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**PortaSwitch: New Features Guide, September 2008**  
**Maintenance Release 18**  
**V1.18.1**

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## Preface

This document describes new features found in PortaSwitch Maintenance Release 18.

### 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 introduced between major 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/](http://www.portaone.com/support/documentation/).

### Conventions

This publication uses the following conventions:

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



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

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



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



**Tips** provide information that might help you solve a problem.

# 1. New Features in PortaBilling100

## Support for 'email' Account IDs

In an age of service convergence, the key is to let users access all services on a network using an easy-to-remember identifier. To simplify the deployment of converged communication services, where the same ID is used for email, instant messaging and calls, PortaBilling now supports using an email address instead of an **E.164** number for SIP services. Such 'email' IDs can now be employed for services where users were previously limited to a phone number.

For instance, if you want to call John Smith, you no longer have to try memorizing his phone number, but simply enter his email address (e.g. john.smith@domain.com).

When using the 'email' ID format, you may wonder how the system will match the email address with the rates in your tariff. The standard **E.164** prefix for a destination match is not applicable here. Instead, you have to add a symbolic destination **@** to the list of phone number prefixes on the Destinations page. Thus anyone making a phone call to account A (a@xxx.com) will be charged according to the termination rates associated with the **@** destination.

The 'email' format for account ID entry may be specified:

- in the primary identification of the account;
- when entering an alternative account identification – Account Alias;
- when assigning a call forwarding mode to a specific account – Forward to CLD and Follow-me configuration;
- when defining abbreviated dialing – #To Dial entry;
- when testing a dial plan for a specific telephone number.

## Service Configuration in a Product

In earlier releases, you had the option of defining the configuration of specific services for a whole IP Centrex environment (configured in customer info and applied to all accounts under that customer) or for a certain phone line (configured in account info). With MR18 you gain the ability to specify default service configuration parameters as part of a product's definition. This allows you to apply the same settings (e.g. maximum bandwidth, or the availability of a unified communications service) for all accounts with this product.

Using the **Service Features** tab on the **Edit Product** page, the administrator can activate/deactivate various features relative to the

service type selected. All accounts associated with this product will then be modified.

**NOTE:** To activate the **Service Type** select menu, first specify the **Accessibility** settings for each service type provided.

It should be noted that bandwidth for data transfer services (such as WiFi) can now be controlled as part of a product's definition via the PortaBilling web interface, using the Wi-Fi service type.

## Mass Change of Subscription Plans

Should you decide to change the mandatory subscriptions included in a certain product, you can now propagate changes to all accounts with this product by a single click.

To do this, simply navigate to the Subscriptions tab on the Edit Product page and use the **Reapply Subscriptions** button.

## Routing to Domain Name

You can now specify the domain address of the gateway/proxy in the outgoing connection configuration, and PortaSwitch will dynamically resolve it to the IP address. This simplifies interconnection with carriers

who use DNS round robin or similar techniques to provide load-balancing among multiple proxies.

The domain address may be specified instead of a numeric IP address for the following entries:

- **Remote IP** field for a 'VoIP to Vendor' connection (see the image below);
- **SIP Proxy** input on the Customer Info page – navigate to the Permitted SIP Proxies tab;
- **SIP URI** entry on the Account Info page – navigate to the Forward tab (note: only available when **Forward Mode** on the **Service Features** tab is set to **Forward to SIP URI**);

The screenshot shows the 'Edit 'SIP-URI' Connection' page. The 'Description' is 'SIP-URI' and the 'Type' is 'VoIP to Vendor'. The 'Service Type' is 'Voice Calls' and the 'Routing Criteria' is 'None'. Under the 'General Info' tab, the 'Remote IP' field contains 'domain.com' and is highlighted with a red dashed arrow. Other fields include 'RTP Proxying' (Direct), 'Tariff' (SIP(v)), 'Capacity' (100), 'Hide CLI Mode' (Clear caller info), 'Vendor Account' (None), and three empty fields for 'Translation Rule', 'Outgoing Rule', and 'CLI Translation Rule'.

## New and Improved Monitoring System

The new system includes an extended set of monitoring probes that enable you to monitor not only system parameters like CPU load or disk space, but also PortaBilling specific functionalities such as the execution of periodic tasks.

