#### BICOM SYSTEMS ADVANCED SIMPLICITY





# **PBXware 5.2** Release notes

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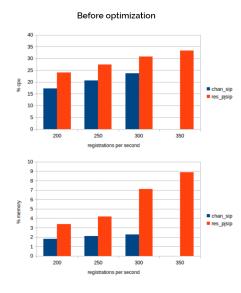
## **System optimization**

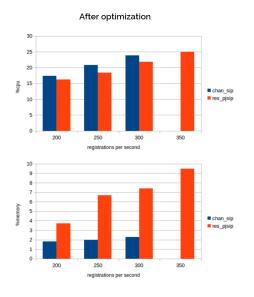
#### System updates

After testing and some code analysis it was discovered that there were a few places in **res\_pjsip** that could be improved upon.

The change that had the most dramatic effect on the CPU usage for registrations in **res\_pjsip** was the **rewrite patch** option. You might wonder why that might have such an effect on registrations. It's because that's the part of the code that handles state (aggregation, publishing, etc.) for contacts, AoRs, and endpoints. So every time an endpoint registers an update, its registration or unregister that part of the code is exercised. This patch was released in Asterisk 13.22.0 and 15.5.0.

Another recent modification that also improved performance targeted the actual **res\_pjsip** inbound registration handling routines. This refactoring removed a costly redundant database lookup. It reduced excessive "pool" allocations down to one as well. This patch is released in Asterisk 13.23.0.





Other performance optimizations:

- 1. System upgraded to PHP 7
- 2. Rebuild of binaries
- 3. Improved configuration updates
- 4. Optimized memory usage with jemalloc

#### **API improvements**

- 1. Extensions: More fields exposed
- 2. Enhanced Services API update
- 3. Trunks: Add, Edit, Delete, Tenants actions
- 4. Tenant/Server API: More fields exposed

## New devices added for auto provisioning

Hotdesking support for Htek devices.

Support for Htek devices



UC912P, UC912G, UC924E, UC926E





Support for VTech devices



VSP716A, VSP726A, VSP736A



Support for Gigaset devices



Maxwell Basic, Maxwell 2, Maxwell 3, Maxwell 10S



Support for Snom devices



D315, D345, D375, D715, D745, D765, 710



Phone Details Current software version : 5.7.0.14430 Clear Upgrade Server		1
Server Type () Polycom Hosted Server	Custom Server Check for Updates	
Available software versions	▼ Install	
Available software versions	▼ Install	000
Available software versions	Install   (rooppop)	1000
Available software versions	Install   (rooppop)	1 2000

## Opus codec integration with the mobile application

Opus is a lossy audio coding format designed to efficiently code speech and general audio in a single format and to handle a wide range of interactive audio applications, while remaining low-latency enough for real-time interactive communication. It is distinguished from most high quality formats by having low delay and by supporting high audio quality. Opus is fully suported on iPhone 6 models and above whereas Android users will need to have at least Android 6.0 installed in order for the Opus codec to be compatible with gloCOM.

#### **Remote storage improvements**

"Archiving storage", formerly known as "Remote storage", is controlled by the license.

#### **Google Drive support**

Customers can use Google Drive for archiving storage.



	_		
Enable:			
Client Type:	G	Google Drive	•
Folder Name:	a	Amazon S3	
Code:	÷	Dropbox	
	5	FTP	
Token:	G	Google Drive	1
	4	Test	
	4	Test	
Token:	G	Google Drive	
Code:		ЕТР	
	$\hat{\}$	Dropbox	
Folder Name:	3	Amazon 53	

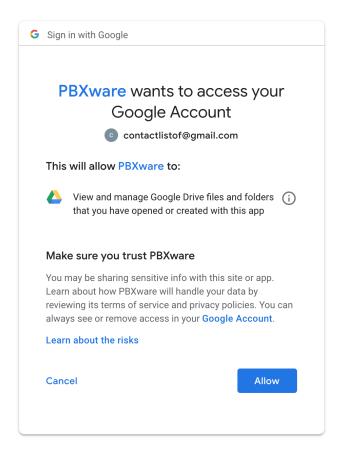
Archiving Storage

#### Google Drive: how to set up

**Folder Name:** Name to be used for the root folder of the app created on the users' drive. **Code:** A temporary code generated by the Google API used for token generation. Press the "Get Code" button and a new window will appear asking to grant the app permissions which include:

1. Creating files on the user's drive.

2. Accessing files created by the app. (the app will not be able to access any files on the drive not created by the app itself).



After granting access a code needed for the token generation will be displayed.

Token: Indication if a token is generated for the tenant.

The label can display one of the following things:

1. 'Press get token after the code is set.': There is no token currently present for the tenant. Generated a code as described above. After pasting the code press "Get Token". If the token is successfully generated the text will change and a pop-up indicating the token has been generated will appear; otherwise, a pop-up will appear indicating the token was not generated.

2. 'Token detected.': There is currently a token present for the tenant. A new token can be generated while there is already one token present in which case the existing token gets overwritten.

