

Porta  Switch™



New Features Guide
Maintenance Release 18

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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/.

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:

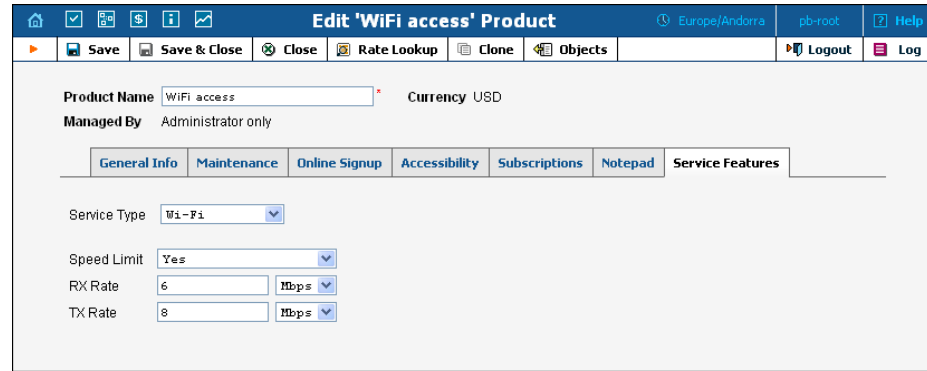
- in the primary identification of the account;
- when entering an alternative account identification – Account Alias;
- when assigning a call forwarding mode to a specific account – Forward to CLD and Follow-me configuration;
- when defining abbreviated dialing – #To Dial entry;
- when testing a dial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



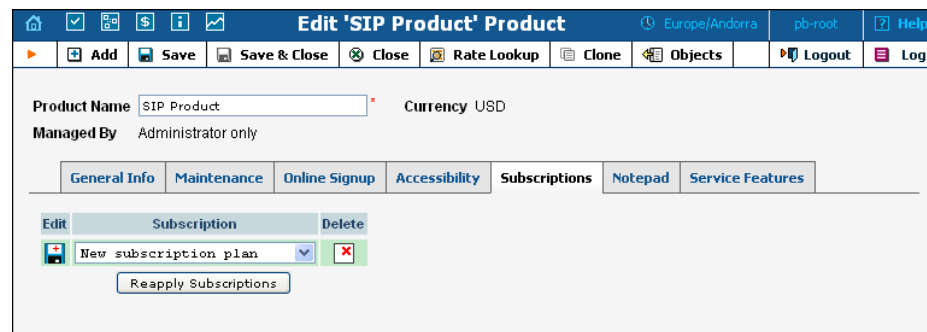
NOTE: To activate the **Service Type** select menu, first specify the **Accessibility** settings for each service type provided.

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' configuration 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'. The 'General Info' tab is active, showing the following fields:

| | | |
|----------------------|-------------------|-----|
| Remote IP | domain.com | * |
| RTP Proxying | Direct | |
| Tariff | SIP(v) | * |
| Capacity | 100 | * |
| Hide CLI Mode | Clear caller info | |
| Vendor Account | None | |
| Translation Rule | | [?] |
| Outgoing Rule | | [?] |
| CLI Translation Rule | | [?] |

A red dashed arrow points to the 'Remote IP' field, which contains the value 'domain.com'.

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.

The screenshot shows the 'Porta-Monitor' interface. On the left is a navigation menu with 'Monitoring' selected, containing links for 'Host Detail', 'Service Detail', 'Reporting', and 'Alert History'. The main content area is divided into several sections:

- Current Network Status:** Last Updated: Fri Sep 12 11:44:41 EEST 2008. Updated every 30 seconds. Logged in as root.
- Host Status Totals:** A table showing counts for Up (5), Down (0), Unreachable (0), and Pending (0).
- Service Status Totals:** A table showing counts for Ok (61), Warning (0), Unknown (0), Critical (1), and Pending (0).
- Service Status Details For All Hosts:** A table with columns: Host, Service, Status, Last Check, Duration, Attempt, and Status Information. The 'Master' host is shown with services like CPU Usage, Current Load, Disk Load, and Disk SMART, all with an 'OK' status.

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.