**Porta-Monitor**

**Monitoring**

- Host Detail
- Service Detail

**Reporting**

- Alert History

**Current Network Status**  
 Last Updated: Fri Sep 12 11:44:41 EEST 2008  
 Updated every 30 seconds  
 Logged in as root

Host Status Totals				Service Status Totals				
Up	Down	Unreachable	Pending	Ok	Warning	Unknown	Critical	Pending
5	0	0	0	61	0	0	1	0
All Problems		All Types		All Problems		All Types		
0		5		1		62		

**Service Status Details For All Hosts**

Host	Service	Status	Last Check	Duration	Attempt	Status Information
Master	CPU Usage	OK	12-09-2008 11:43:29	1d 0h 59m 12s	1/3	IDLE OK - cpu_idle 99.3; cpu_sys 0.0; cpu_user 0.7; cpu_nice 0.0; sys_interrupt 0.0.
	Current Load	OK	12-09-2008 11:42:30	1d 0h 59m 11s	1/3	OK - load average: 0.17, 0.09, 0.08
	Disk Load	OK	12-09-2008 11:43:51	1d 0h 58m 50s	1/3	HDD_LOAD OK - hdd_load 0%.
	Disk SMART	OK	12-09-2008 11:43:39	1d 0h 59m 2s	1/3	HDD_SMART OK - /dev/ata0 port 0 ok or cannot check; /dev/ata0 port 1 ok or cannot check; /dev/ata0 port 2 ok or cannot check; /dev/ata0 port 3 ok or cannot check.

The monitoring system provides advanced control of various alerts via a web GUI. This allows easy, efficient supervision of all aspects of PortaSwitch operations by PortaOne staff.

**Porta-Monitor**

**Monitoring**

- Host Detail
- Service Detail

**Reporting**

- Alert History

**Alert History**  
 Last Updated: Fri Sep 12 11:41:36 EEST 2008  
 Logged in as root

[View Status Detail For All Hosts](#)  
[View Notifications For All Hosts](#)

**All Hosts and Services**

State type options:  
 All state types

History detail level for all hosts:  
 All alerts

Hide Flapping Alerts  
 Hide Downtime Alerts  
 Hide Process Messages  
 Older Entries First

Update

Log File Navigation  
 Latest Archive  
 Fri Sep 12 00:00:00 EEST 2008 to Present.  
 File: nagios.log

**September 12, 2008 11:00**

- [12-09-2008 11:36:38] SERVICE ALERT: 193.28.87.44;B2bua;CRITICAL;HARD;3;B2BUA CRITICAL - WARNING: sipenv-193.28.87.44 b2bua uptime too short: WARNING: sipenv-193.28.87.49 b2bua uptime too short:
- [12-09-2008 11:33:38] SERVICE ALERT: 193.28.87.44;B2bua;WARNING;HARD;3;B2BUA WARNING - WARNING: sipenv-193.28.87.44 b2bua uptime too short: WARNING: sipenv-193.28.87.49 b2bua uptime too short:
- [12-09-2008 11:01:38] SERVICE ALERT: 193.28.87.44;B2bua;CRITICAL;HARD;3;B2BUA CRITICAL - WARNING: sipenv-193.28.87.44 b2bua uptime too short: WARNING: sipenv-193.28.87.49 b2bua uptime too short:

The new monitoring system will also be made available to customers running PortaSwitch releases MR16 and MR17.

## Billing Engine Log Viewer

The GUI for browsing call processing logs, generated by the billing engine for easier troubleshooting, has been improved. These logs are now presented with text indentation and color highlighting for enhanced clarity. Embedded XML formatting allows easy integration with third-party applications for log processing.

