

Porta 🌄 Billing 100[™]



PortaBilling100 for NexTone

Maintenance Release 13

www.portaone.com

Copyright notice & disclaimers

Copyright (c) 2001-2006 PortaOne, Inc. All rights reserved.

PortaBilling100 for NexTone, October 2006 Maintenance Release 13 V1.13.4

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

	Preface	3
1.	Solution Architecture	4
	Concepts	5
2.	NexTone Configuration	8
	Configuring NexTone	9
3.	PortaBilling Configuration	14
	PortaBilling100 Configuration Call Routing	15 36
4.	How to	
	How to manage the routing?	
5.	Troubleshooting	

Preface

This document provides information on setting up "PortaBilling100 for Nextone" in conjunction with NexTone MSX, so as to provide various services such as VoIP traffic exchange.

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/resources/documentation/

Conventions

This publication uses the following conventions:

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

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

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

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

Tips provide information that might help you solve a problem.



1. Solution Architecture

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

Concepts

PortaBilling for Nextone

PortaBilling100 for Nextone is a separate product based on PortaBilling100 and providing all the standard billing features. It also includes all functionalities specific to Nextone, e.g. special processing of RADIUS attributes or a command-line utility for CDR import.

Architecture



VoIP nodes

A node is an element of your VoIP network, such as a gateway, proxy, gatekeeper, and so on. A node:

- participates in the call flow (passes a call through itself),
- communicates with the billing in order to determine whether a particular call should be allowed or not,
- provides accounting information to the billing after the call is completed, so the call can be charged.

NexTone MSX is a typical VoIP node: it accepts incoming calls, performs authorization in the billing, sends calls to the remote gateway for termination and, finally, delivers accounting records to the billing.

RADIUS server

In order to communicate with external entities such as VoIP gateways, the RADIUS protocol is used. VoIP nodes serve as radius clients, and

PortaBilling100 serves as a radius server. The client sends a request (set of attributes) to the server, and the server replies. There are three types of requests:

- 1. Authentication the VoIP node has to determine whether a certain account (the account ID passed in the User-Name attribute) is valid and is allowed to use the service. Billing replies with either a rejection or an acknowledgement (including optional attributes such as h323-credit-amount available funds).
- 2. Authorization the VoIP node has to determine whether an account is allowed to make a call to a specific destination. Billing replies with either a rejection or an acknowledgement (including optional attributes such as h323-credit-time maximum allowed call duration).
- 3. **Accounting** the VoIP node sends information about the completed call, and the billing replies with a confirmation that it has been processed successfully.

NexTone MSX

NexTone MSX is an advanced VoIP session border controller and switch incorporating H323 and SIP proxy, as well as an H323-SIP protocol converter.

NexTone-PortaBilling100 dialogue

NexTone sends requests to the billing so as to obtain information for the following actions:

- Registration. A new SIP UA tries to register to the proxy. NexTone sends an authentication request, and the endpoint is registered upon successful authentication.
- Call authorization. One of the endpoints tries to make an outgoing call. NexTone sends an authorization request to the billing in order to check whether this account is allowed to make a call to that destination and what is the maximum allowed credit time.

NOTE: Currently, call authorization is only available for incoming SIP calls.

• Accounting. When the call is completed (successfully or not), NexTone sends an accounting request to the billing, so that the account can be charged for this call.

NexTone MSX uses several PortaBilling-specific RADIUS attributes in addition to the standard Cisco VSA set, including:

- h323-ivr-out = PortaBilling_UserName:NNN specifies the account ID (NNN) to be used for authorization or call charging,
- h323-ivr-out = PortaBilling_Ignore_Password:YES switches off password validation for IP-based or ANI-based services.

Required Nextone version

PortaBilling100 for Nextone requires the following versions of NexTone for successful operations:

- MSX Version 4.0c3-9 or later
- iView version 4.0c5 or later

Earlier versions of NexTone MSX do not support special RADIUS attributes, and therefore cannot be used for real-time billing (although you can still import CDRs in off-line mode).

2. NexTone Configuration

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

Configuring NexTone

iServer configuration

- 1. Fill in the **Billing** form in the iServer configuration:
 - Billing Type Choose Cisco-Prepaid.
 - **Primary Server** IP address of the PortaBilling100 master server.
 - **Primary Secret** RADIUS secret key for this Nextone node (assign a value, then make sure this same value is entered in the Nextone node's configuration in PortaBilling).

SIP H.323 FCE Billing Redundancy	System Advanced Logging
Billing Type:	Cisco-Prepaid 🔻
Prepaid	
First Us	er: NextoneUser
First Passwo	rd: Nextone
Second Us	er: NextoneUserA
Second Passwo	rd: Nextone
CDR Type	Daily
CDP Timor	minutes
CDR Interim	20 minutes
CDR Directory Date	a /max/adve
CDI DI PELIDI PAL	
	✓ Leg 2 Start
	🗌 Hunt
Radius	
Primary Server: 19)3.28.87.5
Primary Secret: no	extone
Secondary Server:	
Secondary Secret:	
Timeout: 5	Seconds
Retry: 4	
Dead Time: 0	Seconds
L. C.	Send RADIUS Accounting Messages
	Use Overloaded Session ID Format
E	enable POD
POD port: 1	
POD username:	
POD password:	
1	

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

server.cfg

To identify the PortaOne billing server, there is a new configuration parameter called "use_ip_ani_auth" under billing in the server.cfg file. It has not yet been merged into the latest release of iView.

```
billing ciscoprepaid {
    firstauth "NextoneUser" "Nextone"
    secondauth "NextoneUserA" "Nextone"
    use_ip_ani_auth on
```

The last parameter activates use of the PortaBilling_Username attribute, so it will be populated with either an ANI phone number or the IP address of the remote endpoint.

Configuration of authentication modes

NexTone supports three main authentication modes:

- SIP digest authentication This is a global mode; if activated, it applies to all endpoints.
- Authentication by remote IP address In this case, for every incoming call NexTone passes signaling of the remote endpoint to the billing as an account ID. This mode can be applied to specific endpoints.
- Authentication by ANI number In this case, for every incoming call NexTone extracts ANI (CLI) data from the call information and passes it to the billing as an account ID. This mode can be applied to specific endpoints.

NOTE: Currently, NexTone MSX supports real-time call authentication / authorization for incoming SIP calls only. For H323 calls, only postpaid billing is available.

If you wish to use IP-based authentication for some calls and ANI-based authentication for others from the **same** endpoint, you can configure the authentication mode to be dynamically chosen based on the destination number. For instance, customers who are authenticated by a remote IP address must append 1234# to the destination number when sending a call to your NexTone. Similarly, customers authenticated by an ANI number will use a different prefix (e.g. 4567#). NexTone will analyze the DNIS (CLD) data in the incoming call and apply the corresponding authentication method.

Activating SIP digest authentication mode

In the iView configuration, activate RADIUS authentication:

dundancy	System Adv	anced L	ogging
SIP	H.323	F	CE Billing
	Server Name:	kaushal	
	Authorization:	radius 🔻	•
Authoriza	ntion Password:	none	
	Server Type:	radius Stateful I	Proxy V
		Recor	d Route
			L Internal Calling
			Dynamic Endpoints
			🗌 NAT Travsal
Max	imum Forwards:	70	
	SIP TimerC:	180	seconds
SIP T	imer Short Hunt:	2	seconds
	SIP Port:	5060	
	SIP Qien:	1000	
		1002	

Configuring an authentication mode for an endpoint

In order to activate ANI-based authentication/billing, execute the following command on your NexTone server:

cli iedge edit <endpoint-name> 0 anibasedauth yes

In order to activate IP-based authentication/billing, execute the following command on your NexTone server:

cli iedge edit <endpoint-name> 0 anibasedauth no

By default IP-based authentication is applied.

Configuring dynamic authentication mode for an endpoint

You should create two uports for the same endpoint, and a separate calling plan for each uport. In the example below, we assume that you will use 1234# for IP-based authentication and 4567# for ANI-based authentication.

ANI	~	
Calling Party #:		Length: 🔄 🗌 Length unspecifi
Prefix:		Usage <u>help</u>
DNIS		
Called Party #:	1234#	Length: 🗾 🗹 Length unspecified
Prefix:		🗌 No Digit Strip
🗌 Default Rout	te	
- neject		
Sticky		
Properties		
Applied at: 🔘	Ingress O E	gress 🔿 Transit
102202202222222222222	an <u>s</u> aranan senar	

ANI type	DNIS time			
<u>Ω Ματομος</u> ⊚ Ι	Sing (Abc			
Calling Party #	1	- F	Length	Leagth unspecifier
Prefix:			Usage <u>help</u>	
DNIS				
Called Party #:	4567#	Lengt	h: 📃 🗹	Length unspecified
Prefix:			o Digit Strip	
🗌 Default Rout	te			
Reject				
Properties				
Applied at: 🔘	Ingress 🔿	Egress 🔿	Transit	
Template: 🗌				

Next, assign the authentication mode for each endpoint:

cli iedge edit <endpoint-1-name> 0 anibasedauth no cli iedge edit <endpoint-1-name> 0 anibasedauth yes

3. PortaBilling Configuration

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

PortaBilling100 Configuration

Please see the **PortaBilling Administrator Interface** for detailed instructions on how to navigate in and utilize the web interface, as well as detailed explanations of particular fields.

Checklist

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

Operation	Done
General configuration	
Fill in company data in Company Info	[]
Specify base currency	[]
For any other currency you plan to use, specify the exchange rate	[]
source and define exchange rates	
Create all the required destinations for off-net calls	[]
Network configuration	
Create a node for NexTone	[]
Rating configuration	
Create a tariff A, which will apply to your customers (people who	[]
send traffic to you)	
Enter rates in tariff A for the destinations your customers want	[]
to call	
Create a tariff B, which describes your termination costs and	[]
routing for off-net calls (make sure it has a Routing type!)	
Enter rates in tariff B for the destinations you plan to call	[]
Create a "Traffic exchange" product	[]
Create one accessibility entry for this product, using the	[]
NexTone node and tariff A	
Create an off-net calls vendor	[]
Create a connection for this vendor using tariff B	[]
Account provisioning	
Create a retail customer who will use the "Traffic exchange"	[]
service	
Create several accounts for this customer, with an account ID	[]
identical to the remote gateway IP address	
Testing	

Make a test call []

Initial PortaBilling configuration

The following steps are normally performed only once, after the system has been installed:

- Visit **Company Info** from the main menu. Enter information about your company and set up a base currency. Of course, this does not limit your operations to this currency only. However, different currencies will be converted to the one you specify here on reports such as cost/revenue.
- From the main menu, choose **Users** and create login entries for users who will be working with the system. It is not recommended that the default PortaBilling root user (**pb-root**) be used for any operations other than initial setup.
- Make sure you are able to login as the newly-created user, and change the password for the **pb-root** user.
- If you plan to do billing in more than one currency, define these in **Currencies** and specify the exchange rates in **Exchange Rates**.

Create destinations

This step is only required if you have not previously defined the necessary destinations. There are two ways of entering new destinations into the system:

- One-by-one, using the 🖪 Add functionality on the web interface
- By bulk update, uploading the destinations from a file

NOTE: A file with the default destination set is supplied with PortaBilling. You can download it and then upload it to the server. However, it is possible that your business will require different types of prefixes, so please examine the data in the file before uploading.

Creating destinations one-by-one

1. In the Management section of Admin-Index, choose **Destinations**.

۵	_	\$:			Dest	inations		() Europ	e/Kiev	demo-root	🛛 Help
•	🔁 Add		Save	🛞 Close	👿 Download	🔳 Get default set	萬 Upload				💵 Logout	目 Log
***	** •	•			Prefix Cou	ntry Description) ► A B C I	A B C D E F G H I J K L M N O P Q R S T U			:	
	Edit Prefix *				CZECH REPU	Country BLIC Y	Not Appli	cable	Czech proper	Delete	5	
	1					ΈS			US prefix	×		
	380				UKRAINE				Ukraine proper	×		

- 2. Click the **d** Add button.
- 3. Fill in the required information. This includes the phone prefix and country. The country subdivision is optional. You can use the **Description** column to store additional information about the destination (for example, if it is a mobile or fixed number).
- 4. Click **Save**.
- 5. Repeat steps 2-4 for each additional destination.

Uploading a set of destinations from a file

- 1. In the Management section of Admin-Index, choose **Destinations**.
- 2. Click on **Get default set** to download a set of destinations as a CSV (Comma-Separated Values) file.
- 3. Open this file in Microsoft Excel or any other suitable program. Edit the data if required.
- 4. Save the file and close it.
- 5. Switch back to the PortaBilling web interface, and click **Upload** on the Destinations screen.
- 6. Type in the filename for the file you have edited, or click on the **Browse...** button and select the file.
- 7. Click Save & Close.

Create nodes

You must create at least one node to represent your NexTone MSX server. If other gateways are part of your network (Cisco, Quintum), you must enter these as well.

NOTE: Only your own gateways need to be entered as nodes. Remote gateways belonging to a partner/carrier, or those legally belonging to you but used solely by your customer(s), are not considered nodes.



🙆 🗸 🖬 🕻		Add Node		I Europe/Kiev	demo-root	🛛 Help
► Save Save	& Close 🛞 Close				N Logout	
Node Name Nextone						
h323-id ne	extone.portaone.com	Manufacturer	Nextone 💙			
VoIP Password di	sco * Auto	Туре	MSX/MSW 🔽			
NAS-IP-Address 19 Hostname Domain	93.28.87.41 *	RTP Proxying	Optimal 💙			
Auth. Transl. Rule 🕐		RADIUS Client				
		RADIUS Key	strongsecret * Auto			
		RADIUS Source IP	193.28.87.41			
		RADIUS Dictionary	Cisco			
Submitted information Default caching time is	is being cached in the billing engin 10 minutes. Please contact your OK	ne and will not take eff system administrator I	iect immediately. for more information.			
	No	de Management		() Europe/Kiev	demo-root	? Help
► 🗄 Add 🛞 Close					M Logout	目 Log
	H323-ID II Name h323-id	P RADIUS Clien O Yes O No (IP Manufacturer	t) All Show Nodes Type RADIUS Client Delete			
	Nextone nextone.portaone.com 193	3.28.87.41 Nextone	MSX/MSW 🗾 💌			

- 1. In the Management section of Admin-Index, choose Nodes.
- 2. In the Node Management window, click the **Add** icon.
- 3. Fill in the New Node form:
 - **Node name** A short descriptive name for this node (this will be used in the select menus).
 - o H323-ID h323-id (recommended: hostname.domainname)
 - H323 Password If you plan to send calls from NexTone to your Cisco gateways, where the default Cisco remote IP authentication script is used, enter cisco here.
 - o NAS-IP-Address IP address of the NexTone.
 - Auth. Translation rule Used to convert a dialed number to the desired format.
 - Manufacturer Select NexTone.
 - **Type** VoIP node type; select **MSX**.
 - Radius Client Make sure this box is checked.
 - **Radius Key** Make sure it is the same value you previously entered in the iServer configuration.
 - **Radius Source IP** IP address of the NexTone.
- 4. Click Save&Close.
- 5. Repeat steps 2-4 until all of your nodes have been entered.

NOTE: There is some propagation delay between the database and the Radius server configuration file, but no more than 15 minutes.

Create a tariff

A tariff is a single price list for call services. A tariff combines:

- conditions applicable to every call regardless of the called destination
- per destination rates.

Normally, you will need a separate tariff for each of your customers.

- 1. In the Management section of Admin-Index, choose Tariffs.
- 2. On the Tariff Management page, choose **Add**.
- 3. Fill in the **New Tariff** form:
 - **Name** A short name for the tariff object. This is the name you will see later in the select menus.
 - **Currency** Indicates the currency in which pricing information is defined. All pricing information for a single tariff must be defined in the same currency.

NOTE: The currency for a tariff is chosen only once, and cannot be changed later.

- **Type** Choose "Ordinary" for a tariff for your customers, and "Routing" for your vendors.
- Off-peak Period Defines the off-peak period. Click on the off-peak period wizard icon (2) to summon the wizard, which will help you construct a correct period definition. Click Help to get more information on period format definition. If you do not differentiate between peak and off-peak rates, just leave this field blank.
- **Off-Peak Description** A description of the off-peak period, automatically filled in by the off-peak period wizard. You do not need to fill in this field.
- **Destination group set** If you wish to enter rates in the tariff for a whole group of prefixes at once, rather than for each individual prefix, you should create a destination group set and destination groups beforehand. Leave this select menu empty for now.
- **Free seconds** The number of free seconds allowed for each call. In order to use free seconds, the call length must be at least one billing unit (i.e. the first interval; see the 'Enter Rates' section above).
- **Post Call Surcharge** A percentage of the charged call amount.

- **Login Fee** The amount to be charged immediately after initial user authentication (i.e. after the user enters his PIN).
- **Connect Fee** The amount to be charged for each connected call (of a non-zero duration).
- **Round charged amount** Instead of calculating CDRs with 5decimal-place precision, round up CDR amount values (e.g. to cents, so that 1.16730 becomes 1.17).
- **Formula** The default rating formula which will be applied to each rate created in the tariff. If you leave this empty, "old-style" rating will be used.
- Short Description A short tariff description. This will be shown in the rate lookup on the admin interface and the self-care pages for your accounts and customers. For example, the short description for the cust-ABC-Easy Call-1800 tariff will provide better information for your reseller ABC, who will be using this tariff, e.g. "EasyCall via a toll-free number". This field is mandatory; if you are unsure what to enter here, enter the same name as for the tariff.
- **Description** An extended tariff description.
- 4. Click Save.





Enter rates

Rates are per-destination prices. Please refer to the **System Concepts** chapter for more details on billing parameters.

Managing rates online

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

 On the Tariff Management page, you will see a list of available tariffs. Click the Rates icon next to the name of the tariff. When you are in Tariff Management for a particular tariff, click on 🗉 Rates in the toolbar.

- 2. In the **Edit Rates** screen, click **Add**.
- 3. Fill in the required information:
 - Destination A 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 column header). Here you can find the desired prefix by country name.

NOTE: The phone prefix you are trying to create a rate for must already exist in Destinations.

- Interval First first billing unit in seconds
- Interval Next next billing unit in seconds
- **Price First** per-minute price for first interval
- o Price Next per-minute price for next interval
- **Off-peak Interval First** first billing unit in seconds for off-peak time
- Off-peak Interval Next next billing unit in seconds for offpeak time
- Off-peak Price First first interval per-minute price for offpeak time
- Off-peak Price Next next interval per-minute price for offpeak time

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

- Formula i Launches the wizard for creating a custom rating formula.
- Effective from If you want this rate to take effect sometime in the future, you can either enter a date manually, or use the calendar (click on the DD-MM-YYYY link). Click on the ^① Stop Watch icon to make the rate effective **immediately**.

NOTE: When using the calendar, you may specify a different time zone than the current one for the date you are entering. PortaBilling will then automatically adjust the time.

ຝ]	s i		3		'Termina	tion t	ю Х-Т	elecon	n' tariff	rates				④ Europ	e/Kiev		lemo	-root		? н	elp
•	Add 🖬 Save 🛞 Elose 🛅 Tariff											🛃 Calend	ar						X				
							Effective Fro	Effective From Destination Nov V Prefix Group Country							Europe/Luxembourg					r 💌 [
							Country	al, sec.	Price, USD/min ①Effective From				_	~									
					Edit	Destination *	Description	First *	Next *	First Next	YYYY-MM-DD	∕fx	∕‰ ⊉	Q	Mo	Tu	We	Th	Fr	Sa	Su		
												HH24:MI:55*				28	29	30	31	1	2	<u>3</u>	
	380		380		1	1	0.07	immediately		* -			4	<u>5</u>	<u>6</u>	Z	8	<u>9</u>	<u>10</u>				
										LATE			11	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	17				
							UNITED STATES			0.04500	0.04500	2006-09-12				<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	
						1	US prefix	1	1	0.01500	0.01500	13:56:14				<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	1	

- The Hidden, Forbidden and Discontinued flags are optional.
- 4. Click the Save button in the toolbar, or the icon at the left end of the row.
- 5. Repeat the preceding steps if you need to enter more rates.

Managing rates offline

NOTE: Templates are available in PortaBilling, a powerful tool for uploading rates from custom format data files. However, in this particular example we assume that you are preparing data in the default PortaBilling format.

The rates table may be prepared using a spreadsheet processor (i.e. Microsoft Excel) and then easily imported into PortaBilling. This is very convenient should you wish to make many changes. For example, you could increase all prices by 10%.

- 1. If you are not in Tariff Management for your tariff, go to the main menu, click on **Tariffs**, and then click on the tariff name.
- 2. In the Edit Tariff window, move the mouse pointer over the **Download** button and hold it there until a popup menu appears. Choose the **Now** menu item and click on it. This will download the current set of rates (empty), and will also provide you with an overview of the file structure.
- 3. You will see the **File Download** dialogue, and will be prompted to save the file or open it from its current location. We recommend that you first save the file to the folder you will be using to store tariff data files in the future, and then open it in Excel.
- 4. You should see something similar to the screenshot below:

8	Eile Edit	⊻iew Insert Forma	at <u>T</u> ools <u>D</u>	jata <u>W</u> inc	low <u>H</u> elp										_ 8	×
	🛎 🖬 é	B 🖪 🖤 👗 🖻	n 💅 n	- 🍓 :	Σ f≈ <mark>‡</mark> ↓	۵ 🛍) 🐉 🕹	rial		• 10 •	B I I	ī≣≣	: = E		- 👌 - <u>A</u> -	» *
	A8	▼ = 420														_
	Α	В	С	D	E	F	G	H	1	J	K	L	M	N	0	-
1	Name	Currency	Descriptio	n												-
2	(An) Termi	USD	What we o	harge our	customers	s for the	ir calls v	ve terminat	e							
3																
4	Off-peak P	Free Seconds	Post Call 3	Login Fe	Connect F	ee										
5		0	0	0	0											
6																
7	Destination	Country	Descriptio	interval 1	Interval N	Price 1	Price N	Off-peak Ir	Off-peak Ir	h Off-peak I	Off-peak F	Forbidde	Hidden	Discontin	Effective From	
8	420	CZECH REPUBLIC	Proper	1	1	0.05	0.05	1	1	0.05	0.05				12-12-03 03:33	
9	-															
10																
11																
12																-
i i	() H ()	sv](An)_Termina	tion[2]/							4					•	
Rea	dy										Sum=3839	1.34809				1

- 5. Edit the file by adding more rows with rate data, so that it looks similar to the screenshot below.
- 6. Note that the **Country** and **Description** columns are only for reference purposes, and are ignored during import. Also, when using the default template you must fill in the Off-peak columns even if your tariff does not have an off-peak period (use the clipboard to easily copy values to the four peak columns).
- 7. Also note that you may only use those phone prefixes which you have already defined as destinations (see **Create destinations** above).