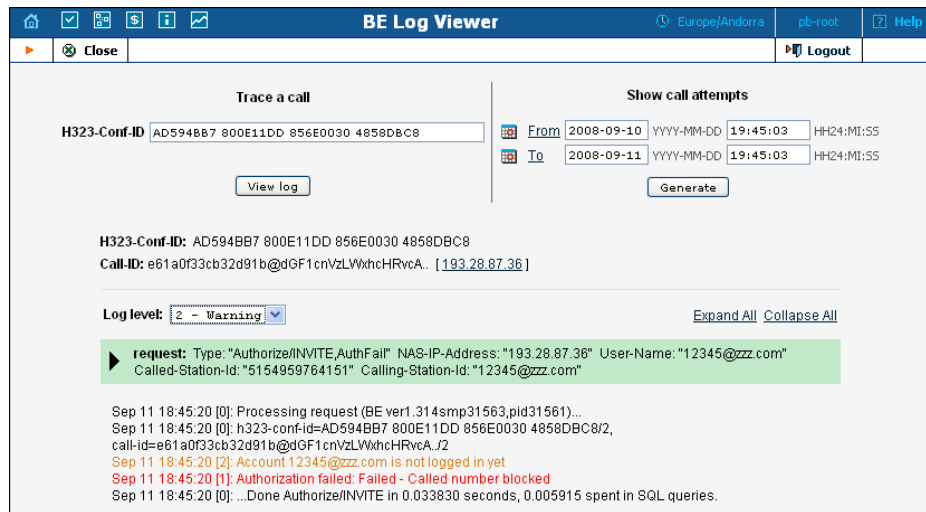
This screenshot shows the 'Alert History' section of the 'Porta-Monitor' interface. The navigation menu on the left has 'Alert History' selected. The main content area includes:

- Alert History:** Last Updated: Fri Sep 12 11:41:36 EEST 2008. Logged in as root. Links for 'View Status Detail For All Hosts' and 'View Notifications For All Hosts' are provided.
- All Hosts and Services:** A section for 'Log File Navigation' showing 'Fri Sep 12 00:00:00 EEST 2008 to Present..' with a 'File: nagios.log' and an 'Update' button.
- State type options:** A dropdown for 'All state types' and a 'History detail level for all hosts:' dropdown set to 'All alerts'. There are checkboxes for 'Hide Flapping Alerts', 'Hide Downtime Alerts', 'Hide Process Messages', and 'Older Entries First'.
- Alert Log:** A list of alerts with timestamps and details. The most recent alert is dated 'September 12, 2008 11:00' and is a 'SERVICE ALERT' regarding '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.



BE Log Viewer Europe/Andorra pb-root Help

Trace a call: H323-Conf-ID: AD5948B7 800E11DD 856E0030 4858DBC8 [View log]

Show call attempts: From: 2008-09-10 19:45:03 To: 2008-09-11 19:45:03 [Generate]

H323-Conf-ID: AD5948B7 800E11DD 856E0030 4858DBC8
 Call-ID: e61a0f33cb32d91b@dGF1cnVzLWxhcHRvcA.. [193.28.87.36]

Log level: 2 - Warning [Expand All Collapse All]

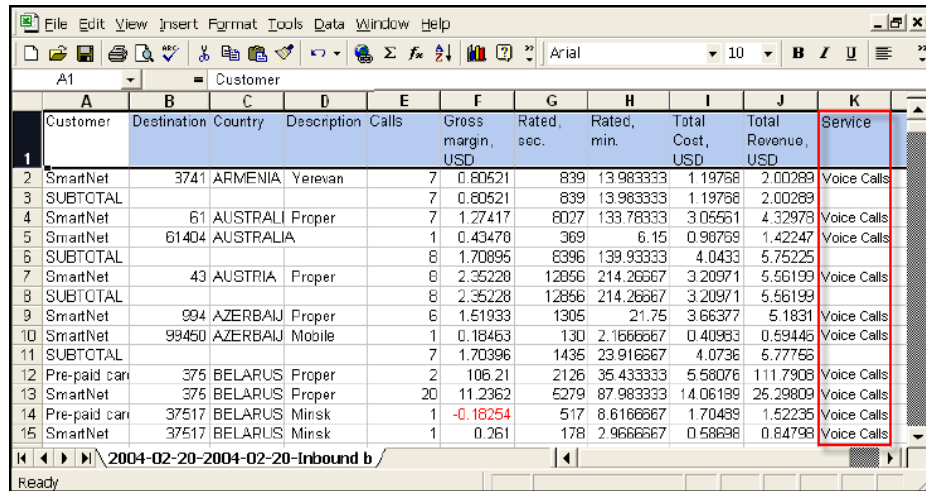
request: Type: "Authorize/INVITE,AuthFail" NAS-IP-Address: "193.28.87.36" User-Name: "12345@zzz.com"
 Called-Station-Id: "5154959764151" Calling-Station-Id: "12345@zzz.com"

Sep 11 18:45:20 [0]: Processing request (BE ver1.314smp31563,pid31561)...
 Sep 11 18:45:20 [0]: h323-conf-id=AD5948B7 800E11DD 856E0030 4858DBC8/2,
 call-id=e61a0f33cb32d91b@dGF1cnVzLWxhcHRvcA.J2
 Sep 11 18:45:20 [2]: Account 12345@zzz.com is not logged in yet
 Sep 11 18:45:20 [1]: Authorization failed: Failed - Called number blocked
 Sep 11 18:45:20 [0]: ...Done Authorize/INVITE in 0.033830 seconds, 0.005915 spent in SQL queries.

