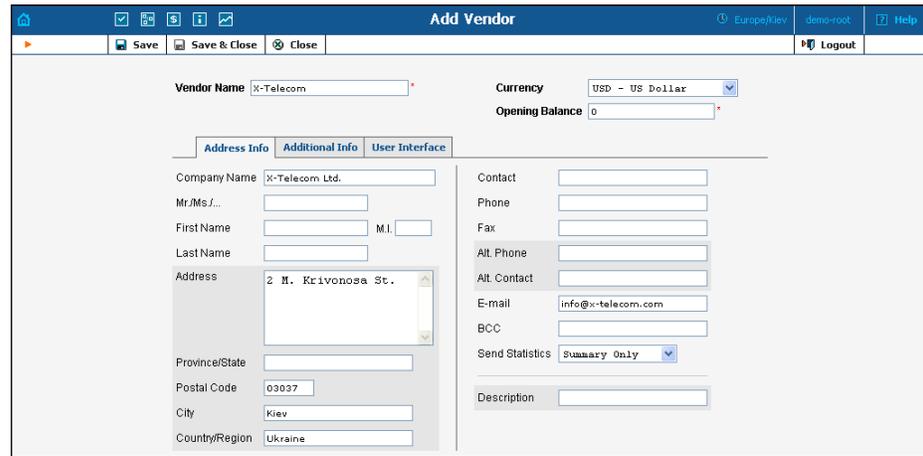
Vendors are your service providers, for example, termination partners or incoming toll-free line providers. Every time a call travels from your network to a vendor (via telephony or VoIP) there is a cost associated with it, and at this point PortaBilling will charge the account and customer for the call,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

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



Column	Description
<b>CDRs</b>	Click the View (  ) icon to go to the CDR view page for this vendor.
<b>Name</b>	The vendor's name.
<b>Connections</b>	Click the connections (  ) icon to be taken to the connections management page for this vendor. Read more in the Connections section below.
<b>Currency</b>	The currency in which the vendor's account is maintained and paid.
<b>Balance</b>	The vendor's current balance.
<b>E-mail</b>	E-mail contact for the given vendor.
<b>Delete</b>	Click the delete (  ) icon to remove the vendor. The delete button will only appear if there are no CDRs or connections defined for the vendor.

### Add/Edit Vendor



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
-------	-------------

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

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

### Maintenance

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

Field	Description
<b>Action</b>	<b>Manual charge:</b> Use this transaction to adjust the vendor’s balance in case of non-call related charges from the vendor. For instance, if the vendor has charged you for an equipment purchase. <b>Manual refund:</b> 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.
<b>Amount</b>	Amount to charge/refund.
<b>Visible comment</b>	A comment on this transaction visible to the vendor in the CDR browser.
<b>Internal comment</b>	An internal comment on this transaction; not visible in the CDR browser, and only accessible directly from the database.

### Additional Info

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

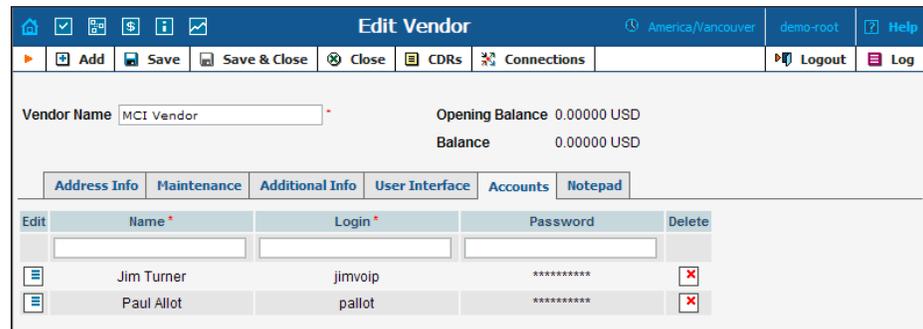
	this transaction.
--	-------------------

### User Interface

The User Interface tab content is identical to that described in the *User Interface* section of the *User Management* Chapter 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 by billing to the SIP server automatically.



## Connections

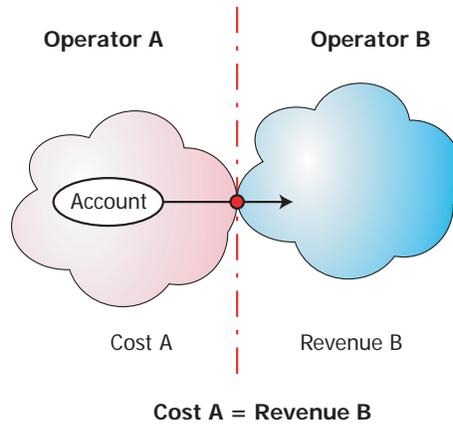
### Definitions

#### 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.

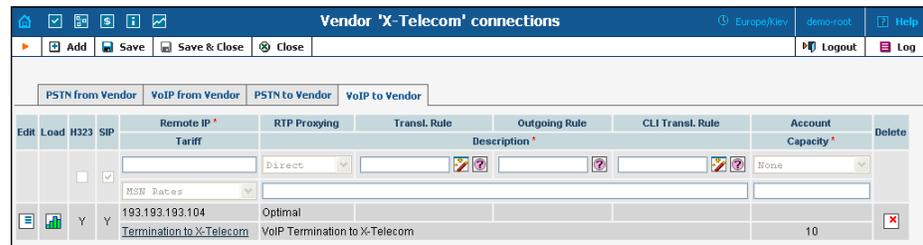


**Operator**

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 a CDR for the vendor (the other operator) describing our costs. Also, if this was an egress call, we will create CDRs for both the account and the customer.

The Connections Management screen is broken down into call leg types using four tabs: PSTN from Vendor, VoIP from Vendor, PSTN to Vendor, and VoIP to Vendor. Under each tab there is an edit row and then a list of the existing connections for the given type.



To add a new connection, enter the information in the edit row and then select **Add**. To edit an existing connection, click the **Edit** icon next to the desired connection, modify the necessary fields, and select **Save**. The following fields and functions are provided in the listing:

Field	Description
<b>Edit</b>	Copies the connection information into the edit row.
<b>Load</b>	Opens the load graph for this connection.
<b>Node</b>	Name of the node used for this connection. Not available for “VoIP to Vendor” connections.
<i>The following columns are only available for PSTN connections:</i>	
<b>Port</b>	Only on PSTN related connections. The specified port for

	<p>PSTN origination or termination. The port can be set using wildcards:                  ‘_’ - match any symbol                  ‘%’ - match any sequence of symbols                  The wildcard symbols ‘*’ and ‘?’ should not be used.</p>
<b>CLD</b>	<p>Only available for “from Vendor” connections. Specifies the access number which the customer dialed in order to reach your network.</p>
<p><i>The following column is only available for “PSTN from Vendor” connections:</i></p>	
<b>Info Digits</b>	<p>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.</p>
<p><i>The following column is only available for “VoIP to Vendor” connections:</i></p>	
<b>Remote IP</b>	<p>IP of the remote gateway. The value in this field should be in one of the following forms:</p> <ul style="list-style-type: none"> <li>• IP address, e.g. 23.45.67.89</li> <li>• 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.</li> <li>• Special keywords ANY or SIP-UA</li> <li>• For the prefix-based connection matching specify a value in the form of PREFIX:NNN, where NNN is the actual prefix. For example PREFIX:34567#</li> </ul>
<p><i>The following column is only available for “VoIP from Vendor” connections:</i></p>	
<b>Incoming Username</b>	<p>The User-Name attribute value according to which the incoming call is authorized, typically an IP address of the vendor’s gateway.</p>
<p><i>The following two columns are only available for “VoIP to Vendor” or “VoIP from Vendor” connections:</i></p>	
<b>RTP Proxying</b>	<p>Describes NAT traversal capabilities of the remote gateway:</p> <ul style="list-style-type: none"> <li>• Direct - the RTP stream should be send directly to this gateway, RTP proxy should not be used</li> <li>• Optimal - this node is capable of NAT traversal, no RTP proxying is required unless specifically requested</li> <li>• OnNat - this node is not capable of NAT traversal, engage the RTP proxy if the other party is behind the NAT</li> <li>• Always – when sending a call to this node always engage the RTP proxy, so no direct media stream will go to it</li> </ul>

<b>Account</b>	Defines which username/password should be used for authorization of calls going via this connection.
<b>Translation Rule</b>	This rule is applied in order to convert the number from a vendor-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.
<b>Outgoing Rule</b>	If necessary, the received number can be modified before 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 the dialing rules wizard for the Translation Rule has been run.
<b>CLI Translation Rule</b>	The CLI Translation Rule will translate the CLI to a vendor-specific format when routing a call to the vendor's network.
<b>Tariff</b>	The tariff used to calculate the cost of terminating calls via this connection.
<b>Description</b>	A logical description of the connection.
<b>Capacity</b>	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.
<b>Delete</b>	Click to remove the connection.

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
<b>H323</b>	Check if this connection is capable of handling H323 calls.
<b>SIP</b>	Check if this connection is capable of handling SIP calls.

## Customer Classes

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 may view a list of all currently defined classes. This list provides the following information:

Name	Managed by	Description	Delete
<a href="#">Enterprise</a>	Administrator only	Enterprise Customer Class	
<a href="#">European Union</a>	Administrator only	European Union Customer Class	<input type="checkbox"/>
<a href="#">North American</a>	Administrator only	North American Customer Class	
<a href="#">Retail</a>	Administrator only	Retail Customer Class	<input type="checkbox"/>

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

### Add/Edit Customer Class

The Add Customer Class page allows definition of a new customer class within PortaBilling.

The following parameters are available:

Field	Description
<b>Name</b>	The name of a specific customer class
<b>Managed by</b>	<b>Administrator only</b> (default) means that this class will be used for your direct customers and will be accessible only to your administrators. Select a PortaBilling reseller to assign this class for use by a particular reseller.

<i>The following specifies various parameters to be assigned by default to customers within this customer class:</i>	
<b>Invoice Template</b>	Either choose “Do not create invoice” (in this case no actual invoices will be created, only CSV CDR statistics) or a particular invoice template
<b>Terms</b>	Description of the invoice terms for a customer to be printed on the invoice.
<b>Invoice Grace Period</b>	Invoice terms, i.e. in how many days after the invoice generation a payment is expected.
<b>Invoice Notification Intervals</b>	Comma-separated list of numbers, each number represents the number of days before the invoice due date when a notification regarding an unpaid invoice should be sent. For instance 14,7,3 means that a customer should receive a notification 14, 7 and 3 days before the due date. (Of course, if the customer pays after the first notification no further notifications will be sent). Leave this field empty to disable notifications completely.
<b>Invoice Re-Send Intervals</b>	Comma-separated list of numbers, each number represents the number of days after the invoice due date when a notification regarding an overdue invoice should be sent. For instance, 0,7,14 means that a customer will receive a notification on the due date and then 1 and 2 weeks later. (Of course, if the customer pays after the first notification no further notifications will be sent). Leave this field empty to disable notifications completely.
<b>Re-collect Intervals</b>	Comma-separated list of numbers, each number represents the 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. (Of course, if the one of the charge attempts succeeds no further attempts will be made). Leave this field empty to disable re-collect attempts completely.
<b>Suspension Warning Time</b>	How many days after the due date a notification about the possible suspension of services should be sent to the customer. Leave this field empty to disable the notification.
<b>Suspension Time</b>	How many days after the due date the customer’s services will be suspended if the invoice is still unpaid. Leave this field empty to disable the service suspension.