8	Eile Edit	⊻iew Insei	rt F <u>o</u> rmat	Tools Dat	a <u>W</u> indow	Help									_ 8	×
	🛎 🖬 🖉	i 🖪 😵	እ 🖻 🛍	s 💅 🔊 -	- 🍓 Σ	f≈ ĝ↓ 🛍	1 🖸 🐉 🗚	rial		• 10 •	BI	[≣ ≣	= 🖬 (🗏 🖂 • 🖇	• - <u>A</u> -	2
	A9	•	= 420602													
	Α	В	C	D	E	F	G	Н		J	K	L	M	N	0	-
1	Name	Currency	Descriptio	n												-
2	(An) Termi	USD	What we d	charge our d	customers f	for their call	s we termir	nate								
3																
4	Off-peak P	Free Seco	Post Call	Login Fee	Connect F	ee										
5		0	0	0	0											
6																
7	Destination	Country	Descriptio	r Interval 1	Interval N	Price 1	Price N	Off-peak Ir	Off-peak Ir	Off-peak P	Off-peak F	Forbidden	Hidden	Discontinu	Effective F	_
8	420	CZECH RE	Proper	1	1	0.05	0.05	1	1	0.05	0.05					
9	420602		Mobile	1	1	0.09	0.09	1	1	0.09	0.09					
10	-															
11																
12																
i l	.	sv](An)_	Terminati	on[1]/						•					•	Г
Rea	dy										Sum=4206	06.36				



- 8. Save the file in Excel. You will probably get a warning from Excel that your file "*may contain features that are not compatible with CSV (Comma delimited)*". Ignore this, and choose **Yes** to retain CSV format.
- 9. Close the file in Excel. If you performed step 6, then disregard the message "*Do you want to save the changes you made*", as this only results from the fact that your format is not the native Excel XLS format.
- 10. Go back to the PortaBilling web interface and the Edit Tariff screen.
- 11. Click on the **Upload** button.
- 12. Either enter the name of your file manually, or click **Browse...** and choose the file.
- 13. Click Save & Close. You should return to the Edit Tariff screen, where a message will inform you of the status of the import. Also, you will receive email confirmation of the tariff upload. If any operation has failed, you will receive the portion of the data which was not uploaded as an attachment, so that you can try to import it later.

You can verify your work using the **Edit Rates** feature. After you have done this, go to the **Main** menu (by clicking on the **Home** icon).

Test the rate configuration (optional)

1. While in the **Edit Tariff** window, click on the **Edit Test** button to go to the Test Call Rating screen.



2. Type in the phone number for which you would like to test the rating, as well as the estimated call duration, then click on the **Test** button.

۵	✓ 🗈	s i 🖂		Test Call Rating	() Europe/Kiev	demo-root	🛛 Help
•	🛞 Close	2				💵 Logout	
	Date and Time	© <u>YYYY-MM-DD</u> 2006-09-11	HH24:MI:SS 17:16:30	Result of the testing Formula:			
	Phone number ③ Simulate call ○ Simulate auth	17787654321		Expanded Formula: MIN = 1 SEQ = 1x1x0.015 & 1xNx0.015			
		charges based on the o orization based on the	all duration available funds	Charged amount: 0.1525 USD Real charge history: +1x1x0.015+609x1x0.015			
	Call duration	10:10 HH	I:MI:SS, MI:SS or SS				

- 3. You will now see the estimated amount charged for this call, as well as a detailed explanation of the rating process.
- 4. Press the **S** Close button to return to the Edit Tariff window.

Create all the required tariffs



Repeat the **Create Tariff** and **Enter Rates** steps until you have created the following:

- A tariff for each type of service you provide to your customers. For instance, if you plan to provide a wholesale termination service as well as end-user VoIP calls, you will need two separate tariffs.
- A tariff with termination costs for each termination partner you have.
- If you have resellers, also create the tariffs you will use for charging each of them. Do not create tariffs which will apply to

your resellers' subscribers yet. First create your customers, and then return to this step.

Create a product

Each of the remote customer gateways will be represented as an account, and billed accordingly. Hence we need to create a product for the account in order to have a defined way of billing it. If you have specific percustomer rates/tariffs, then you will need a product for each customer.

- 1. In the Management section of the Admin-Index page, choose **Products**.
- 2. On the Product Management page, click the **Add** icon.
- 3. Fill in "Add product" under the General Info tab:
 - **Product name** Product object name.
 - **Currency** Product currency. Only tariffs which have the same currency are permitted in the accessibility list.
 - Managed by The default is "Administrator".
 - Breakage A leftover balance which is considered "useless" (for statistical purposes). Accounts with a balance below breakage are counted as *depleted*. This does not affect account authentication or authorization, so the account can still make calls if there is enough money left to cover at least the first interval.
 - Account default ACL The access level assigned by default to new accounts created with this product. The ACL determines which operations may be performed by accounts on the self-care pages. The default is "Account self-care" (pre-defined ACL), which allows all possible operations.
 - Default discount plan The default value is "None".
 - Info URL A URL where current product info is displayed.
 - **Description** A description of the intended use of this product.

4. Click **Save**.

Click on the Accessibility tab to edit this product's accessibility.



ຝ ⊻ 🗈	• • • 🖌 🖂	Add Product		demo-root	? Help		
🕨 🖬 Sav	ve 🛞 Close			💵 Logout			
Product Name Customer SmartNET termination * Currency USD - US Dollar Managed By Atlainistrator only General Info Maintenance Fee Breakage 0 Account Default ACL Account self-care Default Discount Plan None Info URL Description What we charge customer							
V		Smartahl iof Calls Chey terminate to us					
🙆 🗹 🗃 🕏 👔		Edit 'Customer SmartNET termination' Product	() Europe/Kiev	demo-root	? Help		
🕨 🖻 Add 🖬 Save	Save & Close	🕉 Close 🛛 🗃 Rate Lookup		M Logout	目 Log		
	Product Name Custo Managed By Admini General Info N Edit Node	Mark SmartNET termination Currency USD strator only strator only subscriptions Notepad Access Code Info Digits Tariff Atty V TES = Search VET on tor	Delete	-			

Enter the node and tariff into the product's accessibility list

- 1. After selecting the Accessibility tab, click on the 🖪 Add icon.
- 2. Choose **NexTone** as the node, select the tariff with which you want to bill your customer, and leave the CLD field empty.
- 3. Click **Save** to save this accessibility entry.

Create vendors

This step is only required if you have not entered information about your vendors into the system before. Vendors are your termination partners or the providers of incoming toll-free lines.

- 1. In the Management section of the Admin interface, choose Vendors.
- 2. On the Vendor Management page, choose **3** Add.



A					A.d.	d Vondor			(D) =	dama anak	TRI LI-L-
101			0.7		Au	a venuor			© Europe/kiev	demo-root	[] nep
· ·	Save	Save & Clos	e 🕲 Close							NO Logout	
		Vendor Name	X-Telecom			Currency Opening Ba	US Mance O	D - US Dollar	*		
		Address	Info Addition	al Info User Int	erface						
-		Company Nam	8 X-Telecom	Ltd.		Contact					
		Mr/Ms/				Phone			_		
-		First Name			_	Fax			_		
		LastName				Alt Phone			=		
		Address				Alt Contact			=		
			2 M. KE1	vonosa st.		E mail			-		
						E-IIIall	Into@x-t	elecom.com	_		
					\sim	BCC					
		Province/State				Send Statistics	Summary	y Only 🚩			
		Postal Code	03037			Description			_		
		City	Kiev			Description					
		Country/Region	1 Ukraine								
						1					
V											
₫	⊻ ₽	\$ 🖬 🖂			Ad	d Vendor				demo-root	
•	🖬 Save	🖬 Save & Clos	e 🛞 Close							N Logout	
	1	1									
		Vendor Name	X-Telecom	•		Currency	US	D - US Dollar	~		
						Opening Ba	alance 0		*		
			Ň								
		Address	Info Addition	al Info User Int	erface						
		Categorizing a	nd Defaults								
		Billing Period		Honthly		*					
		Bilateral Traffic	c Exchange								
		Offset Balance	With Customer	NONE		~					
		Minimum Amou	unt To Offset		*	20					
					0	50					
۵	>	s i 🖂			Ad	d Vendor				demo-root	? Help
•	🖬 Save	🔒 Save & Clos	se 🛞 Close							N Logout	
		1									
		Vendor Name	X-Telecom	,	•	Currency	US	D - US Dollar	~		
						Opening Ba	alance o		*		
						I					
		Address	Info Addition	ai inro User Int	erface						
		Login	<-telecom		Time	Zone	Europe/K	iev	~		
		Password (gina8get	Auto	Web I	nterface Language	ru - Rusi	sian	*		
		Access Level	Vendor	*							
		Output Format									
		Date	YYYY-MM-DE)	20	03-12-31		~			
		Time	HH24:MI:SS		Us	er Defined		~			
		Date & Time	YYYY-MM-DE	HH24:MI:SS	Us	er Defined		~			
		Input Format									
		Date	YYYY-MM-DE)	20	03-12-31		~			
		Time	HH24:MI:SS		Us	er Defined		~			

3. Fill in the **New Vendor** form. Please note that there are two tabs available on the screen. The most important fields are:

HH24:MI:SS

Main form (top)

• Vendor name – Short name for the vendor object; this will be used on the web interface.

User Defined

- **Currency** The currency in which this vendor charges you.
- **Opening balance** Starting balance for the vendor; the default is zero.

Additional info

• **Billing period** – Split period for vendor statistics.

User-Interface

- **Time zone** The time zone which the vendor uses for his billing period. Statistics will be divided into periods according to this time zone.
- 4. Click Save & Close.
- 5. Repeat steps 2-4 to add all of your vendors.

Define connections

- 1. In the Management section of the Admin interface, choose Vendors.
- 2. Click on the **Connections** icon next to the vendor name.

► P Add ⊗ Close	ogout 🚦 Log
Search	
Search	
CDRs Name Connections Currency Balance E-mail Delete	
Diffish Telecommunications	
D MCI SD 1110.12000 admin@mci.com	
D Teleglobe	
🔎 X-Telecom 🔀 USD 0.00000 info@x-telecom.com 본	
Vendor 'X-Velecom' connections Europe/Kev der	eroot ? Help
Add 🖬 Save 🖬 Save Close 🛞 Close	ogout 目 Log
PSTN from Vendor VoIP from Vendor PSTN to Vendor VoIP to Vendor	
Fdit Load H323 SID Remote IP* RTP Proxying Transl. Rule Outgoing Rule CLI Transl. Rule Accou	Delete
Tariff Description* Capacit	*
193.193.193.104 Optimal V 20 0	×
Termination to X-T VOIP Termination to X-Telecom	
Y	
Image: Image of the second	
▶ 🗄 Add 🖬 Save & Close & Close 🕸 Close	ogout 目 Log
PSTN from Vendor VoIP from Vendor PSTN to Vendor VoIP to Vendor	
Remote IP * RTP Proxying Transl. Rule Outgoing Rule CLI Transl. Rule Accou	t nic
Tariff Description* Capacit	* Uelete
Direct V Direct O Direct	~
HSN Rates V	
Image: State	

- 3. Choose the connection type (e.g. **VoIP to Vendor**) by clicking on the corresponding tab.
- 4. Press **Add** to add a new connection.
- 5. Fill in the connection information. Enter the remote gateway's IP address. Choose the tariff which defines your termination costs for this connection/vendor. **Description** and **Capacity** are mandatory for all connection types.
- 6. If the vendor requires a phone number format different from the one you use (e.g. the E.164 number 4202111222 is sent to the vendor as 34562#4202111222) you should set up translation rules to properly handle this situation. Use **Translation Rule** to convert the phone number from the vendor's format to the one you use (i.e. 34562#4202111222 to 4202111222).
- 7. Click **Save**.
- 8. Repeat steps 3-5 to add more connections to the same vendor, then click **Close** to exit to the **Vendor Management** screen.
- 9. Repeat steps 2-7 to add connections for other vendors.

Create all vendors

Since you are setting up a wholesale traffic exchange platform, you will probably have more than one vendor. Create all of your vendors according to the instructions given above. Every vendor will have his own termination tariff and set of connections.

6	>	\$	i 🗹		۷	endor Ma	nagem	ent			demo-root	
•	🗈 Add	81	lose								M) Logout	目 Log
						Se	earch	oarch				
								earch				
				CDDe	Nama	Connectione	Currency	Balanca	E mail	Delete		
				Q	British Telecommunications	X	GBP	0.13750	info@bt.com	DOIOCO		
					MCI	8	USD	1110.12000	admin@mci.com	×		
					Teleglobe	8	USD	234.55000		×		
				\square	<u>X-Telecom</u>	*	USD	0.00000	info@x-telecom.com			

Create a Customer Class

Customer class provides the ability to define a group of parameters in a centralized way, then apply those parameters to many customers at once. (If you have already created a customer class that you can use for prepaid card distributors, skip this step and go to the next one.)

- 1. In the Management section of the Admin interface, choose **Customer Classes**.
- 2. On the Customer Class Management page, choose 🖬 Add.

۵	S	i 🖌	Add Customer Class (3) E	iurope/Kiev	demo-root	🛛 Help
•	🖬 Save 📓	Save & Close 🛞 Close			M) Logout	
		Name Enterprise	* Managed by Administrator only V	_		
		Invoice Template	SmartNET Invoice			
		Terms	Due on receipt			
		Invoice Grace Period	14 Days			
		Invoice Notification Intervals	14,7,3 Days			
		Invoice Re-send Intervals	0,7,14 Days			
		Re-collect Intervals	0,3,10 Days			
		Suspension Warning Time	15 Days			
		Suspension Time	21 Days			
		Closing Time	35 Days			
		Charge Credit Card When The Billing Period Is Closed				
		Description	Enterprise Customer Class			

- 3. Fill in the **Name** parameter; the other fields can be left empty for now.
- 4. Click Save&Close.

Create a customer

A customer is an owner of accounts. The customer's contact information is used to distribute generated account data and account usage information.

- 1. In the Management section of Admin-Index, choose Customers.
- 2. On the Customer Management page, choose **Add**.
- 3. Fill in the **New Customer** form. Please note that there are several tabs with extra information available on the screen. The most important fields are:



۵		\$: 🖌	Add Customer	C Europe/Kiev demo-root ? Help	
•	🔒 Save	📓 Save & Close 🛞 Close		📲 Logout	
	Customer Name Blocked Type	SmartNET	Currency USD - US Dollar V Opening Balance 0 Customer Class Enterprise V		
	Address Info	o Additional Info Payment Info	User Interface Call Features		
	Company Name Mr./Ms./	SmartNET Inc.	Contact Phone		
	First Name	M.L	Fax		
	Last Name		Alt. Phone		
	Address	7560 25th St. NE 🛛 🔼	Alt. Contact		
		v	E-mail billing@smart.net BCC		
	Province/State	WA	Send Statistics Full Statistics 💙		
	Postal Code City Country/Region	98154 Seattle	Description		

6	V :• (s i 🖉	Add Customer	Europe/Kiev	demo-root	? Help
•	🔒 Save	🖬 Save & Close 🛞 Close			💵 Logout	
	Customer Name Blocked Type	SmartNET	Currency USD - US Dollar V Opening Balance O Customer Class Enterprise V			
	Address Info	Additional Info Payment Info	User Interface Call Features			
	Routing Plan	Default 💙				
	Discount Plan	None				
	Categorizing and E	Defaults				
	Billing Period	Monthly 💙				
	Invoice Template	SmartNET Invoice 🛛 👻				
	Representative	Not defined 🌱				
	Tax ID					
	Callshop Enabled					

۵	×	\$ 🖬 🖂		A	ld Customer	() Europe/Kiev	demo-root	? Help
•	🖬 Save	📄 Save & Close	🛞 Close				📲 Logout	
	Customer Name Blocked Type	SmartNET	•	Currency Opening Balanc Customer Class	USD - US Dollar V 0 Interprise V			
	Address Inf	o Additional Info	Payment Info	User Interface	Call Features			_
	Credit Limit Balance Warning	1000 Threshold 30						

	9 🖲 🖬 🖂	Add Customer		
🖬 Sa	ve 🝙 Save & Close 🛞 Cl	ose	📲 Logout	
Customer Na Blocked Type	me SmartNET	Currency USD - US Dollar Opening Balance 0 Customer Class Exterprise		
Address	Info Additional Info Paym	nent Info User Interface Call Features		_
Login	smartnet	Time Zone America/New_York 🗸		
Paceword		Mah Interface Language an Reint diete		
1 0334010	anpofi1n Auto	Web Intellace Language en - Anglish		
Access Level	anpofiln Auto Retail	web intellate Language en - English		
Access Level Periodic F Dialing R Output Forma	anpofiln (Auto) Retail () Payments Management Enabled Ules Management Enabled	veo menato Languago en - Inglian 🔹		
Access Level Periodic F Dialing R Output Forma Date	Anpofitn (Auto) Retail Payments Management Enabled ules Management Enabled t	2003-12-31		
Access Level Periodic F Dialing Re Output Forma Date Time	Appfin (Auto) Retail V Payments Management Enabled Ules Management Enabled t V MYY-MM-DD HH24:MIISS	veo menado Languago en - Inglian v j 2003-12-31 v User Defined v		
Access Level Periodic F Dialing Re Output Forma Date Time Date & Time	Appfin (Auto) Retail Vayments Management Enabled Ules Management Enabled t HH241MILSS YYYY-MM-DD HH241MILSS	veo menado Languago en - Inglian - 2003-12-31 - User Defined - User Defined - Vser		
Access Level Access Level Dialing Ri Output Forma Date Time Date & Time Input Format	Appfin (Auto) Retail V Payments Management Enabled Ules Management Enabled t T HH24:MIISS YYYY-MM-DD HH24:MIISS	veo menado Languago en - Inglian		
Access Level Access Level Output Forma Date Time Date & Time Input Format Date	Appfin (Auto) Retail Payments Management Enabled Ules Management Enabled t TYTY-MM-DD HH241MIISS TYTY-MM-DD HH241MIISS	veo menado Languago en - Inglian - 2003-12-91 - User Defined - User Defined - 2003-12-91 - W		

Main form (top)

- **Name** Short name for the customer object; this will be used on the web interface.
- **Currency** The currency in which this customer is to be billed.
- **Opening balance** Starting balance for the customer; the default is zero.
- **Type** Define whether this is a reseller or a retail (direct) customer. (Normally, most of your customers will be retail customers. Only if a customer resells your services, while you provide services and billing to his subscribers, will he be created as a reseller.)
- **Customer Class** Choose the customer class you created in the previous step.

Address info tab

- **Email** Email address for distribution of accounting information. When the billing period is over, a list of CDRs, invoice and other statistics will be sent to this address.
- **Bcc** Delivery to the specified email address of your account representative a copy of every outgoing email sent to the customer; this may be used for debug and archiving purposes.
- Send Statistics Summary only Distribute a call summary only, and do not attach a details file; this might be useful in the case of a large amount of calls. Other options are full statistics (attach a complete list of CDRs) or do not send (no not deliver call statistics to this customer via email at all).

Additional info tab

• **Billing period** – Frequency of distribution of accounting information. For more details about different available billing periods, see the **PortaBilling Administrator Guide**.

Payment info tab

- **Credit limit** If left empty, there is no credit limit for this customer.
- **Balance warning threshold** The customer can be notified by email when his balance is dangerously close to the credit limit and his service will soon be blocked. Here you can enter the value for the warning threshold, as follows:
 - As a percentage (e.g. 90%). A warning will be sent when the customer's balance exceeds this percentage of his credit limit. Thus, if his credit limit is \$1000.00 and the threshold is 90%, a warning will be sent as soon as the balance is over \$900.00. This is only applicable when the customer has a positive credit limit.
 - As an absolute value. A warning will be sent as soon as the balance exceeds the specified value.

User Interface

- **Time zone** This parameter serves two purposes. First of all, it defines in which time zone the customer will see his CDRs. It also defines which time zone will be used to divide the customer's billing periods. For example, if you choose America/New York with a monthly billing period here, the customer's invoice will cover the period starting at 00:00 EST on the 1st of every month.
- Web interface language The language to be used on the customer's self-care web interface.

Click Save & Close to save your work. See the PortaBilling Web Reference for more information.

Create Accounts

NOTE: Before generating accounts for a production system, read the section on "Provisioning prepaid accounts".

1. Go to the **Customers** screen (the screen which contains a list of customers). It should look like the screenshot below.

2. Next to the customer name, click on the 🗊 icon (in the Accounts column), which will take you to the account management for that customer.

☆ ⊻ № \$	1 🛛	Cu	stomer Mana	agement		Q	Europe/Kiev	demo-root	? Help
► 🛃 Add 🛞 Clo	ose							M Logout	目 Log
	Time		Representat	tine	Search	h	Advanced		
Dire	ect Customers	V ANT	, independential	v (odaro	Search	search		
CDRs	Name	Accounts / Subcust	omers Currency	Type Credit I	imit Balance	E-mail	Status Delet	e	
	Prepaid Cards Custome	<u>r</u> 🗇	USD	Retail	0.76300				
	SmartNET		USD	Retail 1000.00	000 0.00000 <u>bill</u>	ing@smart.net	×		
🙆 🗹 📰 🖻 🖬 🖂	i	Accounts of Re	etail Custom	er 'Smarth	NET'		Europe/Kiev		
🕨 💽 Add 💽 Account Ge	enerator 🛞 Close							M Logout	
•	Account ID	Batch	Ctrl #	SIP Statu	is	A	<u>dvanced</u> search		
	Ab	Y Y		ANY	Show Ac	counts	<u></u>		
NV N									
	Ad	d Account for	Potail Custo	mor 'Sma	THET	a	EuropaWiay	democrant	2 Help
	A d		Retail Guste			~	Coroportion	NEL	El ticip
	use lose							NU LUGUUL	
Account	D 193.87.28.101	Product	USD - C	ustomer Smart	LNET t 🔽				
Blocked		Onening B:	alance						
		opening be							
Acc	ount Info Subscriber	Additional Info 1	ife Cycle User I	interface Call	Features				
Type	O Dobit O Cro	dit Ollousbor							
Crodit Lin									
VOIP Pas	sword thandaSt	Auto							
E-mail									
Batch	SmartNET	New batch	× *						
				10 11	10000				
@ ⊻ № \$ i ∠		Accounts of Re	etail Custom	er 'Smartf	VET.	a	Europe/Kiev	demo-root	2 Help
🕨 🗄 Add 📑 Account Ge	enerator 🛞 Close							M Logout	
	Account ID	Batch	Ctrl #	SID State	10		duonood		
	AUGUNE	Y N	, Cur#	ANY	Show Ad	counts	search		
CDRs	Account ID Idle, da	iys Currency Balan	ce Credit Limit	Type	Product	Batcl	n Status S	IP	
	193.87.28.101	USD 0.000	00 C	Credit Custome	er SmartNET term	ination Smarth	<u>4E1</u>		

- 3. Now click on 🖪 Add.
- 4. Fill in the "Add account" form:
 - Account ID Identification of the account (value to be sent in the User-Name attribute). For an account representing a remote gateway, this is normally an IP address.
 - **Product** Choose the product which you would like your accounts to use.
 - **Blocked** Check this if you want to create the account as initially blocked.
 - **Opening balance** The initial balance on the card. For credit accounts, the opening balance is normally zero.

Account info tab

- Account type Account type; select "credit".
- **Credit limit** Maximum allowed credit.
- VoIP password Password for authentication/authorization. This password is used only for SIP Digest authentication; for NexTone IP-based and ANI-based authentication/billing, the password is ignored.
- **Batch** A batch is a management unit for accounts. A batch name is alphanumeric. You can type a new name here, or use the existing name in order to generate more accounts for the same batch.

Life Cycle tab

- Activation date Account activation date.
- Expiration date Account expiration date.
- **Lifetime** Relative expiration date; the account will expire on "first usage date" + "lifetime" days. If you do not want to use this feature, leave the field blank.

User Interface tab

- **Login** The login name this account will use to access the selfcare pages. This can be the same as the account ID, or a different name may be chosen for increased security. This field is mandatory.
- **Password** The password for the self-care pages.
- **Time zone** When an account owner accesses the web self-care pages to see a list of his calls, the time will be shown in the time zone most appropriate for him.
- Web interface language The language to be used on the customer's self-care web interface.
- 5. Click Save & Close; a confirmation screen will indicate that the account has been created.
- 6. Repeat steps 3-5 if the customer has more than one remote gateway.

Call Routing

Currently, Nextone can only obtain routing information from the iView, so please configure routing according to the iView documentation.

4. How to...

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

How to manage the routing?

At this moment NexTone does not fetch results of the routing calculations from PortaBilling, so the routing has to be configured directly on NexTone (using tools such as iView).

5. Troubleshooting

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

In case of any difficulties, you can find comprehensive information in the NexTone and PortaBilling log files.

NexTone RADIUS logs

In order to monitor the RADIUS dialogue on the NexTone side, you should turn on monitoring on the NexTone side – please consult the appropriate NexTone manual.

PortaBilling log information for a call

PortaBilling log files are located in the /var/log/porta-billing.log file. You may browse this file with utilities such as less, or use the log browser on the PortaBilling web interface.

Authentication request

```
Sep 04 00:01:50: Processing request (BE ver1.245.2.10,pid51553):
NAS-IP-Address = '164.4.89.20'
```

NexTone IP address

NAS-Port-Type	=	'Async'
User-Name	=	'NextoneUser'

NexTone populates this attribute with a pre-defined value, so it will not used for billing

=	'193.100.201.1'
=	'4985ee3f-3ed46e60@192.168.0.31'
=	'nextone'
=	'PortaBilling_UserName:193.100.201.1'
	=

Account ID is passed in this VSA attribute

h323-ivr-out = 'PortaBilling_Ignore_Password:YES' Sep 04 00:01:50: fixup: 'PortaBilling_UserName' attribute present. Replace User-Name 'NextoneUser' with '193.100.201.1' Sep 04 00:01:50: h323-conf-id=34393835 65653366 2D336564 34366536/2, call-id= Sep 04 00:01:50: PrepareNexecute 'AccountAuth' Sep 04 00:01:50: Found Account: 193.100.201.1[9,debit,balance=1.02000] of customer testgatewayprepaid[4,balance=50.00000,limit=500.00000] Sep 04 00:01:50: Account 193.100.201.1 is not logged in yet Sep 04 00:01:50: Account has an empty password, skip the password check Sep 04 00:01:50: Attempt to charge account with a login fee Sep 04 00:01:50: Logging in account '193.100.201.1'(9) to '34393835 65653366 2D336564 34366536' Sep 04 00:01:50: Account '193.100.201.1' logged in, setting call lifetime to 1800 sec Sep 04 00:01:50: Authentication acknowledge response

Authentication accepted

=	1.02
=	1
=	Tariff:WHOLESALE
=	PortaBilling_AccountBalance:1.02000
=	PortaBilling_ProductBreakage:0.00000
=	available-funds:1.02
=	0
=	USD
=	en
	= = = = =

Authorization Request

```
Sep 04 00:01:50: Processing request (BE ver1.245.2.10,pid51553):
NAS-IP-Address = '164.4.89.20'
NAS-Port-Type = 'Async'
User-Name = 'NextoneUserA'
Called-Station-Id = '441259322891834'
Calling-Station-Id = '193.100.201.1'
                         = 'Async'
h323-conf-id = '4985ee3f-3ed46e60@192.168.0.31'
Password= 'Nextone'h323-ivr-out= 'PortaBilling_UserName:193.100.201.1'h323-ivr-out= 'PortaBilling_Ignore_Password:YES'
Sep 04 00:01:50: fixup: 'PortaBilling_UserName' attribute present. Replace User-
Name 'NextoneUserA' with '193.100.201.1'
Sep 04 00:01:50: h323-conf-id=34393835 65653366 2D336564 34366536/2, call-id=
Sep 04 00:01:50: Found a call in cache with such id
Sep 04 00:01:50: Copied account: 193.100.201.1[9,debit,balance=1.02000] of
customer testgatewayprepaid[4,balance=50.00000,limit=500.00000] from '164.4.89.20'
into the current request
Sep 04 00:01:50: Checking if this call comes through a VoIP from vendor connection
Sep 04 00:01:50: No VoIP from vendor connections were found
Sep 04 00:01:50: Account 193.100.201.1 is already logged in, same session
Sep 04 00:01:50: Account has an empty password, skip the password check
Sep 04 00:01:50: Applying node translation rule on CLD ...
Sep 04 00:01:50: Translation 's/^4412//' applied: '441259322891834' ->
'59322891834'
Sep 04 00:01:50: Setting up a new charge with tariff 'WHOLESALE'
Sep 04 00:01:50: Using peak rate, since no off-peak is defined
Sep 04 00:01:50: PrepareNexecute 'GetPricePerDestination*'
Sep 04 00:01:50: SQL query 'GetPricePerDestination*' executed in 0.001594 seconds
Sep 04 00:01:50: Compute maximum call duration for leg Account 193.100.201.1 to
destination with funds 1.02000 (account funds 1.02000)
Sep 04 00:01:50: Maximum call duration: 180 announced as 180
(+1x60x0.29+2x60x0.29) by rate 32683 using 103114 as seed
Sep 04 00:01:50: Limited call duration for Debit account - enhance call lifetime
with 240s to Mon Sep 4 00:31:50 2006
Sep 04 00:01:50: Enhance lifetime with 1800s to Mon Sep 4 00:31:50 2006
Sep 04 00:01:50: Authentication acknowledge response
h323-billing-model = 1

      h323-ivr-in
      = Tariff:E_GIROTEL9 073006

      h323-ivr-in
      = PortaBilling_CLI:193.100.201.1

      h323-ivr-in
      = PortaBilling_CompleteNumber:59322891834

      h323-ivr-in
      = PortaBilling_Auth_CLD:59322891834

h323-ivr-in
h323-ivr-in
h323-ivr-in
                           = PortaBilling_Auth_Reseller_CLD:59322891834

      h323-ivr-in
      = PortaBilling_

      h323-ivr-in
      = DURATION:180

      h323-return-code
      = 0

      h323-currency
      = USD

      h323-credit-time
      = 180

h323-preferred-lang = en
Sep 04 00:05:05: Processing request (BE ver1.245.2.10,pid51553):
NAS-IP-Address
                           = '164.4.89.20'
```

NAS-Port-Type = 'Async' Called-Station-Id = '59322891834' Calling-Station-Id = '193.100.201.1' Calling-status-Acct-Status-Type = 'Stop = 'Login-User' = 'BTS' h323-gw-id

 h323-gw-id
 = bis

 h323-call-origin
 = 'originate'

 h323-call-type
 = 'VoIP'

 h323-setup-time
 = '00:01:50.596 EDT Mon Sep 04 2006'

 h323-connect-time
 = '00:02:05.111 EDT Mon Sep 04 2006'

 h323-disconnect-time
 = '00:05:152 EDT Mon Sep 04 2006'

 The three attributes above define call initiation, call connect and call disconnect time, respectively. h323-conf-id = '1043-3366331310-596453@ss1.supertelecom.net' Acct-Session-Id = '56eb' h323-disconnect-cause = '10' Acct-Session-Time = '180' Acct-Delay-Time= '180'Acct-Delay-Time= '0'Acct-Authentic= 'LocaNAS-Port= '0'NAS-Identifier= 'ssl'Connect-Info= '' = 'Local' h323-incoming-conf-id = '4985ee3f-3ed46e60@192.168.0.31' subscriber = 'Subscriber' session-protocol = 'SIP' remote-media-address = '65.218.170.184' in-trunkgroup-label = '' in-carrier-id = '' gw-rxd-cdn = '59322891834' gk-xlated-cdn = '59322891834' gw-final-xlated-cdn = '59322891834' gk-xlated-cgn = '' outgoing-area = 'BTS' release-source = '6' h323-remote-address = '65.218.170.184' h323-ivr-out = 'PortaBilling_UserName:193.100.201.1' Exec-Program-Log = 'porta-billing.pl' Sep 04 00:05:05: fixup: Canonize h323-incoming-conf-id '4985ee3f-3ed46e60@192.168.0.31' as '34393835 65653366 2D336564 34366536' Sep 04 00:05:05: fixup: 'PortaBilling_UserName' attribute present. Replace User-Name '' with '193.100.201.1' Sep 04 00:05:05: h323-conf-id=31303433 2D333336 36333331 3331302D/2, call-id= Sep 04 00:05:05: Use alert-timepoint for PDD (post dial delay) calculation. PDD is: 15 Sep 04 00:05:05: PrepareNexecute 'GetActiveLegIdByAcct' Sep 04 00:05:05: PrepareNexecute 'DeleteActiveLeg' Sep 04 00:05:05: PrepareNexecute 'AccountAccounting' Sep 04 00:05:05: Found Account: 193.100.201.1[9,debit,balance=1.02000] of customer testgatewayprepaid[4,balance=50.00000,limit=500.00000] Sep 04 00:05:05: End of the outgoing call for account, which appears as never logged-in Sep 04 00:05:05: Set lifetime with 15s to Mon Sep 4 00:05:20 2006 Sep 04 00:05:05: Looking up vendor/connection Sep 04 00:05:05: Trying to match connection for call Sep 04 00:05:05: Looking for a connection VoIP/originate Sep 04 00:05:05: Outgoing VoIP, matching by the remote IP address '65.218.170.184' (env 2) Sep 04 00:05:05: Found connection 6 'BTS 1' to vendor 'BTS' Connection found, so the call should be billed. Sep 04 00:05:05: Found vendor/connection Sep 04 00:05:05: Applying connection translation rule on CLD ... Sep 04 00:05:05: Translation 's/^4412//' applied: '59322891834' unchanged Sep 04 00:05:05: Charging call ... Sep 04 00:05:05: Setting up a new charge with tariff 'WHOLESALE' ...

```
Sep 04 00:05:05: Using peak rate, since no off-peak is defined
Sep 04 00:05:05: PrepareNexecute 'GetPricePerDestination*'
Sep 04 00:05:05: Calculating account's charge by tariff 'WHOLESALE'
The account charge is calculated
Sep 04 00:05:05: Call to '59322891834' with duration 180 seconds will be charged
 for 180 seconds and cost is 0.57 (1x60x0.19+2x60x0.19) by rate 32714 using 92178
 as seed
Sep 04 00:05:05: Setting up a new charge with tariff 'V BTS' ...
Sep 04 00:05:05: Using peak rate, since no off-peak is defined
Sep 04 00:05:05: PrepareNexecute 'GetPricePerDestination*'
Sep 04 00:05:05: Calculating vendor's charge by tariff 'V BTS'
Now your termination costs to the vendor are calculated.
Sep 04 00:05:05: Call to '59322891834' with duration 180 seconds will be charged
 for 180 seconds and cost is 0.27 (1x30x0.09+25x6x0.09) by rate 13293 using 92178
 as seed
Sep 04 00:05:05: Charging account for the call
Sep 04 00:05:05: Inserting CDR
Sep 04 00:05:05: PrepareNexecute 'InsertAccountCDR'
The CDR is inserted and the account's balance is modified.
Sep 04 00:05:05: Charging debit account 193.100.201.1 0.57
Sep 04 00:05:05: PrepareNexecute 'UpdateDebitAccountBalance'
Sep 04 00:05:05: Debit account of retail customer, bill only the account
Sep 04 00:05:05: This is one of the multiple outgoing calls of incoming session(s)
Sep 04 00:05:05: Found the incoming call object for session '34393835 65653366
 2D336564 34366536', marking account info there as outdated
Sep 04 00:05:05: Charging vendor for the call
Sep 04 00:05:05: Charging vendor 5 'BTS' 0.27
Sep 04 00:05:05: Inserting CDR
Sep 04 00:05:05: PrepareNexecute 'InsertVendorCDR'
 Sep 04 00:05:05: PrepareNexecute 'UpdateVendorBalance'
Sep 04 00:05:05: Accounting response
Sep 04 00:05:05: Processing request (BE ver1.245.2.10,pid51553):
NAS-IP-Address = '164.4.89.20'
NAS-Port-Type = 'Async'
Called-Station-Id = '59322891834'
Calling-Station-Id = '193.100.201.1'
Calling-Station-Id = '193.100.201.1'

Acct-Status-Type = 'Stop'

Service-Type = 'Login-User'

h323-gw-id = '193.100.201.1'

h323-call-origin = 'answer'

h323-call-type = 'VoIP'

h323-setup-time = '00:01:50.577 EDT Mon Sep 04 2006'

h323-disconnect-time = '00:05:05.112 EDT Mon Sep 04 2006'

h323-disconnect-time = '00:05:05.156 EDT Mon Sep 04 2006'
h323-disconnect-cause = '10'
h323-conf-id = '4985ee3f-3ed46e60@192.168.0.31'
Acct-Session-Id = '56ea'
Acct-Session-Time = '180'
Acct-Delay-Time= '180'Acct-Delay-Time= '0'Acct-Authentic= 'Local'NAS-Port= '0'NAS-Identifier= 'ssl'Connect-Info= ''
h323-incoming-conf-id = '4985ee3f-3ed46e60@192.168.0.31'
subscriber = 'Subscriber'
session-protocol = 'SIP'
remote-media-address = '192.168.0.31'
in-trunkgroup-label = ''
in-carrier-id = ''
gw-rxd-cdn = '59322891834'
gk-xlated-cdn = '59322891834'
gw-final-xlated-cdn = '441259322891834'
```

(c) 2000-2006 PortaOne, Inc. All rights Reserved. www.portaone.com

outgoing-area= ''release-source= '6h323-remotect? = '6' h323-remote-address = '192.168.0.31' h323-ivr-out = 'PortaBilling_UserName:193.100.201.1' Exec-Program-Log = 'porta-billing.pl' Sep 04 00:05:05: fixup: Canonize h323-incoming-conf-id '4985ee3f-3ed46e60@192.168.0.31' as '34393835 65653366 2D336564 34366536' Sep 04 00:05:05: fixup: 'PortaBilling_UserName' attribute present. Replace User-Name '' with '193.100.201.1' Sep 04 00:05:05: h323-conf-id=34393835 65653366 2D336564 34366536/2, call-id= Sep 04 00:05:05: Found a call in cache with such id Sep 04 00:05:05: Copied account: 193.100.201.1[9,debit,balance=1.02000] of customer testgatewayprepaid[4,balance=50.00000,limit=500.00000] from '164.4.89.20' into the current request Sep 04 00:05:05: PrepareNexecute 'GetUpToDateAccountInfo' Sep 04 00:05:05: Use alert-timepoint for PDD (post dial delay) calculation. PDD is: 15 Sep 04 00:05:05: PrepareNexecute 'GetActiveLegIdByAcct' Sep 04 00:05:05: PrepareNexecute 'DeleteActiveLeg' Sep 04 00:05:05: End of call on incoming call leg from access NAS Sep 04 00:05:05: Scheduling 193.100.201.1 for logout, call lifetime reduced to 15 Sep 04 00:05:05: Logging out account '193.100.201.1'(9) from '34393835 65653366 2D336564 34366536' Sep 04 00:05:05: Set lifetime with 15s to Mon Sep 4 00:05:20 2006 Sep 04 00:05:05: Looking up vendor/connection Sep 04 00:05:05: Trying to match connection for call Sep 04 00:05:05: Looking for a connection VoIP/answer Sep 04 00:05:05: VoIP, matching by the node IP '164.4.89.20' and User-Name '193.100.201.1' Sep 04 00:05:05: No VoIP from vendor connections were found Sep 04 00:05:05: Connection to vendor not found Sep 04 00:05:05: No connection from vendor Sep 04 00:05:05: Accounting response