Client			
Enable:			
Client Type:	<b>G</b> Google Drive	•	
Folder Name:	GoogleFolderTest		Ì 🗸
Code:	Press get code.	Get Code	
Token:	Token detected.	Get Token	
	* Test		
Files	,		
Resources:	Recordings 🗶	•	•
Folder Name:	August2018		] 🗸
Filename Date Format:	Nov-06-2018	•	ī 🗸
Filename Time Format:	24 Hour Format	•	) 
Upload Older Than:	All	•	
Convert to MP3:			
Network			
Max Simultaneous Uploads:	2		
Max Retries:	10		
Upload Rate (Kbytes):	1000		
E-mail Notifications			
Enable:			
Send on Error Only:			
E-mail:			~
System			
Auto Run:			
Remove Files:			

**Resources:** Select resources to be uploaded.

Options are: Recording, Voicemails, Fax.

**Folder Name:** Multi Tenant only. This is the starting folder for the specific tenant, it enables the usage of the same client settings for multiple tenants without path conflicts.

Filename Date Format: Select the date format to be used for the filename.

Filename Time Format: Select the time format to be used for the filename.

**Upload Older Than:** How old the file needs to be in order to be uploaded:

All 1 week 2 weeks 3 weeks 4 weeks 1 month 2 months 3 months 4 months 5 months 6 months 1 year 2 years 3 years

**Convert to MP3:** Convert files to MP3 before the upload.

**Max Simultaneous Uploads:** Maximum number of concurrent uploads. Default is 5. May get lower during execution due to client limitations, e.g., max connections per user on FTP server. **Max Retries:** How many times to retry on a failed upload. Default is 10.

**Upload Rate (Kbytes):** Upload rate limitation in kilobytes. Limit is set cumulatively for all uploads. Default is unlimited.

Autorun: Start uploading files automatically on the defined date/time.

**Remove Files:** If enabled on a successful upload, the file will be removed from the system. Press "Run" to start archiving or "Save" to save the setup.

#### Dropbox

**Code:** Registration code provided by the Dropbox API. Value is not stored, only used to temporarily store value for the token acquisition.

To get a Dropbox code, press "Get Code" and allow the application. If there are no currently logged in Dropbox accounts, you will be prompted to log in.

**Token:** Insert a previously acquired dropbox token or press "Get Token" after the Code field has been set properly.



Dropbox limitations for standard and advanced accounts (25,000 API calls/month for data transport partners). More info: https://www.dropbox.com/plans?trigger=nr

#### Amazon S3

Access Key: Acquired from an Amazon account. Access Secret: Acquired from an Amazon account. Bucket: S3 bucket to be used. Server: Server address/IP.



This is the only mandatory field for FTP servers with anonymous users allowed.

**User:** Username to be used for the registration.

**Password:** Password to be used for the registration.

**Root Directory:** Root directory on the server. The application expects this to be a valid, existing location on the server, otherwise the upload will be aborted.

#### Search and retrieval (S3/Google Drive)

This feature enables customers to listen to the remotely stored recordings from the GUI as well as to download them. Recordings are streamed directly to the client and no local files are created on the system during the features use. There is a new option in the CDR GUI page which replaces the listen button with a specific CDR which represents the option to listen to the remotely stored record and is indicated by the service the record is stored on.

From	То	Date/Time	Duration	Billing	Cost	Status 1
poly (106)	yealink (108)	21 Mar 2018 13:21:46	00:00:13	00:00:13		Answered 3
poly (106)	yealink (108)	15 Mar 2018 10:51:09	00:01:02	00:01:02		Answered a
poly (106)	yealink (108)	09 Mar 2018 13:35:52	00:00:08	00:00:08		Answered 2
poly (106)	yealink (108)	09 Mar 2018 13:35:40	00:00:07	00:00:06		Answered 🚬 🤮
poly (106)	yealink (108)	09 Mar 2018 13:35:40	00:00:07	90:00:00		Answered Associated
poly (106)	yealink (108)	09 Mar 2018 13:35:52	00100108	00100108		Answered 2
	yealink (108)					Answered
						Answered 3

The icon can be one of the free options based on the existence and accessibility of the recording:

- 1. No icon: No recording is available for entry.
- 2. Standard play icon: There is a recording available locally. Download and playback are available the same as before.
- 3. Service icon: There is no local recording available but there is a remotely stored recording available. Playback and download can be done by sending the recording to the client in a segmented form.



- Listen and download must be enabled on the license, otherwise an error message will be displayed

- To listen to your recording(s) stored on Archiving Storage requires a license update. Please contact your System Administrator.

- To download the recording(s) stored on the Archiving Storage requires a license update. Please contact your System Administrator.

#### Control of MP3 conversion, upload rate control, and upload retries

- 1. Control over the MP3 conversion in the PBXware GUI for the remote storage. This enables users to choose to either compress uploaded recordings or leave them in a native format.
- 2. "Upload Rate" field is exposed in the GUI for users so the users can manage the upload rate to avoid network issues when necessary.
- 3. The "Max Retries" field is exposed in the GUI for users to enter a maximum number of upload retries for a single file in case of a network error.

