# PORTA ONE

# PortaSwitch

# New Features Guide

# 56
Maintenance
Release

Documentation

www.portaone.com

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# Preface

PortaSwitch® Maintenance Release 56 is the next leap-forward release, consistent with our "fast releases, precisely on time" ideology.

### 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`.

**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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# Taxation with Avalara

Beginning with this release, PortaBilling® is integrated with Avalara – one of the largest tax calculation companies in the USA. Tax calculation via Avalara is done using the XML API. Your taxation configuration is stored within Avalara and all taxes are calculated by the Avalara middleware. This significantly simplifies taxation management for your administrators.

The tax calculation process is as follows:
*   PortaBilling® sends all customer xDRs, along with customer location information, to Avalara using the API.
*   Avalara calculates the taxes and then returns those calculations to PortaBilling®.
*   PortaBilling® uses this tax information to generate xDRs for taxes and then produce invoices.

Avalara calculates taxes based on the customers' tax jurisdiction, which is determined using PCodes – permanent jurisdiction codes. These PCodes are obtained from the customer's location (the ZIP code) and the CLI / CLD numbers in xDRs using the code mapping table provided by Avalara. This ensures accurate tax calculation.

If CLI / CLD numbers are not present in the xDRs (e.g. an xDR for subscription charges or manual credit), the customer's location PCode is used.

As a result of tax calculation, PortaBilling® receives summarized taxes grouped by tax type (e.g. federal, state, etc.) and generates separate xDRs for each tax type.

## Configuration

To enable tax calculation via Avalara, first establish the account with Avalara. Contact the Avalara support team (***support@eztax.com***) to activate the Customer Mode service. Customer Mode is mandatory to group transactions that apply to the same customer and speed up the tax calculation process.

Second, contact the PortaOne support team to configure the Avalara module on the Configuration server and install the Avalara plugin.

Lastly, to configure the Avalara taxation parameters on the web interface:
*   Configure the taxation parameters that apply to you as the service provider on the **My Company Info** page.

- Select the Avalara taxation method and define the taxation parameters for your customers for the customer class or for an individual customer.

For backward compatibility, the EZTax taxation plugin is still available. However, due to the simplified management of the Avalara updates, it is recommended that you switch to Avalara taxation.

Integration with Avalara ensures correct tax calculation for your customers and helps you maintain accurate accounting records. It also results in reduced maintenance and compliance costs for Avalara services – starting as low as $500 per month.

Additionally, you can associate different Avalara accounts with separate billing environments to use PortaBilling® as an ASP (Application Service Provider) platform.

# Limits on Calls in Progress

Sometimes a customer's SIP gateway (e.g. an auto-dialer) produces many call attempts when trying to reach a destination that does not answer, and by doing so, the system becomes overloaded.

Another example is "cross-forwarding" in which forwarding is configured for the same user, both in the SIP network (e.g. from an extension to a mobile phone) and in the mobile network (e.g. from the mobile phone to an extension). As a result, the call "loops" and is processed as separate call attempts to the mobile network.

These numerous call attempts consume system resources for authorization and routing, and consequently slow down the system and affect normal call processing.

Therefore, to increase system stability and prevent its overload, both connected and calls in progress (i.e. calls being connected) are now considered when limiting the number of simultaneous calls.

As soon as a limit is set on simultaneous calls for a given customer, customer site or account (as part of product configuration), PortaBilling® requests notifications from PortaSIP® about this customer's calls in progress.

**NOTE**: The **send_start_acct** option of the Configuration server must be enabled.

This is so that if excessive call attempts occur, the limit on simultaneous calls will quickly be reached and subsequent call attempts will be rejected.

The administrator can also track calls in progress on the **Active Sessions** page.

Thus, the ability to limit calls in progress serves as an additional tool against DoS attacks while improving overall system security.

# Call Barring as Part of Customer Service Configuration

Beginning with this release, you can prohibit outgoing calls to specific destinations for all customer accounts with just a single mouse click.

To do this, apply the call barring rules: first go to the **Service Configuration** tab on the customer's page, enable the **Call Barring** service feature and then select the desired rules by using the call barring wizard:



## Priority levels

The call barring feature can now be applied to a product, customer and / or account. If these entities have different call barring rules defined, the following priority order applies (from the highest to the lowest):

- Account
- Customer
- Product

Therefore, when an account makes a call, PortaBilling® first tries to apply the account's call barring settings. If these are not defined, PortaBilling® applies the customer's settings. If the customer's settings are not defined, then the product's settings are applied.

Note that, by default, an account inherits a customer's call barring rules and product settings (enabled / disabled).

Consider the following example:

The US company, TopFashion, produces clothes and distributes them all over the world. The company hires many employees from Mexico. For this reason, the customer asks a PortaBilling® administrator to prohibit this destination in order to prohibit the personal use of office phones. So the administrator creates a call barring rule that includes Mexican destinations and assigns it to the TopFashion customer. This way, no one in the company can call Mexico.

Later on, however, TopFashion contacts the administrator and asks that sales managers only be permitted to call Mexico. The administrator goes to the sales managers' accounts and cancels the rule about Mexican destinations. Now sales managers can call Mexico with no restrictions.

Having the option to apply call barring rules at the customer level provides an easy way for controlling business clients' outgoing calls. Undesired calls can be abolished for multiple accounts with just a single mouse click.

# Static IP Address Provisioning to HSS

Businesses often require static IP addresses to interconnect between offices, access security cameras, etc. With this release, PortaBilling® provides the option to use static IP addresses for LTE services and, therefore, provision them to HSS. This functionality provides various benefits, such as the opportunity to access LTE devices from the Internet, provide remote support, set up a VPN connection and use the advanced features (e.g. port forwarding), among others.

**NOTE:** At this time, static IP address provisioning to HSS is supported only for the Huawei SAE-GW provisioning module. Please contact the PortaOne® support team for assistance with how to provision a static IP address via a different manufacturer's gateways.

To assign the static IP address, specify it in the **Static IP** field on the **Account Info** page:

If you provide service bundles (e.g. LTE Internet, VoLTE and VPN), specify which of them the static IP address refers to in the **CNTXID** field. This field requires the *Context ID* value that you configure on the gateway for each service.

**NOTE:** If the **CNTXID** field is empty, the static IP address will be applied to the service whose *Context ID* value is *1.*

Having the ability to provision a static IP address for LTE devices to HSS provides a variety of benefits, both for end users (e.g. to set up a VPN connection to their business office resources) and for service providers (e.g. for remote troubleshooting).

# Template-Based Subscriber Provisioning for Huawei HSS

A home subscriber server (HSS) manages subscription-related data. It includes, for example, a reference to an access point name (APN) that a subscriber must be provisioned with and, consequently, which services they can use and which Quality of Service (QoS) model applies to them. This information is maintained via a subscriber template that is stored on an HSS.

With this release, PortaBilling® can provision multiple identifiers for which template to use when a subscriber is created on a Huawei HSS per billing environment. This provides you with the opportunity to sell various services with different QoS to different end users.

Thus, a group of subscribers can be created with a template that provides them with Internet Access plus VoLTE and L2TP (Layer 2 Tunneling Protocol). The second group with the template that provides Internet

Access plus VoLTE. And the template provisioned to the third group might only provide, for example, Internet Access.

This feature makes it possible to effectively manage your product range and create packages that are attractive to businesses and individual users. It also helps eliminate the necessity for manual adjustments to templates when non-default settings are required. This makes subscriber provisioning more convenient.

To provision an end user with a certain template, complete the following:
1. Create an Internet access policy with the template ID specified in the policy description in the format: TPLID=$N$, where $N$ is the ID of the template (e.g. TPLID=1).
2. Include this service policy in the desired product.
3. Assign this product to the end user's account.





# Support of Domain Names in PortaSIP® Cluster

To both brand your services and simplify their provisioning to end users, you can now use domain names for your PortaSIP® cluster. Thus, instead of using the cluster's virtual IP address, provision (a) domain name(s) to

your customers' SIP devices and gateways. Then configure the DNS server to analyze and properly handle the domain names you use, according to your business model.

By using PortaSIP® cluster domain names and the appropriate DNS configuration, the following can be achieved:

- Re-brand your services through reseller chains by using multiple domain names for a single cluster virtual IP address;
- Allow users to browse their voice messages by defining the email domain name for your PortaSIP® cluster and resolving it to the cluster virtual IP address. Note that for multi-site PortaSIP® cluster installations, the email domain name must be shared by all the PortaSIP® clusters.
- Increase high-availability of services resolving the domain name to virtual IP addresses of all the PortaSIP® clusters in your geo-redundant installation.
- Prioritize traffic flow among the PortaSIP® clusters of your geo-redundant installation based on subscriber location according to the DNS SRV records.

As a result, you provide your customers with an easy-to-remember name for your company and resellers and obtain a flexible tool for system management.

# Inter-Cluster Messaging

To enhance geo-redundancy for messaging services, inter-cluster messaging support has now been introduced. This means that users registered on different geo-redundant installation sites (each with its own PortaSIP® cluster configured), can exchange messages with each other. If a message recipient is offline or unavailable, the message will be sent to them as soon as they appear online, regardless of which site they are registered on.

While operating in stand-alone mode (because the main site is down or unavailable), messages are delivered only to users who are registered on the same site. However, as soon as the main site becomes available again, inter-cluster messaging is restored and undelivered messages are delivered to the recipients.

**NOTE:** Users registered on another site receive undelivered messages only after their IP devices re-register.

Inter-cluster messaging support facilitates the provisioning of messaging services and improves customer experience.

# Individual Node Configuration for Diameter (Gy)

With this release, the configuration for nodes that support the Diameter protocol have been optimized. This simplifies the configuration of services such as 3G and 4G.

To configure a Diameter (Gy) node, you need only specify:

- The *gateway's realm* on the **Node management** page:



**NOTE:** The gateway's realm represents the **Origin-Realm** value in BE logs.

- The *origin host* and *origin realm* of your PortaBilling® installation on the Configuration server.



When all three values have been defined, PortaBilling® can communicate with the node via the Diameter protocol.

PortaBilling® is already fully integrated with the *Huawei UGW9811* gateway. Other gateways that correspond to the Diameter Credit-Control

Application (**DCCA**) with additional AVPs defined in **3GPP TS 32.299** (version 12.0.0 Release 12) can be provisioned as "generic" nodes.

If you want to provide an interoperability test between your gateway and PortaBilling®, please contact the PortaOne® support team.

# Handling a One-Way Audio Issue with an IP PBX

Service providers may face a one-way audio issue with particular IP-PBX equipment.

For example, such a situation was observed with the Samsung OfficeServ 7070 IP PBX. It was proven that the issue was produced because this particular IP PBX violates the RFC and sends a different SDP during call setup. As a result, a one-way audio issue occurs.

PortaSwitch® now allows service providers to successfully manage such equipment's behavior. To handle this, a new **allow_callee_early_sdp_change** service policy attribute has been introduced.

With this attribute enabled, a B2BUA updates the RTP session if or when an SDP change takes place. This ensures that an appropriate set of parameters is used to establish a media stream.

When this attribute is disabled, B2BUA behaves according to RFC6337 – once the SDP has been received in a SIP response, SDP in subsequent SIP responses are discarded.

This enhancement allows service providers to successfully deal with one-way audio issues caused by SDP changes during call setup.

# Interactive Connectivity Establishment (ICE) Support

ICE is a protocol that allows media streams between two endpoints to be established even though they are located behind Network Address Translation (NAT) devices and firewalls.

When an ICE-enabled client (the caller) wants to communicate with another party (the callee), ICE gathers as many sets of IP addresses as

possible to be used for communication between both parties. ICE then determines which path is best and establishes a media session.

ICE support brings the following advantages:
- It permits to establish voice calls with user agents that exclusively use ICE protocol for setting up media streams.
- It allows RTP streams to traverse network address translation (NAT) devices and firewalls.

**NOTE**: Establishing media connectivity using ICE may require adding Simple Traversal of UDP through NAT (STUN) / Traversal Using Relay NAT (TURN) server(s) to your network.

# Other Features and Enhancements

- **Differentiating customers based on a business model** – It is essential for each service provider to have a thorough understanding of their customers, e.g. what services they use or would like to have, what their needs are, etc.

  To achieve this goal, administrators can now associate each customer with a certain business model. An administrator assigns the business model via a customer class.



  For now, this serves for information purposes only. In further releases, an intelligent data representation based on the chosen customer's business model will be introduced.

- **Intelligent account creation** – To make the account creation process more user-friendly and reduce human error, two new product's parameters have been introduced with this release:
  - **Account role** – This allows administrators to define the account type the product is intended to be used with.
  - **Realm** – This allows administrators to impose a scope of unique identifying characteristics for an account ID.

For now, these two parameters are used for information purposes only. The final implementation of this functionality – applying these parameters during account creation – is planned for further releases.

- **Call routing adjustment based on vendor response** – Sometimes one of your termination partners sends an improper SIP response if, for some reason (e.g. due to their gateway malfunctioning), they cannot terminate a call. Or, you need to define whether to try to connect a call if a user does not answer or declines it.

  Now you can adjust call routing by using the service policies for outgoing connections. Define the SIP response codes (e.g. *486* (Busy Here) or *603* (Declined)) for the **hunt_stop_codes** attribute and assign the service policy to the "Calls to Vendor via SIP" connection. When this connection is tried and PortaSIP® receives a response with the code that matches the one defined, further routing for the call is stopped.

  This enhancement facilitates vendor management and improves overall call processing.

- **Use service policies to control privacy headers in outgoing SIP requests** – New attributes specify whether the **p-asserted-identity** (**pai**) and **remote-party-id** (**rpid**) headers are included in outgoing INVITE requests.
  - The **identity_outgoing_headers_trusted** attribute determines whether to include one or both of these headers in a request sent to *trusted* remote connections.
  - The **identity_outgoing_headers_untrusted** attribute determines whether to include them in a request sent to *untrusted* remote connections.
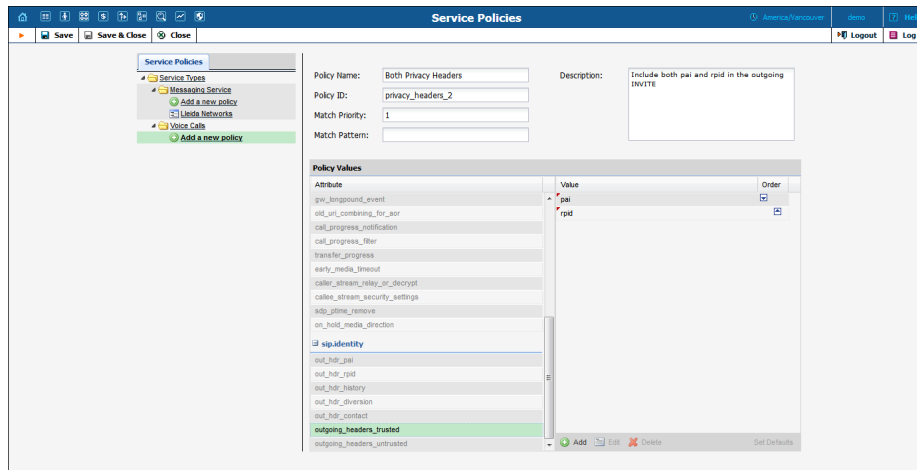
Privacy headers are used when, for example, a caller's identity must be hidden from a called party, but a vendor still requests this information. In this case, identity information can be included in the privacy header that indicates that the caller's info must be withheld from the called party.

Different vendors require and can properly process different privacy headers. Thus, being able to specify which privacy header to send to trusted / untrusted vendors gives you the ability to satisfy both an end user's request for anonymity and a vendor's request for identity data.

- **Control safeguards applied to additional SIP headers** – To secure your VoIP system, PortaSIP®'s B2BUA component usually strips unknown or potentially unsafe headers from incoming requests.

  For example, it strips the Alert-Info header that provides an alternative ring tone for the UA because it may introduce the risk of exposing a callee to dubious content if someone were to exploit the URI it contains inappropriately.

  However, you may still want to use this header if you are sure that the origin of its content is not questionable.

  Beginning with this release, use a new service policy attribute, **passthrough_headers**, to configure conveniently which headers B2BUA must let through.

  PortaSIP® will accept all the headers listed in this attribute and forward them on to vendors.
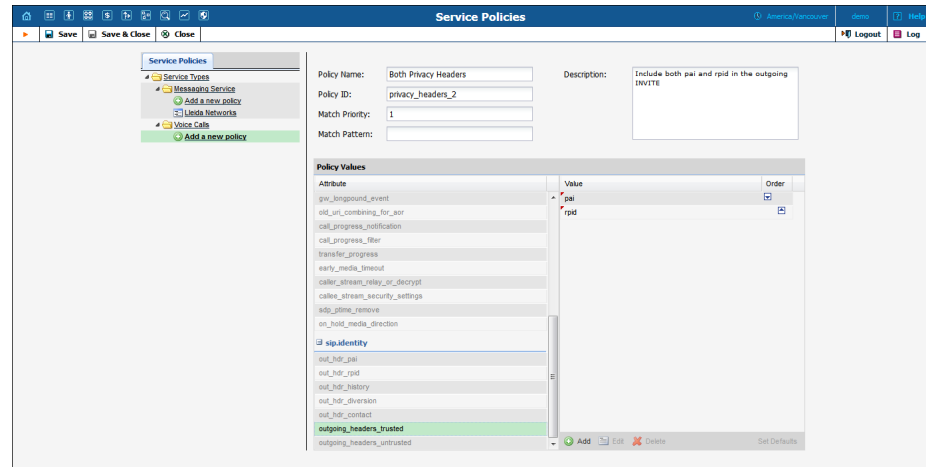
Control over the list of headers permitted lets you engage with a variety of partners and use equipment whose features depend on custom SIP headers. This presents further opportunities for your business.

- **Porter enhancements** – Porter functionality – the tool used for data transfer – has been enhanced and now allows you to:
  - o Transfer customers with individually configured measured services, so as a result, customer metrics are transferred. In future releases, the statistics data charts transfer will be added.
  - o Transfer a range of different entities simultaneously. You can specify entities as a sequence of an entity name – entity ID pairs separated by spaces (e.g. Customers 1543 Products 575 Vendors 57 etc.). Alternatively, you can list entities to transfer in a file and enter the path to this file during data export – either way, Porter will transfer them.

These enhancements optimize the data transfer process and reduce the administrative load.

- **Invoice payment policy** – If you generate an invoice and pay for it by using the invoice wizard, the payment is applied according to the following logic:
  - o Payment for an *out-of-turn* invoice is applied to this invoice only.
  - o Payment for a *midterm* invoice is first applied to previous unpaid invoices, if any, and then to the generated midterm invoice.

This revised invoice payment policy ensures consistency in both cash flow and correct accounting.

- **Improved PortaSIP® cluster configuration** – Several adjustments to the SIP cluster setup are being introduced with this release:
  - o Dispatching and processing node instances that belong to the same PortaSIP® cluster are now gathered under a dedicated sip-cluster node. Each such node has a distinct name, e.g. **sip-cluster-3@Omega**, where the *@Omega* indicates which virtual environment this cluster is attached to (the Omega environment in the example).

    Thus, to configure a PortaSIP® cluster, first create a sip-cluster node and then create the dispatching and processing node instances under it.
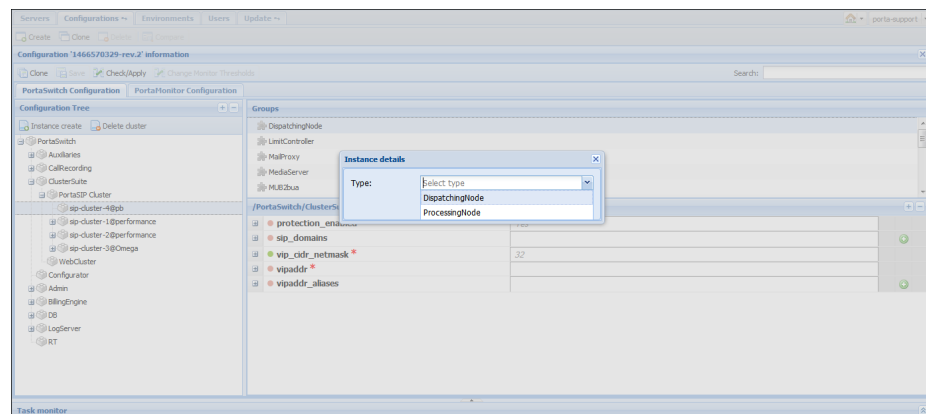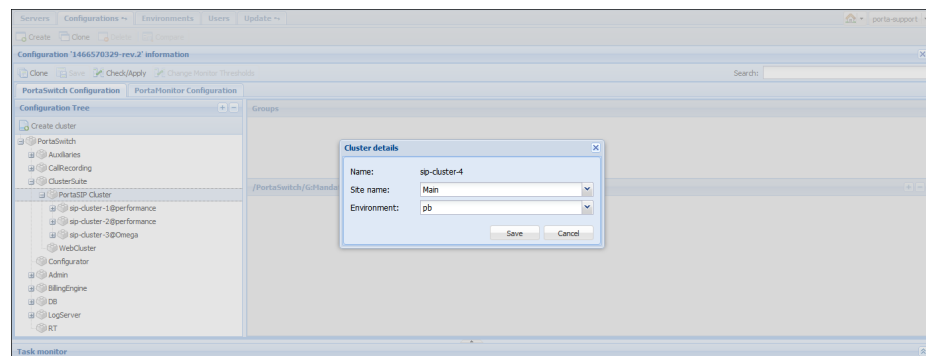




    This way you can clearly differentiate among PortaSIP® clusters that belong to different sites and virtual billing environments.
  - o SIP cluster configuration is centralized. Most of the configuration options have been moved from the level of the individual dispatching and processing node instances to the sip-cluster node level. The setting you define for a sip-cluster node will be inherited by all instances that are under it.

When a SIP cluster has several dispatching or processing nodes, they usually share similar settings.
The centralization of settings at a higher level makes it possible to configure them one time only and thus reduce additional work and eliminate human error.

  o Virtual IP address-related options can now be found in the Dispatching Node group of a sip-cluster node.
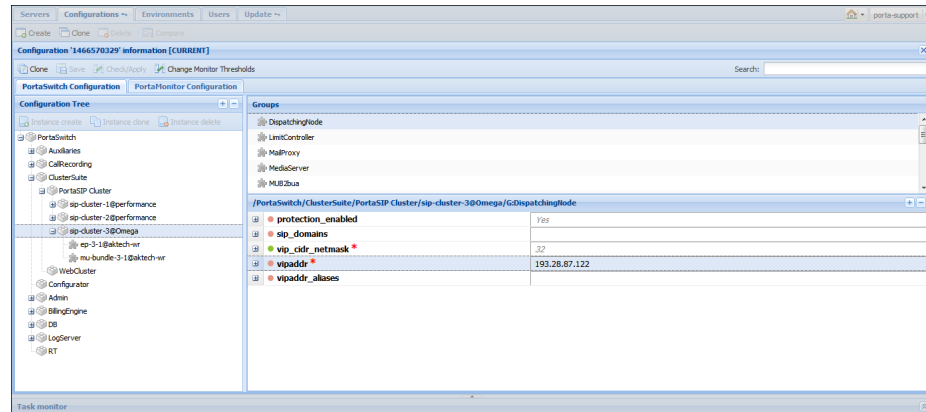


  o The EdgeProxy component has received a more *intuitively transparent* name and is now called SIPProxy.

These enhancements make the deployment of your SIP clusters easier to do and more efficient than before.

- **Simplified hotline configuration** – With this release, you can quickly and easily select the required options for hotline configuration on the new **Hotline** tab.



To enable hotlining, specify the website in the URL format and select at least one of these check boxes:

> o **When account out of funds** – Select this option to redirect end users if their traffic quota or balance are insufficient for accessing the Internet.
> o **When account suspended or blocked** – Select this option to redirect end users whose accounts are blocked, suspended or expired.

To disable hotlining, clear both check boxes.

With the new tab, hotline configuration becomes intuitive, eliminating the need to look for configuration parameters in the documentation.

- **Separate monitoring of hotlined sessions** – When hotlining is configured, end users who are, for example, out of funds for using the Internet are redirected to the website that instructs them how to continue the service and provides means to do it.

  For quality support service, it is important to have the capability in place for distinguishing between regular Internet sessions and hotlined ones.

  With this release, you can choose whether to show hotlined sessions among other active sessions.

  To hide a hotlined session, go to the **Active Sessions** page, select **Internet Access** for **Service Type** and clear the **Hotlined** check box.

  To hide hotlined sessions by default, on the Configuration server web interface, go PortaSwitch -> the Admin node - > the Active Calls group and set the **ShowHotlinedSessions** option to **No**.

  Hotlined sessions are easily identified on the page by the  **Hotlined** icon.

This helps you to perform support tasks more quickly and effectively.

- **Define fees for accounts in invoice wizard** – When generating an invoice for a customer via the invoice wizard, you can either charge or credit this customer's particular accounts. To do this, click the **Add Fee** button on the **Fees** tab, select the desired credit account and specify the fee amount.



As a result, an xDR will be applied to this account and later be reflected on the invoice.

| TOTAL Payments | | | | | -43.98 |
|---|---|---|---|---|---|
| **Credits** | | | | | |
| 12001001102 | Balance adjustment - Manual | equipment rent | | 2016-06-14 | 10.00 |
| 12002001105 | Balance adjustment - Manual | equipment rent | | 2016-06-14 | 10.00 |
| 12001001101 | Balance adjustment - Manual | equipment rent | | 2016-06-14 | 10.00 |
| | Balance adjustment - Manual | | | 2016-06-07 | 5.00 |
| 12001001101 | Balance adjustment - Manual | | | 2016-06-13 | 3.00 |
| **TOTAL Credits** | | | | | **38.00** |
| **Subscriptions** | | | | | |
| 12002001105 | Activation Fee | Smart call basic | 2016-06-04 | 2016-06-04 | 2.99 |
| 12065557711 | Activation Fee | Smart call basic | 2016-06-11 | 2016-06-11 | 2.99 |
| **TOTAL Subscriptions** | | | | | **5.98** |

This enhancement gives you more flexibility for managing particular payments per account. It also makes the generation of invoices on demand more specific.

- **Top up service wallets with initial balance** – Service wallets having an initial balance are typically used for allocating some amount of free service to customers once they have been assigned. But now you can allow your customers to extend this service usage, for a fee, by topping up these service wallets. Configure the top-up options so that customers may select the most appropriate one via their self-care interface. With this enhancement, you add flexibility to this advanced business model and increase your revenue.



- **Most recent service wallet top-up** – An administrator can now obtain all kinds of information about the last service wallet top-up transaction. This information is shown in the **Top-up History** dialog box and includes the following:

o  The date when the transaction was made.
o  The charged fee and service quota.
o  The destination group designated for this service wallet.
o  The service for which the money is reserved.

The administrator can obtain this information about the last service wallet top-up transaction for both customers and accounts.
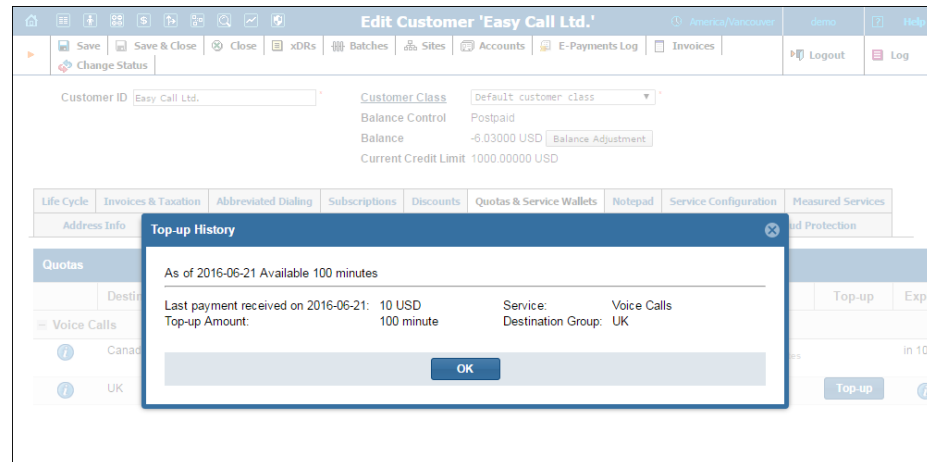


- **Enhanced volume discount calculation logic** – It touches upon the following aspects:
  o  To provide Internet quotas, you no longer need to define a non-zero price in customer tariffs. Now you can set a zero price in the tariff and set up the service to be blocked when the quota is exhausted. Or, you can continue providing service and charge customers only for the amount of data transferred – quotas can work either way.
  o  The volume discount calculation algorithm for sessions that span several discount thresholds has been optimized and is now more precise.

- **Enhanced pricing batch filters in DID inventory** – When working with DID inventory, you use the pricing batches to define your pricing strategy. Thus, you associate a pricing batch with DID numbers of a certain type – those provisioned on-demand or uploaded to the DID inventory, and configure the DID markup within. Then, while distributing DID numbers among pricing batches, you only see those used for inventoried DIDs in the list.

DID numbers that are provisioned on-demand from external providers are automatically added to their respective pricing batches when allocated by customers.

- **Resellers are now able to modify notification templates** – Notification templates are used to generate notification messages (email or SMS) that are sent to resellers' customers when certain events take place.



The ability to modify notification templates enables resellers to customize notifications sent to their customers without needing to

involve an administrator. As a result, administrators' workload is reduced.

- **The procedure for configuring online signup has changed** – A summary of the main changes is as follows:
  - Configuration options related to both regular and multi-card signup are now handled via the configuration server web interface.
  - DID number provisioning for online signup is now performed from the DID pool (i.e. any DID number from the DID pool can now be distributed among end users via online signup).

  For detailed information about how to configure online signup, please refer to the **Unified PortaSwitch Handbook Collection**.

- **Store credit card data used for Authorization Only transactions** – The Authorization Only transaction serves to verify that an end user's credit card is valid and reserve the required amount of money on it.

  Now you can also save the card's data specified during this transaction for future use. This saves time by making it unnecessary to re-enter card data after verification and thus makes the addition of a new credit card to the system more convenient.

  Note that you will be able to save credit card data only if the payment processor you use is configured to store 'full credit card information, except cvv.'

- **Configure the Paging / Intercom prefix within a dialing rule** – By dialing a paging / intercom prefix before a phone number, an end user can establish an intercom connection with a colleague (within the same IP Centrex). Beginning with this release, the paging / intercom prefix is part of the dialing rules and can be conveniently configured along with other service codes on the dedicated tab. If no dialing rule is assigned to an end user, the default prefix value *33 applies.

- **Customer self-care users can enable the Paging / Intercom feature on the Outgoing Calls page** – Since the paging / intercom prefix must now be configured within a dialing rule, the check box that enables / disables the paging / intercom feature has been moved to the **Outgoing Calls** page of the **IP Centrex** tab. Consequently, the **General** page of the **IP Centrex** tab has been removed as redundant.



- **Print your company's postal code on issued invoices** – Service providers have an opportunity to easily add a postal code to an invoice template.

To add a contact postal code to an invoice, launch the Layout Designer for the invoice's templates and select the **Company ZIP** field from the **Header** section of the context menu. The contact info specified in the corresponding section of the **Company Info** page will then appear on invoices based on this template.

Using such predefined variables available from the Layout Designer helps save time on template creation and eliminates the possibility of human error.

- **Spending plan management for customers via API** – Now you can assign, remove and reset spending plans, plus modify spending plan limits for a particular customer, all by using the API. This improves customer management from either your applications or the CRM systems.

# Web Interface Changes

- **Call barring wizard** – With this release, use the call barring wizard to select previously configured rules and enable call barring from one place. To find the call barring wizard, go to the **Service Configuration** tab of the customer or account page. To select the call barring rules, click on the ✉ **Wizard** icon and then tick the desired rules.

- **Optimized product selection** – As of this release, all mandatory account parameters are located on a single form, including the main product and prepaid plan. This enhancement ensures that an administrator defines all of the mandatory parameters before clicking the **Save** button.

  **NOTE:** The prepaid plan options (**Periodic Fee** list) are only available when a product includes a subscription that has prepaid plans configured.

  If add-on products are available, the **Add-on Products** tab appears so that additional services may be assigned to the account.

With this optimized product selection, creating and / or changing an account are simpler and more user-friendly.

