



PortaSwitch

New Features Guide



©2000-2018 PORTAONE, INC. ALL RIGHTS RESERVED. WWW.PORTAONE.COM

Copyright notice & disclaimers

Copyright © 2000-2018 PortaOne, Inc. All rights reserved

PortaSwitch® New Features Guide, July 2018 Maintenance release 71 V1.71.07

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

Preface	.4
Integration with Salesforce CRM	. 5
Call control API for custom IVR application	. 6
Failover for RADIUS proxy	. 8
New Version of Linux	.9
Other features and enhancements	. 9
Web interface changes	10
Important upgrade notes	

Preface

PortaSwitch® Maintenance Release 71 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

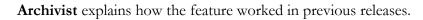
This publication uses the following conventions:

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

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.



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

60

 $\overline{\lambda}$

Tips provide information that might help you solve a problem.

Trademarks and copyrights

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

Integration with Salesforce CRM

PortaBilling[®] is now integrated with the Salesforce customer relationship management (CRM) system designed for the automation of business processes. This integration enables your sales team to:

- perform marketing campaigns for PortaBilling® customers via CRM; and
- use all the CRM features that are built into the system contact and follow up with customers, review history, analyze campaigns, etc.

To create a marketing campaign, your sales manager needs a list of customers that he can contact (e.g. via calls or SMSs). He filters existing PortaBilling® customers using different criteria – country, product, last day of service usage, etc. These selected customers become campaign members. When your sales manager opens a customer profile in Salesforce, the **PortaBilling® details** tab appears and there he can see the payment history, products and service usage details of the customer.

PORTA ONE	icati Home Start Port	taOne Campaign Campaigns 🥆	Al v Q Leads v Contacts				E	** 🖬 ? 🌣 🖡 🧞
Ellie Palmer	UL SSSSS URUT - 123	AND THE STREET	NSSIINS 10037 - 189	sent z	arean and a support of the support	WS-111 - ZA	+ Follow New Case New Note	Submit for Approval
Title Company Ellie Palmer	Phone(2) ♥ 970-081-8119	Email						
Open	- Not Contacted	Workin	ng - Contacted	\rightarrow	Closed - Not Converted	\sim	Converted	 Mark Status as Complete
ACTIVITY CH	ATTER DETAILS	NEWS PORTABILLIN	IG DETAILS				We found no potential duplicates of this lead	d.
ID 31842			Name Elle Paimer				Campaign History (1)	
Invoices Products	Service Usage						Campaign - France June 13 Start Date: 13/06/2018 Type: Conference	
INVOICE #	V PERIOD FROM	✓ PERIOD TO	✓ AMOUNT NET	✓ 001	STANDING AMOUNT 🗸 DUE DATE	~	Status: Sent	
34289	2018-05-22 21:57:18	2018-05-22 21:57:18		S¥.00	\$1.00 22-May-2018		View All	
34290	2018-05-22 21:57:25	2018-05-22 21:57:25		-\$4.00	\$0.00 22-May-2018			
34291	2018-05-22 21:58:22	2018-05-22 21 58 22		\$1.00	\$1.00 22-May-2018			
34292	2018-05-22 21:58:26	2018-05-22 21:58:26		\$1.00	\$1.00 22-May-2018			
34293	2018-03-22 21:58:30	2018-05-22 21 58:30		\$5.00	\$5.00 22-May-2018			
34294	2018-05-22 21:58:34	2018-05-22 21:58:34		-\$3.00	\$0.00 22-May-2018			

For your sales team's convenience, they can do the following via the CRM, without logging into PortaBilling®:

- access relevant information about customers (e.g. their products, service usage history, invoices and balance), and
- manage customer products and / or add-on products.

Consider the following example:

A sales manager, John Doe, creates a marketing campaign in which he wants to sell international calls to Mexico, already configured in the MegaGo add-on product. To make this happen, he filters for customers who:

- live in the USA;
- use the SuperCall main product;
- do not use the MegaGo add-on product; and

• have spent more than \$30 in the last month on voice calls.

When the list of customers is ready, John opens the first customer profile, that of Abigail Curry, and starts the call by offering additional services – 100 minutes of free calls to Mexico (the MegaGo add-on product). Abigail Curry is interested and agrees to pay for a new service. John opens the product configuration page in the CRM and adds the MegaGo add-on product. When he saves the changes, the CRM relays the data to PortaBilling[®].

	Abigail Curry			
Account	7165452			
Main Product	SuperCall	•		
Addons	Enabled Addon Name Add-on 1	29-Jun-2018	ä	
				
	Add-on 2	29-May-2018	苗	

This integration helps boost your sales by organizing your marketing campaigns. In addition, this allows your sales team to manage customer products via the CRM web interface and this ensures they have up-to-date information about your customers' service usage.

Call control API for custom IVR application

With this release, the call control API has been extended and now provides the ability to operate with custom IVR applications. This functionality is of special interest to call centers, since it permits them to develop their own IVR applications including specific features (e.g. auto attendant to track the status of the parcel.) That introduces their own call processing flow, therefore improving customer interaction. The IVR application communicates with PortaSwitch® via the API and it can be implemented in any programming language.

Consider the following example.

Your customer, a visa processing center, wants to automate the process of providing their users with relevant information such as their visa

application status. To make this happen, they implement an IVR application in Java and store it on their external server. The application can gather user inputs and retrieve the necessary information from the visa center's database. To participate in call processing, the application connects to PortaSwitch® via the API, requests the access number (e.g. 1733355700) and subscribes to call state notifications for that access number.

When Mary Smith dials 1733355700 to call and check her visa application status, the following occurs:



- PortaSwitch® matches the access number (1733355700) and notifies the customer's IVR application about the call.
- The IVR application sends the API request to PortaSwitch® with an instruction to answer the call and provides the path to the prompts.
- PortaSwitch® answers the call and plays a prompt for Mary to enter her registration number, etc.
- PortaSwitch® collects Mary's input and sends it to the IVR application via the API.
- The IVR application retrieves the data from the external database and sends the API request to PortaSwitch® to inform Mary that her visa has been approved.

This feature enables your customers to implement their own IVR applications in the programming language of their choice. Thus, they can manage incoming calls and automate their workflow.

Your benefit comes from being more competitive in the marketplace and therefore, extending your customer base.

Configuration

To enable the use of a custom IVR application, a PortaSwitch® administrator needs to do the following:

• Create an IVR application of the User Application type.

			BB (IVR Applications () America/Vancouver								
Þ.	۲	Add	🖬 Si	ive	E Save & Close	Voice Appl	ications Settings	Ose Ose						▶Ø Logout	Log
									Applications		Search				
							AN	r			•	Search			
			E	dit		Name *		Applica	ation Type *		Access Numbers		Description Del	ete	
					Custom IVR		User .	Applicatio	n	• •				•	

- Add access numbers that can be used by the application.
- Enable the User application option for the IVR owner account, either explicitly or within the product configuration.

\equiv \uparrow Product	SAVE	CLONE RATE LOOKUP				🕒 demo 🇘	. Ø
Green call > Services > Void	ce calls 🗲 Incoming	g calls					
Services		Voice calls configuration	ı		Incoming calls confi	guration	
ADD A SERVICE	>	Fair usage policy		~	Unified messaging		~
Voice calls	Ť.	Service policy		~	User application	•	~
		Outgoing calls		>		-	
4		Incoming calls		>	Present caller info		~
* ·		Fraud detection		>			

The IVR application owner needs to:

- Develop an IVR application that can communicate with PortaSwitch® via the API.
- Add an access number to the application.
- Subscribe the application to call state notifications for the access number.

Failover for RADIUS proxy

The RADIUS proxy in dual-version PortaSwitch® is used to distribute RADIUS requests across systems based on customer location. This ensures uninterrupted service provisioning during gradual customer migration.

Now you can make the RADIUS proxy redundant to preserve service provisioning if it becomes unavailable (e.g. due to hardware failure). To make this happen, add several RADIUS proxy nodes and then organize them into a cluster. Assign a virtual IP address to the cluster to serve as the communication point for the external RADIUS clients (e.g. NAS).