Files			
Resources:	Recordings ×	•	•
Folder Name:	August2018CETVRTAK		
Filename Date Format:	Aug-28-2018	•	
Filename Time Format:	24 Hour Format	•	
Upload Older Than:	All	•	
Convert to MP3:			
Network			
Max Simultaneous Uploads:	2		
Max Retries:	10		
Upload Rate (Kbytes):	1000		
Upload Rate (Kbytes):	1000		
Max Retries:	10		
Max Simultaneous Uploads:	2		
Network	_		
Convert to MP3: (			
Upload Older Than:	VII		
Filename Time Format:			
Filename Date Format:			

#### **Timezone per Tenant, Timezone per Extension**

Users can set up a default timezone for a tenant that will apply to all extensions on the target tenant in Settings – > Tenants.

cality		
Country:	📰 United Kingdom 👻	~
Tenant Time Zone:	Europe/Vienna -	
Voicemail Time Zone:	Auto	
Area code:		
National dialing code:	0	~
Leave National Code:	Yes No Not Set	
International dialing code:	00	~
	C Emergency Services	
Currency symbol/ISO code:		
Currency writing convention:	Symbol before amount	
Currency writing convention:	Symbol before amount	
Currency symbol/ISO code: Currency writing convention:	Symbol before amount	
Currency symbol/150 code:	G Emergency Services	
International dialing code: Currency symbol/15D code:	00 Emergency Services	~
Currency symbol/150 code:	G Emergency Services	~
Leave National Code: International dialing code: Currency symbol/150 codei	Von Pro Paul Bat OO © Ernergenrey Bervlene	( (
National dialing code: Leave National Code: International dialing code: Currency symbol/ISO codei	Von Pro Paul Bat OO © Ernergenrey Bervlene	~ ~
Area codei National dialing codei Leave National Codei International dialing codei International dialing codei	0 Ven Fro Files Sat OO ED Ernergenticy Berlines	~ ~

#### **Multiple extensions CSV upload status report**

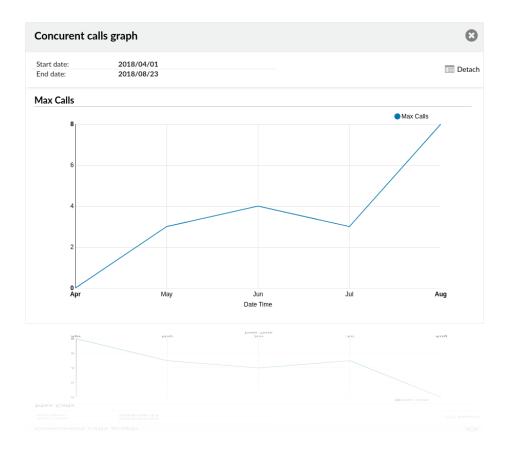
A report will be displayed after the CSV upload (number of extensions uploaded/failed/skipped).

Settings	Extensions > A	Add 🖌 Hide Advanced	Options							
s v	UAD:	gloCOM	*							
	Location:	Local	•							
Extensions	Location.									
sups Groups		Add Multiple Extens	ions							
roups rents		[Line 1 Skipped]: Exten	sion number '100' is already res sion number '101' is already res	arved.						
ed Devices		[Line 3 Skipped]: Exten	sion number '102' is already res	srved.						
		[Line 12 Skipped]: Exte	sion number '107' is already res nsion number '111' is already re	served.						
		[Line 17 Modified]: Pin	nsion number '113' is already re '1015123' is too long, setting to	empty.						
		[Line 18 Skipped]: Exte [Line 20 Skipped]: Inval	nsion number '117' is already re id extension number '119a'.	served.						
		[Line 21 Skipped]: Num	ber of columns needs to be 3-8 nsion number '124' is already re							
		[Line 26 Skipped]: Secr	et 'Tes3!' is too weak.	served.						
		[Line 38 Skipped]: Exte	password 'Tes23!' is too weak. nsion number '137' is already re	served.						
		[Line 43 Skipped]: Exte [Line 54 Skipped]: Exte	nsion email 'test142.com' is inv nsion number '153' is already re	alid. served.						
		[Line 65 Canceled]: Ma:	dimum number of extensions re	ached.						
		Name	E-mail	Ext	Secret	User Password	PIN	MAC	Department	
		Glocom227	glocom@test.com	103	Test123!	Test123!	1003			
		GIOCOIII227	gocomerescom	105	165(123)	lest1231	1003			
		104	test⊚104.com	104	Test123!	Test123!	1003			
ins >		104	tast@104.com	104	NISLIZO:	NSLI23:	1003			
		105		105	Test123	Test123!	1004			
		105	test@105.com	105	lest123	lest123	1004			
					<b>T</b>		1005			
		106	test⊚106.com	106	Test123!	Test123!	1005			
			test@108.com	108	Test123!	Test123!	1007			
Admin Settings		108								
		108								
		108	testig 100.com	300	Tout1201	Test1201	1007			
			test@106.com test@100.com	106	Teers 2 201 Teers 2 201	Tear1231 Tear1231	1007			
		100								
		100	test@106.com	104	Tess 3.2.21	7041231	1005			
		108 108	test@105.com test@106.com	105 106	Tess 12.21 Tess 12.31	West1231 Test1231	1004			
		700 709 709 709	test@106.com test@105.com test@106.com	304 305 305	Teart 32.01 Teart 32.01 Teart 3.2.01 Teart 3.2.01	Test1201 Test1201 Test1201	3003 3003		Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004	MAKE	Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004	HANG REAL	Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004		Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004	WWE	Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004	PANE	Department	
		700 709 709 709	glacom@test.com test@106.com test@105.com test@106.com	103 104 105 106	Teori 1231 Teori 1231 Teori 1231 Teori 1231	Tex1221 Tex1201 Tex1201 Tex1221	1003 1004 1004	HANG	Dependence	

