



PortaSwitch New Features Guide

MAINTENANCE RELEASE 85

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Preface

PortaSwitch® Maintenance Release 85 is the next long-life release which is mainly focused on improved system stability. It is supported with bug fixes, contains minor improvements and offers other software support for an extended period of time, thereby enabling customers to better plan the evolution of their PortaSwitch® systems.

Where to get the latest version of this guide

The hard copy of this guide is updated upon 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*.



The **exclamation mark** draws your attention to important actions that must be taken for proper configuration.

NOTE: Notes contain additional information to supplement or accentuate important points in the text.



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



Archivist explains how the feature worked in previous releases.



Gear points out that this feature must be enabled on the Configuration server.



Tips provide information that might help you solve a problem.

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Integration with the Microsoft Active Directory

Starting with this release, PortaBilling® is integrated with the Microsoft Active Directory.

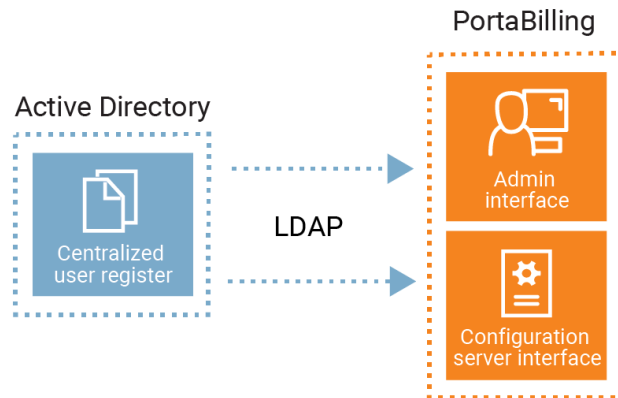
The Microsoft Active Directory (AD) is a directory service that enables service providers to manage users within their entire infrastructure from a single location. An AD administrator can create/block/delete user records, manage their details, and provide access to all corporate resources (for example, Microsoft SharePoint, Microsoft Teams, or Odoo CRM) via the AD. Thus, an AD administrator can quickly enable access for new employees and instantly block access to all corporate resources when somebody leaves the company. This saves significant time on user management and it improves infrastructure security.

An AD administrator can create user records in AD to manage access to:

- PortaBilling® web interface
- The Configuration server web interface

Therefore, users can access the PortaBilling® and Configuration server's web interface in addition to other resources using a single set of credentials. This simplifies the login process and reduces the risk of losing or forgetting multiple passwords.

To communicate with the AD, PortaBilling® supports the Lightweight Directory Access Protocol (LDAP). The (LDAP) user password is stored in the AD database. Thus, the user is authenticated in PortaBilling® through the AD. The LDAP is also used for data synchronization (user name, login, password, email, country, role, expiration date) between the AD and PortaBilling®.



This is how it works:

1. The AD administrator creates a user record in the AD that is then automatically created in PortaBilling®.
2. The user logs in to the PortaBilling® web interface using their LDAP credentials provided by an AD administrator.
3. PortaBilling® sends an authentication request to the AD via the LDAP.
4. The AD verifies the user login and the LDAP password.
5. Access to the PortaBilling® web interface is provided according to the user access role.
6. When an AD administrator changes a user's access role or user details, the data is synchronized with PortaBilling® via the LDAP.
7. When the AD administrator deletes the PortaBilling® user record from the AD, it is automatically deleted from PortaBilling®, too.

Let's say a service provider hires a new employee, David. David is an accountant and needs read-only access to PortaBilling®. The AD administrator opens the AD and creates a new user record with the Helpdesk access role. The AD sends the user data via the LDAP and creates a new user record in PortaBilling®. Now David can log in to PortaBilling® using his LDAP password. In a few months, when David leaves the company, the AD administrator blocks David's user record in the AD. The AD then synchronizes with PortaBilling® and blocks the user record there. Thus, David's access to PortaBilling® is blocked.

Specifics:

- To log in to PortaBilling® or the Configuration server web interface, the AD administrator must create a user record in the AD first.
- The AD stores the user data (e.g., login, password) and authenticates the user's access to PortaBilling® via the LDAP.