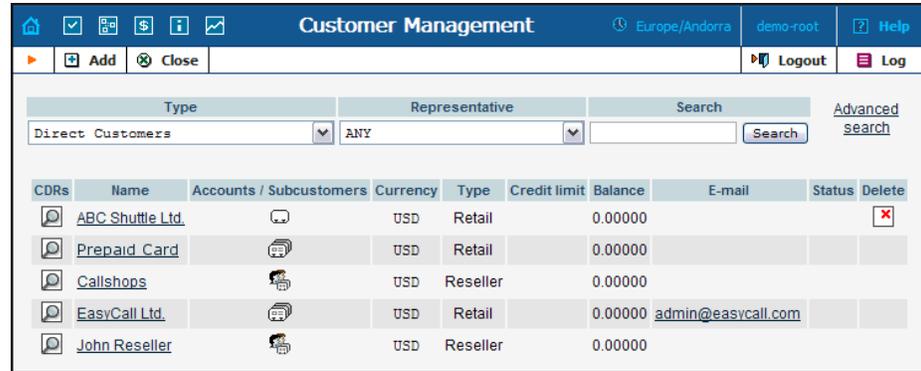
<b>Closing Time</b>	How many days after the due date the customer's account will be closed if the invoice is still unpaid. Leave this field empty to disable the automatic closing of the customer. Note that, if defined, the <b>Suspension Warning Time</b> must be less than the <b>Suspension Time</b> ,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

## Customer Management

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

Filter value	Description
<b>ANY</b>	All customers registered in the system
<b>Direct customers</b>	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.
<b>All resellers</b>	Only customers of the reseller type.
<b>All retail</b>	All retail customers; this includes your own retail customers and those of your resellers.
<b>Direct retail</b>	Only retail customers who are owned by your company.
<b>Sub-customers of Reseller NNN</b>	All sub-customers of a specific reseller.
<b>Representative</b>	Only customers related to a specific representative.
<b>Search</b>	Filter by name. When you enter a value in the search field, all customers who have the search string in their customer name, company name, or first/last name will be displayed.
<b>Advanced Search</b>	Allows you to specify complex search conditions (see more info below)

The list provides the following information and activities:

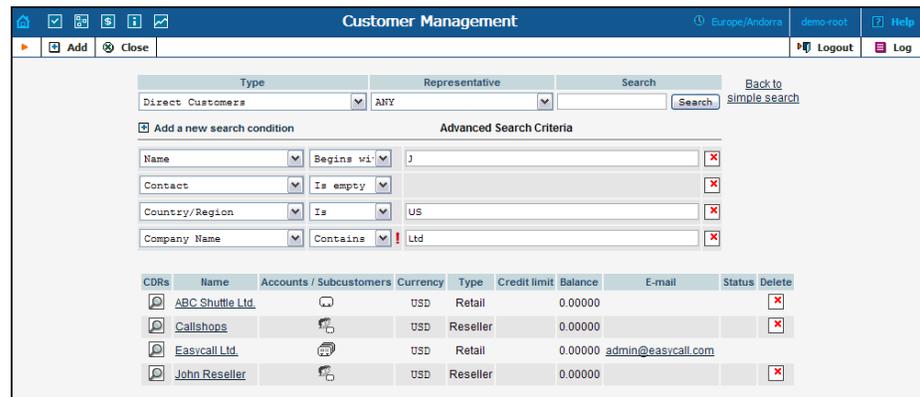


Column	Description
<b>CDRs</b>	Click the View (  ) icon to go to the CDR view page.
<b>Name</b>	The customer's name.
<b>Owned By</b>	The name of the reseller owning the customer (none are displayed if <b>Direct Customers</b> filter is applied)
<b>Accounts/ Sub-customers</b>	Click the Accounts  icon to go to the Account 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  , so you can easily see this fact. The same applies to resellers, in this case the "no sub-customers" icon  is shown.
<b>Currency</b>	The currency in which the customer's account is maintained and billed.
<b>Type</b>	The customer may be either a reseller or a retail customer.
<b>Credit Limit</b>	The credit limit applicable to the customer's account (if any).
<b>Balance</b>	The customer's current balance.
<b>E-mail</b>	E-mail contact for this customer.
<b>Status</b>	The status of the customer's account. The  icon will appear if a 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 because of an overdue invoice, and the  icon means that this customer was closed. The frozen  icon means that periodical payments for this customer have been suspended due to repeated errors (for instance, the customer canceled his credit card and did not enter information about a new card in PortaBilling).

<b>Delete</b>	Click the delete  icon to remove the customer. The delete icon will only appear if there are no CDRs, accounts or sub-customers owned by the customer, or other entities (products, tariffs, etc.) managed by the customer.
---------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### Advanced search

When in the advanced search mode you may specify an unlimited number of search conditions. Every condition applies to a particular field (e.g. customer’s ZIP code). Click on the  **Add a new search condition** to add another search condition.



Operation	Description
<b>Is</b>	The value of the field in the customer information must exactly match the search criteria.
<b>Begins with</b>	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 names “John” and “Johnny” will be selected)
<b>Contains</b>	The value of the field in the customer information must contain the specified value somewhere inside (e.g. if you enter the filter value “Eric” – customers with names “Eric”, “Erica”, “Maveric” and “American” will be selected)
<b>Is empty</b>	The corresponding field in the customer information must be empty

All of the search operations are case-insensitive, so you may 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 case of multiple search criteria the customer’s record must satisfy all of them to appear in the result list.



During a search operation using the auxiliary fields (e.g. fax) or a search operation which uses the “contains” comparison, the database cannot use the indexes, so it will result in the full table scan, which means an increased load on the server and a longer time to produce the final result – avoid using such search operations unless it is required.

If you will click on the **Back to simple search** – it will switch the form to the original mode.

## Add/Edit Customer

The Add Customer page allows definition of 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 following information is required at the top of the form. Information on all the other tabs is optional, and need not be specified when creating the customer. Once it has been created, the customer cannot be changed from a retailer to a reseller, or moved under another reseller.

Field	Description
<b>Customer Name</b>	Defines the customer name as it will appear in the PortaBilling system. This is distinct from the <b>Company Name</b> field in the <b>Address Info</b> tab.
<b>Blocked</b>	Blocks <i>all</i> accounts of this Customer
<b>Currency</b>	The currency must be specified by selecting it from the drop-down list of available currencies. Once saved, the currency cannot be changed.
<b>Opening Balance</b>	The starting balance for this customer.
<b>Type</b>	This can be either “Reseller” or “Retail”.
<b>Customer Class</b>	Customer class assigned to this customer

### Address Info

The Address Info tab provides most of the commonly required contact information. The **Send Statistics** select menu is worth mentioning. The default choice is **Full Statistics**, whereby the customer will receive an e-mail with an attached CSV file after the billing period is closed, containing all the calls made by his accounts. If invoices are being generated for this customer, an invoice will be attached to the e-mail as well. The CSV file containing all calls may be rather large, so it is possible to use the **Summary Only** option. When this option is used, the customer will only receive a brief summary e-mail. Finally, it is possible to turn off e-mail statistics by choosing the **Do Not Send** option. Also note that you may

allow 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 the **Edit Customer** mode).

Field	Description
<b>Action</b>	<p><b>Manual Charge:</b> 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.</p> <p><b>Manual Refund:</b> 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.</p> <p><b>E-Commerce Charge:</b> 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.</p> <p><b>E-Commerce Refund:</b> 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.</p> <p><b>Authorization Only:</b> 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.</p> <p><b>Capture Payment:</b> Transfers a given amount from</p>

	<p>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.</p> <p><b>Manual Payment:</b> Credits the customer's balance. Use this when receiving payment from the customer. Manual Payment allows the customer to make more calls.</p> <p><b>Promotional Credit:</b> 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.</p>
<b>Amount</b>	Amount to charge/refund.
<b>Visible comment</b>	A comment on this transaction visible to the vendor in the CDR browser.
<b>Internal comment</b>	An internal comment on this transaction; not visible in the CDR browser, and accessible only directly from the database.

Additional Info

Field	Description
<b>Tariff</b>	This option is only visible when the customer's type is set to <b>Reseller</b> , it defines the tariff to be applied to this customer. For all outgoing calls, made by his sub-customers, this reseller will be charged according to this tariff.
<b>Incoming Tariff</b>	Tariff for charging a reseller for incoming calls (e.g. toll-free lines). Only available if the <code>ChargeCustomerForIncomingCalls</code> feature is turned on in <code>porta-admin.conf</code>
<b>Routing Plan</b>	Routing plan to be applied to this customer.
<b>Discount Plan</b>	Volume Discount Plan to be applied to this customer.
<b>Billing Period</b>	Defines the frequency of invoicing for this customer.
<b>Invoice Template</b>	Defines the Invoice Template for this customer, you may choose <b>Customer class' default</b> in order to avoid defining invoice template specifically for every customer and apply the invoice template defined for the class. See the <a href="#">Templates</a> section for more information.
<b>Representative</b>	Assigns a representative to this customer. See the <a href="#">Representatives</a> section for more information.
<b>Tax ID</b>	Customer's tax ID.

<b>Callshop Enabled</b>	Defines whether callshop features (timer, receipt, etc.) are available. Not available for direct retail customers. To use the callshop functionality with the 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.

### Payment Info

The Payment Info screen defines customer payment characteristics. In addition to customary payment information (preferred payment method, credit card number, etc.), 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 mail will be sent to the customer owners (i.e. the system administrators if the customer is direct, or else the reseller).

The **Preferred Payment Method** dropdown 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 periodical 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 periodical 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 periodical. A reseller should define its 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.

### 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 “Periodical payment management enabled” option to enable the customer himself to manage periodical payments on the Customer Self-Care interface (it does not prevent administrator from editing this information!). The Periodical 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.

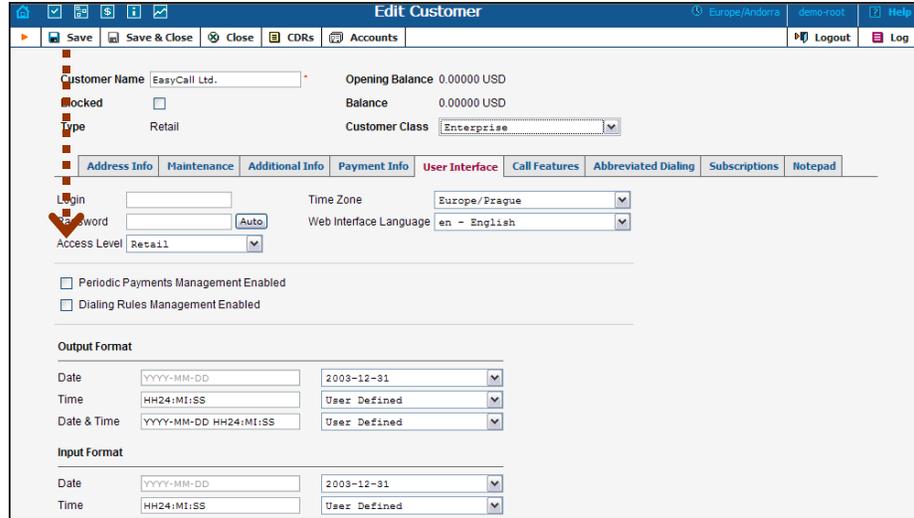
Check the “Dialing Rules management enabled” option to enable the customer himself to manage dialing rules on the Customer Self-Care interface. This option is not available for resellers.

### 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.



The screenshot shows the 'Edit Customer' form for 'EasyCall Ltd.'. The form includes fields for Customer Name, Opening Balance (0.00000 USD), Balance (0.00000 USD), Type (Retail), and Customer Class (Enterprise). It also has tabs for Address Info, Maintenance, Additional Info, Payment Info, User Interface, Call Features, Abbreviated Dialing, Subscriptions, and Notepad. Under the User Interface tab, there are fields for Login, Password, Access Level (Retail), Time Zone (Europe/Prague), and Web Interface Language (en - English). There are also checkboxes for 'Periodic Payments Management Enabled' and 'Dialing Rules Management Enabled'. At the bottom, there are sections for 'Output Format' and 'Input Format' with dropdown menus for Date, Time, and Date & Time.

### Periodical Payments

**NOTE:** The Periodical 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.

Periodical payments management allows the administrator and customers to set up the following parameters for automated periodical payments. All the 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.



The screenshot shows the 'Edit Customer' form with the 'Periodic Payments' tab selected. It includes a dropdown for 'Charge Credit Card When The Billing Period Is Closed' (set to 'Customer class' default') and an 'Effective' dropdown (set to 'Now'). Below is a table of payment entries:

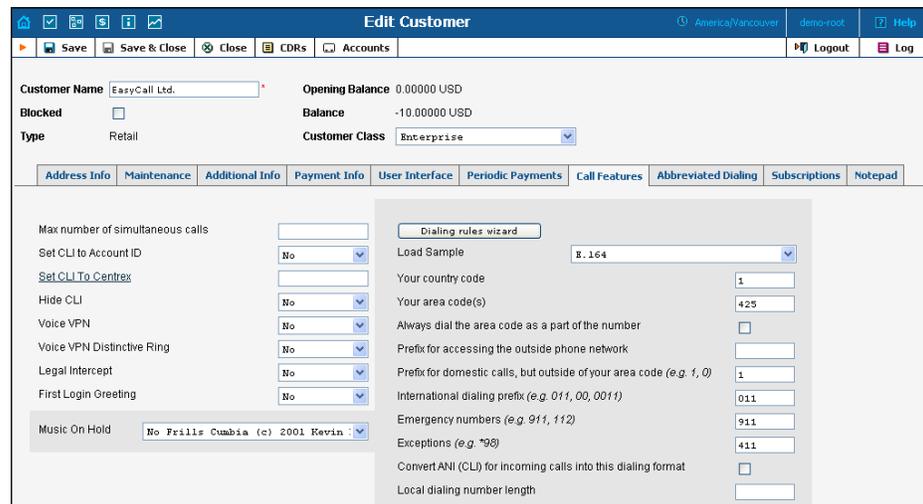
Edit	Accepted	Amount *, USD	Frequency	Balance Threshold *, USD	From *, YYYY-MM-DD	To *, YYYY-MM-DD	Number of Transfers	Frozen	Discontinued	Delete
		100.00	Balance Driven	200	2006-05-20	2007-01-01	Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Field	Description
<b>Amount</b>	Specify a fixed amount to be paid, or click the <b>Pay Balance</b>  icon (not available when the frequency is balance driven) to pay the current balance with a certain periodicity.

<b>Frequency</b>	Balance driven, weekly, or monthly.
<b>Balance Threshold</b>	Only available when the frequency is balance driven. Payment will be triggered when the balance is higher than the specified threshold.
<b>From, To Date</b>	Dates when the payment will remain active. Click the stopwatch  icon to make the payment active <b>immediately</b> .

### Call Features

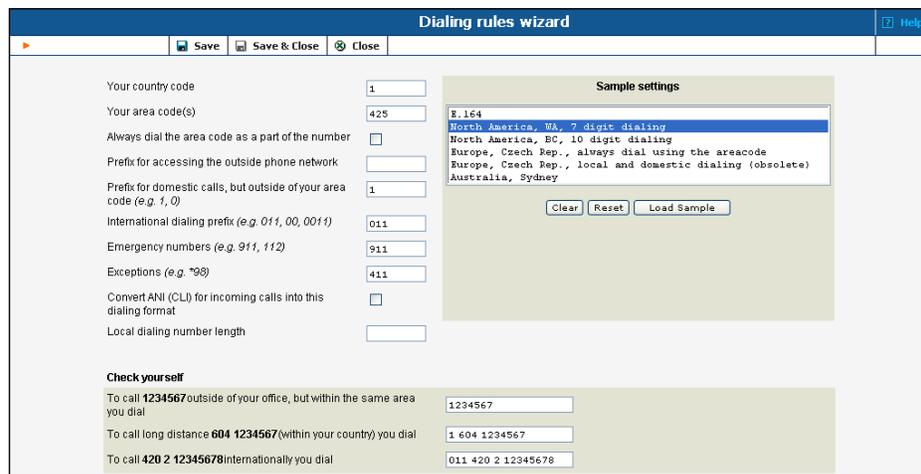
In this tab the administrator can activate/deactivate various call features and set up dialing rules such as an international prefix, outside prefix, direct number (e.g. 911) for customer’s IP Centrex environment.



Field	Description
<b>Max number of simultaneous calls</b>	Only allow a specific number of concurrent calls for accounts of this customer.
<b>Set CLI to Account ID</b>	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.
<b>Set CLI to Centrex</b>	For outgoing calls in the IP Centrex environment (off-net destinations), set the CLI (ANI) number to the specified value. This is typically done so that calls between extensions within the 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.
<b>Hide CLI</b>	Remove CLI (ANI) information for outgoing calls.

<b>Voice VPN</b>	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.
<b>Voice VPN Distinctive Ring</b>	For incoming calls from phones within the IP Centrex environment, use a ring pattern different from the default one.
<b>Legal Intercept</b>	Intercept all incoming and outgoing calls of this customer for law enforcement purposes.
<b>First Login Greeting</b>	When a new account (phone number) in this IP 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.
<b>Music On Hold</b>	Defines the music on hold to be used with the IP Centrex environment. Choose <b>None</b> 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.

In order to define the phone number format which is used by this customer’s accounts, click **Dialing rules wizard** to activate the wizard.



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), if this is the way you want to dial the numbers.

### Abbreviated Dialing

Here the customer may define a list of phone extensions for their 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:** In order to be allowed 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.



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

Field	Description
<b>Abbreviated #</b>	The number the end-user will dial on his phone (extension number)
<b># to Dial</b>	The number 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 do not enter anything in this field, 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) will never be converted

	by other translation rules.  <b>NOTE:</b> Phone numbers must be entered in the E.164 format.
<b>Description</b>	Description of this abbreviated number, e.g. "Andrew's IP phone".
<b>SIP</b>	If the Number 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.

## Add/Edit Customer under a Reseller

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



## Account Management

An account is the 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

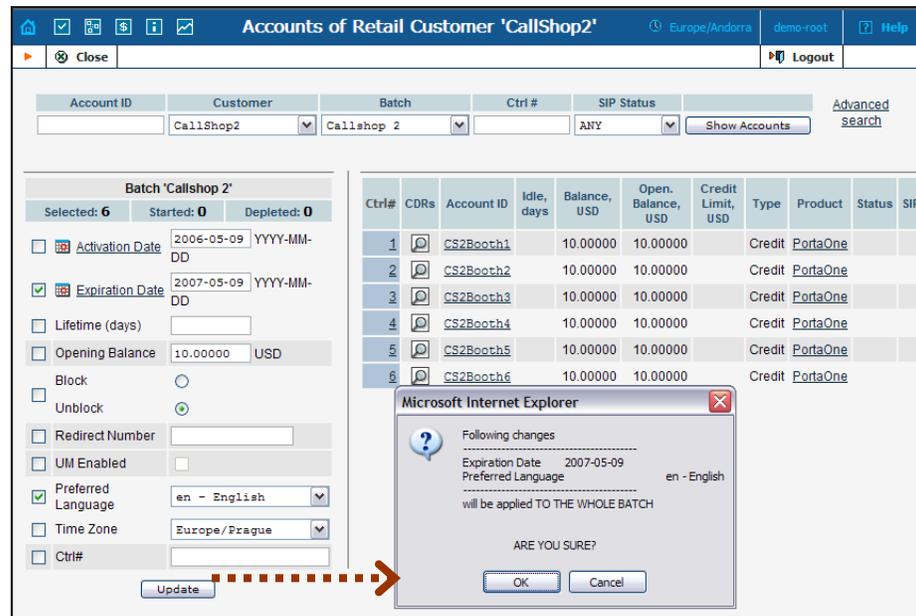
#### Search Filter

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

Field	Description
<b>Account ID</b>	The primary identification for this account; an alphanumeric string. Note: the % wildcard symbol may be used.
<b>Batch</b>	Logical name for a group of accounts. Select from a list

	of all the customer's batches to enable the batch update pane.
<b>Ctrl#</b>	Enter control numbers and/or number ranges separated by commas. For example: 1,3,8-12
<b>SIP Status</b>	Default – ANY; using this function, you can display either logged-in or logged-out accounts only.

Batch update pane



Field	Description						
<b>Account ID</b>	The primary identification of this account; an alphanumeric string.						
<b>Ctrl#</b>	Enter control numbers and/or number ranges separated by commas. For example: 1,3,8-12						
<b>ACCOUNTS</b>							
<b>Status</b>	<table border="0"> <tr> <td> Zero balance</td> <td> Expired</td> </tr> <tr> <td> Not active</td> <td> Blocked</td> </tr> <tr> <td> Credit exceeded</td> <td> Customer blocked (see <a href="#">Edit Customer</a>)</td> </tr> </table>	 Zero balance	 Expired	 Not active	 Blocked	 Credit exceeded	 Customer blocked (see <a href="#">Edit Customer</a> )
 Zero balance	 Expired						
 Not active	 Blocked						
 Credit exceeded	 Customer blocked (see <a href="#">Edit Customer</a> )						
<b>Ctrl#</b>	Click via 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, the user should:

- Check the box next to **Refund/Charge** to indicate that this is one of the updates that should occur,
- 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, to the customer it will look as if the card originally had \$20 on it.

### Advanced search

When in the advanced search mode you may specify an unlimited number of search conditions and the system would fetch the relevant accounts. Click on the  **Add a new search condition** to add another search condition.

Operation	Description
<b>Is</b>	The value of the field in the account information must exactly match the search criteria.
<b>Begins with</b>	The value of the field in the account information must start with the specified value (e.g. if you enter the filter value “John” – customers with names “John” and “Johnny” will be selected)
<b>Contains</b>	The value of the field in the account information must contain the specified value somewhere inside (e.g. if you enter the filter value “Eric” – customers with names “Eric”, “Erica”, “Maveric” and “American” will be selected)
<b>Is empty</b>	The corresponding field in the account information must be empty

All of the search operations are case-insensitive, so you may enter “Eric” as a search criteria, and even if the subscriber’s name was originally entered as “eric” or “ERIC” – you will still see him in the list.

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



During a search operation using the auxiliary fields (e.g. fax) or a search operation which uses the “contains” comparison, the database cannot use the indexes, so it will result in the full table scan, which means an increased load on the server and a longer time to produce the final result – avoid using such search operations unless it is required.

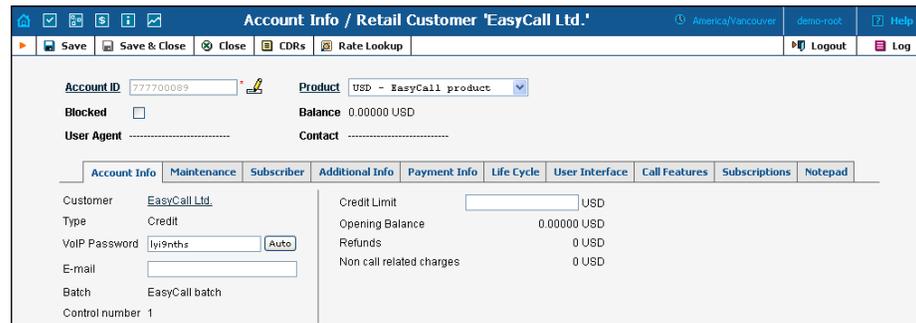
If you will click on the **Back to simple search** – it will switch the form to the original mode.

## 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**.



Field	Description
<b>Account ID</b>	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.
<b>Blocked</b>	Specifies whether the account is blocked or unblocked. The account will be unusable if this is checked; it is usually unblocked automatically when the account is used for the first time.
<b>Product</b>	The product providing pricing plans for this account.

<b>Balance</b>	The balance for this account.
<b>User Agent</b>	If this account is currently used by a SIP UA to register with the SIP server, the user agent identification info is displayed.
<b>Contact</b>	The URI of the user agent, used by the SIP Proxy to contact it.
<i>Account Info Tab</i>	
<b>Account Type</b>	The account type may be “Debit”, “Credit”, or “Voucher”. Debit is usually associated with prepaid cards. Credit is a type of account that will be invoiced for incurred costs. Voucher accounts are “refill coupons” for debit accounts.
<b>Credit Limit</b>	Only available when the account type is set to “Credit”. Defines the credit allowance in the account’s currency.
<b>VoIP Password</b>	The password to be used to authenticate any calls made using this account.
<b>E-mail</b>	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.
<b>Batch</b>	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.
<b>Control Number</b>	Read-only. The sequential number of the account in the current batch. Batch name and control number uniquely define the account ID, which is often used for prepaid calling cards.
<b>Zero balance date</b>	Applicable only for debit accounts, specifies when the account has used up all of the available funds.
<b>Opening Balance</b>	The opening balance for this account.
<b>Refunds</b>	The amount refunded to the account owner.
<b>Non-Call Related Charges</b>	Charges not directly associated with calls the account has made; for instance, a maintenance fee or login fee.
<i>Maintenance Tab</i>	
<b>Field</b>	<b>Description</b>
<b>Action</b>	<p><b>Manual Charge:</b> 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.</p> <p><b>Manual Refund:</b> 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</p>

	<p>that the account is able to make more calls.</p> <p><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.</p> <p><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.</p> <p><b>Authorization Only:</b> 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.</p> <p><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.</p> <p><b>Manual Payment:</b> Credits the account balance. Use this when receiving payment from the account owner. Manual Payment will allow the account to make more calls.</p> <p><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 Promotional Credit will allow the account to make more calls.</p>
<b>Amount</b>	Amount to charge/refund.
<b>Visible comment</b>	A comment on this transaction visible to the customer in the CDR browser.
<b>Internal comment</b>	An internal comment on this transaction; not visible in the CDR browser, and accessible only directly from the database.
<i>Subscriber Tab</i>	
	The Subscriber tab provides most of the commonly required contact information for the account’s owner.
<i>Additional Info Tab</i>	
<b>IP Phone, IP Phone Port</b>	Indicates the IP Phone and associated port assigned to the account. Default – not set.
<b>E-</b>	Allows the account’s owner to make online payments or

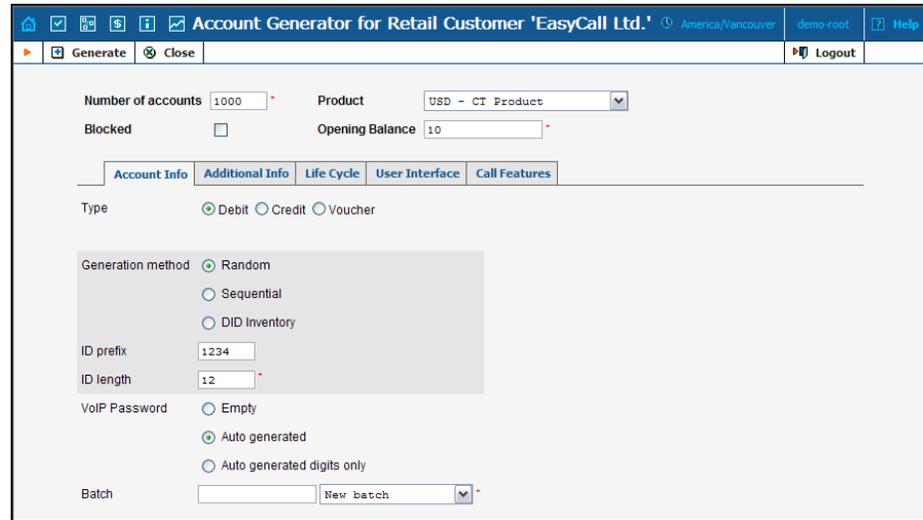
<b>commerce enabled</b>	set up periodical payments on the account self-care page. Note: Configuring the account to enable online payments (both manual and periodical) is done in exactly the same way as for customers. First you should set up a suitable payment system.
<b>Discount plan</b>	Assign a discount plan to this account. When a new account is created, by default it will be assigned a discount plan which is associated with the account's product.
<i>Life Cycle Tab</i>	
<b>Activation Date</b>	The date from which the account is usable.
<b>Expiration Date</b>	The date from which the account will be unusable. If 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.
<b>Lifetime</b>	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.
<b>Issue Date</b>	The date of the account's creation.
<b>First Usage, Last Usage</b>	The dates when the account was in use for the very first/last time.
<b>Last Recharge</b>	Specifies the last time the account was recharged using a voucher (via either the self-care page or IVR).
<i>User Interface</i>	
<b>Login</b>	Account login for the account user interface. Click the Account ID button to set the login as identical to the Account ID.
<b>Password</b>	User interface password for the account.
<b>Access Level</b>	Access level assigned to the account.
<b>Time Zone</b>	Time zone for the account.
<b>Web Interface Language</b>	Displays the account user interface in a particular language.
<i>Follow-me Tab</i>	
<b>Follow Me</b>	Possible modes of use of the service. Never – do not use at all. When Unavailable – redirect a call only if the primary phone does not answer. Always – simply redirect a call.
<b>Order</b>	Specifies the order of redirecting a call. As listed – call every active follow-me number from the first (topmost) number to the last one until the call is answered; otherwise use random order.

<b>Edit</b>	Click the <b>Edit</b>  icon to edit the follow-me number details. To add a new number to the list, click the  <b>Add</b> button.
<b>Up, Down</b>	Click the buttons to move the row before the previous one or after the next one in the list.
<b>Name</b>	The name of the follow-me number (e.g. “mobile phone”).
<b>Destination</b>	Specify a number to redirect the call to, formatted according to customer dialing rules.
<b>Active</b>	Define the period when the number is active, i.e. is allowed to redirect a call. Click the <b>Active</b> link or wizard  icon to create the first or add the next period definition using the Period Wizard (this is virtually the same as the Off-peak Period Wizard in Edit Tariff). Click the <b>Always</b> button in the wizard to make the follow-me number active permanently. Click the Test Period  icon to run a period test.
<b>Timeout</b>	Specify the amount of seconds to wait until a call is answered. After that, the call will be redirected to the next follow-me number, or disconnected.
<b>Off</b>	Check to temporarily disable redirection to the follow-me number.
<i>Call Features Tab</i>	
You have the option of expressly specifying the value of a given parameter, or of 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).	
<b>Set CLI to Account ID</b>	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.
<b>Set CLI to Centrex</b>	For outgoing calls in the IP Centrex environment (off-net destinations), set the CLI (ANI) number to the specified value. This is typically done so that calls between extensions within the 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.
<b>Hide CLI</b>	Remove CLI (ANI) information for outgoing calls.
<b>Voice VPN Distinctive Ring</b>	For incoming calls from phones within the IP Centrex environment, use a ring pattern different from the default one.
<b>Legal Intercept</b>	Intercept all incoming and outgoing calls of this customer for law enforcement purposes.
<b>E911</b>	Activate emergency services for this account
<b>Music On</b>	Defines the music on hold to be used with the account.

<b>Hold</b>	Choose None to disable this feature, or select the default setting for the account’s 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.
<b>Preferred IVR language</b>	The language the user prefers when interacting with an IVR application.
<b>Associated number</b>	Specifies the number to be sent back to the IVR in an 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.)
<b>Follow-Me Enabled</b>	Activate the follow-me service for this account
<b>UM Enabled</b>	Allows the account user to access the unified messaging system. To find out more, go to: <a href="http://www.portaone.com/products/um/">www.portaone.com/products/um/</a>
<i>Volume Discounts Tab</i>	
<b>Destination Group</b>	Information about used and remaining discounts is shown, grouped by Destination Group names. Each name represents one group included in the Volume Discount Plan assigned to the account.
<b>Threshold</b>	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.
<b>Used</b>	The current value of the account’s counter associated with this destination group.
<b>Remaining</b>	The amount remaining to reach the threshold value.
<b>Current Discount</b>	The value of the discount currently applied to the account.
<b>Next Discount Level</b>	The value of the next level discount.
<b>Discount Info</b>	Click the information  icon for a textual representation of the discount scheme.

## Account Generator

The Account Generator should be utilized 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 the accounts will not be visible from the Account Management page until the process is completed. The customer will then receive an e-mail notification regarding task completion, as well as another e-mail listing all the accounts in CSV format, with the values “Batch”, “Control Number” (a sequential index), “PIN” (Account ID), “Web login” (by default identical to the account ID) and “Password” (the web password).



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

Field	Description
<b>Number of Accounts</b> (replaces Account ID)	The number of accounts to be generated.
<i>Account Info tab</i>	
<b>Generation method</b>	<p>Random will produce unique unpredictable account IDs of the specified length and prefix. Sequential will create accounts with IDs NNN0000, NNN0001, NNN0002 and so on (where NNN is the ID prefix) – see below for more details.</p> <p>DID Inventory will generate accounts based on the selected DID Owner Batch where the user has an option to choose the starting DID.</p>

<b>ID prefix</b>	Preset leading digits in the account ID; leave empty to make the account ID totally random.
<b>ID length</b>	Total ID length, including ID prefix.
<b>Starting ID</b>	Only available in Sequential generation and is always numeric.
<b>VoIP Password</b>	Can be generated automatically, or left empty to allow end-users to login using account ID only (typically used for prepaid cards).
<b>E-mail</b>	The e-mail attribute of an account contains the e-mail address of the account’s owner, so that he can reset the account’s password. Since many accounts will be generated at once and assigned to different owners, the best choice is probably to leave this field blank. Do <i>not</i> enter the e-mail address of the person who is to receive information about new accounts in this field; this e-mail will be sent to the current user, who created the accounts.
<i>User Interface tab</i>	
<b>Login</b>	Can be set as identical to the account ID, or left empty to disable access to the account self-provisioning interface.
<b>Password</b>	Can be generated automatically, or left empty to allow end-users to login using the account ID only.

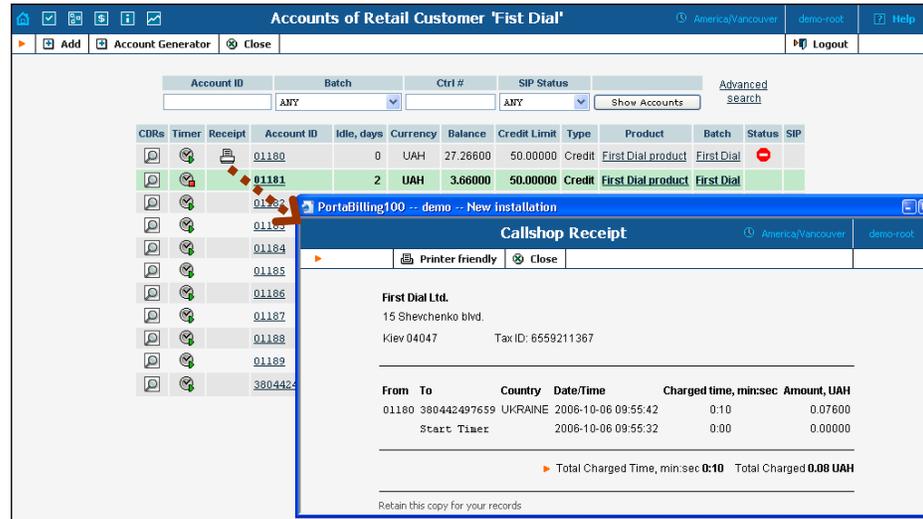
### Assigning account ID

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”, so 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).

Choose Sequential if you simply want to generate a large amount of accounts at once. In this case, the first generated ID will be the number following the biggest existing number within the range defined by the ID prefix and ID length; the next ID will follow the first, and so on. For example, if you specify 100 accounts with ID prefix “1” and ID length 4, and there are already three accounts within the defined range (1000, 1100, 1200), the first generated ID will be 1201, the second 1202, and the last

1300. In either case, if there is not enough room to generate the specified number of accounts, generation will not begin and an alarm 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 someone 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  icon, and the Print Receipt icon appears. Clicking this icon will initialize the receipt pop-up.

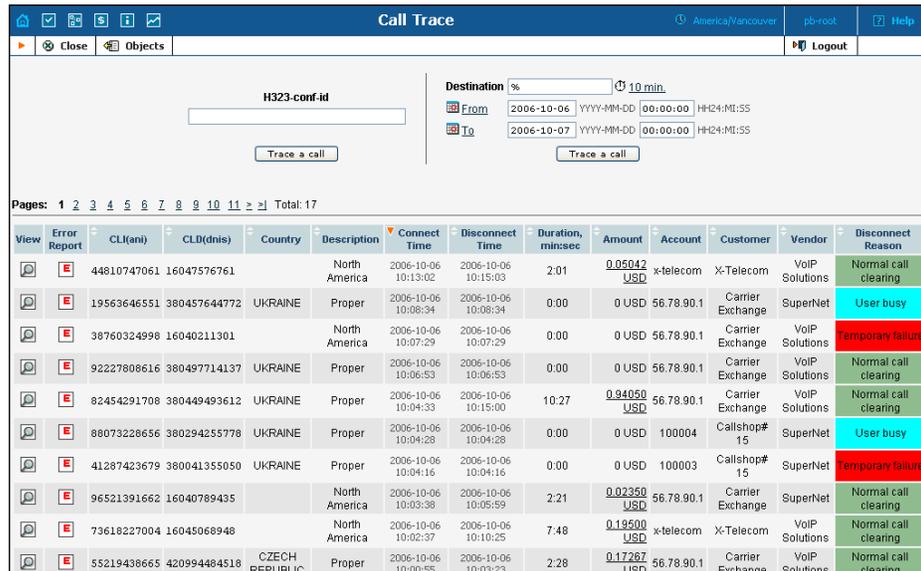
**NOTE:** Callshop features are not available for accounts of direct retail customers. In order to enable these features for accounts of a reseller’s sub-customer, both the reseller and the sub-customer must have the “Callshop enabled” option on.

# 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). The date range for the search must be specified, but it is highly recommended that it be set to the smallest range necessary, in order to reduce waiting time and server load. Ideally, the search window should contain only one day.

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



View	Error Report	CLI(ani)	CLI(dnis)	Country	Description	Connect Time	Disconnect Time	Duration, minsec	Amount	Account	Customer	Vendor	Disconnect Reason
		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
		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
		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 failure
		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
		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
		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
		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 failure
		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
		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
		55219438665	420994484518	CZECH REPUBLIC	Proper	2006-10-06 10:00:55	2006-10-06 10:03:23	2:28	0.17267 USD	56.78.90.1	Carrier Exchange	VoIP Solutions	Normal call clearing

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.

### List of 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 selecting the Connections  icon.

Call Trace Results																																																																					
H323-conf-id		00462FC9 00462FC9 00462FC9 000020DB					Setup time, sec	10																																																													
							Duration, sec	166																																																													
	UTC	Account	Customer	Vendor	User																																																																
	America/Vancouver	100004	America/Vancouver	SuperNet	pb-root																																																																
Connect Time	2006-10-06 17:14:12	2006-10-06 10:14:12	2006-10-06 10:14:12	2006-10-06 10:14:12	2006-10-06 10:14:12																																																																
Disconnect Time	2006-10-06 17:16:58	2006-10-06 10:16:58	2006-10-06 10:16:58	2006-10-06 10:16:58	2006-10-06 10:16:58																																																																
<p>▶ ACCOUNTS</p> <table border="1"> <thead> <tr> <th>Account</th> <th>CL(ani)</th> <th>CLD(dnis)</th> <th>Country</th> <th>Description</th> <th>Setup Time, min:sec</th> <th>Charged time, min:sec</th> <th>Charged amount, USD</th> <th>History</th> <th>Disconnect Reason</th> </tr> </thead> <tbody> <tr> <td>100004</td> <td>43788663571</td> <td>16046043539</td> <td>CANADA</td> <td>British Columbia</td> <td>0:10</td> <td>2:48</td> <td>0.28000</td> <td>1x6x0.1+27x0.1</td> <td>Normal call clearing</td> </tr> </tbody> </table> <p>▶ RESELLERS</p> <table border="1"> <thead> <tr> <th>Customer</th> <th>CL(ani)</th> <th>CLD(dnis)</th> <th>Country</th> <th>Description</th> <th>Setup Time, min:sec</th> <th>Charged time, min:sec</th> <th>Charged amount, USD</th> <th>History</th> <th>Disconnect Reason</th> </tr> </thead> <tbody> <tr> <td>Callshop# 15</td> <td>43788663571</td> <td>16046043539</td> <td></td> <td>North America</td> <td>0:10</td> <td>3:00</td> <td>0.15000</td> <td>1x60x0.05+2x60x0.05</td> <td>Normal call clearing</td> </tr> </tbody> </table> <p>▶ VENDORS</p> <table border="1"> <thead> <tr> <th>Co. Vendor</th> <th>CL(ani)</th> <th>CLD(dnis)</th> <th>Country</th> <th>Description</th> <th>Setup Time, min:sec</th> <th>Charged time, min:sec</th> <th>Charged amount</th> <th>History</th> <th>Disconnect Reason</th> </tr> </thead> <tbody> <tr> <td>SuperNet</td> <td>43788663571</td> <td>16046043539</td> <td></td> <td>North America</td> <td>0:10</td> <td>2:46</td> <td>0.02767 USD</td> <td>1x1x0.01+165x1x0.01</td> <td>Normal call clearing</td> </tr> </tbody> </table>										Account	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount, USD	History	Disconnect Reason	100004	43788663571	16046043539	CANADA	British Columbia	0:10	2:48	0.28000	1x6x0.1+27x0.1	Normal call clearing	Customer	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount, USD	History	Disconnect Reason	Callshop# 15	43788663571	16046043539		North America	0:10	3:00	0.15000	1x60x0.05+2x60x0.05	Normal call clearing	Co. Vendor	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount	History	Disconnect Reason	SuperNet	43788663571	16046043539		North America	0:10	2:46	0.02767 USD	1x1x0.01+165x1x0.01	Normal call clearing
Account	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount, USD	History	Disconnect Reason																																																												
100004	43788663571	16046043539	CANADA	British Columbia	0:10	2:48	0.28000	1x6x0.1+27x0.1	Normal call clearing																																																												
Customer	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount, USD	History	Disconnect Reason																																																												
Callshop# 15	43788663571	16046043539		North America	0:10	3:00	0.15000	1x60x0.05+2x60x0.05	Normal call clearing																																																												
Co. Vendor	CL(ani)	CLD(dnis)	Country	Description	Setup Time, min:sec	Charged time, min:sec	Charged amount	History	Disconnect Reason																																																												
SuperNet	43788663571	16046043539		North America	0:10	2:46	0.02767 USD	1x1x0.01+165x1x0.01	Normal call clearing																																																												



Connection									
H323-conf-id									
<p>Vendor SuperNet</p> <p>Type VolP to Vendor</p> <p>Remote IP 210.56.78.1</p> <p>Translation Rule</p> <p>Tariff SuperNet</p> <p>Description superNet</p>									

## View billing engine logs

The View Logs page allows the raw billing log of a selected call to be viewed by h323-conf-id (or while in the call detail screen above – just click the **View log** button in the toolbar).

Field	Description
Call H323-conf-id	H323-conf-id of a call.
Search log files for	The day when the call was made.
Include logs file for the previous day in search	This option extends the search by adding the previous day.

## Active Calls

The Active Calls page shows calls which 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 by:

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

Account	Customer	Connect Time	Disconnect Time	Duration	CLI	CLD	Vendor	Connection	
18664655093	X-Telecom	2005-05-26 14:05:30	2005-05-26 14:16:29	00:10:59	988	762	Best VoIP	Best PSTN to Vendor	<input type="checkbox"/>
988 ->	Test Node #3 ->								
18664655093	X-Telecom	2005-05-26 23:07:55		00:13:39	988	762	Global VoIP	VoIP Connection	<input checked="" type="checkbox"/>
988 ->	VOIPSOLUTIONS-outbound ->								
	Test Node #5 ->	2005-05-27 05:22:41		00:18:53	988	762			<input checked="" type="checkbox"/>
988 ->	762								

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 a call is still in progress
Duration	Total call duration
CLI	Calling station ID (ANI) for the originator
CLD	Called station ID (DNIS) – 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	Schematic call flow diagram

Sometimes a call may be displayed in the active calls registry has already been disconnected (the most common reason for this is that one of your gateways was rebooted – so calls were cut off, but billing never received accounting records about it). In this situation you have the ability to clean up such “stalled” calls from the web.

**NOTE:** Cleanup operation only affects billing internal registry of active calls and will not disconnect a call which is still in progress

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

## SIP Log Viewer

The Sip Log Viewer page allows billing logs of PortaSIP calls to be viewed. You should 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 find the call-id of “your” call according to CLD or other parameters.

Only text log:



```

27 Jul 00:00:14/GLOBAL/ser: RECEIVED message from 219.74.184.194:10581:
REGISTER sip:demo.portaone.com SIP/2.0
Via: SIP/2.0/UDP 192.168.0.138:5060
From: ;tag=4033808185
To:
Call-ID: 2379060364@192.168.0.138
CSeq: 10 REGISTER
Contact: ;expires=3600
User-Agent: Cisco ATA 186 v3.1.1 atasip (040629A)
Authorization: Digest username="18667478647711",realm="demo.portaone.com",nonce="42e6c9ce1e0b2e10ca02cf9312a40309b1b95fc2"
Content-length: 0

27 Jul 00:00:14/2379060364@192.168.0.138/ser: processing REGISTER received from 219.74.184.194
27 Jul 00:00:14/2379060364@192.168.0.138/ser: sending AAA request for 18667478647711, method REGISTER:
Calling-Station-Id      = '18667478647711'
User-Name               = '18667478647711'
Digest-User-Name       = '18667478647711'
Digest-Realm           = 'demo.portaone.com'
Digest-Nonce           = '42e6c9ce1e0b2e10ca02cf9312a40309b1b95fc2'
Digest-URI              = 'sip:demo.portaone.com'
Digest-Method          = 'REGISTER'
Digest-Algorithm       = 'MD5'
Digest-Response        = 'c94b02480755281bc33cf7010b571b26'
Service-Type            = 'Sip-Session'
Cisco-AVPair            = 'call-id=2379060364@192.168.0.138'

27 Jul 00:00:14/2379060364@192.168.0.138/ser: AAA request accepted, processing response:
h323-billing-model      = 'h323-billing-model=0'
Cisco-AVPair            = 'h323-ivr-in=Tariff:Apollo SIP'
Cisco-AVPair            = 'h323-ivr-in=available-funds:9996007.08'
h323-return-code       = 'h323-return-code=0'
h323-currency           = 'h323-currency=USD'
h323-preferred-lang    = 'h323-preferred-lang=en'
    
```

Log with call diagram:





# Account Info

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

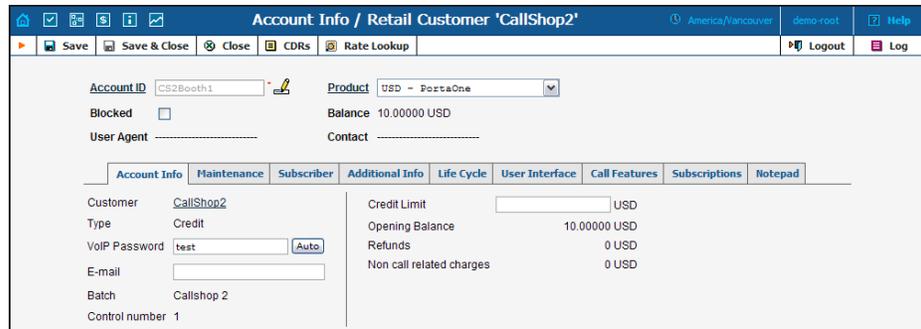


Account ID	Customer	Batch	Ctrl #	SIP Status	
10%	Pre-paid card test	ANY		ANY	Show Accounts

CDRs	Timer	Receipt	Account ID	Idle, days	Currency	Balance	Credit Limit	Type	Product	Batch	Status	SIP
			1001383877	12	USD	7.16000		Debit	Prepaid cards	cards-2004-01		
			1013332891	12	USD	4.92567		Debit	Prepaid cards	cards-2004-01		
			1020777721	12	USD	0.00000		Debit	Prepaid cards	cards-2004-01		
			1026510894	12	USD	9.20000		Debit	Prepaid cards	cards-2004-01		
			1031179746	12	USD	9.76667		Debit	Prepaid cards	cards-2004-01		
			1032720663	12	USD	7.97333		Debit	Prepaid cards	cards-2004-01		
			1034753937		USD	10.00000		Debit	Prepaid cards	cards-2004-01		
			1040638905		USD	10.00000		Debit	Prepaid cards	cards-2004-01		
			1042317129		USD	10.00000		Debit	Prepaid cards	cards-2004-01		
			1052617150		USD	10.00000		Debit	Prepaid cards	cards-2004-01		
			1057877041	12	USD	4.64786		Debit	Prepaid cards	cards-2004-01		

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



Account ID: CS2Booth1    Product: USD - PortaOne

Blocked:     Balance: 10.00000 USD

User Agent: \_\_\_\_\_    Contact: \_\_\_\_\_

Account Info | Maintenance | Subscriber | Additional Info | Life Cycle | User Interface | Call Features | Subscriptions | Notepad

Customer: CallShop2    Credit Limit: \_\_\_\_\_ USD

Type: Credit    Opening Balance: 10.00000 USD

VoIP Password: test    Refunds: 0 USD

E-mail: \_\_\_\_\_    Non call related charges: 0 USD

Batch: Callshop 2

Control number: 1

The majority of the account details on the Account Info page are read-only. This interface is similar to the one accessible via the customer's [Accounts](#). The Help Desk staff has the ability to modify only the Web Password, VoIP Password, Account Balance, Time Zone, Redirect Number, Blocked Status, and Preferred Language. When making such changes, the 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 selecting  **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 usage will be displayed under the graph. If there are two graphs, captions will be provided on the left. Usage of navigation is explained in the table below.

Icon	Description
	<b>Zoom Out.</b> Click the icon or the top part of the graph to see a 50% longer time interval.
	<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.
	<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 time they are removed from the system. The current month is displayed in the bottom right-hand corner of the calendar.

Look at the following legend for the calendar:



1. If present, this arrow notifies the user that the 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.

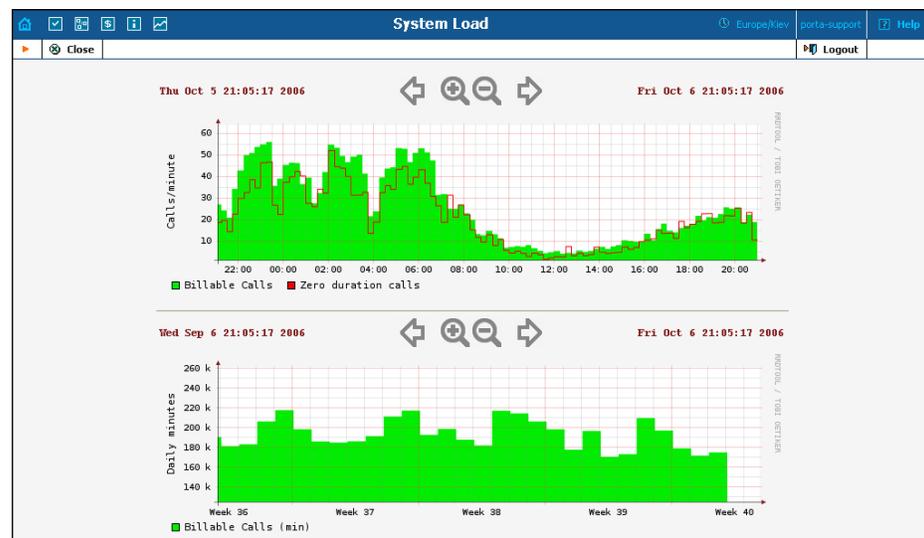
4. Click this icon to download statistics for the first half of the month.
5. Click this icon to download statistics for the second half of the month.
6. Number of the week in the current year. No report was generated for this week, so there is no link.
7. Same as 6, but a report has been generated and may be downloaded by clicking the link.
8. Day of the month. No report has been generated. Link is inactive.
9. Days with linked reports are set off in bold and underscored. Click to download the report.

If a report is available, the corresponding link is set off in bold and underscored.

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

## System Load

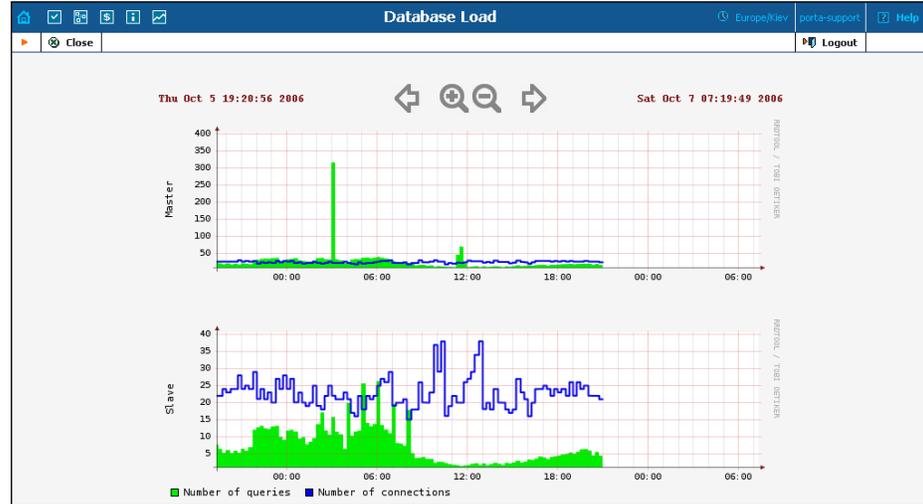
The System Load graph provides a high-level view of the status of the billing system in terms of the number of calls going through it and the number of CDR rows.



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 Load

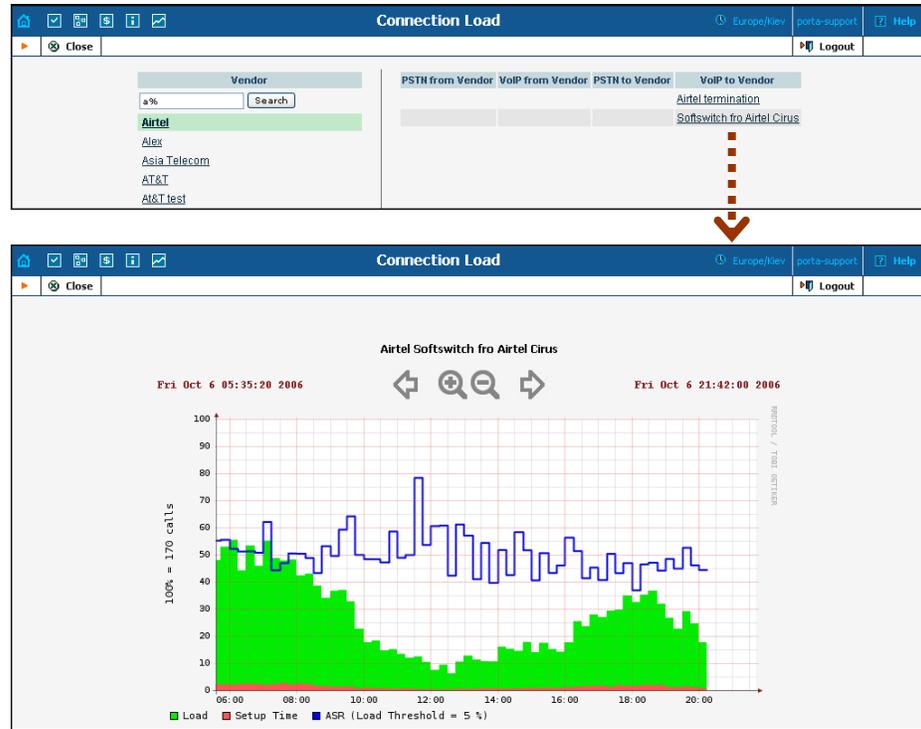
The **Database Load** graph shows the load (in number of queries) and the number of active threads on the master and slave databases. This information may be useful in the event that database interactions seem slow, or in other debugging scenarios.



## 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 the connections related to this vendor 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 graphs show the saturation of your connections. Connection Load displays such utilization, as well as showing 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 set for the 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**  icon to download zipped CSV files.

**Vendor ASR reports** Europe/Kiev porta-support Help

Close Custom Query Logout

A% Search

**Airtel**  
Alex  
Asia Telecom  
AT&T  
AT&T test

Download Options

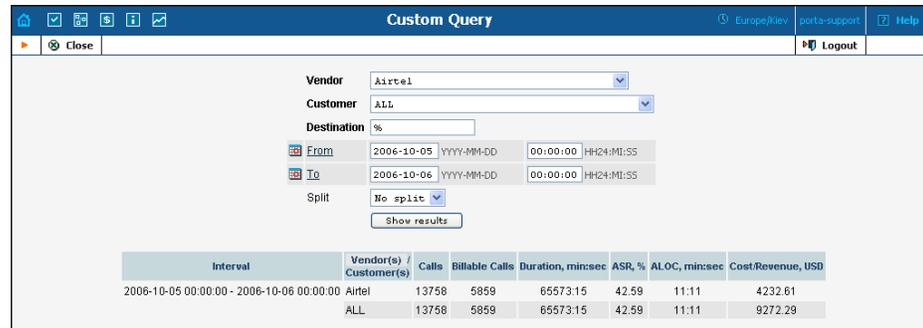
<b>Nov 2005</b> # Mo Tu We Th Fr Sa Su 44 1 2 3 4 5 6 45 7 8 9 10 11 12 13 46 14 15 16 17 18 19 20 47 21 22 23 24 25 26 27 48 28 29 30	<b>Dec 2005</b> # Mo Tu We Th Fr Sa Su 48 1 2 3 4 49 5 6 7 8 9 10 11 50 12 13 14 15 16 17 18 51 19 20 21 22 23 24 25 52 26 27 28 29 30 31	<b>Jan 2006</b> # Mo Tu We Th Fr Sa Su 52 1 2 3 4 5 6 7 8 2 9 10 11 12 13 14 15 3 16 17 18 19 20 21 22 4 23 24 25 26 27 28 29 5 30 31	<b>Feb 2006</b> # Mo Tu We Th Fr Sa Su 5 1 2 3 4 5 6 6 7 8 9 10 11 12 7 13 14 15 16 17 18 19 8 20 21 22 23 24 25 26 9 27 28
<b>Mar 2006</b> # Mo Tu We Th Fr Sa Su 9 1 2 3 4 5 10 6 7 8 9 10 11 12 11 13 14 15 16 17 18 19 12 20 21 22 23 24 25 26 13 27 28 29 30 31	<b>Apr 2006</b> # Mo Tu We Th Fr Sa Su 13 1 2 14 3 4 5 6 7 8 9 15 10 11 12 13 14 15 16 16 17 18 19 20 21 22 23 17 24 25 26 27 28 29 30	<b>May 2006</b> # Mo Tu We Th Fr Sa Su 18 1 2 3 4 5 6 7 19 8 9 10 11 12 13 14 20 15 16 17 18 19 20 21 21 22 23 24 25 26 27 28 22 29 30 31	<b>Jun 2006</b> # Mo Tu We Th Fr Sa Su 22 1 2 3 4 23 5 6 7 8 9 10 11 24 12 13 14 15 16 17 18 25 19 20 21 22 23 24 25 26 27 28 29 30
<b>Jul 2006</b> # Mo Tu We Th Fr Sa Su 26 1 2 27 3 4 5 6 7 8 9 28 10 11 12 13 14 15 16 29 17 18 19 20 21 22 23 30 24 25 26 27 28 29 30 31 31	<b>Aug 2006</b> # Mo Tu We Th Fr Sa Su 31 1 2 3 4 5 6 32 7 8 9 10 11 12 13 33 14 15 16 17 18 19 20 34 21 22 23 24 25 26 27 35 28 29 30 31	<b>Sep 2006</b> # Mo Tu We Th Fr Sa Su 35 1 2 3 36 4 5 6 7 8 9 10 37 11 12 13 14 15 16 17 38 18 19 20 21 22 23 24 39 25 26 27 28 29 30	<b>Oct 2006</b> # Mo Tu We Th Fr Sa Su 39 1 40 2 3 4 5 6 7 8 41 9 10 11 12 13 14 15 42 16 17 18 19 20 21 22 43 23 24 25 26 27 28 29 44 30 31

	A	B	C	D	E	F	G	
1	Destination	Country	Description	Calls	Billable Calls	ASR, %	Duration, min:sec	ALOC
2		247	Ascension Island	2	0	0	0:00	
3	Not Matched		Unable to match in tar	255	1	0.392156862745098	11:37	
4	SUBTOTAL			257	1	0.389105058365759	11:37	
5		355 ALBANIA	Proper	1	0	0	0:00	
6	SUBTOTAL			1	0	0	0:00	
7		54 ARGENTINA	Proper	2	0	0	0:00	
8		541 ARGENTINA		1	0	0	0:00	
9		5411 ARGENTINA	Buenos Aires	4	3	75	23:13	
10	SUBTOTAL			7	3	42.8571428571429	23:13	
11		374 ARMENIA	Proper	29	3	10.3448275862069	1:11	
12	SUBTOTAL			29	3	10.3448275862069	1:11	
13		61 AUSTRALIA	Proper	7	2	28.5714285714286	8:26	
14		611 AUSTRALIA	Mobile	1	1	100	0:35	
15		6129 AUSTRALIA	Sydney	1	0	0	0:00	
16	SUBTOTAL			9	3	33.3333333333333	9:01	
17		43 AUSTRIA	Proper	17	6	35.2941176470588	72:05:00	
18		431 AUSTRIA	Vienna	8	1	12.05.2005	14:25	
19		43650 AUSTRIA	Mobile	1	1	100	0:04	
20	SUBTOTAL			26	8	30.7692307692308	86:34:00	

## Custom Query

The Custom Query utility, which can be accessed by clicking the **Custom Query**  button, 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.) The date and time range for the search must be specified. To initiate the query, click the Show results button.



Interval	Vendor(s) / Customer(s)	Calls	Billable Calls	Duration, min:sec	ASR, %	ALOC, min:sec	Cost/Revenue, USD
2006-10-05 00:00:00 - 2006-10-06 00:00:00	Airtel	13758	5859	65573:15	42.59	11:11	4232.61
	ALL	13758	5859	65573:15	42.59	11:11	9272.29

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

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



The Custom Query utility serves as a tool for monitoring various parameters of your current call flow. It should **not** be used as a tool for obtaining billing statistics for a particular vendor (use the CDR statistics for the corresponding vendor), and should **never** be used to obtain information such as “total minutes of a particular customer”. Since this report operates with the vendor’s CDR, 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 Report screen allows the user 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)
  - By customer and destination, subtotal per customer
  - By customer and destination, subtotal per country
  - By vendor and destination, subtotal per vendor
  - By destination

The active selection is highlighted in green.

	C	D	E	F	G	H	I	J	K
1	Country	Description	Calls	Gross margin USD	Rated sec.	Rated min.	Total Cost USD	Total Revenue USD	
2	UNITED STATES	Illinois	31	0.02236	66	38	0.01430	0.03666	
3	UNITED STATES	California	22	1.65841	4691	43	1.10124	2.75965	
4	UNITED STATES	Texas	22	0.21031	618	39	0.13965	0.34996	
5	UNITED STATES	New York	23	0.20831	621	13	0.13832	0.34663	
6	UNITED STATES	Illinois	32	0.8041	783	58	0.17030	0.97440	
7	UNITED STATES	Illinois	32	0.4879	1358	24	0.31200	0.79990	
8	UNITED STATES	New Jersey	122	0.10215	288	87	0.06783	0.16998	
9	UNITED STATES	Massachusetts	24	0.05207	124	123	0.03458	0.08685	
10	UNITED STATES	Kentucky	42	0.15623	466	21	0.10374	0.25997	
11	UNITED STATES	Connecticut	28	0.02002	9	25	0.01330	0.03332	
12	UNITED STATES	South Carolina	12	0.38057	1132	32	0.25270	0.63327	
13	UNITED STATES	Arkansas	74	2.38757	7131	93	1.58636	3.97293	
14	UNITED STATES	New Jersey	41	0.04407	131	47	0.02926	0.07333	

# Custom Reports

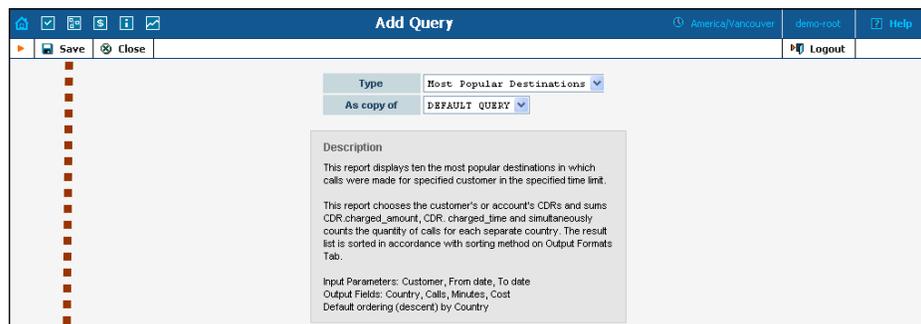
Custom reports section allows you to manage and execute custom report queries.

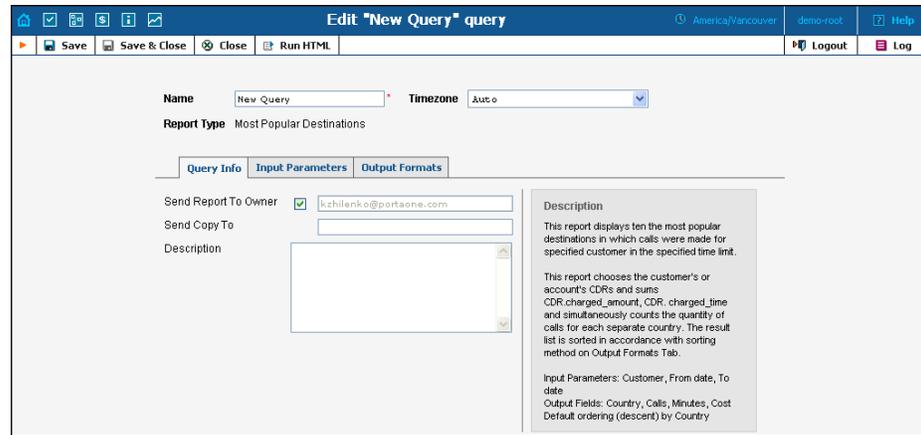


On the initial custom report screen you will be able to see already existing reports, in order to execute one of them and see the result immediately press the  **Run** icon for a particular report. Click the  **Run Queue** button in the toolbar to see the information about scheduled report execution.



Press  **Add** to create a new report by choosing a 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 the parameters defined in that report), or just as a blank copy. Press  **Save** to proceed in defining the report.





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
<b>Send Report To Owner</b>	If this check box is ticked, after every query 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.)
<b>Send Copy To</b>	Send a copy of the report result to some other email address.
<b>Description</b>	General description of this report

### Input Parameters tab

Contents of this tab depend on the particular report, and allows you to manage report parameters. E.g. for the “Most popular destinations” you will be able to specify the date range and a customer.

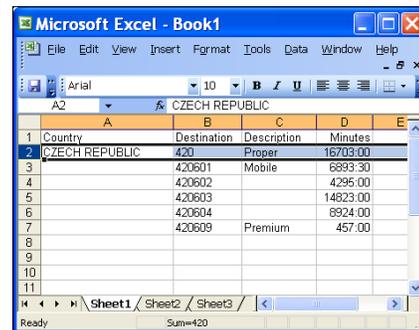
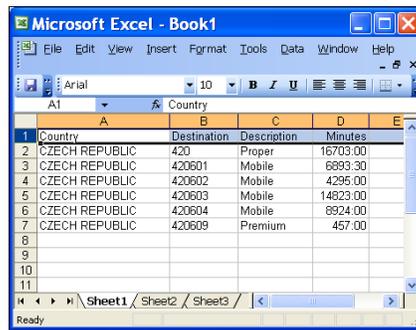
### Output Formats tab

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
<b>Column</b>	The name of the report column.
<b>Visible</b>	Whether this column should be included in the report. If you uncheck this option, the column will be simply skipped in the report result.

<b>Format</b>	Formatting of the column data (e.g. whether the total number of minutes should be displayed as 380 or 380:00)
<b>Post Processing Rule</b>	This field functions similar to the post-processing rules in templates (see more details in <a href="#">PortaBilling Templates Guide</a> ). It allows you to modify the actual value, extracted from the database, before it will be presented in the report. For instance you may
<b>Suppress Dup</b>	If activated, the duplicate column values in the adjacent rows will not be displayed – see the example below.

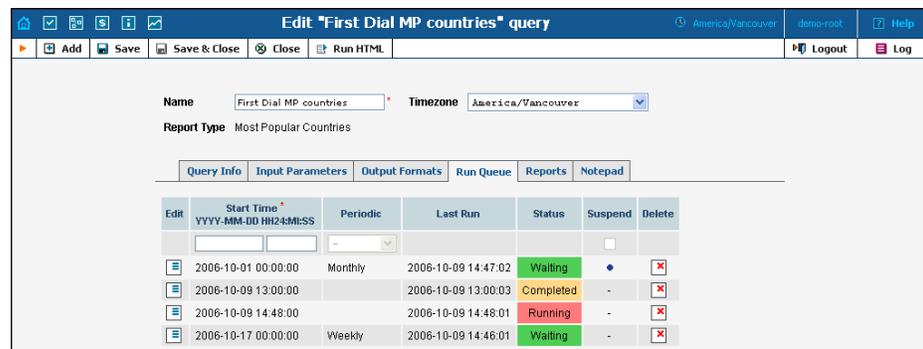
Suppress duplicates option allows you to make your reports better readable by removing the excessive information. Please compare two datasheets below, which represent the same data, but the right one has a “Suppress Duplicates” option turned on for certain columns.



Column	Description
Column	The name of the report column.
Sort	Specifies the sort mode for this column: <ul style="list-style-type: none"> <li> - The data is sorted according to the value of this column in the ascending order (i.e. <b>Andrew</b> will be on the top of the list and <b>Zack</b> will be at the bottom).</li> <li> - The data is sorted according to the value of this column in the descending order (i.e. <b>Zack</b> will be on the top of the list and <b>Andrew</b> will be at the bottom).</li> <li> - This column is not used for data sorting at all.</li> </ul>
Up/Dn	In case if there are multiple columns which participate in sorting, the order of them becomes very important – this columns allows you to arrange the sequence of sort columns. For instance if you want to sort the data first according to the country name and then according to the number of minutes – using the  and  arrows 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 see when the report was generated last time. Click the  **Add** button in the toolbar to add a new entry.



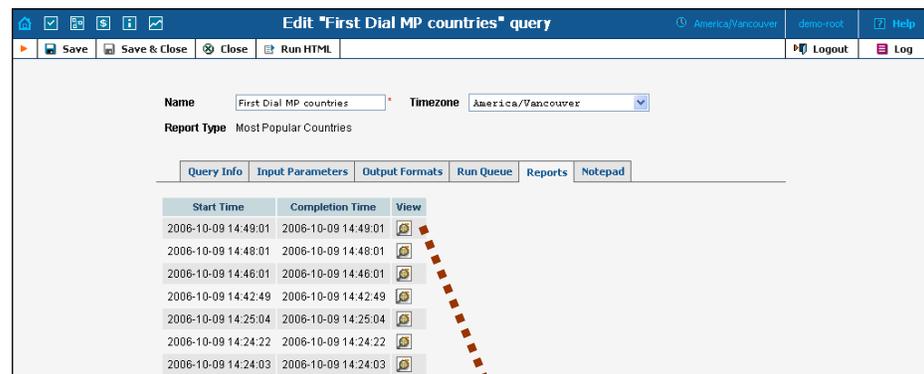
Edit	Start Time YYYY-MM-DD HH:MM:SS	Periodic	Last Run	Status	Suspend	Delete
	2006-10-01 00:00:00	Monthly	2006-10-09 14:47:02	Waiting	<input type="checkbox"/>	
	2006-10-09 13:00:00		2006-10-09 13:00:03	Completed	-	
	2006-10-09 14:48:00		2006-10-09 14:48:01	Running	-	
	2006-10-17 00:00:00	Weekly	2006-10-09 14:46:01	Waiting	-	

Column	Description
<b>Start Time</b>	Date and time when the report should be produced.
<b>Periodic</b>	Specifies whether the report should only be produced once, or the same report should be done every day, week or month.
<b>Last Run</b>	A date when the report was executed for the last time (if applicable).
<b>Status</b>	A current status of the report: <ul style="list-style-type: none"> <li>• Waiting – The report execution has not started yet and is scheduled for the future</li> <li>• Completed – The report was supposed to be executed only once, and this has already happened in the past.</li> <li>• Running – the report is being currently produced</li> </ul>
<b>Suspend</b>	Allows you to temporary disable report execution (but do not delete the entry from the report schedule). May be convenient in case if you leave for vacation and would like to avoid having reports piling up in your inbox during your absence.

**NOTE:** The **Start Time** specifies only the “preferred” start time of the report. Report execution will not start earlier than the specified time, but may start later if there were 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 06:00, the other one will start only after the first one finishes.

### Reports tab

This tab allows you to browse results of the ten previous report’s executions, so in case if you did not save the original result – you do not have to run the reports over again. Click on the  icon to see the corresponding file.



Report "Most Popular Countries", "2006-10-09 14:49:01"

Close Download

Report Type:  
 Currency: UAH  
 Timezone: UTC  
 Input Values: From: 2006-10-01 00:00:00 To: 2006-10-09 14:49:01 Customer: Fist Dial

Description

This report displays ten the most popular countries 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 simultaneously counts the quantity of calls for each separate country. The result list 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 (descend) by Country

Country	Calls	Minutes	Cost
UKRAINE	13636	79529.16	11524.58
UNITED STATES	6797	39320.07	1179.61
CZECH REPUBLIC	6754	38936.36	9734.03

## Vendor CDR Reports

The Vendor Report screen allows the user to easily download all reports that have been set for the 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 '%' can also be used.

Vendor reports

America/Vancouver demo-root Help

Close Logout

% Search

SIP-to-SIP  
**X-Telecom**

Download Options

Nov 2005							Dec 2005							Jan 2006							Feb 2006										
#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su
44	1	2	3	4	5	6		48		1	2	3	4			52		1	2	3	4		1	5	6	7	8	9	10	11	12
45	7	8	9	10	11	12	13	49	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	6	6	7	8	9	10	11	12
46	14	15	16	17	18	19	20	50	12	13	14	15	16	17	18	2	9	10	11	12	13	14	15	7	13	14	15	16	17	18	19
47	21	22	23	24	25	26	27	51	19	20	21	22	23	24	25	3	16	17	18	19	20	21	22	8	20	21	22	23	24	25	26
48	28	29	30					52	26	27	28	29	30	31	4	23	24	25	26	27	28	29	9	27	28						
																5	30	31													
Mar 2006							Apr 2006							May 2006							Jun 2006										
#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su
9	1	2	3	4	5			13		1	2					18	1	2	3	4	5	6	7	22		1	2	3	4		
10	6	7	8	9	10	11	12	14	3	4	5	6	7	8	9	19	8	9	10	11	12	13	14	23	5	6	7	8	9	10	11
11	13	14	15	16	17	18	19	15	10	11	12	13	14	15	16	20	15	16	17	18	19	20	21	24	12	13	14	15	16	17	18
12	20	21	22	23	24	25	26	16	17	18	19	20	21	22	23	21	22	23	24	25	26	27	28	25	19	20	21	22	23	24	25
13	27	28	29	30	31			17	24	25	26	27	28	29	30	22	29	30	31					26	26	27	28	29	30		
Jul 2006							Aug 2006							Sep 2006							Oct 2006										
#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su
26						1	2	31	1	2	3	4	5	6	35					1	2	3	39							1	
27	3	4	5	6	7	8	9	32	7	8	9	10	11	12	13	36	4	5	6	7	8	9	10	40	2	3	4	5	6	7	8
28	10	11	12	13	14	15	16	33	14	15	16	17	18	19	20	37	11	12	13	14	15	16	17	41	9	10	11	12	13	14	15
29	17	18	19	20	21	22	23	34	21	22	23	24	25	26	27	38	18	19	20	21	22	23	24	42	16	17	18	19	20	21	22
30	24	25	26	27	28	29	30	35	28	29	30	31				39	25	26	27	28	29	30	43	23	24	25	26	27	28	29	
31																								44	30	31					

## Customer CDR Reports

The Customer Report screen allows the user to easily download all reports that have been set for the customer. Reports for the desired customer may be found by selecting it 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 '%' can also be used.

**Customer reports** America/Vancouver demo-root Help

Close Logout

Search: %

Download Options  CDR Types  Invoice  Debit

Nov 2005							Dec 2005							Jan 2006							Feb 2006										
#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su
44	1	2	3	4	5	6		48	1	2	3	4				52	1						1	5	1	2	3	4	5		
45	7	8	9	10	11	12	13	49	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	6	6	7	8	9	10	11	12
46	14	15	16	17	18	19	20	50	12	13	14	15	16	17	18	2	9	10	11	12	13	14	15	7	13	14	15	16	17	18	19
47	21	22	23	24	25	26	27	51	19	20	21	22	23	24	25	3	16	17	18	19	20	21	22	8	20	21	22	23	24	25	26
48	28	29	30					52	26	27	28	29	30	31	4	23	24	25	26	27	28	29	9	27	28						
															5	30	31														

Mar 2006 Apr 2006 May 2006 Jun 2006 Jul 2006 Aug 2006 Sep 2006 Oct 2006

## Unresolved CDR Reports

The Unresolved Calls screen allows the user 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.

**"Unresolved calls" reports** America/Vancouver demo-root Help

Close Logout

Download Options  CDRs

Nov 2005							Dec 2005							Jan 2006							Feb 2006										
#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su	#	Mo	Tu	We	Th	Fr	Sa	Su
44	1	2	3	4	5	6		48	1	2	3	4				52	1						1	5	1	2	3	4	5		
45	7	8	9	10	11	12	13	49	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	6	6	7	8	9	10	11	12
46	14	15	16	17	18	19	20	50	12	13	14	15	16	17	18	2	9	10	11	12	13	14	15	7	13	14	15	16	17	18	19
47	21	22	23	24	25	26	27	51	19	20	21	22	23	24	25	3	16	17	18	19	20	21	22	8	20	21	22	23	24	25	26
48	28	29	30					52	26	27	28	29	30	31	4	23	24	25	26	27	28	29	9	27	28						
															5	30	31														

Mar 2006 Apr 2006 May 2006 Jun 2006 Jul 2006 Aug 2006 Sep 2006 Oct 2006

## 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.



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 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 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.