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.



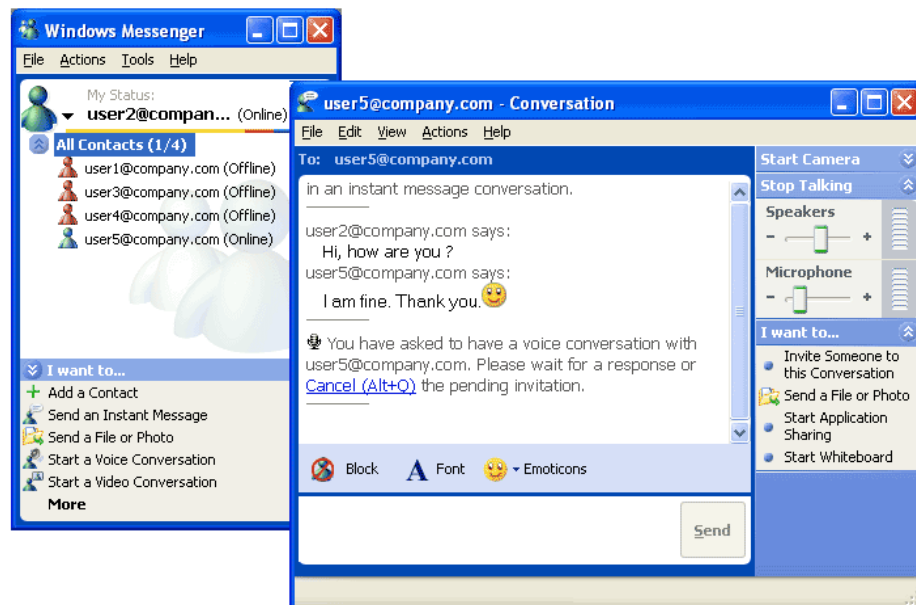
| Customer | Destination | Country | Description | Calls | Gross margin, USD | Rated, sec. | Rated, min. | Total Cost, USD | Total Revenue, USD | Service |
|--------------|-------------|-----------|-------------|-------|-------------------|-------------|-------------|-----------------|--------------------|-------------|
| 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 | 133.783333 | 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 | 139.933333 | 4.0433 | 5.75225 | |
| SmartNet | 43 | AUSTRIA | Proper | 8 | 2.35228 | 12956 | 214.26667 | 3.20971 | 5.56199 | Voice Calls |
| SUBTOTAL | | | | 8 | 2.35228 | 12956 | 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 | 14.06199 | 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.

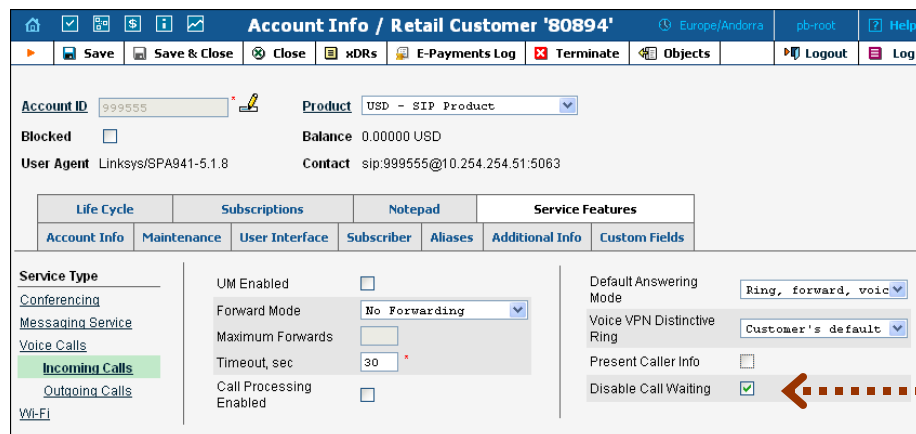


Call Waiting

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 DIDs (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 | Notepad | 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.