- Only an AD administrator can create/delete/block the PortaBilling® user record and manage the mandatory user fields:
 - Name / Surname
 - Email
 - Login
 - Password
 - Role
 - Country
 - Company
 - Expiration date
- User details specified in the AD are read-only in PortaBilling®.
- By default, data in PortaBilling® synchronizes every 10 minutes with AD. You can change synchronization frequency on the Configuration server.
- Access to the Configuration server via SSH is disabled.

Integration with the Microsoft Active Directory allows service providers:

- to enable users to access their corporate resources with a single set of credentials, and
- to manage PortaBilling® users within a centralized user register. This reduces significant time on user management for company administrators.

Contact the PortaOne support team to configure PortaBilling® to interact with the Microsoft Active Directory.

Charge subscription fee in full for partial billing periods

With this release, you can choose whether or not to prorate recurring charges for subscriptions.

When a customer signs up for/cancels a subscription in the middle of a billing period, you can charge them either the prorated or full periodic fee.

Thus, if a customer with a monthly billing period signs up for the subscription on March 17th, the charge can be for either 15 days in March (17th-31st) when the subscription is active or for the full month.

This option enables you to adjust subscriptions to your business requirements. For instance, you may want to balance the cost and revenue side while you resell your partner's services on a recurring fee basis.

Let's consider the example of the ABC company, which offers IPTV services to end users for a monthly subscription fee. The IPTV vendor charges ABC in full even if their customer cancels the subscription. To avoid revenue leakage, the ABC company can also charge the customer in full for the last month of service usage.

By default, first and last partial billing periods are charged with a prorated fee. To charge for subscriptions in full, go to **Subscription plans > Fees** and select the **Full fee** option.

Note that this option is available if you charge for subscriptions **At the end of the billing period** or **In advance** and is not available for **Progressive** (daily) subscriptions.

Also, if you already use the **Waive the charges for the days when no service was provided** functionality, note that there are no refunds for the first and last billing periods if you set up the non-prorated (full) fee.

With this enhancement, you can ensure the subscription charges cover the cost, no matter when the subscription is activated/canceled. You can improve the current revenue as well.

Mobile account batch generation for SIM card distribution

With this release, an administrator can generate batches of mobile accounts via the Account generator. Each account in a batch is assigned a mobile number (MSISDN) and a SIM card (IMSI) from the corresponding inventory. This saves administrators' time, since previously they had to create accounts and assign SIM cards manually.

The screenshot displays the 'Create an account' interface with an 'ACCOUNT GENERATOR' modal open. The modal is titled 'Account generation' and contains the following configuration options:

- Initial configuration:** Account role (Mobile), Type (Debit), Product (Super One), Quantity (100), Batch (Add a new batch), and New batch name (10%SIMcards).
- Optional configuration:** (Collapsed)
- Service:** (Collapsed)
- Summary:** (Collapsed)

The background form includes fields for MSISDN (with an error message), IMSI, Product, Activation date (Immediately), Type (Credit), and Balance control (Subordinate). A red dashed arrow points from the 'ACCOUNT GENERATOR' label to the modal.

This feature enables mobile operators to involve distributors in selling ready-to-use SIM cards to a large number of end users.

For example, let's say that new distributor John Smith wants to sell your SIM cards in a local supermarket chain. You'll therefore provide John with 100 SIM cards. To configure this batch, your administrator opens the Account generator to create 100 inactive debit accounts with the Mobile role. The administrator sets the initial account balance to \$10 and chooses the starting MSISDN and IMSI number for this batch. Note that this data should be previously uploaded to the DID/MSISDN and SIM card inventories. To assign accounts to John, the administrator chooses his name in the Distributor drop-down list.

NOTE: Only debit accounts can be assigned to a distributor.

Account generation

Initial configuration
@msisdn, 100, 10%SIMcards

Optional configuration

Service

Summary

Assign MSISDN sequentially starting with
The first one available

Assign IMSI sequentially starting with
The first one available

Service password *
Auto generated

Customer site
None

Distributor
John Smith

Life cycle

E-commerce enabled

CANCEL GENERATE

Once a batch of accounts is generated, the accounts' data is automatically provisioned to the host mobile network (i.e., HSS and/or PCRF), on the condition that PortaBilling® is integrated with the mobile carrier's core.

