Maintenance Release 91







New Features Guide

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Preface

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PortaSwitch® Maintenance Release 91 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.

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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Strong Customer Authentication support for online payments

To prevent fraudulent transactions and make online payments more secure, new Strong Customer Authentication (SCA) requirements have been introduced in Europe as a part of the **second Payment Services Directive (PSD2).** Service providers in the European Economic Area (EEA), UK, and Switzerland must meet SCA (also known as two-factor authentication, 2FA) requirements. Without SCA, the customers' banks may decline the payments.

SCA is implemented with 3D Secure authentication. Applying 3D Secure adds an extra step after the checkout, where the customer has to provide additional information to complete the payment (e.g., to enter a one-time password received on their phone).

For example, the service provider uses Stripe payment processor to receive online payments. Mary Smith, their customer, lives in the UK and, therefore, she has to pass SCA.

Let's say Mary Smith wants to pay her invoice via the self-care interface. She fills in her card details and initiates payment. Meanwhile, Stripe sends a transaction request to Mary's bank. The bank sends a one-time password to Mary's phone. Mary is redirected to the bank page, where she enters a one-time password to authenticate a payment. After the confirmation, Mary is redirected back to the PortaBilling® self-care interface. Once the payment is successful, Mary's balance changes in PortaBilling®.

Note that the customer's bank may decline the auto-payments because there is no customer to pass SCA. If the auto-payment is declined, the next auto-payments are automatically disabled. The customer receives an email notification informing that the payment has failed because it requires an additional verification step. They can make a manual payment from their self-care interface.

Currently, Stripe payment processor is supported by SCA. Support for other payment processors operating in the EEA will be implemented in future releases. SCA with Stripe is immediately available to you in MR91, MR90-1 via iPaaS (Integration Platform as a Service). If you're using Stripe on the older release of PortaSwitch®, i.e., MR55–MR90, PortaOne® team can make a backport patch for the specific MR to enable SCA for Stripe. **Contact us** to find out more.

Benefits

- Service providers meet SCA requirements and can continue accepting online payments in the EEA, UK, and Switzerland.
- End users gain an additional security layer for their online payments due to 2FA.

Call supervision

Customers that use IP Centrex can now supervise their colleagues' calls in real time. For example, a manager can listen in on a sales agent's calls, guide them, and, if needed, participate in the calls.

Call supervision is available in three modes:

- **Spy mode** a manager can join an active call to listen in on the agent and the client's conversation without revealing the manager's presence. For example, managers can silently monitor calls to provide feedback afterward and suggest improvements to agents' communication skills.
- Whisper mode a manager can speak to the agent directly while the client is not hearing the manager. The manager can assist the agent and give tips during the conversation with the client. For example, managers can use this mode when training new agents.
- **Barge-in mode** a manager can speak to both parties the agent and the client. For example, the agent has trouble handling the client's concern, so the agent asks the manager for assistance. The manager joins the call using the barge-in mode to speak to the client directly.

A manager can choose any of these modes when joining an active call and switch between modes during the call.

Benefits

- IP Centrex customers can use call supervision to train new agents, evaluate their performance, and improve customer service, sales, technical support, etc.
- Managers can ensure that agents process calls in a way that meets the company's standards.
- Agents receive help from the managers in real time and can resolve issues on the spot.

Let's consider an example.

The ABC company has a call center with customer support and sales teams. Adam is a manager of the customer support team. He is authorized to join agents' calls to assist or provide feedback. John is a new agent in the customer support team with the extension 744.

Adam sees on the special IP phone console that John has an active call with a client. Adam decides to check how John is handling the call. To join the call in spy mode, Adam dials *90744 (where *90 is the **Spy mode** prefix and 744 is John's extension). Now Adam can hear the conversation.

John answers a few of the client's questions. When the client asks another question, John can't find the required information. John requests assistance from Adam in the corporate chat. Adam has already been listening in on this call, so he switches to the **Whisper mode** by dialing **1**. Adam tells John how to find the information.