#### **CDR / Statistics improvements**

#### **Concurrent calls report**

Users have the ability to list concurrent calls statistic per tenant/trunk.



#### Incoming calls per DID and outgoing calls per Trunk

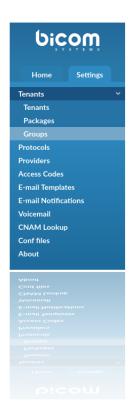
DID statistics can be filtered by "Incoming calls per DID".

DID statistics can be filtered by "Outgoing calls per Trunk".

Show Advanced Options					
Date Range	From			То	
2016/07/25 12:00 AM - 2018/08/23 11:59 PM	Contains *	ALL		Contains * ALL	
Reports table	Search reports		Q S	elected reports	
Name 🔺 🔻	Type ~ ~	Direction ~ ~		Name	
Calls per direction	Summary	All	+		✓ Show
Incoming calls per DID	DID	Inbound	+		Show
Outgoing calls per Trunk	Trunk	Outbound	+		
¢ previous	Page 1 of 1				
	Page 1 of 1				
	Touch Page 1 of 1	Nibund Outbound	+ next r		
Outgoing calls per Think a grandman	Page 1 of 1				✓ \$how
Incoming calls par DID Outgrafe calls per Thunk Incomes	DID Trunk Page 1 of 1	Inbound		Nana	<ul> <li>Show</li> </ul>
Cuits per direction Incomite calls per DD Outgoing calls per Thunk E Innome	Summury DID Thurk Plage 3 of 3	All Inbound		Nume	<ul> <li>✓ Show</li> </ul>
Name A. * Calls per direction freconing calls per DID Outgobie calls per Threfs processes	lyge – – Surreavy DDD Took Page 1 of 1	All Inbound	000 s 4 4 4		✓ Slow
Name A. * Calls per direction freconing calls per DID Outgobie calls per Threfs processes	lyge – – Surreavy DDD Took Page 1 of 1	Direction A * All Inbound	000 s 4 4 4		A Dim

#### Tenant to tenant call feature changes

This is a submenu under the **Settings** tab. Tenants and packages were separate menu items earlier, now together with Call Groups they are a submenu of the Tenants menu items.



**Groups** - A page where you can create one or more Tenant call groups. A call group contains a list of tenants allowed to call each other.

Tenants Group → Edit			
	Group Name:	New Tenant Group	~
	Tenants:	200 - Tenant 200 x         603 - Test603 x         666 - 666 x           803 - Tenant 803 x         901 - Tenant 901 x	
		✓ Save ← Go bac	ck
		🗸 Save 🔶 Go bac	ck
	Tenants:	200 - Tenant 200 x         603 - Test603 x         666 - 666 x           803 - Tenant 803 x         901 - Tenant 901 x	
	Group Name:	New Tenant Group	

On the "Tenant Add/Edit" page the "Disable Tenant to Tenant calls" option has been renamed to "Enable Tenant to Tenant calls" - users can choose tenant to tenant calls group (field label "Tenant to Tenant calls groups"), when selecting/changing group the tenant will be automatically added/removed to/from the group. When no group is selected, tenant calls are allowed for all tenants.

Enable Tenant to Tenant calls:	Yes No Not Set	
Tenant groups:	New Tenant Group 🗶	•
Tenant groups:	New Tenant Group ×	A

#### **E-mail sender per tenant customization**

An option to customize an e-mail sender per tenant on the Tenant Add/Edit page.

E-mail			
From	n E-mail:	test@test.com	
Voicemail From	n E-mail:	test@test.com	
		10015 1001000	
Voicemail From	E-mail:	test@test.com	
From	n E-mail:		

#### Send an e-mail in case a special number is dialed

Server/Tenant Edit — > Emergency Services button. The "Notification E-mail" field name: when set somewhere other than a Master Tenant (call center or tenant) after dialing one of the emergency numbers, an e-mail will be sent to the provided address.

If the e-mail field is left empty no e-mail will be sent.



Setting this on the master tenant will not affect anything.

There is a new template called 'Emergency Call Template' on E-mail Templates.