Servers Sites Configurations 4 Environments	ts Users Update 4		🔬 • demo					
🖁 Create 🔚 Clone 🗔 Delete 🛛 🔄 Compare								
Configuration '84' information								
🗋 Clone 📲 Save 📝 Verify 📝 Change Monitor Thresh	holds 🔄 Compare network configurations	Sea	rch:					
PortaSwitch Configuration PortaMonitor Configura	ation							
Configuration Tree +	Groups							
Instance create Cone cluster Delete cluster	RadiusProxy							
PortaSwitch								
Gin Auxiliaries								
GaliRecording								
😑 🏐 ClusterSuite								
- (i) Diameter Cluster Front-end								
RADIUS Proxy Cluster								
G i radus-proxy-duster-1	/PortaSwitch/ClusterSuite/PADIUS Provy Cluster/	/PortaSwitch/ClusterSuite/RADIUS Proxy Cluster/radius-proxy-cluster-1/G:RadiusProxy						
in radius-proxy-1-1@biling	<pre>B = acct_port*</pre>	21813	•					
radius-proxy-1-2@biling1 @ PortaSIP Cluster	acc_port*	21013						
B Web Cluster	alterego_ip auth_port	21812						
(iii) Configurator	🙂 🔍 clients *		0					
		Νο	•					
Configurator B S BillingEngine D D8	 clients * debug * default_backend 	Production system	0					
Configurator BillingEngine	 clients * debug * default_backend production_acct_port 	Production system auto	•					
Configurator Configurator BillingEngine Configurator DB Configurator Configurato	 clients* debug* default_backend production_acct_port production_autt_key 	Production system auto auto	•					
Configurator Configurator BillingEngine Configurator DB Configurator Configurato	iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Production system auto auto auto auto	0					
Configurator Co	e clients debug* deduug* deduut_backend oproduction_acct_port oproduction_auth_key oproduction_auth_key oproduction_auth_port oproduction_auth_port	Production system auto auto						
Configurator Co	iii 0 clients* iii 0 default, backend iii 0 production_astr.Lev iiii 0 production_auth.Lev iiii 0 production_auth.port iiii 0 production_auth.cet iiiii 0 production_auth.cet iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Production system auto auto auto auto	0					
Configurator Co	e clients debug* deduug* deduut_backend oproduction_acct_port oproduction_auth_key oproduction_auth_key oproduction_auth_port oproduction_auth_port	Production system auto auto auto auto						
Configurator Co	iii 0 clients* iii 0 default, backend iii 0 production_astr.Lev iiii 0 production_auth.Lev iiii 0 production_auth.port iiii 0 production_auth.cet iiiii 0 production_auth.cet iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Production system #20 #20 #20 #20 #20 #20						

This virtual IP address is shared among all RADIUS proxy nodes though only active on one of them. If, for some reason, the active RADIUS proxy node becomes unavailable, the virtual IP address switches to another node. That node then becomes active and handles RADIUS request processing.

This enhancement adds fault tolerance to the RADIUS proxy service, thus increasing overall system stability.

New Version of Linux

PortaSwitch® Maintenance Release 71 utilizes Oracle Enterprise Linux version 7.5.

Oracle Enterprise Linux version 7.5 includes a new version of kernel and an updated collection of applications that offer the following benefits:

- Faster performance.
- Straightforward administration.
- Advanced reliability.

Other features and enhancements

• Define access code prefix for the Prepaid card IVR – Now you can group all of the access numbers that you provide for prepaid card calling under a single rating entry within a product. This significantly simplifies product configuration and saves you from having to enter separate rating entries for every access number.

To illustrate how this works, consider the following example:

Let's say that you operate within the USA and sell international calling cards with local access numbers in several states (e.g. 12125551111, 16015551111, and 12015551111). When a call arrives to one of these access numbers, PortaBilling® uses this number to authorize a call and then charge a user.

With this release, an administrator can set a **grouping access code prefix** (e.g. USA) for the prepaid card calling IVR application. The system then adds this prefix to the access number (e.g. USA.12125551111) when a call arrives.



Use Special Access Code for First Calls	
Use Fixed Access Code for First Calls	
Grouping access code prefix	USA
Separate Incoming Leg Cost	0
Rate By	CLI Y
Incoming Access Code Prefix	IN

PortaBilling® authorizes calls by matching the longest access code (e.g. USA). So now, an administrator can add just a single rating entry for the product's usage charges instead of having to add a separate one for each access number.

		Product		SAVE	CLONE	RATE LOOKUP						😩 demo		
		International cards	> Usage charges											
Usa	age c	harges											Α	DD
	e calls		Node PortaSI			U	ccess code ISA			Tariff International o				~

This enhancement speeds up product configuration and therefore saves an administrator's time.

- **Porter enhancements** This release introduces enhancements to the Porter data transfer tool; they are especially beneficial if you migrate customers in batches:
 - **Parallel processing mode for data migration.** Now Porter can migrate several customers in parallel. This allows you to increase data migration performance.

To enable parallel processing for Porter, the number of threads for data migration must be defined in the Porter configuration. This maximum thread number depends on the server's processing capacity and the load caused by other operations running on that same server. Please contact PortaOne Support to evaluate the number of threads available for Porter in your installation.

• Terminated customers are not migrated by default. If, during the data migration process, a customer is terminated, Porter ignores this customer record and leaves it in the main system. This facilitates data migration.

Web interface changes

• Adjust the interval for call queue announcements – With this release, your IP Centrex customers (e.g. call center owners) can change the interval between call queue announcements on their self-care portal. This interval defines how often the system

informs callers about their place in the queue and the estimated wait time until someone attends to them.