- **Web interface enhancements for volume discount plans** – With this release, the representation of discounts, quotas and service wallets has been improved:

  o On the **Edit Discount Plan** page, the **Type** and **Details** columns display extended and more precise information. Therefore, you can view the key parameters of all discount schemes at a glance.
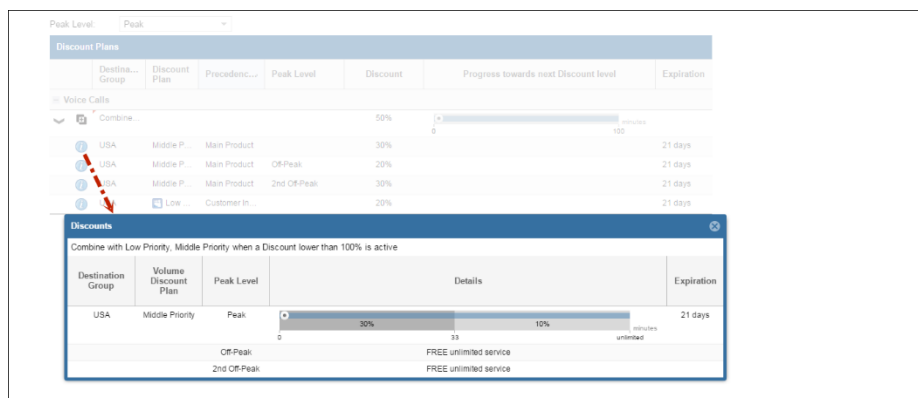


  o Information about discounts, quotas and service wallets on the **Edit Customer** and **Edit Account** pages now includes only the most valuable data. Progress bars have been added to easily track service consumption:

- o You can view the total discount rate applied to a customer or an account during peak, off-peak or second off-period periods. To do this, select the desired period in the **Peak Level** list.
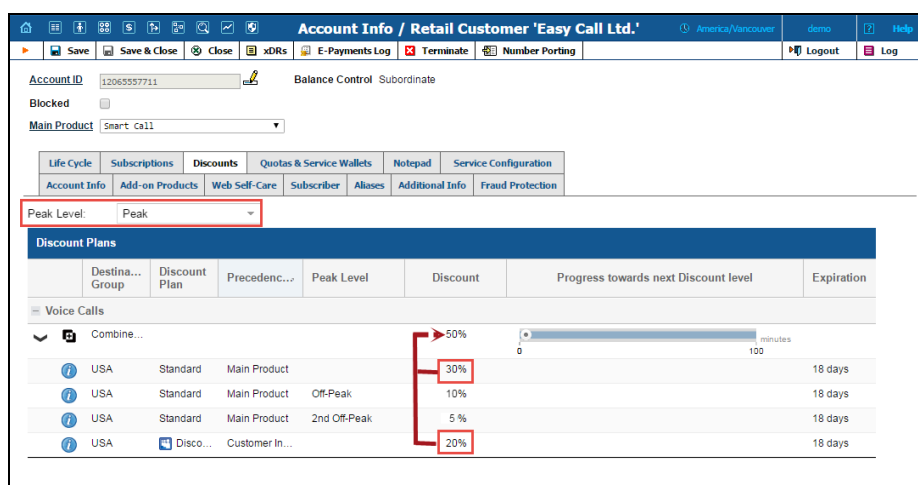


Such representation provides a clear picture of all the discounts provided to the customer and applied to them.

- **Redesigned Quota History dialog box** – The newly redesigned **Quota History** dialog box now presents summarized information about traffic allocated for the current usage period and traffic rolled over from previous usage periods. There is also information about each traffic quota expiration date (current and rollover).
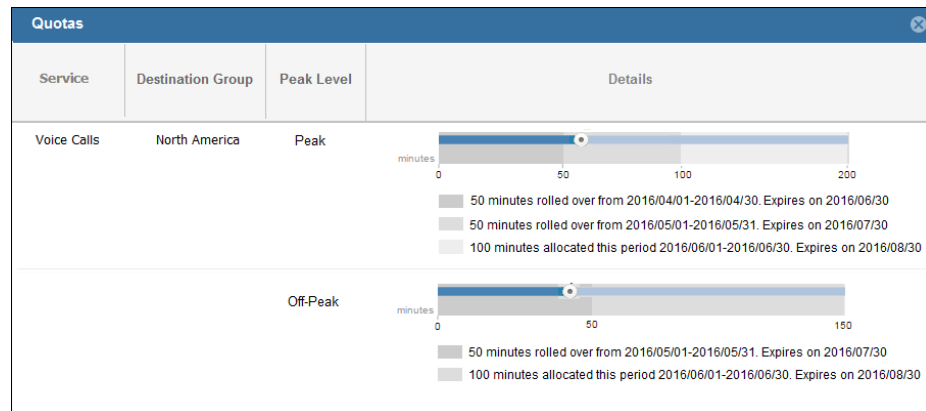
- **Presentation of combined discounts** – Now discounts that are configured for the same destination group and for which the same combination rule applies are shown as a **Combined Discount** logical group on the **Account Info** page. Group discounts are sorted by priority – from high to low.

  For each **Combined Discount** group a summarized discount and progress bar that illustrates the group's overall progress is shown.
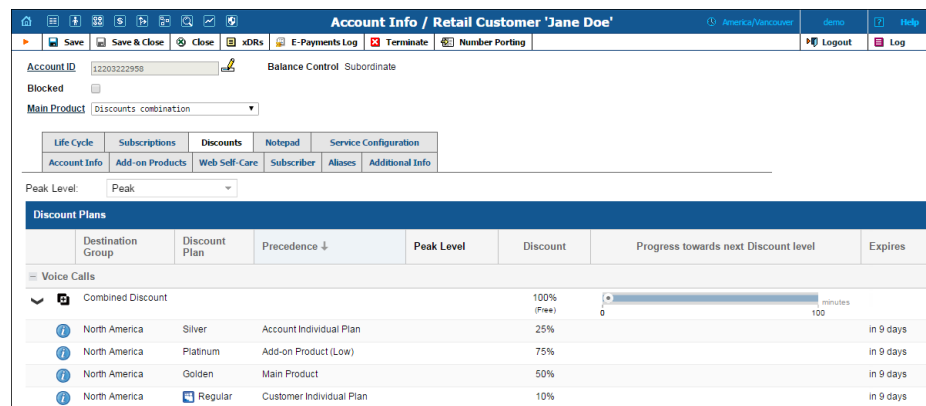


- **New Balance Adjustment wizard** – The **Balance Adjustments** tab on the **Edit Customer** and **Edit Account** pages (that allows an administrator to adjust a customer or account balance) has now been replaced with the **Balance Adjustment** wizard.

  This delivers a more intuitive user experience and is more convenient for administrators.

- **More intuitive connection creation** – Now the **Add connection** page has labels that are more informative. It also has the structure that permits an administrator to fill in all the required information for Calls to Vendor via SIP connections more confidently and quickly than before.

  The most significant enhancement addresses creating internal connections.
  - You can explicitly specify that you want to create an internal connection by selecting the corresponding option.
  - There is no need to remember special codes that identify the class of the internal connection (e.g. whether it enables SIP-to-SIP calls). You can conveniently select the desired connection class from the list. Each list item contains both a clear description of what it is intended for and a special code.



- **The Company Info page has a new structure** – The **Company Info** page has been rearranged and now presents the information in a more logical and easy-to-use manner.

- The base currency has been moved from the tab area to the top of the page to make it visible as soon as an administrator opens the page.
- All address information, both legal and contact details, is now gathered on one tab, and an administrator can copy the legal information into the contact info area by selecting the dedicated check box.
- You can provide two email addresses. One will appear in the `From:` field in emails with notifications, statistics and invoices sent to customers. The other one is your contact email that your customers can use for contacting you (this email can be added to an invoice template and thus appear on issued invoices).
- On the **Taxation & Invoices** tab an administrator can specify the taxation settings when the taxation plug-in is enabled (please see the **Taxation with Avalara** announcement in this guide).





# Important Upgrade Notes

- **The configuration for content-based billing has been simplified** – In the content-based billing model, the gateway analyzes the Internet content that users access (e.g. You Tube, social networks, email services, etc.) and sends corresponding rating group values to PortaBilling®. Previously administrators created multiple tariffs for every rating group and associated them

by using different access codes to charge customers for different Internet content. Now they can use a single tariff containing the rates for respective rating groups for the same goal.

Therefore, to configure content-based billing, do the following:
- o Create destinations in the **RGXXX** format, where XXX stands for the rating group value.
- o Define rates for these destinations in customer tariffs. Note that the NETACCESS rate must be present in the tariff to authorize a user and charge for any other rating group.
- o Create a single rating entry in the product using the empty access code and tariff.

For backward compatibility, content-based billing that uses access codes is preserved. However, it is recommended that respective rates be used instead.

With this simplified configuration, you can introduce content-based billing for Internet services with just a few mouse clicks.

- **Changes in the rate match pattern for messaging services** – Starting with this release, support of MSGSMPP% and MSGSIP% rates in tariffs is discontinued. Therefore, customers who have been using these rates in their tariffs must reconfigure them with E.164 or E.212 destinations. To charge for on-net messaging, use MSGN, MSGNR, and /or MSGNRX rate codes. If you wish to apply different tariffs for instant messages and SMSs, use the SIP and SMPP access codes in the product configuration. It is also possible to use the default matching rate code "|" ("pipe") to cover everything else in the tariff.

  To temporarily use the previous configuration, type the *[Msg]TransportProtocolInRatePattern=Yes* string for BillingEngine -> Custom -> IniOptions option on the Configuration server.

- **Email upload settings are not copied for the cloned tariff** – In the cloned tariff, email upload values are always blank. This ensures the uniqueness of an email upload key for each tariff within the billing environment. Therefore, if you plan to update the rates for the cloned tariff by email, manually define the new email upload settings for it.

- **Callback calls initiated by SIP accounts** – If you use callback together with residential VoIP services, a callback call (leg A) is initiated to your IP phone. In this type of case, voicemail, follow-

me or other call redirect options will not work if the call is not answered.

- **Deprecated API fields** – Be aware that retrieving the following API fields:
    - o **i_routing_plan** – the unique ID for the account's routing plan,
    - o **follow_me_enabled** – the account's forward mode, and
    - o **i_moh** – the unique ID for the account's music on hold option

    takes a significant part of the overall execution time for **get_account_info** and **get_account_list** requests. Therefore these API fields are deprecated in the current release and will not be supported in further releases.

    Administrators should therefore use the **ServiceFeatureInfo** structure to get / set the appropriate options.

- **The configuration of free rating groups has changed** – Starting with this release, administrators no longer need to specify free rating groups in the description of the Internet Access Policy.



The free rating groups can now be explicitly defined in tariffs. To do this, an administrator adds destinations in the RGXXX format (where XXX stands for the rating group value), and sets a zero price for these destinations in the corresponding rates.

The billing engine automatically figures out which rating groups are free from the tariff. No further actions, such as adding free rating groups in the Internet Access Policy, are required.