Now, the new accounts provided to the distributor are ready to use. When John Smith sells a SIM card, he activates the account via the web self-care interface in one click. The end user can start using the service right away.

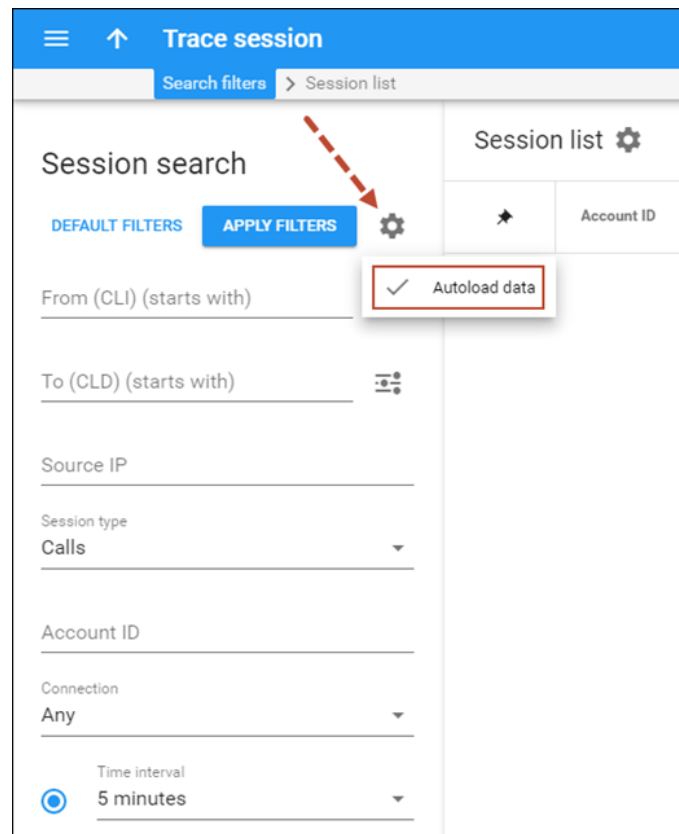
The distributor's commission for activation and further account top up per every SIM card is automatically reflected in PortaBilling®. Refer to the Distributor section in the [PortaBilling® Administrator Guide](#) for more details.

Your xDR History						
Customer		John Smith		Total Transactions		3
From Date	2020-05-17 17:58:21	Credits	0.00000 USD			
To Date	2020-05-18 17:58:25	Charges	18.00000 USD			
Service (s)	All	Recurring Charges	0.00000 USD			
		Recurring Credits	0.00000 USD			
		Usage Charges	0.00000 USD			
		Usage Credits	0.00000 USD			
		Payments	0.00000 USD			
		Refunds	0.00000 USD			
		Taxes	0.00000 USD			
		Total	18.00000 USD			
Credits / Adjustments						
Description	Comment	Date/Time	Amount, USD	Revert		
Distributor: Transfer	C:Mobile services provisioning	2020-05-17 20:57:22	0.00000	<input type="checkbox"/>		
Distributor: New product sale	Charge for account:12060898684@msisdn	2020-05-17 20:23:25	9.00000	<input type="checkbox"/>		
Distributor: New product sale	Charge for account:12060898683@msisdn	2020-05-17 20:22:50	9.00000	<input type="checkbox"/>		
Subtotal			18.00000			

This feature reduces administrators' manual work and enables mobile operators to expand their sales network by selling SIM cards through distributors.