The client keeps asking about the service details. Adam decides that John needs help in handling this call. Adam switches to the **Barge-in mode** by dialing **2**, introduces himself to the client and explains the relevant details. The client is satisfied with the provided information, and the call ends.

Configuration

To configure call supervision, these steps must be performed:

 On the PortaBilling® administrator web interface. The administrator enables the call supervision feature for the customer: opens the Customer record > Services > Voice calls > turns on the Call supervision toggle > Save.



	SAVE	CHANGE S	TATUS	
Customer "ABC company" > Servic	es > Voice calls			
ABC company	Services		Voice calls configuration	
Business model Hosted IP PBX	Voice calls Abbreviated dialing	>	RTP proxy	^
Customer class * IP Centrex customers CD	Bundles	>	Use default	-
Balance control Postpaid			Music on hold	^
Currency USD - US Dollar			File* No Frills Cumbia (c) 2001 Kevin	•
Balance, USD 10.04000			Legal intercept	
Credit limit, USD 500.00			Call supervision	^
Accounts >			Mode Prefix to join a call DTMF to switc	h to
XUKS >			Spy *90	0
Finances v			Whisper *91	1
DIDs >			Barge-in *92	2

2. On the customer web self-care interface. The customer configures the extensions in a huntgroup that are authorized to access the other huntgroup members' calls.

For example, to add Adam as a manager of the "Support" huntgroup, the customer opens the **IP Centrex** tab > **Huntgroups** > "Support" huntgroup configuration > Add extension > fills in details > selects the check box for Supervision allowed option > Save.

Extence: 18 1USD Credit Limit: 502 00 USD) en - Engrich ABC Company (Logn ABC_Company) Company (Log				Customer Self-C	are Portal					
Considered Consider	Balance: 10.61 USD				Credit Lim	it: 500.00 USD en - Englisi	×	ABC company (L	ogin: ABC_company)	🔒 Logout 🔸
Contraction Contracti	28 Dashboard	🔏 My Profile	🔛 IP Cer	ntrex	Billing Information	on				
Conception Call Actual and a conception Call Actual and and a conception Call Actual and a conception Call Actu	💕 Edit: Sales									🕒 Help
Addem 10045551405 Valats for lesses Addm 10045551405 Valats for lesses Addm 10045551405 Valats for lesses Addm Valats for lesses Valats	Constraints	Huntgroup Number Huntgroup Name Call Pickup Allowed	1 Support I Included Huntgroups Ringbac	Hunt Sequ Caller ID	ence Random Keep original	* *				
Production Production Standbacksonger Production	Join Incoming Calls Control Calls Control Calls	Extension Number	Extension Name	Assigned To Phone Line	Ring	ing	Ignore Follow- me/Voicemail	Supervision allowed	Set This Group as Primary	Delete
	Can Reconfigure Minimumous Can Densen Sa Santo Munic On Hold	Z41	Adam 2	6045551405	Valis for sec, th Permanently enabled Disabled Update Cance	en rings for sec	-			
Can nungroup		Edit Huntgroup		@ 2001-2021 RedeOver Tex	all stable second					



			Customer Self-C	are Port	al				
Balance: 10.61 USD					Credit Limit: 500.00 USD en - Englist	1 ¥	ABC company (La	ogin: ABC_company)	🔒 Logout 👻
(28) Dashboard	🙈 My Profile	ip Cent	rex		Billing Information				
💕 Edit: Sales									🕑 Help
	Huntgroup Number	1	Hunt Seau	ence	Random				
Extensions	Huntgroup Name	Support	Caller ID		Keep original				
Phone Lines	Call Pickup Allowed								
se DIDs									
Abbreviated Dialing	Tradidad Patronetaria	Tedadad Hasharana Disabada							
> A Incoming Calls	Included Extensions	Included Huntgroups Kingback	Ione						
Cutgoing Calls	Extension Number	Extension Name	Assigned To Phone Line		Ringing	me/Voicemail	allowed	Primary	Delete
Call Recordings	744	John	16045551406	V Perm	nanently enabled	-	_	_	×
Huntgroups									
Ap Identity	743	Kevin	16045551410	Perm	nanently enabled		-	-	×
Music On Hold	741	Adam	16045551405	🖌 Perm	nanently enabled	-	×	-	×
	742	Mary	16045551407	🖌 Perm	nanently enabled	-	-	-	×
	a								
	Add Extension								
	😑 Save 🗦 Back								
	Edit Huntgroup								
			@ 2001-2021 PortaOne, Inc	All rights res	erved.				

Specifics

The default prefixes and Dual-Tone Multi-Frequency (DTMF) codes for call supervision feature:

Call supervision	Prefix to join an	DTMF code to
mode	active call	switch to this
		mode from any
		other
Spy mode	*90	0
Whisper mode	*91	1
Barge-in mode	*92	2

For example, to join a call made by an agent with extension 888 in the whisper mode, a manager dials the corresponding prefix followed by the extension: *91888. To switch, e.g., from the whisper mode to spy mode, the manager dials the DTMF for the spy mode: **0**. To switch to the barge-in mode, the manager dials **2**.

It's possible to change the default prefixes and DTMF codes by creating a new dialing rule.

For example, a customer migrates to IP Centrex from their legacy PBX. The customer's managers are used to the call supervision prefixes *21, *22, *23, and DTMF codes 1, 2, 3. To keep these prefixes and DTMF codes in IP Centrex, the administrator:

- creates a customer record with the dialing rules option enabled;
- creates a new dialing rule of PBX type; and
- changes the default prefixes and DTMF codes in the dialing rule.



$\equiv \uparrow$ Dialing rule	SAVE	ESET
Edit dialing rule > Service	codes	
Edit dialing rule	Service codes	
Description IP Centrex	Call parking	Private call
Applied to End user	Park prefix *70	Hide CLI prefix *67
Type PBX	Release prefix *71	Show CLI prefix *68
Subtype International	Call supervision prefixes "Spy mode" prefix to join a call	Call supervision DTMFs "Spy mode enable" DTMF
Dialing rule parameters	> *21 "Whisper mode" prefix to join a call	"Whisper mode enable" DTMF
Audit log	*22 *Barge-in mode" prefix to join a call *23	2 "Barge-in mode enable" DTMF 3

Customers can edit the supervision prefixes and DTMF codes on their customer self-care interface: they need to open the **IP Centrex** page > **Dialing rules**, switch to the **Custom rule** and change the call supervision prefixes and DTMF codes.

			Custor	mer Self-Care Portal					
ce: 10.61 USD				Crec	dit Limit: 500.0	00 USD en - English	✓ ABC co	mpany (Login: Al	BC_company)
shboard	🔏 My Profile		IP Centrex	Billing Inf	ormation				
Dialing Rules									
Dialing Rules:	Custom Rule			~					
Translate CLI on outgoing calls:	No								
Your Location	NO Dialing Prefixes			Call parking prefixes		Call recording prefix	es and DTMFs		
Your country dial code:	Outside line dial	prefix:		Park Prefix:	*70		Prefix	DTMF	
Your area code(s):	Domestic long-di	stance dial prefix		Release Prefix:	*71	Enable:	*44	*44	
Always dial the area code as a part of the number:	(outside of your International dial	area code): ing prefix:		Private call prefixes		Disable:	*45	*45	<u> </u>
Emergency numbers (e.g.	Translation to E.	164 Not Required		Hide CLI Prefix:	*67	Call supervision pref	ixes and DTMFs	D.T.M.F	
911, 112):	(e.g. internal nur	nbers):		Show CLI Prefix:	*68	Sov	Prenx *21	DIME	
Add Country Code Only (e.g. 111%):				Other prefixes and codes		Whiener	+22		
				Group Pickup Prefix:	*40	Parene ins	#22	2	
Check for yourself				Paning/Interrom Prefix:	*22	barge-in.	-23	3	
You are going to call:		555-1234		Transfer the forwarded call:	+cc				
To call within your local area you d	ial:	555-1234		Pueses Dial Dianu	00				
	ountry, 123 code) you dial:	123-555-123	4	bypass biai Pian.	-3104				
To call long distance (within your o		44-30-555-1	234	Voicemail:	298				

Enhanced on-demand call recording

With this release, end users can activate the on-demand call recording by DTMF codes. Thus, the on-demand call recording is available for all end users, regardless of the SIP phone model they use.

To enable a specific account to start/stop call recording at any time during a call, the administrator enables the **Allow to start/stop recording manually** option in the call recording configuration. To start/stop the recording, the end user dials DTMF codes. For example, to start the recording during a call, they dial *44 and to stop the recording – *45.

$\equiv \uparrow$ Account		SAVE CHANGE S	TATUS	
Account "1205	5500001" > Service	e configuration > Voice calls		
DID 12055500001		Service configuration		Voice calls configuration
Account role Universal		Voice calls	>	Call recording
Type Credit				Override 🥌 Enabled 💶
Customer EasyTalk	Θ			Auto record outgoing calls
Main product * IP Centrex	* ©			Auto record incoming calls
Balance control				Auto record redirected calls
Balance, USD 3.49865				Allow to start/stop recording manually
xDRs	>			Send the call recording via email
Personal info	~			
Finances	~			"Deactivate call recording per call" prefix
Services	~			"Stop call recording" DTMF
Fraud protection				*45 "Activate call recording per call" prefix
Audit log	>			*44 "Start call recording" DTMF *44
				*44

The administrator can change the default DTMF codes by creating a new dialing rule and assigning it to a customer/account.

Also, the end users can edit default DTMF codes in the custom dialing rule configuration on their self-care interface.

		Accou	nt Self-Care Portal					
alance: 4.57 USD			Web In	terface Language: en	English Y	12055500001 (L	ogin: 11165400001)	i 🔒 Li
Dashboard	🔏 Ny Profile	IP Centrex	Billing Information					
Dialing Rul	les							
General DIDs	Cialing Rules:	Custom Rule	v					
Dialing Rules	Translate CLI on outgoing calls:	No						
Call Recordings	Translate CLI on incoming calls:	No						
@ Identity	Your Location	Dialing Prefixes	Call parking prefixes		Call recording prefixe	es and DTMFs		а.
Music of Hold	Your country dial code:	Outside line dial prefix:	Park Prefix:	*70		Prefix	DTMF	
	Your area code(s):	Domestic long-distance dial prefix	Release Prefix:	*71	Enable:	*44	*44	
	Always dial the area code	(outside of your area code):			Disable:	*45	*45	
	as a part of the number:	International dialing prefix:	Private call prefixes		Call supervision prefi	ives and DTMEs		ч.
	Emergency numbers (e.g.	Translation to E.164 Not Required	Hide CLI Prefix:	*67	con supervision pren	Prefix	DTMF	
	Add Country Code Only	(cigi inconsi nanocio)	Show CLI Prefix:	*68	Monitor:	*90	0	
	(e.g. 111%):		Other prefixes and code	15	Prompter:	*91	1	
			Group Pickup Prefix:	*40	Intervention:	*07	2	
	You are going to call	FFF 1334	Paging/Intercom Prefix:	*33				
	To call within your local area you di	555-1224	Transfer the forwarded	call: *66				
	To call long distance (within your co	ai. 555 1254 water 122 code) you dial- 123-555-1234	Bypass Dial Plan:	*3164*				
	To call internationally you dial (to co	watery with code 44 20): 44-20-555-123	Voicemail:	*98				
	to can incernationally you dial (co co		· · · · · · · · · · · · · · · · · · ·					
	Save							
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The administrator can allow end users to hide call recordings from their colleagues on the self-care interface. To do this, the administrator:

- Creates a new access role for the account with permissions to modify the **Show the call recording to account only** option.
- Assigns this access role to a specific account.



Then, the end user can manage the **Show the call recording to myself only** option on their self-care interface.

		Account Self-Care	Portal		
Balance: 4.57 USD			Web Interface Language:	en - English 👻	12055500001 (Login: 11165400001) 🛛 👸 Logout 👻
Dashboard	🙈 My Profile	iP Centrex	Billing Information		
Call Recordings					😡 Help
«	E Call recording list	rdings			
General Bond State General General Dibs Dialing Rules	Auto record	Allow to start / stop recording	manually		
(A) Incoming Calls	Outgoing				
Call Recordings	Incoming				
Music On Hold	Redirected				
	Send the call recording via email example@portaone.com				
	Show the call recording to myself only				
	Save Reset				
		© 2001-2021 PortaOne. Inc. All rig	hts reserved.		

Also, with this release, the end users can receive call recordings in the email notifications after the call is ended. To do this, an administrator enables the **New call recording is available** notification in the customer class assigned to a specific customer.

Benefit

• The on-demand call recording is available for all end users, regardless of the SIP phone model they use.

Configuration

To enable a specific account to receive call recordings in the email notifications, perform the following steps:

- Enable the **New call recording is available** notification in the customer class assigned to a specific customer.
- Specify the email for an account to send the notifications to: go to **Personal info** > **General info** > **Email** > **Save**.
- Enable the **Send the call recording via email** option for a specific account:

go to Voice call configuration > Call recording > turn on the Send the call recording via email toggle > Save.

The end users can manage the **Send the call recording via email** option on their self-care interface.

Change the default prefixes and DTMF codes for on-demand call recording:

- Create a customer/account record with enabled dialing rules.
- Create a new dialing rule of PBX type.
- Change the default prefixes and DTMF codes in the dialing rule.



Dialing rule	SAVE RESET		
Edit dialing rule > Service o	odes		
Edit dialing rule	Service codes		
IP Centrex	Call parking	Private call	Other prefixes
Description	Park prefix *70	Hide CLI prefix *67	Group pickup prefix *40
Applied to End user	Release prefix *71	Show CLI prefix	Paging/Intercom prefix *33
Type PBX	Call supervision prefixes	Call supervision DTMFs	Transfer the forwarded call *66
Subtype	"Monitor mode" prefix to join a call *90	"Monitor mode enable" DTMF 0	Bypass dial plan *3164*
International	"Prompter mode" prefix to join a call +91	"Prompter mode enable" DTMF 1	Voicemail *08
Can be edited by end users	"intervention mode" prefix to join a call	"Intervention mode enable" DTMF	
Dialing rule parameters	> <u></u>	<u>_</u>	
Audit log	Call recording prefixes	Call recording DTMFs	
-nunring .	"Activate call recording per call" prefix * *12	"Start call recording" DTME * *12	0
	"Deactivate call recording per call" prefix * *13	"Stop call recording" DTMF * *13	

Plug'n Pay payment processor

Service providers can now accept online payments via Plug'n Pay payment processor. It is available in PortaBilling® via PortaOne® iPaaS (Integration Platform as a Service). Thus, even service providers with older PortaSwitch® versions, e.g., MR75 can start using Plug'n Pay without a full system update.

To start using Plug'n Pay, service providers need to subscribe to PortaOne® iPaaS and have an existing active Plug'n Pay merchant account. Starting with MR91, or in MR90-1, the Plug'n Pay payment processor is immediately available and can be activated within a few days. For service providers using the older release of PortaSwitch®, i.e., MR55– MR90, the PortaOne® team can make a backport patch for the specific MR to enable using Plug'n Pay. In this case, the entire integration process might take 1-2 weeks.

As a result, Plug'n Pay appears on the list of available payment processors on the PortaBilling[®] web interface and can be used just like any other payment processor.



Benefit

• Due to the PortaOne® iPaaS cloud-based integration with Plug'n Pay, service providers can start receiving credit card payments via this payment processor with minimal integration efforts, even if they are running an older version of PortaSwitch®.

PortaOne® iPaaS subscribers have the option to add any other payment processors. **Contact us** to find out more.

To find more information about iPaaS integrations, refer to the **PortaSwitch® Architecture and Concepts** guide.

Other features and enhancements

Backup configuration for Elasticsearch indices

The Elasticsearch database is storage for SIP and BE logs, web logs, ESPF logs, and CDR collections. Also, Elasticsearch creates indices for each log. While logs can be quite large, the indices themselves can occupy a lot of disc space.

An administrator can configure and create Elasticsearch backups on the Configuration server using the Archivist utility. With default settings, a backup is created for all Elasticsearch indices: siplogs, belogs, weblogs, cdrmediator, espf.

With this release, an administrator can specify the Elasticsearch indices to back up and, therefore, save disc space. To configure backup for one or several indices, an administrator specifies them in the following format: <index1>*,<index2>*,<index3>*, etc., where indexN is one of the Elasticsearch indices.

For example, to configure Elasticsearch backup for SIP and BE logs only, the administrator specifies "siplogs*, belogs*" value for the **Allowed indices** option.

Backup					
Tasks	Schedule				
O Default settings	5 व ⊯ ≌ Expand/Collapse	🗔 Run Now 📃 Logs & Backups 😸 Show Calendar			
🖯 Default	configurator	Minute: 0			
Backup custom rpms (0) Stream MySOL database Backup (0)	a k-be2				
Backup /etc (0)	ak-web1	Hour: 4			
Backup Elasticsearch (0)	ak-web2	Day:			
Backup MySQL database (1) Backup radacc files (0)					
Backup Cassandra (0)	ak-techwr	Month:			
Backup statistics (0)	ak-sec-web1	Weekday: *			
Backup prompts (0)	H ak-sec-sipi				
Call recordings (0)	ak-rac1	Timeout: 0			
Backup Deposits (0)	∃ ak-rac2				
	ak-sec-rac1	Request timeout: 90			
	DSBC1	Allowed indices: sinlogs* belogs*			
	B DSBC2	increa marcari apraga jacoga			
		Backup count: 5			

This enhancement helps the administrator to save disc space by storing backups only for the required indices (e.g., SIP and BE logs).

You can find more information on how to configure backups in the **Configure Backups with Archivist** handbook.

Set conditions for subscription charging when no service was provided

Market environment or local regulations may require that service providers not charge customers when they don't have access to the service. PortaBilling® implements this requirement by charging a full subscription fee and then issuing credits for the days when no service was available. A customer may not have access to the service due to the following conditions:

- The account was expired.
- The account or customer were blocked.
- The customer was suspended.



• No funds were available (the balance of a customer or an individual account reached the credit limit or ran out of available funds).

By default, credits for a subscription fee are issued under all the above conditions.

With this release, service providers can choose under which specific conditions to issue credits for a subscription fee.

Let's consider an example. The service provider Panda telecom offers 100 minutes of calls to European destinations for a \$30 monthly fee. Panda telecom doesn't charge the subscription fee for the days when customers can't use the service due to suspension, block, or their account expiration. However, when their balance reaches the credit limit, customers can use the available minutes of the 100-minute quota. Since they still can access the service, Panda telecom wants to charge the customers the subscription fee when their balance reaches the credit limit (postpaid customers) or runs out of available funds (prepaid customers).

To make this happen, the administrator:

- 1. Goes to Subscription plan > General configuration > Issue credits for the days when option.
- 2. Clears the check box for the **No funds were available** condition.



\equiv \uparrow Subscription plan	SAVE
Subscription plan "100 minutes Europe" > General configuration	
100 minutes Europe	General configuration
Subscription plan name visible to end users *	Issue credits for the days when:
100 minutes Europe	✓ The account was expired
Currency USD - US Dollar	The account or customer were blocked
Managed by Administrator only	The customer was suspended No funds were available
Subscription charges applied At the end of the billing period	Skip credits, charge in full
Activation mode	For the first billing period
At the given start date	For the regular billing periods
	For the last billing period
Share with resellers	Can be applied more than once

With this enhancement, service providers gain a tighter control over charging subscription fees and thus, can avoid revenue leakage.