



PortaSwitch New Features Guide

MAINTENANCE RELEASE 80

Copyright notice & disclaimers

Copyright © 2000–2019 PortaOne, Inc. All rights reserved

**PortaSwitch® New Features Guide, September 2019
Maintenance Release 80
V1.80.04**

Please address your comments and suggestions to: Sales Department,
PortaOne, Inc. Suite #408, 2963 Glen Drive, Coquitlam BC V3B 2P7
Canada.

Changes may be made periodically to the information in this publication. The changes will be incorporated in new editions of the guide. The software described in this document is furnished under a license agreement, and may be used or copied only in accordance with the terms thereof. It is against the law to copy the software on any other medium, except as specifically provided for in the license agreement. The licensee may make one copy of the software for backup purposes. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopied, recorded or otherwise, without the prior written permission of PortaOne Inc.

The software license and limited warranty for the accompanying products are set forth in the information packet supplied with the product, and are incorporated herein by this reference. If you cannot locate the software license, contact your PortaOne representative for a copy.

All product names mentioned in this manual are for identification purposes only, and are either trademarks or registered trademarks of their respective owners.

Table of Contents

Preface4
SMS processing via Protei SMSC5
Fallback call delivery in dual-version PortaSwitch®5
Other features and enhancements.....6
Web interface changes8
Important upgrade notes9

Preface

PortaSwitch® Maintenance Release 80 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.

Trademarks and copyrights

PortaBilling®, PortaSIP® and PortaSwitch® are registered trademarks of PortaOne, Inc.

SMS processing via Protei SMSC

With this release, CSPs can provide SMS services to their mobile subscribers and charge them for SMS delivery in real-time using PortaBilling® and Protei SMS center (SMSC).

PortaBilling® functions as an OCS and communicates with Protei SMSC via the Diameter (Ro) interface with the direct debiting authorization mode.

When John Doe sends an SMS, Protei SMSC sends the CCR (Credit Control Request) Diameter message of the Event_Request type to authorize John's account in PortaBilling®. Upon successful authorization, PortaBilling® sends a CCA (Credit Control Answer) message back to Protei SMSC and immediately charges John's account for the SMS. The SMSC then delivers John's message to the recipient.

PortaBilling® controls John's balance and service quotas to deny SMS service when he has no funds or exceeds the allocated quota and to resume it when funds are replenished or a quota is renewed.

CSPs can also send SMS notifications to subscribers about various billing events (e.g. exceeding a credit limit or a balance top up). PortaBilling® communicates with Protei SMSC for SMS notification delivery via PortaSIP®.

Following the example above, to notify John about reaching his credit limit or making a successful password change, PortaBilling® creates a notification and sends it to PortaSIP®. PortaSIP® sends it to Protei SMSC via the SMPP protocol. The SMSC then delivers the SMS to John's phone.

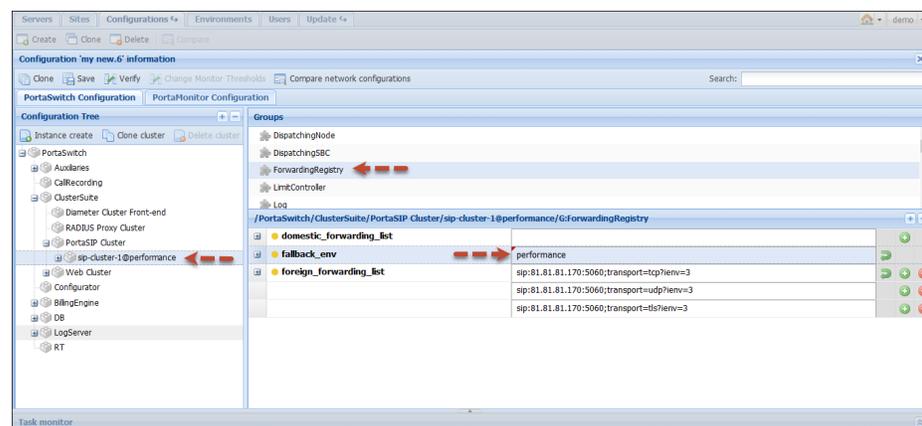
With this integration, CSPs receive a cost effective solution to provide SMS services out-of-the-box. They also improve the customer experience since SMS notifications are a convenient way to notify subscribers about their activities in a timely manner.

Fallback call delivery in dual-version PortaSwitch®

To find which system in dual-version PortaSwitch® will process an incoming call, the dispatching SBC matches first the destination number and then the source number against the account / DID list in the database.

If the dispatching SBC cannot find the target system for some reason (e.g. there is no record in the database to match the destination number), it now sends the call to a fallback system. In that system, PortaSIP® authorizes the call in PortaBilling® and receives the correct routing to deliver the call to the recipient. The alter-ego system is the fallback system by default.

You can configure a fallback system for a dispatching SBC to send calls. For example, if you have just deployed dual-version PortaSwitch® and haven't yet migrated customers to the alter-ego system, define a production system as the fallback one. Select a billing environment from the production system in the **ForwardingRegistry.fallback_env** option on the Configuration server.



Then when the dispatching SBC cannot identify where to dispatch an incoming request, it routes this request to the production system for further processing.

The ability to define the fallback system increases the call success rate in dual-version PortaSwitch® and therefore improves customer experience.

Other features and enhancements

- **Improved API operation in dual-version PortaSwitch®** – These enhancements serve to simplify the communication of API applications (custom self-care portals, CRM systems, etc.) with dual-version PortaSwitch® and therefore minimize their modifications:
 - WebDispatcher now automatically sets the session context for all API methods that include `i_customer` / `i_account` values in their input parameters. WebDispatcher saves the

set context for further requests. For example, an API application calls the `get_account_list` method with the `i_account` attribute in the request. WebDispatcher detects that the account resides in the alter-ego system and executes the method there. Next, the API application calls the `get_product_list` method. WebDispatcher runs it on the alter-ego system. This preserves the workflow for API applications and reduces the number of customizations required to make them compatible with dual-version PortaSwitch®.