Emergency Call Templates				8
Emergency Call E-mail Subject and Template				•
Emergency Call E-mail Subject:				
Emergency Call				
Emergency Call E-mail Template:				
Extension %EXT% has dialed an emergency number (%NUMBER%).				
	Ċ	Reset	~	Save
	2	Reset	~	Save
Emergency Call E-mail Subject: Emergency Call E-mail Template: Extension %EXT% has dialed an emergency number (%NUMBER%).				

## "Number of digits" renamed to "Extensions digit length"

In the Setup Wizard and in the option to create a new tenant, the "**Number of digits**" has been changed to "**Extension digit length**" to avoid confusion.

#### CRM

#### CRM Routing on DID and IVR

CRM Routing allows routing to a specific queue or IVR or playing sound files based on the information fetched from CRM.

So, when a call comes in AGI, we will first contact CRM and then based on the result make a specific action.

The PBXware Home tab CRM menu with the Integration and Routing submenu offers several options.

In the Routing submenu one can set up rules based on which calls are to be routed.

On DID and IVR destinations, one can select the rule which will be evaluated for a particular DID/IVR.

<b>bico</b> m	vserver1							
lome Settings	Edit Routing Rule > DID	D_test						
board	General							
nsions ) (s )		Rule Name:	DID_test					
ks 🧳	c	RM Field Name:	crm_routingc					
erences >								
		Location:	DID					•
ies ) its )								
email >	CRM Settings							-
tor		CRM To Use:	CRM from CRM > I	ntegration				•
rts )		CRM Modules:	Contacts ×					•
stics		CRM Username:	ozraci@gmail.com					
		CRW Osemanie.	ozraci@gmail.com					
gration		CRM Password:	•••••	•••••	•••••	•••••	•••••	
ıting								
im ) ne )	Rules							
es )	Operator	Value		Destination		Destination Option		+
ce Plans >	Operator	Value		Destination		Destination Option		
	>=	• 50		Queue	-	102 – Test	• =	×
	>=	• 100		Queue	•	116 - Test3	•	5 30
	<	• 50		Queue	•	138 - test1	•	
						✓ Save	*	Go ba
						136 - test1	*	
				driene		116 - 7010		
	Operator			Destination				
		CRIM Password:						



Let's say you need to filter inbound calls on DID and send calls to destinations based on some of the fields in your CRM.

In the CRM there is a "status" field name with the customer's status and the content of the field can be GOLD, SILVER, BRONZE etc..

You can basically set your CRM routing rule to check if an incoming call is marked as GOLD and if this is true send this call to the appropriate location IVR, Queue etc..

PBXware can be integrated with new Customer Relationship Management (CRM) solutions. Pipedrive and SuiteCRM are great additions to an already wide list of supported CRMs.

CRM Integration					
Integration Service					
Enable:					
CRM type:	Salesfo	rce			•
Consumer Key:	Micros	oftCrm			•
Consumer Secret:	Bullho	rn			
Login URL:	Proprie	etaryCrm			
	Vtiger		\$		_
Create Call Log when call starts:	Pipedr				
	SuiteC	RM			<b>•</b>
Log options					
Log inbound calls:	Yes	No	Not Set		
Log outbound calls:	Yes	No	Not Set		
Log answered calls:	Yes	No	Not Set		
Log unanswered calls:	Yes	No	Not Set		
Upload recordings:	Yes	No	Not Set		
					✓ Save
Upload recordings:		Ио	Not Set		🛩 Save
Log unanswered calls:		No	Not Set		
Log answered calls:		No	Not Set		
Log inbound calls: Log outbound calls:			Not Set Not Set		
Log options					
Create Call Log when call starts:	Pipedr				
Login URL:			13		

#### SuiteCRM Integration



#### **Pipedrive CRM Integration**



#### Zoho CRM support for the new API Version

Version 2.0 update of Zoho APIs had a great impact on the usage of APIs and functions (previously custom functions). The APIs work mostly in the same manner but the syntax, output, and methods are different.

#### Use PBD pin as DID remote access authentication

Users can choose PBD authentications for a DID remote access.

General		
Trunk:	Please select	• •
DID/Channel (start):		•
Destination:	Remote Access	• •
Value:	PBD Access	
Service Plan:	Please select	•
Call Rating Extension:		
E.164 number (start):		
	✓ Save ←	Go back
	✓ 5ave ←	Go back
E.164 number (start):		
Call Rating Extension:		
Service Plan:	Please select	•
Value:	PBD Access	· ^

## **Service plans**

#### Management of vertical service display in Online Self Care (OSC)

When creating a service plan, the default enhanced services can be selected which will be available in OSC for the end user.