The screenshot shows the 'BE Log Viewer' application window. It has a title bar with 'BE Log Viewer', 'Europe/Andorra', 'pb-root', and 'Help'. Below the title bar is a menu bar with 'Close' and 'Logout'. The main area is divided into two sections: 'Trace a call' and 'Show call attempts'. The 'Trace a call' section has a text input field for 'H323-Conf-ID' containing 'AD5948B7 800E11DD 856E0030 4858DBC8' and a 'View log' button. The 'Show call attempts' section has 'From' and 'To' fields with date and time inputs, and a 'Generate' button. Below these sections, there is a 'Log level' dropdown set to '2 - Warning' and buttons for 'Expand All' and 'Collapse All'. A log entry is highlighted in green: 'request: Type: "Authorize/INVITE,AuthFail" NAS-IP-Address: "193.28.87.36" User-Name: "12345@zzz.com" Called-Station-Id: "5154959764151" Calling-Station-Id: "12345@zzz.com"'. Below this, there are several log lines with timestamps and details about processing requests and authorization failures.

MR18 also introduces log indexing, which can be done on a dedicated server for customers with large log volumes. This allows rapid retrieval of the required information with a minimum load on the server’s CPU and disk system.

## Improved Cost/Revenue Report

The built-in cost/revenue report now provides sub-totals for individual services.

The screenshot shows a spreadsheet application window with a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help) and a toolbar. The spreadsheet has columns labeled A through K. Column A is 'Customer', B is 'Destination', C is 'Country', D is 'Description', E is 'Calls', F is 'Gross margin, USD', G is 'Rated, sec.', H is 'Rated, min.', I is 'Total Cost, USD', J is 'Total Revenue, USD', and K is 'Service'. The data rows show various call records with sub-totals for different countries and services. A red box highlights the 'Service' column, which contains entries like 'Voice Calls'.

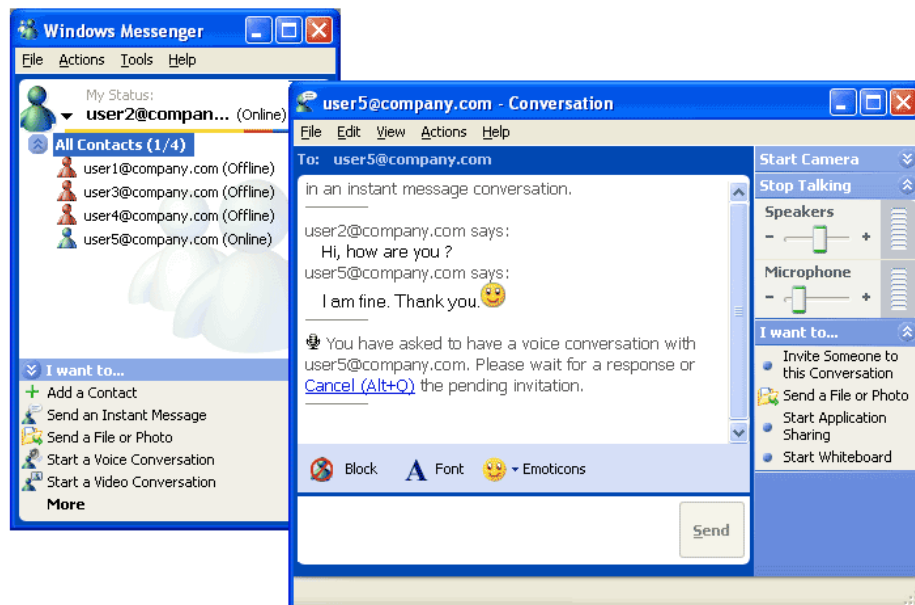
A	B	C	D	E	F	G	H	I	J	K
Customer	Destination	Country	Description	Calls	Gross margin, USD	Rated, sec.	Rated, min.	Total Cost, USD	Total Revenue, USD	Service
SmartNet	3741	ARMENIA	Yerevan	7	0.80521	839	13.983333	1.19758	2.00289	Voice Calls
SUBTOTAL				7	0.80521	839	13.983333	1.19758	2.00289	
SmartNet	61	AUSTRALI	Proper	7	1.27417	8027	133.78333	3.05551	4.32978	Voice Calls
SmartNet	61404	AUSTRALIA		1	0.43478	369	6.15	0.98789	1.42247	Voice Calls
SUBTOTAL				8	1.70895	8396	139.93333	4.0433	5.75225	
SmartNet	43	AUSTRIA	Proper	8	2.35228	12856	214.26667	3.20971	5.56199	Voice Calls
SUBTOTAL				8	2.35228	12856	214.26667	3.20971	5.56199	
SmartNet	994	AZERBAIJ	Proper	6	1.51933	1305	21.75	3.66377	5.1831	Voice Calls
SmartNet	99450	AZERBAIJ	Mobile	1	0.18463	130	2.1666667	0.40963	0.59445	Voice Calls
SUBTOTAL				7	1.70396	1435	23.916667	4.0736	5.77755	
Pre-paid car	375	BELARUS	Proper	2	106.21	2126	35.433333	5.58076	111.7908	Voice Calls
SmartNet	375	BELARUS	Proper	20	11.2362	5279	87.983333	14.06189	25.29809	Voice Calls
Pre-paid car	37517	BELARUS	Minsk	1	-0.18254	517	8.6166667	1.70489	1.52235	Voice Calls
SmartNet	37517	BELARUS	Minsk	1	0.261	178	2.9666667	0.58698	0.84798	Voice Calls

# 2. New Features in PortaSIP

## Instant Messaging

Instant messaging, also known as “IM” or chat, is a technology that provides near-real time text-based communication between two parties over a network connection. Although the ability to communicate with another user via text in near-real time makes this capability different from email, the ability to leave messages for a user who is offline narrows that difference.

PortaSIP now includes an advanced messaging module that enables online messaging, server-side message storage for offline users (so they can receive messages later), and the option of maintaining a full message history on the server. Together with presence services and voice calls this new feature offers you a full real-time communication experience.



Supported by nearly all VoIP multimedia clients, such as eyeBeam, x-Lite, and MS Messenger, instant messaging can be easily used to post messages privately from any computer or mobile device.

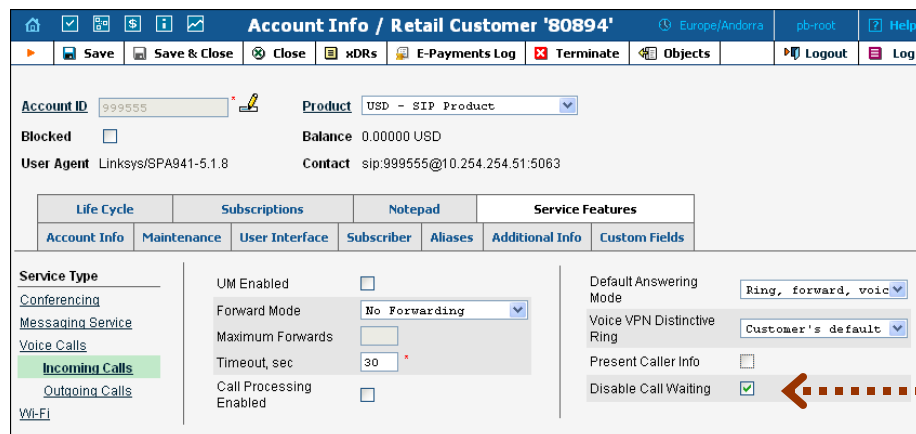


## Call Waiting

The call waiting service signals you that there is another incoming call. It enables you to put one caller on hold while you talk to the other, and to switch between these two calls.

Since some companies may charge extra for this service, the ability to disable call waiting on the provider side is needed. PortaSwitch can now control delivery of the call waiting feature to IP phones and allow administrators to disable call waiting for a specific account. So it's up to you whether to make call waiting an add-on service or not.

To disable the call waiting feature, simply go to the Service Features tab on the Account Info page and select the **Disable Call Waiting** check box.



## RTP Proxy Control at Account/Customer Level

In addition to the option of media proxying based on a specific vendor's proxying policy, it is now possible to activate full media proxying for a specific account (phone line) or a specific customer (all accounts under the customer). This can be used to force NAT traversal on the PortaSwitch side in complex network configurations, or to provide users with an extra level of privacy.

RTP proxy control at the account level can be configured on the Account Info/Customer Info page by using the Service Features tab. The possible configuration options include:

- Default - Identical to the vendor's proxying configuration.
- Direct - The RTP stream should be sent directly to the node, i.e. an RTP proxy should not be used.
- Optimal - The node is capable of NAT traversal, and no RTP proxying is required unless specifically requested.
- OnNat - The node is not capable of NAT traversal; engage an RTP proxy if the other party is behind NAT.
- Always - When sending a call to the node, always engage RTP proxying so that no media stream goes directly to it.
- Customer's default - Identical to the customer's proxying configuration (only available at the account level).

The screenshot shows the 'Account Info / Retail Customer' configuration page. The 'Service Features' tab is selected, and the 'RTP Proxy' dropdown menu is open. The dropdown menu lists the following options: Use Default, Direct, Optimal, On NAT, and Always. A red dashed arrow points to the 'Customer's default' option in the dropdown menu.

## Multi-DID Control

If multiple DID (sets of phone numbers) have been allocated to a single user via the Account Alias feature, the PortaSwitch administrator can define which of these will be allowed independent SIP registrations (i.e. they can be used on different phones), and which can only be used in

conjunction with the main account. This extends the available service options to hosted IP PBX and SIP trunking services.

Account Alias registration can be done by the administrator on the Account Info page, using the Aliases tab.

Life Cycle	Subscriptions	Noteпад	Service Features
Account Info	Maintenance	User Interface	Subscriber
			Aliases
			Additional Info

Edit	Alias ID	Allow authentication registration	Delete
	430023	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Select the **Allow authentication/registration** check box next to each Alias ID to allow incoming calls to be routed directly to the alias account.

## Support for Intercom Calls

Intercom calls enable users belonging to the same group to use two phones like an on-door speakerphone. One user dials a special code before the phone number, and a two-way audio channel is established automatically. The second user does not need to pick up his handset. Instead, hands-free mode is activated, and both users can now talk to each other. Most VoIP phones with the SIP protocol can be used for intercom calls.

In PortaSIP an intercom group is defined as all the accounts under the same customer. To activate this feature, the administrator should enable the **Paging/Intercom** option and specify the **Paging/Intercom Prefix** using the Service Features tab.

The screenshot shows the 'Edit Customer' interface with the following details:

- Customer Name:** Demo Customer
- Opening Balance:** 0.00000 USD
- Balance:** 0.00000 USD
- Blocked:**
- Type:** Retail
- Customer Class:** Default customer class

Navigation tabs include: Taxation, Abbreviated Dialing, Subscriptions, Notepad, Service Features, Permitted SIP Proxies, Address Info, Maintenance, User Interface, Dialing Rules, Additional Info, Payment Info, and Custom Fields.

**Service Type** (Left sidebar):

- Conferencing
- Data Service
- Dial-up Internet
- Messaging Service
- Internet Access
- Quantity Based
- Session Based
- Voice Calls
- Incoming Calls
- Outgoing Calls** (highlighted)
- Wi-Fi

**Service Features** (Main area):

- Set CLI To: Original CLI (do no)
- Centrex Number \*
- First Login Greeting: No
- Hide CLI: No
- Hide CLI Prefix
- Show CLI Prefix
- Limit Simultaneous Calls: No
- Max Number Of Simultaneous Calls \*
- Minimum Funds Reserved Per Call: USD
- Paging/Intercom: Yes
- Paging/Intercom Prefix \*: 433

A red dashed arrow points to the 'Paging/Intercom Prefix' field.

## SIP Log Indexing

MR18 introduces SIP log indexing, which can be done on a dedicated server for customers with large log volumes. This allows rapid retrieval of the required information with minimum load on the server's CPU and disk system.

# 3. New Features in PortaUM

## IVR Personalization

Users can now perform account self-configuration (such as managing their forwarding mode and follow-me numbers) or receive extra information (e.g. hearing the last calls made or received on their phone line) via the IVR menu.

Here is just a short list of what you can now do with the new enhanced IVR menu:

- Change your IVR language;
- Hide/show an incoming caller's number (if the user is subscribed to this service);
- Recharge the account;
- Retrieve balance information;
- Manage voicemail preferences;
- Record a custom greeting;
- Enable/disable auto attendant preferences;
- Manage Forward mode and Follow-me numbers.

## Hebrew Language Support for IVR

In addition to English, Russian and Spanish language, support for Hebrew has been added to the PortaUM management IVRs.

We plan to include more languages soon. Your requests for specific languages are welcome.