- WebDispatcher automatically sets the session context for the API requests that include the `i_customer` value specified in the `managed_by` input parameter. For example, to retrieve all the products managed by the ABC reseller, the API application calls the `get_product_list` method and sends the ID of this reseller within the `managed_by` attribute. The WebDispatcher detects that the ABC reseller belongs to the production system and thereby executes the API request there.

NOTE: The reseller must be active in only one of the systems. WebDispatcher automatically sets the session context to the alter-ego system if the reseller is active in both systems (when some of their customers are moved to the alter-ego system).

- Any entity created in dual-version PortaSwitch® receives a unique ID. All entities created on the production system receive an odd ID value, while entities created on the alter-ego system receive an even ID value. This type of distribution prevents data collision during migration from one system to another.
- **Data usage graphs for satellite Internet users** – In addition to upload / download rate graphs, you can now view data usage statistics for satellite Internet users in PortaBilling®.

Let's say John Doe uses a daily quota of 1GB and complains that the Internet did not work for one day. The administrator checks John Doe's upload / download rate and data usage statistics for the last week and sees that John Doe did not have a functioning connection to the Internet for one day. Further investigation shows that the Internet was unavailable due to the provider's connectivity issues.



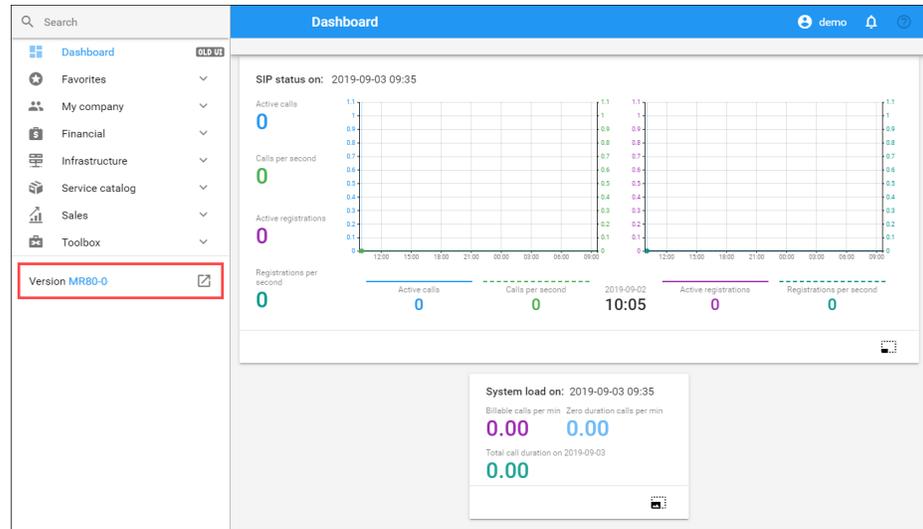
As compensation, the administrator provides John Doe with free Internet quota for one day.

This enhancement simplifies service usage monitoring and helps solve disputes.

Service usage graphs are available as a separate plug-in. Please contact the PortaOne® support team for assistance with plug-in installation.

Web interface changes

- **PortaBilling® version and new features description** – With this release, you can view the current version of your PortaBilling® installation on the administrator’s dashboard. It also contains a link that redirects you to the New Features Guide, where you can get acquainted with all the new features in your current version.



- **Expand / collapse log requests for billing logs** to refine the data display for logs with a large number of requests (e.g. hide unnecessary ones). This facilitates troubleshooting.

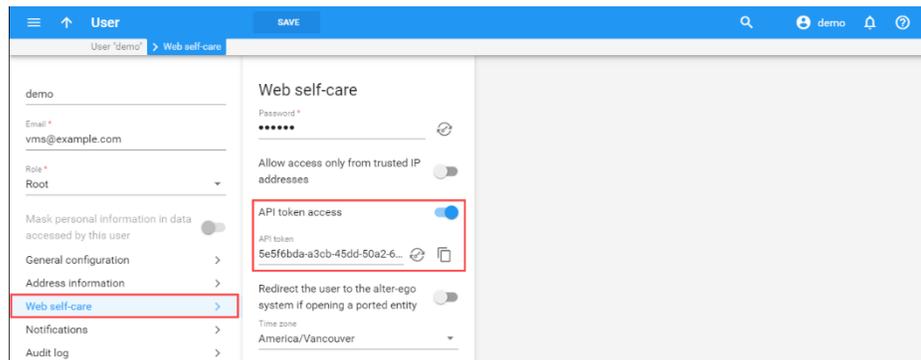
The screenshot shows the 'Log viewer' interface. The top bar includes 'Log viewer', 'SAVE LOG', 'SEND TO RT', and 'performance'. Below is a search bar and a 'Session summary' section. The main area is titled 'ADVANCED VIEW' and shows a table of log entries. The first entry is highlighted with a red box and shows a 'Porta billing' component. To the right of the table is a detailed view of the log data, including fields like 'Session-Id', 'Origin-Host', 'Destination-Realm', and various service-related parameters.

Important upgrade notes

- **Token-based authentication for PortaPhone** – PortaPhone can now be authenticated in PortaBilling® via an API token. This increases security in their communication and prevents malicious activities in your system.

The use of a username / password pair for API authentication is no longer supported. Therefore, you must reconfigure the provisioning module in PortaBilling®:

- Generate an API token for a PortaBilling® administrative user.



- Specify the API token in the **AcrobitsSignup.PortaBillingAPIToken** option on the Configuration server.