			Customer Self-Care	Portal			
Balance: 0.12 USD				Credit Limit: 100.00 USD en - Er	nglish 👻	EasyCall Ltd. (Login: easy_calltd)	🔒 Logout 👻
🔠 Dashboard	My Profile	🔆 IP Centrex	Billing Information				
Call Queue Edi	t						😡 Help
Extensions	Huntgroup name:	Sales Department	*				
Sites	Huntgroup number:	100					
DIDs	Maximum incoming calls se	t on hold: 50					
Dialing Rules	Announcement						
Call Barring	Announce the number of c ahead of them in the queu	allers 🕑 e:					
Call Logs	Announce estimated wait t	ime: 🕑					
a Call Queues	Average handle time, mit	nutes: 1					
Apldentity V ¹ Music On Hold	Interval between announce minutes :	ements, 1					
	Play music on hold:						
	Music on hold file:	🕨 🕒 Music on h	old.mp3	De Browse			
	🔚 Save 🔵 Back						
	Call Queue Edit						

This enhancement allows customers to fine-tune call queues according to the peculiarities of their business (e.g. average call duration, number of operators, etc.).

- **Predefined auto attendant service feature in a product –** With this release, the auto attendant service feature is enabled by default on products with an auto attendant account role. This speeds up service configuration and improves user experience.
- The localization for Brazilian Portuguese has been updated for customer and account self-care portals. This increases customers' satisfaction with PortaSwitch®.
- Single page for service policy creation Previously, the administrator created service policies for Voice calls, Messaging and Internet access services on separate pages.

With this release, all service policies are created and stored on a single dedicated page.



\equiv \uparrow Service policy					😫 demo	Ų	?
Search filters 🗦 Ser	vice policy list						
SEARCH	CREATE	Results					
Create service policy		Name	Service type	Managed by			SIP e
SAVE & AI	DD ANOTHER SAVE						
Name * Internet access		*					
Voice calls							
Messaging service							
Internet access							
Recipient domain pattern		t access					
Managed by Administrator only	•						
		*					

The attributes are configured separately for each service policy, depending upon the service type.

This enhancement simplifies navigation on the web interface.

• Create a tariff from within a product configuration – If you have not created a tariff, now you can do it while configuring a product. Simply type the tariff name into the Add a new tariff dialog window and click Save. The new tariff automatically inherits all of the product configuration options such as service, currency and to whom it applies (customer or reseller).

≡ ↑ Product		SAVE CLONE	RATE LOOKUP				😝 demo	۰	0
Residential SIP	Usage charges 15/100	Usage charges	;						
Name visible to end users * Residential SIP Product type		Service * Voice calls	Add a new tariff			de Tariff *	- / 1		•
Main Currency USD - US Dollar		Overdraft protection	SIP subscribers Managed by Administrator only			Originating line information	Any		
Managed by Administrator only		Send alerts when	Currency USD - US Dollar			Allow zero charged services for si	uspended users	0	
Account role Phone line		Lock at least Limit maximum k	Service Voice calls Applied to Customer			Rate match mode	Default		*
Share with resellers		amount USD	Customer						
Services	>	030		CANCEL	SAVE				
Charges General info	>	Each fund lock allo	ocates no more than	USD					
Usage charges							CANCEL		

This enhancement speeds up the service configuration process since even if a tariff is missing, it can be added on the spot. This increases users' overall experience with PortaBilling®.

Important upgrade notes

• **TLSv1.1+** as the default security type for PortaSIP® – SSL and TLS protocols are used to secure communications among applications over the Internet. In PortaSIP®, TLS is used to encrypt communications between PortaSIP® and a SIP end-point to prevent their communications from being intercepted.

To meet the PCI requirements regarding security, the PortaSIP® dispatching SBC and dispatching nodes now use TLSv1.1 and TLSv1.2 as default protocols for SIP signaling encryption.

For this reason, your user and vendor equipment must support TLSv1.1+ for calls over TLS service provisioning.

For backward compatibility, the legacy SSLv3 and TLSv1.0 protocols are still available in PortaSIP®. Thus, to preserve their use (e.g. if your vendor or user devices do not yet support TLSv1.1), adjust the **sip_ports_tls** option value on the Configuration server as follows:

- 5070:example.com::1 to enable the SSLv23. This is the compatibility mode, which includes support for TLSv1.0, TLSv1.1, TLSv1.2 and SSLv3 protocols.
- 5070:example.com::2 to enable only the TLSv1.0. where example.com is the domain name of your PortaSIP® or dispatching SBC. This value is mandatory.