Enha	anced Services			8
*	Caller ID	×	~	
*	Call Pickup *8/88	×	$\sim$	
*	Last Caller	×	$\sim$	
*	Operation Times	×	$\sim$	
*	Call Filters & Blocking	×	$\sim$	
*	Do Not Disturb *78/79	×	$\sim$	
*	Call Screening	×	$\sim$	
*	Call Forwarding *71/72	×	$\sim$	
*	Follow Me *520/521	×	$\sim$	
*	Group Hunt *510/511	×	~	
*	Mobile Numbers	×	~	
*	Speakerphone Page *399/400	×	~	
*	Speakerphone Page Groups *600	×	~	
*	Directory / BLF List	×	~	
*	Speed Dial *130	×	~	
*	Instant Recording *159	×	~	
*		×	2	
-			5	
-	Remote Access	×	5	
-	Call Monitoring	2	Ĵ,	
÷	System operation times *401/402	×	2	
***	Call Monitoring System operation times *401/402	×××		
	Delete Recordings Listen to Recordings	×		
	Speed Dial *130 Instant Recording *159	×		
	Speakerphone Page Groups *600 :	××××		
		~		
	Call Forwarding         *71/72           Follow Me         *520/521	×		

#### Call Rating email template usage

Users can choose an email template for Call Rating under the **E-mail templates** section.

-	mail t	emplates
		New Extension Templates
		Call Rating Templates
	Ē	Incoming/Outgoing Limit Templates
		Fax To E-mail Template
		Instant Recording Template
		Service Plans Templates
	Ē	Emergency Call Template
		Voicemail E-mail Template
		Voicemail E-mail Template
		Voicemail E-mail Template
		Emergency Call Template Voicemail E-mail Template
		Fax To E-mail Template Instant Recording Template Service Plans Templates Emergency Call Template Voicemail E-mail Template Acicemail E-mail Template
		Incoming/Outgoing Limit Templates Fax To E-mail Template Instant Recording Template Service Plans Templates Emergency Call Template Voicemail E-mail Template Acidematic E-mail Template
		Fax To E-mail Template Instant Recording Template Service Plans Templates Emergency Call Template Voicemail E-mail Template Acicemail E-mail Template
		Incoming/Outgoing Limit Templates Fax To E-mail Template Instant Recording Template Service Plans Templates Emergency Call Template Voicemail E-mail Template Acidematic E-mail Template

#### Support for CNAM providers with text/plain response type

Added support for CNAM providers which return plain text instead of JSON response.

## **Choose a CallerID when sending a Fax**

gloCOM users can choose caller IDs from a predefined list in the PBXware GUI for sending a FAX.

Home Set	tings	CSV Opload	📩 CSV Download 🛛 📩 Dov	vnload CSV Template		
Dashboard						
Extensions	Search for Caller					C
DIDs						
Conferences	Caller ID 🔺 🔻			Label 🔺 🔻		
VR	>					
Queues	> 061506070			Private	Ľ	
/oicemail	> 1111111			Main Fax Machine	ľ	P
Ionitor	> 2222222			Upstairs Fax	ſ	P
leports	>			opstans ran		
tatistics	♦ previous			Page 1 of 1		
ax	~					
Received						
Sent						
Cover Page						
Caller IDs						
Settings						
RM	>					
- RM	>					
Caller IDs Settings						
	2222222			Upstairs Fax Page 1 of 1		
	> 1111111			Main Fax Machine Uperaire Fax		
	Caller ID A					

## Detecting a caller early hang-up before placing a call in Queue

When a call comes into the system via a DID and if that call is a hang-up while a greeting on DID is being played, the call will still pass to the Queue because of statistics so users can be aware they had abandoned calls.

Custom sounds folder:			
Detect caller early hangup:	Yes	No	Not Set
	0	Opera	ation times
	0	Opera	ation times
Detect caller early hangup:	Yes		

A new option in the queue which would disable/enable this per user preference is presented. Basically, it's up to the user whether they wish to pass abandoned calls to a queue and still have these calls in statistics or if an abandoned call during a greeting should be detected and not routed to a queue and shown in statistics.

#### **Custom parking lots for the Call Center edition**

Formerly introduced in MT systems, custom parking lots are now available in the Call Center edition as well.

Home Settings	Parking Lot > Add		
Servers	Parking Lot		
Protocols Providers	Name:	CustomOne	~
Default Trunks	Parking Extension:	900	~
UAD Access Codes	Parking Positions:	901-920	~
Parking Lots Numbering Defaults	Parked Calls Transfer:	Enable (Both sides)	
E-mail Templates E-mail Notifications	Parked Calls Recording:	Enable (Caller only)	
- voicemail CNAM Lookup	Timeout (sec):	15	
Conf files	,	After timeout, 'Timeout Destination' will be called. If empty, call will return to parker.	
About	Timeout Destination:	100 – Operator 👻	
	Custom Ringtone:		
	Caller ID Prefix:		
		✓ Save ← Go	back
		🔊 89400 & Co	back
	Paritad Calai Resording Paritad Calai Resording Timeout (seei) Timeout Bestination Calair D Prenin Calair D Prenin	Evolutio (Educer only) Evolutio (Califor only) 15 Arter Elmeout, Timeout Destination' will be called, if empity, call will return to parker. 300 – Ceannior	

# Enable jitterbuffer based on extension and tenant configuration

Users can now set up jitterbuffer values on Extension -> Edit -> Advanced Options

Jitter Buffer		
Jitter Buffer:	Inherit •	
Max length (ms):		
Re-sync threshold:		
Target extra:		
Target extra:		
Re-sync threshold:		
Max length (ms):		

#### Jitterbuffer type:

- 1. Fixed Set a fixed jitterbuffer on the channel.
- 2. Adaptive Set an adaptive jitterbuffer on the channel.
- 3. Disabled Remove a previously set jitterbuffer from the channel.

#### The arguments are:

- 1. Max\_size: Length in milliseconds for the buffer. Defaults to 200 ms.
- 2. Resync\_threshold: The length in milliseconds over which a timestamp difference will result in resyncing the jitterbuffer. Defaults to 1000ms.
- 3. Target\_extra: This option only affects the adaptive jitterbuffer. It represents the amount of time in milliseconds by which the new jitter buffer will pad its size. Defaults to 40ms.

## Simplified mobile app licensing

Users are able to see mobile devices available on the system as one group of mobile devices. Both "iOS" and "Android" options are merged as a single "Mobile Apps" option. This way customers can get "Mobile Apps" subscriptions and connect mobile apps regardless of the platform.

Desktop Editions				Mobile Editions
Office	Business	Agent	Supervisor	Mobile
0 of 0 (available 0)	16 of 50 (available 34)	0 of 0 (available 0)	16 of 50 (available 34)	0 of 0 (available 0)

## Support for TLS bind port customization

This port overrides any TCP/UDP settings in SIP protocol settings and is applied for all users (external and internal).

TLS settings			_		
Enable 1	TLS: Ye	es	No	Not Set	
TLS P	ort: 50	61			
External TLS P	ort: 50	61			
Use TLS for gloCC	DM: Ye	es.	No	Not Set	
Use TLS for gloCC		52	No	Not Set	
External TLS P	ort: 50				
TLS P	ort: 50				

## Show/hide extension in desktop/mobile apps

Enable/Disable extension from displaying in gloCOM.

A system admin can manage (enable/disable) gloCOM accounts directly from the PBXware GUI.

Show in Desktop/Mobile App:	Yes	No	Not Set
Show in Desktop/Mobile App:	Yes	No	Not Set

## Allow IP address authentication for extensions

This option can be found under Features in the PBXware GUI. This field can be used per tenant to allow IP address authentication for extensions and force IP based authentication.

atures					
	V	P.L.	Net Cet		
Hide CallerID in OSC:	Yes	No	Not Set		
orce "Allow ES CallerID" for Call	N-	NI	Net Cet		
Forwarding:	Yes	No	Not Set		
Enable CallerID CNAM lookup:	Yes	No	Not Set		
Ringtone for Local calls:					
Set CallerID for Call Forwarding					
and Group Hunt calls:	Yes	No	Not Set		
•					
nly Allow Trunk CallerID within DID range:	Yes	No	Not Set		
-					
On DID save update ES/CID/Trunks:	Yes	No	Not Set		
Do not allow users	Yes	No	Not Set		
sending any CallerID:					
Hide Extensions with no	Yes	No	Not Set		
department (gloCOM):	165	NO	Not Set		
Line Durrania Fast	V	b la	Net Cet		
Use Dynamic Features:	Yes	No	Not Set		
Disable Call Rating for Call	N				
Forwarding:	Yes	No	Not Set		
llow IP Address Authentication					
for Extensions:	Yes	No	Not Set		
	_				
	0	Other net	works	Speed Dial	I
	0	Other net	works	Speed Dial	
Ilow IP Address Authentication for Extensions	Yes	Mo	Not Set		
Disable Call Rating for Call Forwarding:	A0.5	Mo	Not Set		
Use Dynamic Features:		Мо	Not Set		
Hide Extensions with no department (gloCOM)			Not Set		
Do not allow users sending any CallerID:			Not Set		
On DID save update E5/CID/Trunks:			Not Set		
nly Allow Trunk CallerID within DID range:			Not Set		
set CallerID for Call Forwarding and Group Hunt calls:	A0.8				

When this field is set to YES the following fields are enabled per extension:

- 1. Incoming IP addresses
- 2. Insecure

Incoming IP addresses (new line seperated):		4
Insecure:	very	•
Insecure:	AGLÀ	÷
Incoming IP addresses (new line seperated):		

## **Customizable Access codes for call pickup**

Users can set codes for a call pickup using \*8 and \*88+EXT\_NUM Under Settings – > Access codes.

Call Parking		
Call Park:	700	~
Call Park Start:	701	~
Call Park End:	720	~
Call Park Timeout (sec):	45	~
Enhanced Call Park:	800	~
Call Pickup:	*88	~
Call Pickup Asterisk:	*8	~
Parked Calls Transfer:	Enable (Both sides)	
Parked Calls Recording:	Disable •	
Parked Calls Recording:	Disable	
Parked Calls Transfer:	Enable (Both sides)	
Call Pickup: Call Pickup Asterisk:	*8	
Enhanced Call Park:	800	
Call Park Timeout (sec):	45	
Call Park End:		
Call Park Start:		

This can be located under Extension — > Enhanced Services, the \*8 and \*88+EXT\_NUM codes for a call pickup are right next to the Call Pickup option.

Enha	anced Services					8
*	Caller ID		×	~		Ľ
*	Call Pickup	*8/88	×	~	<b>A</b>	
	Call Pickup			~		
	Caller ID			$\sim$		S.
Enha	anced Services					

## TFTP server disabled by default for new installations

The TFTP startup can be controlled in GUI (Master Server / Master Tenant)

Auto Provisioning								
LAN Hostname/IP:								~
WAN Hostname/IP:								~
Max. Number of requests:								~
gloCOM LAN server:								
gloCOM WAN server:								
Enable TFTP:	Yes	No	Not Set					
Use DNS SRV when possible:	Yes	No	Not Set					
WAN Host for DNS SRV:								
WAN Host for DNS SRV:								
Use DNS SRV when possible:	Yes	No	Not Set					
Enable TFTP:	Yes	No	Not Set					
gloCOM WAN server:								
gloCOM LAN server:								
Max. Number of requests:								
WAN Hostname/IP:								

#### French language translation for PBXware GUI

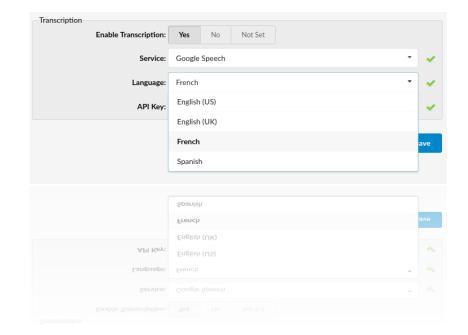
An additional language for GUI. French will be available for use immediately after the upgrade.

		C	8
Select lang			
English			
Español			
Français	$\mathbf{b}$		
Français	12		
Español			
English			

## Speech-to-Text support for French and Spanish in Voicemail

Speech-to-text support for two more languages:

- 1. Spanish
- 2. French



## Other fixes and improvements :



Removed Woomera devices completely.

Removed the \*303 access code.



Δ

Disabled the **\*302** ccess code on MT, does not allow agent greeting on MT.

Removed System – > Sangoma, "BRI cards".



Multi User on DID is controlled by the license.

- 1. Permissions: var/spool/asterisk has proper permissions. (#262126485)
- 2. Config: Replaced ari.conf and pjsip\_notify.conf with static entries. (#261403084)
- 3. Config files: added important custom files where missing. (#261402385)
- 4. Queue: Undefined mixmonitor\_var. (#261031430)
- 5. Licensing: Replaced all HTTP protocols with HTTPS. (#259823580)
- 6. Parking Lots: always goes back to the dialplan. (#259818495)
- 7. Call Forwarding: Set CallerID properly for internal calls. (#144178135)
- 8. Action Logs: Store name, email, extension. (#256855447)
- 9. Licensing: Misspelled word 'succesfully'. (#255662079)
- 10. Auto provisioning: Paging for Fanvil phones. (#226912456)
- 11. ConfBridge: Enabled Talk Detection by default. (#255348331)
- 12. Sounds: Sounds playback/download under Multi-Tenant. (#253307526)
- 13. Instant Recording: calling DID on a different tenant. (#252934517)
- 14. CDR: filtered failed and unsupported records from remote records. (#236615095)
- 15. Monitor: Log messages when skipping folders managed by Archiving Storage. (#241390113)
- 16. Queue: Fixed Fixed MOH on DID level to avoid MOH problems. (#242243555)
- 17. Agent outbound: Uses a real member name. (#249394676)
- 18. Voicemail: Localization moves time forward. (#248207555)
- 19. DIDs: Ability to force SIP To look up via the config option. (#245066487)
- 20. Using OpenSSL instead of mycrypt for AES encryption. (#244641000)
- 21. jquery.nscroller.js: Updated to version v3.7.6. (#254527198)
- 22. Renamed 'Billing' to 'Call Rating'. (#233020437)
- 23. AGI: Generic functions for config options. (#247452695)
- 24. Access Codes: Allow \*68 (CallerID Unlock) to clear \*81 (Block CallerID once). (#244286971)
- 25. Reports: Handle reports separately by direction. (#241377504)
- 26. IVR: Restored the IVR Fax with FAXOPT functionality. (faxdetect) (#242198692)

- 27. Recordings: B-leg recording to work on an MT. (#241987209)
- 28. Voicemail: Locked folder when writing a transcript into a file. (#238140122)
- 29. Agent auto answer: support for autoanswer via gloCOM softphone. (#240784289)
- 30. Trunks: E.911 trunks will not inherit Default trunks. (#235920346)
- 31. Disabled mounting astdb to RAM feature. (#238201712)
- 32. sh/pbxware: Asterisk DTLS pem generate on OpenSSL 1.0.2n+. (#234403832)
- 33. Memcached: session restore. (#237449544)
- 34. CDRs: Remote records would not play on the tenants report page. (#235980735)
- 35. sh/pbxware: rsproxy stopping. (#234814132)
- 36. