



Handbook:

Rating, Subscriptions and Invoicing Maintenance Release 23



Copyright Notice & Disclaimers

Copyright © 2000-2011 PortaOne, Inc. All rights reserved

PortaSwitch® Handbook: Rating, Subscriptions and Invoicing, May 2011 Maintenance Release 23 V1.23.4

Please address your comments and suggestions to: Sales Department, PortaOne, Inc. Suite #408, 2963 Glen Drive, Coquitlam, BC, V3B 2P7 Canada.

Changes may be made periodically to the information in this publication. The 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

	Preface	4
1.	Charging for Value-added Services	4
	Checklist	5
	General, Network, Rating Configuration	
	Create Subscription Plans	
	Bundle Subscription Plans with Product	9
	Check Subscription Plan Assignment	
	Manually Assign Subscription to Account	
	Manually Assign Subscription to Customer (Optional)	11
2.	Invoicing Process Illustrated	12
	Example 1: Invoice Amount Due, Invoice Status	13
	Example 2: Automatic Payment at the End of the Billing Period	
	Example 3: Suspension, Overpaying an Invoice	15
	Example 4: Refunds and Credits	
	Example 5: Turn On the Invoicing Later	
	Example 6: Advance Payment	
	Example 7: Advance Subscriptions, Invoices with Negative Total	
	Example 8: Collection Threshold	
3.	Creating a Service with Discount Plans	24
	Checklist	25
	Create a Destination Group Set	26
	Define a Destination Group	
	Assign Prefixes to the Destination Group	
	Create All Required Destination Groups	
	Create a Volume Discount Plan	
	Define Discounts within a Volume Discount Plan	
	Assign a Default Discount Plan to a Product Override the Discount Plan for an Account (Optional)	
	Assign a Specific Discount Plan to a Customer	
	Check Current Volume Discount Statistics for an Account	
4.	Creating a Service with Multiple Off-Peak Periods	38
	Checklist	39
	Create Off-Peak Periods in the Tariff	
	Define Rates for Off-Peak Periods	
	Define Discounts for Off-Peak Periods	46

Preface

This document provides PortaBilling® users with step-by-step instructions and examples for setting up various prepaid and postpaid services on a VoIP network.

Where to get the latest version of this guide

The hard copy of this guide is updated at major releases only, and does not always contain the latest material on enhancements occurring between minor releases. The online copy of this guide is always up to date, and integrates the latest changes to the product. You can access the latest copy of this guide at: www.portaone.com/support/documentation/

Conventions

This publication uses the following conventions:

- Commands and keywords are given in boldface
- Terminal sessions, console screens, or system file names are displayed in fixed width font



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

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



Timesaver means that you can save time by taking the action described in the paragraph.



Tips provide information that might help you solve a problem.

Trademarks and Copyrights

PortaBilling®, PortaSIP®, PortaUM® and PortaSwitch® are registered trademarks of PortaOne, Inc.



Charging for Value-added Services

When providing VoIP calling services, quite often you will have to charge your customers for some additional services rendered: IP phone rental, voicemail service, "bundled" free minutes, and so on. The PortaBilling® subscription module allows you to efficiently manage these charges.



Checklist

Print the following page and use it to check off the operations you have completed while performing system setup according to the instructions in this chapter. Please be sure to perform all of the operations (all of the boxes must be checked), otherwise the service will not work.

Operation		Done	
General configuration			
Make sure configuration of general and network settings has	[]	
already been performed according to the instructions in Setting up			
a Wholesale Traffic Exchange chapter in the PortaSwitch			
Handbook: Wholesale Services.			
Rating configuration			
Create a subscription plan A which will be bundled with your	[]	
product.			
Create any optional subscription plans you may require.	[]	
Associate subscription plan A with your product.	[]	
Account provisioning			
Create a retail customer who will be using your services.	[]	
Create an account for this customer.]	
If required, assign some subscriptions directly to the account.	[]	
Testing			
Verify that the subscriptions are visible under the account.	[]	



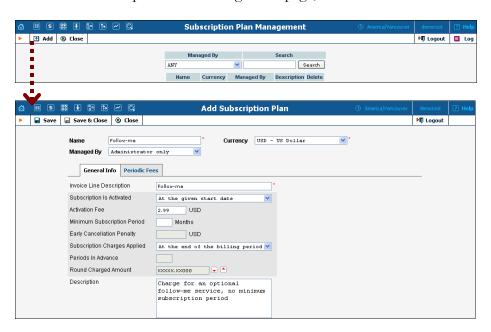
General, Network, Rating Configuration

This is identical to the procedure described in *Setting up a Wholesale Traffic Exchange* chapter in the **PortaSwitch Handbook: Wholesale Services**; please follow the instructions provided there.

Create Subscription Plans

A subscription plan defines the charges associated with a particular service.

- 1. In the **Rating** section of the Admin interface, choose **Subscription Plans**.
- 2. On the Subscription Plan Management page, choose **Add**.



3. Fill in the required information:

Main form (top)

- o **Name** Name of the subscription plan which is to be used on the Admin interface.
- O **Currency** Indicates in which currency pricing information is given. A subscription plan can only be applied to a product, account or customer with this same currency.

NOTE: The currency for the subscription plan may be chosen only once, and cannot be changed later.



Managed By – If you want this subscription plan to be used for your reseller's accounts, so that the reseller himself can change the parameters of the plan and apply it to his accounts, choose a customer name from the menu. Otherwise, choose Administrator only here.

General Info

- o **Invoice Line Description** A subscription plan description to be included on every invoice line visible to the customer (for instance, it may be in a language different than English).
- o **Subscription Is Activated** Defines when the subscription will be considered active (and charges will begin to apply): either simply from the date it is entered into the system, or you may postpone it until the date when the customer actually uses the account for the first time.
- O Activation Fee Enter the value charged for every new subscription upon startup; leave this field empty to waive the activation fee.
- o **Minimum Subscription Period** Time (in months) during which the customer must keep the subscription plan active in order to avoid penalties. Leave this field empty to create a subscription plan that can be closed at any time.
- o **Early Cancellation Penalty** The fee applied if the minimum subscription period condition is not met.
- O Subscription Charges Applied The default method is At the end of the billing period, so that subscription charges are applied to the account / customer balance when the billing period is closed. Another option is Progressively, where a small portion of the total subscription fee is applied each day, so that the balance grows gradually. You can also choose to apply charges In advance.
- Periods in Advance If you selected In advance in the previous field, specify the number of periods (the default value is 1).
- Round Charged Amount Leave the default value unchanged if you want to calculate charges with the maximum available precision; otherwise, see the PortaBilling Web Reference Guide for more details about setting up rounding.
- O **Description** Your comments about the intended purpose of this subscription plan.

Periodic Fees

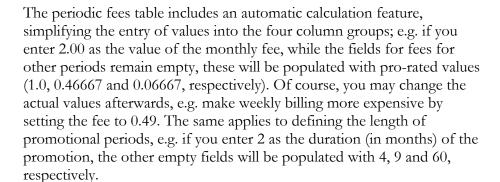
By default, only one type of pricing is available: this is the default fee which will be applied to the subscription. Click the icon to edit it, then click the icon after you have finished entering all the information. There are four column groups (monthly, bi-weekly,



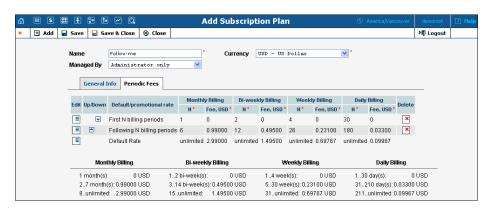
weekly and daily billing), each of which allows you to specify fees for every billing period separately.



- o **N** Duration of the promotional period (not available for the default fee).
- Fee Full amount of subscription fee to be applied during the billing period.



If you want to add more promotional periods (e.g. for the first three months) click the Add button in the toolbar to insert a row into the pricing table, then click the icon when you have entered all the required information.



The screenshot above defines a product which:

- o will be free for the first month,
- o will have a monthly fee of \$0.99/month for the next six months,





o will have a normal subscription fee of \$2.99/month afterwards.

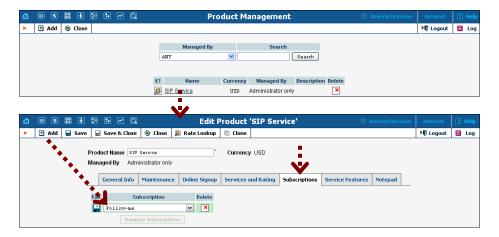
A reference table is provided for your convenience at the bottom of the screen, so that you can clearly see when a change in the subscription fee is to occur. You may also change the order of the promotional periods by moving them up and down using the and cons.

- 4. Click Save&Close to finish the subscription plan definition and save it to the database.
- 5. Repeat steps 2-4 to create any other additional subscription plans

Bundle Subscription Plans with Product

You can create subscription plans as bundled with a product, so that they will apply to every account using this product.

- 1. In the **Rating** section of the Admin interface, choose **Products**.
- 2. On the Product Management page, click on the name of a specific product.
- 3. Select the Subscriptions and click the Add icon.
- 4. Select the subscription plan from the select menu.



- 5. Click the Save button in the toolbar, or the icon on the left end of the row to save the data.
- 6. Repeat steps 3-5 to include more than one mandatory subscription with the product.



Check Subscription Plan Assignment

After a subscription plan has been bundled with a product, every new account created with this product will automatically be assigned this subscription.

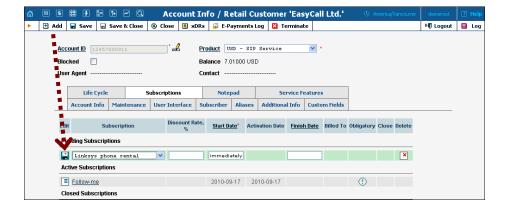


The icon indicates that this subscription forms part of the product definition, and is therefore mandatory (cannot be canceled).

Manually Assign Subscription to Account

You may also assign some additional, optional subscription plans to an account.

- 1. Go to the **Customers** screen (the one containing a list of customers).
- 2. Next to the customer name, click the living icon (the one in the **Accounts** column) to enter account management for this customer.
- 3. Perform an account search and, when the required account is displayed, click on the account ID.
- 4. On the Account Info page, click on the **Subscriptions** tab.
- 5. Click the **Add** icon.



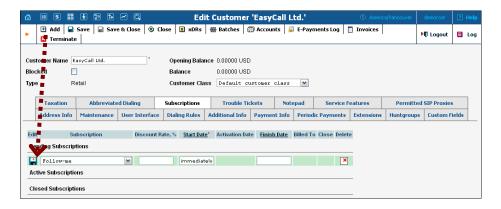


- 6. Select the subscription plan from the select menu. You may also specify a start date for the subscription (by default, it will be activated on the day you create it).
- 7. Click the Save button in the toolbar, or the icon on the left end of the row to save the data.
- 8. Repeat steps 5-7 to add more subscriptions to this account.

Manually Assign Subscription to Customer (Optional)

You may also assign some additional, optional subscription plans to an account or customer.

- 1. Go to the **Customers** screen (the one containing a list of customers).
- 2. Click on the customer name.
- 3. On the Customer Info page, click on the **Subscriptions** tab.
- 4. Click the **Add** icon.



- 5. Select the subscription plan from the select menu. You may also specify a start date for the subscription (by default, it will be activated on the day you create it).
- 6. Click the Save button in the toolbar, or the icon on the left end of the row to save the data.
- 7. Repeat steps 4-6 to add more subscriptions to this customer.



2. Invoicing Process Illustrated

This chapter outlines the information needed to understand how the service charges, credits / refunds and payments are used in the invoicing process and how they are reflected in the attributes of the invoice (such as the amount due). The process is explained using different scenarios.



Invoicing Process

PortaBilling® provides a flexible and easy-to-use invoicing system, covering various scenarios of likely interactions with customers. An administrator can specify:

- the invoice grace period (this indicates within how many days payment must be received following an invoice's date of issue);
- when to send reminders about an approaching due date or overdue payment of an invoice;
- when a customer's service should be suspended; and
- when to permanently close a customer's account.

An invoice is a PDF document reflecting all transactions (calls, payments, refunds, subscription charges, etc.) which have occurred during the billing period.

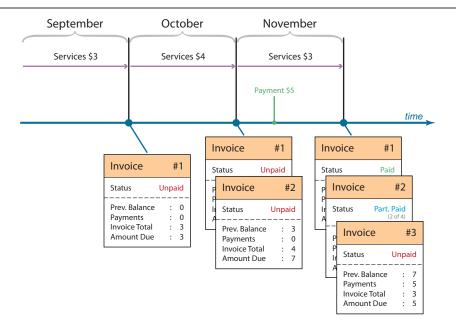


For the sake of simplicity, we will use "calendar" billing periods in the following examples (i.e. the billing period starts on the first day of the month and ends on the last day of the month). However, the principles described here will work with any other billing period – monthly, weekly, etc.

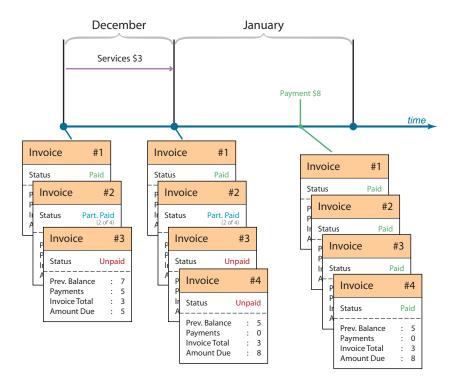
Example 1: Invoice Amount Due, Invoice Status

Suppose a customer's service charge for the September billing period is \$3. An invoice (see #1) with a **total** of \$3 is then produced at the end of the month, and since there are no other factors to be considered (previous balance, etc.), the **amount due** for this invoice is \$3. In October, the service charge is \$4, so the **total** (or **net amount**) of October's invoice (#2) is \$4, while the **amount due** is \$7 (\$3 + \$4), since the previous invoice balance is included.

On November 10th the customer makes a payment of \$5. This payment is applied first to the oldest unpaid invoice (#1 for the September billing period, \$3 total), and the remaining portion (\$2) is then applied to the most recent unpaid invoice (#2, for October). As a result, the invoice status for September is now "paid," while October's invoice status is "partially paid" (the remaining balance due for this invoice period is \$2). In November the total service charge is \$3, so on December 1st a new invoice for November is produced. Its total is \$3, and the amount due is \$7 (previous invoice's amount due) minus \$5 (payment made during this period) equals \$2 + \$3 (new invoice total) = \$5.



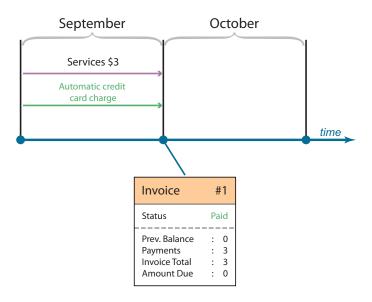
The total charge for December is \$3, so invoice #4 for December is for a total of \$3 with an amount due of \$8. When payment is made in January, it is again split: \$2 is applied to the October invoice (#2), whose status becomes "paid;" then \$3 is applied to the November invoice (#3), and its status also becomes "paid;" and finally, the remaining amount of \$3 is applied to the December invoice, (#4). As a result, all invoices are now paid.





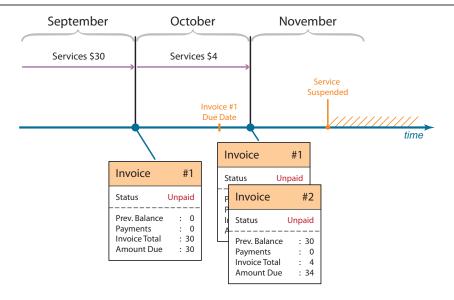
Example 2: Automatic Payment at the End of the Billing Period

The total service charge during September is \$3. At the end of the billing period when the invoice is produced, its total is \$3 – so as a part of the invoice generation the customer's credit card is charged \$3 to pay the invoice. The payment is recorded as being applied to the September billing period, and as a result, the invoice is created with a zero **amount due**, and its status is "paid" (see below).

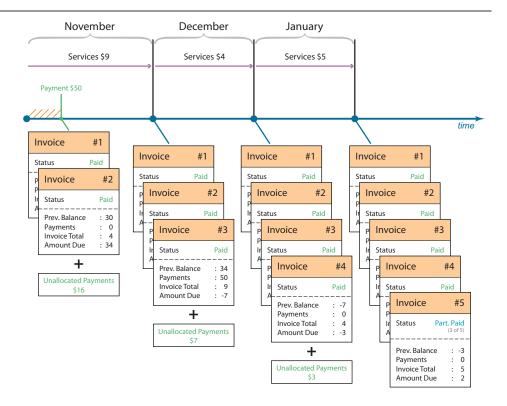


Example 3: Suspension, Overpaying an Invoice

Customer's invoice #1 for the September billing period had an invoice total of \$30 and was due on October 21st. No payment was received until the end of October, so invoice #2 (produced on November 1st) has an invoice total of \$4, bringing the amount due to \$34.



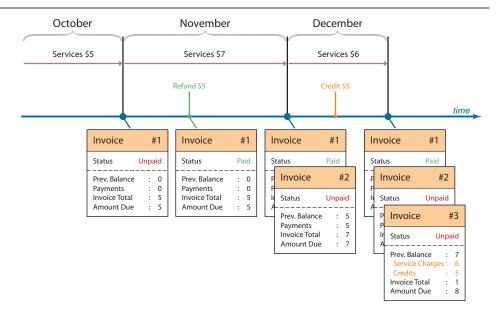
On November 10th the customer's service is suspended because invoice #1 is overdue. On November 15th the customer makes a payment of \$50 and \$30 of this payment is applied to invoice #1, which then becomes paid. Since there are no other overdue invoices, the suspension is lifted from the customer's service. Then \$4 of the remaining payment amount is applied to invoice #2 designating it as paid. There are no other outstanding invoices, and the remaining sum (\$16) of what has already been paid is not applied to any invoice. This sum will be recorded in the "unallocated payments" property of the customer (you can see it on the **Payment Info** tab in the **Customer Info** form) so that it can be applied to future invoices. When invoice #3 for the November billing period is produced (with an invoice total of \$9) the customer's unallocated payment amount is immediately applied to the invoice. As a result, the invoice becomes "paid" and the unallocated payments now total \$7.



For the December billing period the customer's invoice total is \$4. The remaining sum of unallocated payments (\$7) covers this invoice, which becomes "paid" and the unallocated payments now total \$3 (\$7 - \$4). In the January billing period, the customer's invoice is for \$5. Given that \$3 is left in unallocated payments, this covers part of the invoice amount. Now the invoice is "partially paid" (the remaining balance is \$2), and unallocated payments are down to zero.

Example 4: Refunds and Credits

For example, the customer's invoice #1 for the October billing period is \$5, but later it is discovered that this amount includes some erroneous charges. As a result, sometime during November (while the November billing period is still open) a **refund** of \$5 is awarded to the customer. This amount is immediately applied to the currently open invoice (i.e. the one for October), and it then becomes "paid."

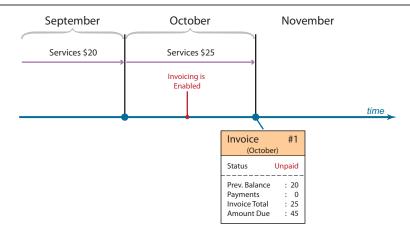


The customer continues to use the service in November, and invoice #2 for November comes to a total of \$7. This invoice will also contain a note saying that the previous invoice balance was \$5 and that there was \$5 in payments / refunds, bringing the amount due to \$7. Now suppose that sometime during December (after the November invoice has already been produced) the customer calls the helpdesk and complains about the sound quality of some calls he made back in November. He is offered a \$5 credit, which is applied to his account on December 5th. This does not affect the November invoice, but will be reflected in the next billing cycle. So when the December billing period is over, the invoice will contain the applicable service charges for that period (\$6) minus the credit (\$5) bringing the total to \$1 – and the amount due then becomes \$8.

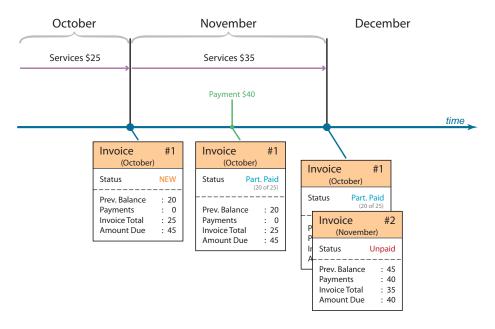
Thus the main difference between refunds and credits is that a refund is immediately applied to an existing invoice, while a credit will be visible on the next invoice.

Example 5: Turn On the Invoicing Later

The customer was initially created with invoicing disabled. During the first period (September) the total sum of charges was \$20 (\$13 for calls plus a \$7 subscription fee), but no invoice was produced. During the October billing period invoicing is enabled, so invoice #1 is created on November 1st. This invoice, covering the October billing period, will contain the actual charges for October (\$20 for calls and a \$5 subscription fee) – and the invoice total will be \$25. The total charges accumulating in the account prior to October will be included on this invoice as the previous balance (\$20), so the amount due for this invoice will come to a total of \$45 (\$25 + \$20).

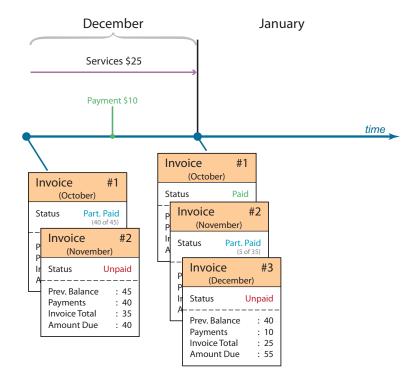


During November the customer makes a payment of \$40 which is recorded as follows: \$20 is applied to the "previous balance" of the first invoice (since there were no invoices for earlier periods) and the rest (\$20) is applied to the invoice total itself. Since the payment applied to the invoice is less than the invoice total (\$25), invoice #1 is "partially paid" (the sum still pending is \$5). When November ends, a new invoice #1 is produced that contains the applicable charges for services provided in November (\$35), so the invoice total is \$35. Combining the previous balance (\$45 due from invoice #1), payments made during this period (\$40) and the invoice total (\$35) work out like this: \$45 - \$40 + \$35 = \$40.



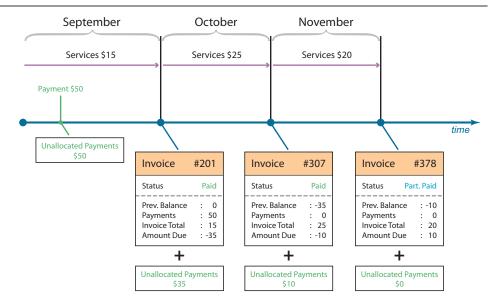
When sometime during the December billing period the customer makes a payment of \$10, it is applied to the remaining outstanding balance for invoice #1 (for October), and its status then becomes "paid," and as the rest of the payment (\$5) covers part of invoice #2 (for the November period), its status now becomes "partially paid" (since the outstanding sum owed is \$30). During December the following charges are applied to the customer: \$10 for calls, \$5 for subscription, and \$10 for configuration

assistance (applied personally by an administrator), so invoice #3 will contain: the previous balance due of \$40, payments: \$10, invoice total \$25 (\$10 + \$5 + \$10), bringing the amount due to \$55.



Example 6: Advance Payment

Let's say the customer plans to be away for several months starting at the end of September, and is worried that he will not be able to pay his bills regularly. Then in mid-September (while there are no outstanding invoices) he makes a payment of \$50. Since there are no unpaid invoices, this amount goes to "unallocated payments." Assuming the service charge for September is \$15 (\$10 for calls and \$5 for subscription), on October 1st when invoice #201 is generated, the unallocated payment balance is applied and the invoice status immediately becomes "paid." The amount due, shown on the invoice, is -\$50 + \$15 = -\$35 – and since it is a negative number, a "Credit balance, do not pay" message will appear next to the amount due in the invoice PDF. The unallocated payments now total \$35 (\$50 - \$15).



Service charges for the October billing period are \$25, so when invoice #307 (invoice total = \$25, amount due = -\$35 + \$25 = -\$10) is produced for this period, the "unallocated payments" are again applied to it, and the invoice becomes "paid." The unallocated payments now total \$10 (\$35 - \$25 = \$10). The charges for November are \$20, so the same process is repeated at the end of the November billing period. Invoice #378 for a total of \$20 is created stating the amount due: -\$10 + \$20 = \$10. The remaining amount in "unallocated payments" (\$10) is applied to this invoice – but since the available amount is less than the invoice total, the invoice status becomes "partially paid" and the unallocated payment amount is zero. Starting with the next billing period the invoicing continues as usual.

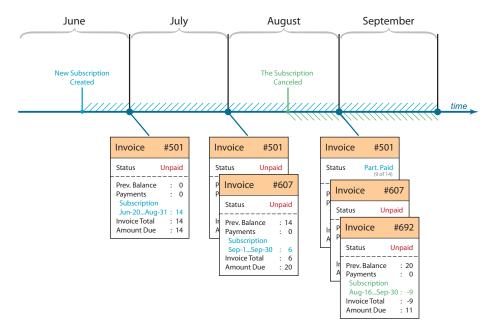
Example 7: Advance Subscriptions, Invoices with Negative Total

For example, on June 20th a \$6 subscription, charged two months in advance, is added to an account.

When invoice #501 for June is generated (on July 1st), it contains the "past" subscription charge for the period from the day the subscription was activated until the last day of June (10 days), as well as advance charges for two future billing periods (July and August), bringing the total subscription charges to \$14: \$2 (10 days out of 30 in June, so the prorated charge is \$6 * 10/30 = \$2) + \$6 (July) + \$6 (August) and the "billed to" property of this subscription is set to August 31st. So the invoice total for invoice #501 is \$14, and the amount due is \$14 as well.

Invoice #607 for the July billing period (produced on August 1st) contains a \$6 subscription charge for September (since the customer has already

been charged for July) and the "billed to" property is updated to September 30th, accordingly. Since the previous balance (on invoice #501 for the June period) was \$14, the amount due for this invoice becomes \$20 (\$14 + \$6).



On August 15th, the subscription is canceled. At that moment, a credit is issued for the entire billed but unused service period - from August 15th until the "billed to" date (September 30th), so the credited amount is \$9 (\$3 for half of August and \$6 for September). Invoice #692 is produced on September 1st for the month of August. It includes the \$9 credit, and assuming there were no other charges for that period, the invoice total is \$9. The amount due will then come to 20 - 9 = 11. In addition, a negative invoice total is recorded in the system in the same way the payment would be (since effectively, the outstanding customer balance is less now). The \$9 balance is applied to pay off invoice #501 for the June period (\$14), which becomes "partially paid" (the sum remaining is \$5). Invoice #607 for the July period remains "unpaid" (\$6). The status of invoice #692 is a bit tricky – and although there is nothing due on the invoice total itself, it still carries an unpaid balance from the previous invoices – so the customer still needs to pay this invoice's amount due (\$11) for all invoices to be paid and up to date.

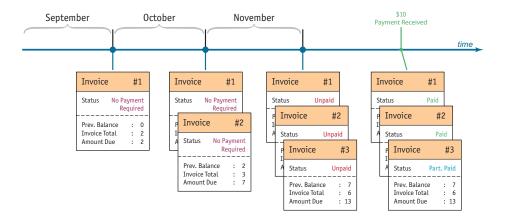
Example 8: Collection Threshold

Collection threshold allows payment to be delayed if the total amount is too low to make it worthwhile. If the amount due on an invoice is lower than the specified threshold, no payment is required and the collection process is not launched, i.e. notifications about the due date or an invoice being overdue are not sent. If no payment is made, the invoice balance is



rolled over to the next invoice(s) until the amount due on a new invoice crosses the threshold.

Let's consider the following scenario with an invoice grace period of 21 days and a collection threshold of \$10. During the initial period (September) the customer does not have any subscription charges (it is a promotional period) and he only makes calls for \$2 in total. Invoice #1 with a total of \$2 is then produced at the end of the month; the amount due for this invoice is likewise \$2. As the amount due is less than \$10 (the collection threshold), this invoice is considered exempt from the collection process. The customer will receive a PDF file with the invoice information; however, no further notifications will be sent, and the status for this invoice is displayed as "No Payment Required". On October 21st, when the invoice would have become overdue, nothing will happen.



During the second period (October) the total sum of charges is \$5 (\$2 for calls plus a \$3 subscription fee). At the end of the month, invoice #2 with a total of \$5 is produced; the amount due for this invoice is \$7 (\$2 + \$5), since the previous invoice balance is included. This amount is still below the collection threshold, so this invoice is also marked "No Payment Required" and exempted from the collection process.

During the third period (November) the total sum of charges is \$6 (\$3 for calls plus a \$3 subscription fee). At the end of the month, invoice #3 with a total of \$6 is produced; the amount due for this invoice is \$13 (\$7 + \$6), since the balance of the previous invoice (#2) is included. This amount is above the collection threshold (\$10), and so the invoice is considered "normal" (its status is displayed as "Open").

On December 10th the customer makes a payment of \$10. This payment is first applied to the oldest unpaid invoice (#1 for September, \$2 total), then to invoice #2 (October, \$5) and then the remaining amount (\$3) is applied to invoice #3. As the result, invoices #1 and #2 are now "paid", and invoice #3 is partially paid. The customer will receive notifications about the approaching due date (December 21st), and if payment is not received by then, the normal collection process will start.

3. Creating a Service with Discount Plans

This chapter will show you how to use PortaBilling® volume discounts to provision products that include a certain number of "free" monthly minutes, or to give your customers extra discounts after they make a certain amount of calls.

The following sections will assist you in setting up a product that includes various types of volume discounts. In the example below, we assume that the goal is to set up a product which will provide:

- several discount levels of calls to US and Canada per month: 200 free minutes, then 400 minutes in normal rate, then 700 minutes with a 10% discount and beyond that, an unlimited 20% discount
- \$5 worth of calls to all European destinations per month
- a 10% discount on all European calls after at least \$20 of such calls have been made in the current month



Checklist

Print the following page and use it to check off the operations you have completed while performing system setup according to the instructions in this chapter. Please be sure to perform all of the operations (all of the boxes must be checked), otherwise the service will not work.



The checklist below assumes that you have already configured the basic SIP service according to the instructions provided in *Setting up a Wholesale Traffic Exchange* chapter in the **PortaSwitch Handbook: Wholesale Services**.

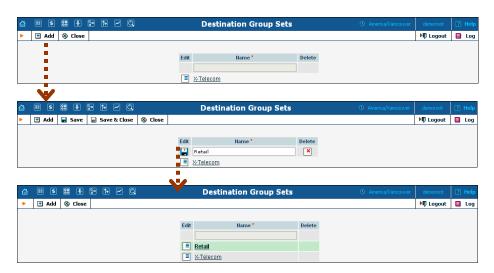
Operation		Done	
Initial configuration			
Make sure configuration of general and network settings has	ſ	1	
already been performed according to the instructions in Setting up	-	-	
a Wholesale Traffic Exchange chapter in the PortaSwitch			
Handbook: Wholesale Services.			
Make sure basic SIP service configuration has already been	[1	
performed according to the instructions in Setting up a Wholesale		,	
Traffic Exchange chapter in the PortaSwitch Handbook:			
Wholesale Services.			
Rating configuration			
Create a destination group set.	ſ	1	
Create the required destination groups.	ĺ	ĺ	
Assign prefixes to these destination groups.	ĺ	ĺ	
Create a volume discount plan.	ĺ	ĺ	
Define discounts within this discount plan.	Ì	ĺ	
Assign this discount plan as the default one for a certain product.	ĺ	ĺ	
Account provisioning			
Check that the retail SIP service customer has already been	ſ	1	
created according to the instructions in previous chapters.		-	
Testing			
Program the parameters (phone #, password, SIP server address)	ſ	1	
into the SIP phone and make a test call.		•	



Create a Destination Group Set

A destination group set is a logical container for destination groups which are used for the same purpose. For instance, in this case a destination group set contains various destination groups (such as US&Canada, or Europe) that apply to your customers.

- 1. In the **Rating** section of the admin interface, choose **Destination Group Sets**.
- 2. On the Destination Group Sets Management page, choose Add.



- 3. Type in the name of the new destination group set.
- 4. Click the Save button in the toolbar or the icon on the left end of the row.



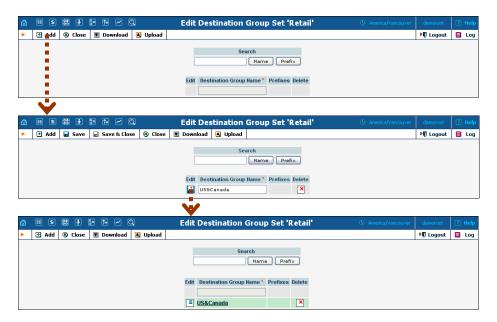
One common mistake in naming a destination group set results when you need to define a discount for US and Canada calls, and so create a destination group set named US&Canada which includes a US&Canada destination group. While this may suffice initially, what happens if you soon also need to provide a special rating for Asia calls? You can, of course, create another destination group for Asian phone prefixes, but then the name of the destination group set will be misleading. This is why it is recommended that a destination group set be named according to its purpose, not its contents. Thus a destination group set to be used for entering rates for your vendor X-Telecom will be named "X-Telecom", while a destination group set to be used to define rates for your customers will be named "Retail customers" or the like.



Define a Destination Group

Now you need to create the actual destination groups, each of which will contain phone prefixes.

- 1. In the **Rating** section of the admin interface, choose **Destination Group Sets**.
- 2. On the Destination Group Sets page, click on the destination group set name to enter the Edit screen.
- 3. Click **Add** to add a new destination group.



4. Type in the destination group name, then click the **Save** button in the toolbar or the icon on the left end of the row.

Assign Prefixes to the Destination Group

Assuming that you have already defined all the required prefixes (destinations) in the Destinations section earlier, you now just need to allocate them to destination groups, so that PortaBilling® will know exactly which prefixes belong to which destination group.

Add Prefixes Online from the Web Interface

1. When in edit mode for a destination group set, click on the name of the destination group to see detailed information about it.





2. Click • Add to enter "add prefixes" mode.



3. To display the available prefixes, type in the country name or a master phone prefix and press one of the search buttons (**Prefix** to search by prefix, **Country** to search by a country name).

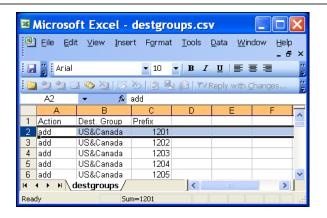


- 4. When you see a list of the available prefixes, select the ones you would like to include in this destination group, and then press the Save
- 5. Now you will return to edit destination group mode, where you can see a list of currently included prefixes. You may delete some of these, or add more prefixes if required.

Upload Prefixes from a File

When dealing with destination groups that contain a large number of prefixes (such as US&Canada, in this example) the preferred way to populate the destination group is by uploading a CSV file.

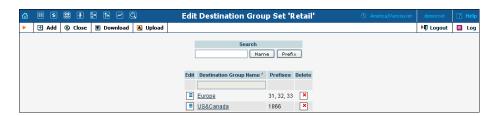




- 1. Prepare a CSV file which contains information about the prefixes. The file structure is as displayed in the picture: the first row contains column titles (and is ignored), while all the other rows include three columns: <action>,<destgroup>,,,cprefix>. Action is either add or delete, destgroup is the name of the destination group, and prefix is the actual destination (in E.164 format). You may include definitions of multiple destination groups in the same file.
- 2. When in edit mode for a destination group set, click the **Upload** button in the toolbar.



- 3. Either enter the name of your file manually, or click **Browse...** and choose the file.
- 4. Click Save&Close.
- 5. You will now see the Edit Destination Group Set screen, which displays the currently defined destination groups and the prefixes included.



NOTE: If the number of prefixes within the destination group is too large, not all of them will be displayed on this page; instead, "..." will be shown at the right end of the



Prefixes column. Click on the destination group name to go into edit mode and see all the prefixes.

Create All Required Destination Groups

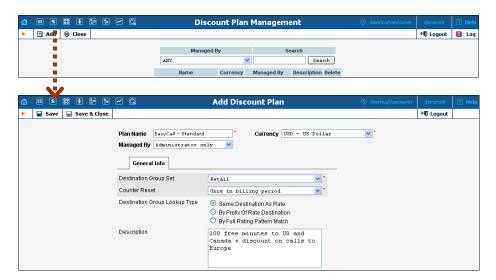


Repeat the *Define a destination group* and *Assign Prefixes to the destination group* steps, and then create a destination group for each calling area for which you would like to offer special conditions. For example, if you plan to provide free minutes to US&Canada and special volume discounts for calls to Europe, you will need two separate destination groups within the *same* destination group set.

Create a Volume Discount Plan

A volume discount plan contains definitions of all the applicable special discounts offered to users of a certain product.

- 1. In the **Rating** section of the admin interface, choose **Volume Discount Plans**.
- 2. On the Discount Plan Management page, choose Add.



- 3. Fill in the Add Discount Plan form:
 - Plan Name A short descriptive name for this discount plan.
 - Currency Indicates in which currency pricing information is defined; a volume discount plan can only apply to accounts and customers with the same currency.

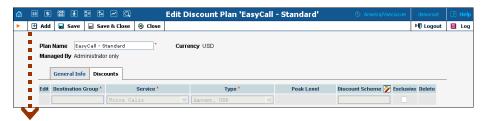
NOTE: The currency for the discount plan may be chosen only once (at creation) and cannot be changed later.



- Managed By If you want this discount plan to be used for your reseller's accounts, so that the reseller himself can change the parameters of this tariff and create new accounts using this product, choose a customer name from the menu. Otherwise, choose Administrator only here.
- Destination Group Set The destination group set which will be used to select the definitions of individual destination groups. Choose the destination group set you created in the previous steps.
- Counter Reset If you want your customers to receive a one-time promotion (e.g. 500 free minutes for each new subscriber), choose Never. This means that call counters will be never reset, and discounts will always be calculated based on the sum total of calls since account activation. The default option is Once in billing period, meaning that in every billing period the counters are set to zero and the process starts all over again, e.g. every month the customer is entitled to 200 free minutes.
- **Description** An extended tariff description.
- 4. Click **■** Save.

Define Discounts within a Volume Discount Plan

- 1. While in the Edit Discount Plan form, click on the Discounts tab.
- 2. Press Add to add a new discount.



- 3. Enter the initial information about this discount:
 - **Destination Group** Type in the name of the destination group this discount will apply to, or click on the column header to invoke a popup menu, where you can search for available destination groups and select one of them.

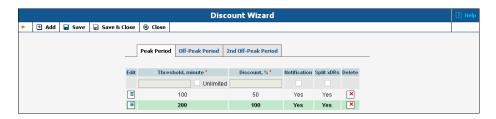




- Type If the discount levels are to be based on the total number of minutes, choose Volume, min. Otherwise, choose Amount, USD to use cost-based discount levels. For more details about different discount level options, see the PortaBilling Administrator Guide.
- **Discount Scheme** Click the icon in the toolbar to invoke the discount definition wizard. There are three tabs where you can define three different discounts for the peak, off-peak, and second off-peak periods. Setting discounts for multiple off-peak periods is explained in a separate chapter Creating Service with Multiple Off-Peak Periods below.

Define the applicable discount levels for the peak period:

- o Press **Add** to add a new discount level threshold.
- o In the **Threshold** column, enter the threshold value; the current discount will be applied *until* the counter value is *lower* than this threshold. For instance, if you specify 200 as the threshold for a volume-based discount, this discount level will be applied until the total number of minutes is between 0 and 199. If you tick the **Unlimited** checkbox, this discount will have no "upper" threshold. Typically, this is the last discount in the definition, e.g. "200 minutes free, then 200 minutes at the normal rate, then 300 minutes with a 10% discount and, if you go beyond that, another 20% discount." Therefore, in this case the correct sequence of discount thresholds would be 200, 400, 700, Unlimited (see below).



O In the Discount column, enter the actual value of the discount (use 100 to specify free calls). Do not put a %



- sign after the number, as this will be appended automatically.
- O Check the **Notification** box if you want an e-mail to be sent to the customer or account subscriber when a threshold is crossed. If no e-mail is specified for the subscriber, notification will be sent to the customer to whom the subscriber belongs.
- O Check the **Split xDRs** box and then a session divided into several portions (e.g. when a session spans several rating periods) will produce multiple xDR records. Each xDR record is linked to the applicable discount level / rate.
- O Click on the icon on the left end of the row to complete definition of this discount level. Repeat the steps above to define more discount levels.

Click Save&Close in the toolbar in order to return to the Discount Plan screen. You will see that the **Discount** Scheme column is now populated with the discount definition:

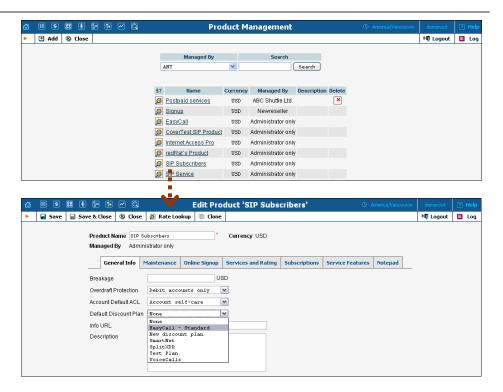


- Exclusive Defines whether an account should be granted exclusive free calls, i.e. calls to which a 100% discount is applied (these calls do not affect the customer's counters). See the PortaBilling Administrator Guide for more details.
- 4. Click the Save button in the toolbar or the icon on the left end of the row to save this discount.
- 5. Repeat steps 2-4 above to define more discounts within this discount plan.

Assign a Default Discount Plan to a Product

- 1. In the **Rating** section of the admin interface, choose **Products**.
- 2. On the Product Management page, click on the name of your SIP services product.





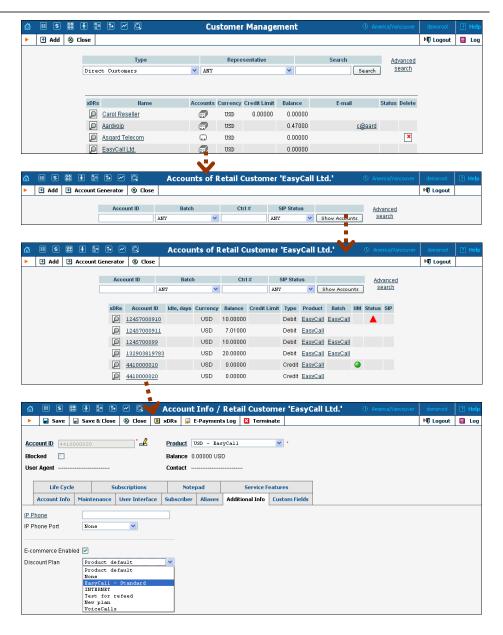
- 3. In the Default Discount Plan select menu, choose the volume discount plan you have just created.
- 4. Click Save&Close.

Now this discount plan will be applied automatically to all accounts with this product (unless it is manually overridden at the account level – see below).

Override the Discount Plan for an Account (Optional)

- 1. Go to the **Customers** screen (the one containing a list of customers).
- 2. Next to the customer name, click the living icon (the one in the **Accounts** column) to enter account management for this customer.
- 3. Perform an account search and, when the required account is displayed, click on the account ID.
- 4. On the Account Info page, click on the **Additional Info** tab.



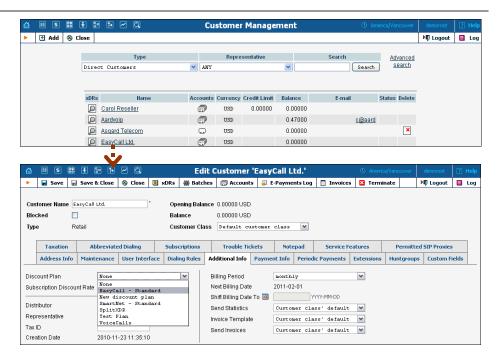


- 5. In the **Discount Plan** select menu, choose the volume discount plan you have just created.
- 6. Click **Save&Close**.

Assign a Specific Discount Plan to a Customer

- 1. Go to the **Customers** screen (the one containing a list of customers).
- 2. Click on the customer name.
- 3. On the Customer Info page, click on the **Additional Info** tab.





- 4. In the Discount Plan select menu, choose the volume discount plan you have just created.
- 5. Click Save&Close.

Check Current Volume Discount Statistics for an Account

- 1. Go to the **Customers** screen (the one containing a list of customers).
- 2. Next to the customer name, click the list icon (the one in the **Accounts** column) to enter account management for this customer.
- 3. Perform an account search and, when the required account is displayed, click on the account ID.
- 4. On the Account Info page, click on the **Volume Discounts** tab.



- 5. View the information in the table:
 - Destination Group The destination group this discount applies to.



- **Peak Level** The type of peak level this discount applies to (peak, off-peak or 2nd off-peak). In case of **N/A**, no off-peak levels are defined for the destination group in this discount plan, and the same discount applies all the time.
- **Threshold** The threshold value of the currently applied discount level.
- **Used** The current volume counter (total number of minutes or money spent).
- **Remaining** The total number of minutes or money remaining at this discount level; after it is used up, the next discount level will be applied.
- **Current Discount** The currently applied discount percentage.
- **Next Discount Level** The discount percentage which will be applied after the threshold is crossed.
- **Discount Info** Click on the licon to view comprehensive information about all applicable discounts levels.

Click **Close**.



4. Creating a Service with Multiple Off-Peak Periods

This chapter will show you how to use off-peak periods to create different rates for different times of the day or week, and also how to apply different discounts based on the time period.

In the previous chapter, we defined a product that offered several discount levels for calls to US and Canada without distinguishing between peak and off-peak time. In the example that we use in this chapter, we assume that the goal is to set up a product which will provide calls to US and Canada with:

- 500 free weekend minutes
- 750 free night minutes.



Checklist

Print the following page and use it to check off the operations you have completed while performing system setup according to the instructions in this chapter. Please be sure to perform all of the operations (all of the boxes must be checked), otherwise the service will not work.



The checklist below assumes that you have already configured the basic SIP service according to the instructions provided in *Setting up a Wholesale Traffic Exchange* chapter in the **PortaSwitch Handbook: Wholesale Services**.

Operation	Done	
Initial configuration		
Make sure configuration of general and network settings has	[]
already been performed according to the instructions in Setting up		
a Wholesale Traffic Exchange chapter in the PortaSwitch		
Handbook: Wholesale Services.		
Make sure basic SIP service configuration has already been	ſ	1
performed according to the instructions in Setting up a Wholesale	_	_
Traffic Exchange chapter in the PortaSwitch Handbook:		
Wholesale Services.		
Rating configuration		
Volume discount plan has already been created according to the	ſ	1
instructions in previous chapter.	-	-
Create first and second off-peak periods in the tariff.	ſ	1
Define different rates for the first and second off-peak periods.	ĺ	ĺ
Add off-peak discounts to the volume discount plan.	Ī	j



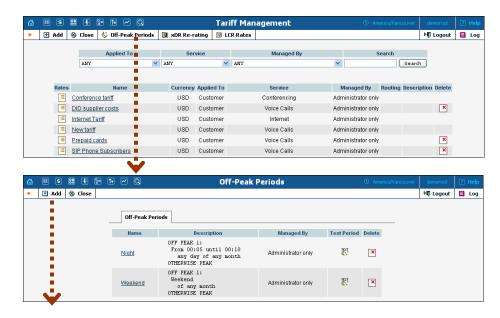
Create Off-Peak Periods in the Tariff



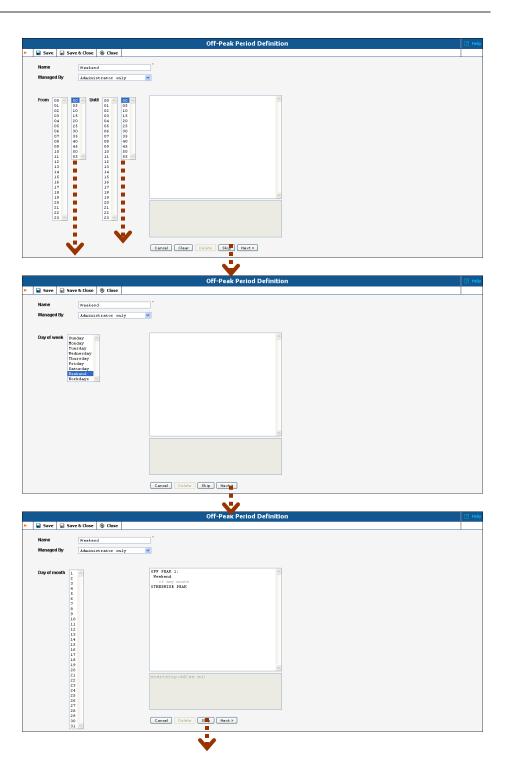
You have to enable the second off-peak period feature by activating the MultiOffPeakPeriod option via the PortaSwitch® configuration interface. It is located in the PortaSwitch / Admin node, Tariff group of the configuration tree. After this option has been enabled, define the second off-peak period via the Off-peak period wizard. For more information on off-peak periods, please refer to the Rating and Invoicing chapter of PortaBilling Administrator Guide (the Rating Individual Calls section).

Off-peak periods are defined per tariff as shown on the sequence of screenshots in this section. We will define two off-peak periods:

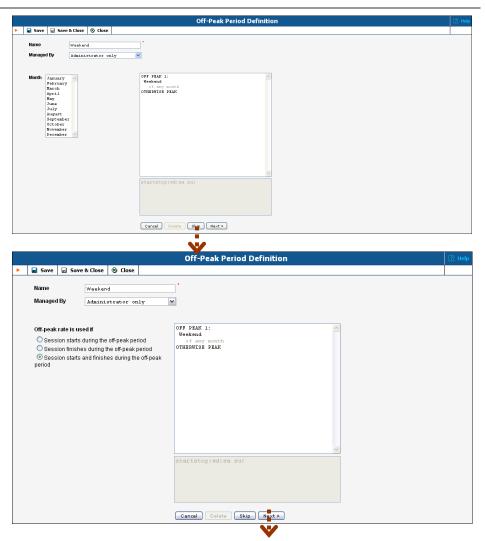
- weekends (from the midnight of Saturday until the midnight of Monday) as the first off-peak period and
- night hours (from 9pm until 8am) as the second off-peak period.
- 1. In the **Rating** section of the Admin-Index page, choose **Tariffs** and click on Off-Peak Periods. You need to create an off-peak period first, and then assign it to the necessary Tariff.
- 2. To add a new off-peak period to the system, select Add to go to the Off-Peak Periods screen.
- 3. As we are setting weekends as the first off-peak period, click **Skip** on the first page of the wizard (defining hours). Then select *Weekend* in the **Day of week** box and click **Next**. Click **Skip** on the following two pages defining **Day of month** and **Month**. Select one of the three options depending on when you want the call to start and / or finish. Click **Next**.





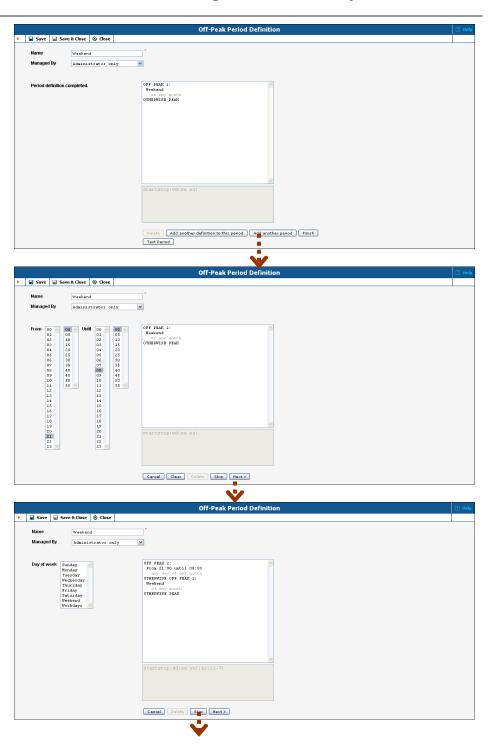




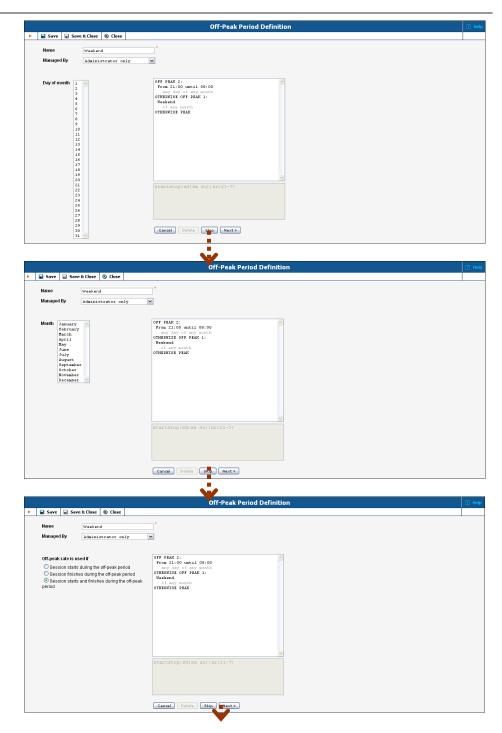


- 4. Now you need to define the second off-peak period (from 9pm until 8am during working days). Press the **Add another period** button.
- 5. Select 21 and 00 in the **From** columns and 08 and 00 in the **Until** columns, then click **Next**. Click **Skip** on the following three pages. Select one of the three options depending on when you want the call to start and / or finish. Click **Next**.



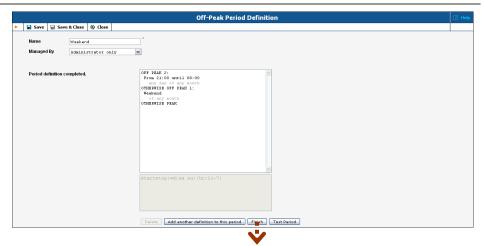






6. Press **Finish** to finish defining the off-peak periods.





7. On the Tariff Management page, choose the tariff for which you want to set up the created off-peak period.



- 8. The off-peak periods are visible in the Default **Off-Peak Period** field.
- 9. Click Save&Close.

Define Rates for Off-Peak Periods



You can define different rates for the off-peak and second off-peak periods on the **Rates** page. Insert prices for the first and second off-peak periods into two adjacent fields (0.007 and 0.006 on the screenshot) next to the fields where you define first and next intervals for the off-peak period:

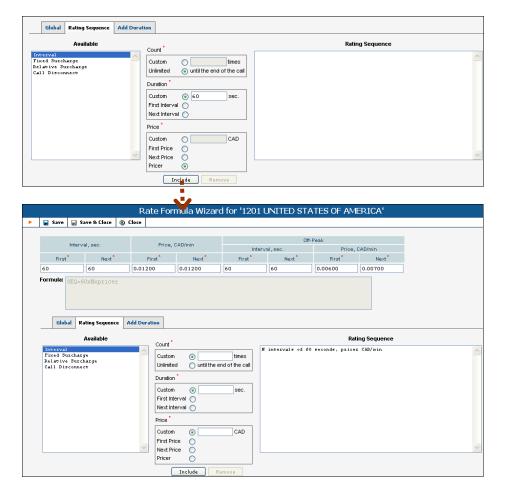




Also, you need to select the special **pricer** element in the rating formula as price per minute instead of **price_first/price_next**. Click on the Rate formula wizard icon (), then click the **Rating Sequence** tab, select



Interval in the Available box, choose Unlimited in the Count box, select Custom and type in 60 sec. in the Duration box and choose Pricer in the Price box, then click Include. The new rating sequence will appear in the Rating Sequence box. Click Save&Close:



PortaBilling® will then check whether the call fits into the main period; if so, the **pricer** will be set to the **Off-peak price next** value. If the call does not fit into the main off-peak period, then the second off-peak period will be checked; if the call fits into this period, **pricer** will be assigned the **Off-peak price first** value. Otherwise, peak rates are applied, and **pricer** will be populated with the value from **Price_next**.

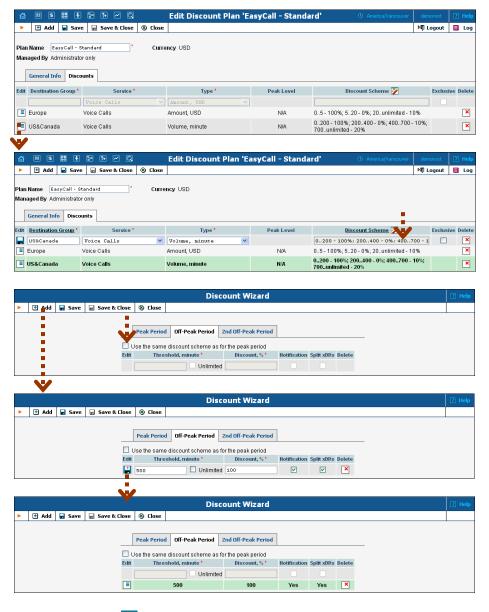
Define Discounts for Off-Peak Periods

Now we will add different discounts for the off-peak and second off-peak periods to the discount plan created in the previous chapter.

- 1. In the **Rating** section of the admin interface, choose **Volume Discount Plans**.
- 2. Click on the discount plan which you want to edit.

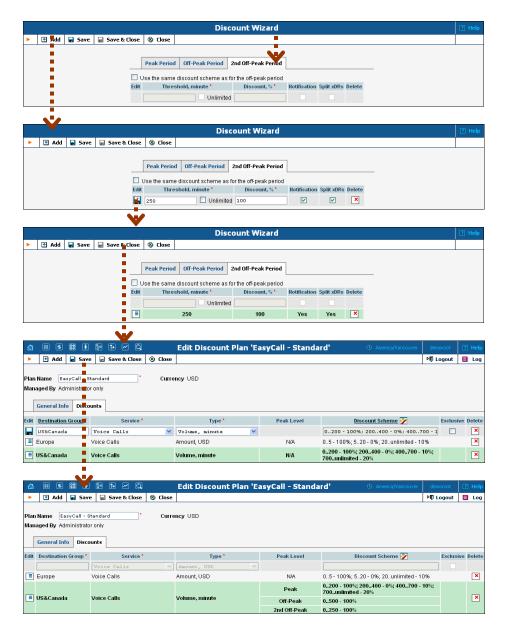


- 3. Click on the **Discounts** tab.
- 4. Click the **Edit** icon for the discount to which you want to add off-peak discounts:



- 5. Click the icon in the toolbar to invoke the discount definition wizard. There are three tabs where you can define three different discounts for the peak, off-peak, and second off-peak periods.
- 6. Click the **Off-peak Period** tab and uncheck the box reading **Use** the same discount scheme as for the peak period.
- 7. Press Add to add a new discount level threshold. Define the threshold in the same way as was explained in the section *Define Discounts within Volume Discount Plan* above.
- 8. Click on the icon on the left end of the row to complete definition of this discount level.





- 9. Click the **2nd Off-peak Period** tab and uncheck the box reading **Use the same discount scheme as for the off-peak period.**
- 10. Press Add to add a new discount level threshold. Define the threshold in the same way as was explained in the section *Creating a Service with Discount Plans* above.
- 11. Click on the icon on the left end of the row to complete definition of this discount level.
- 12. Click Save&Close in the toolbar in order to return to the Discount Plan screen.
- 13. Click the **Save** button in the toolbar to save this discount.