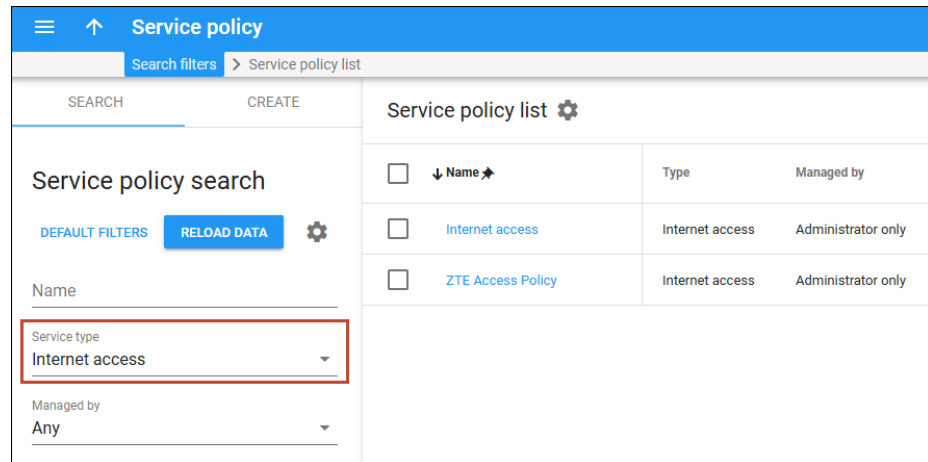
Other features and enhancements

- **Trace session functionality has been improved to speed up data loading** – When a large number of sessions are in your system and you need to filter them by specific criteria for troubleshooting, you can get faster filtering results by means of:
 - **Autoload data option** – By default, sessions of the last 5 minutes automatically load once you open the Trace session panel. You can now turn off the data autoload if you don't want all those sessions to load each time you use the Trace session functionality. This saves you time, as you don't have to wait to apply specific filtering criteria.



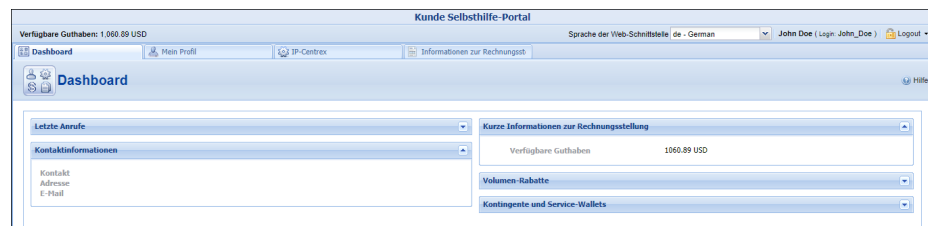
- **Ten-time increase in Trace session performance** – Now when you apply filters and the results contain a large number of sessions, the data loads significantly faster. For example, if it used to take up to 5 minutes to load your sessions of the last day, now it takes about 30 seconds.
- **Change the default service type for the service policy** – By default, the **Service policy search** panel displays the policies for the Voice calls type. With this release, PortaBilling® users can set either Messaging service or Internet access as the default service type. The service type is automatically saved after it is changed and the **Create service policy** panel inherits the same default service type. This customization saves users time by eliminating extra clicks.

For example, let's say an administrator opens the **Service policy search** panel and changes the service type from Voice calls to Internet access. When they next open the search panel, Internet access service type will appear by default.



This enhancement makes the web GUI more user friendly.

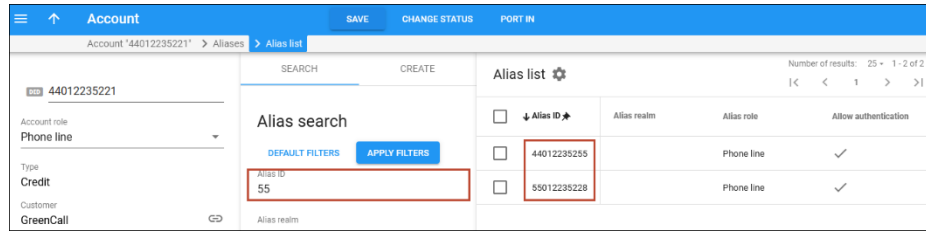
- **The German language is now supported for customer and account self-care interfaces.** Attract native German-speaking customers by providing them with a fulfilling user experience on the web self-care interface in their native language.



See the full list of languages that are supported in the Web interface administration section of the **PortaBilling® Administrator guide**.

Web interface changes

- **Enhanced search for account aliases** – PortaBilling® now searches for aliases that start with, end on, or contain the characters you input. For example, the search result for “55” lists all aliases containing “55” – 551122779911, 441155778866, 491166887755, etc.



This enhancement allows the administrators to search for account aliases a lot faster.

- Redesigned Log viewer** – The diagram now takes up more space on the screen. When you open the Log viewer page, by default, you see the session flow in more detail. The changed diagram to text log ratio reduces your scrolling when troubleshooting.

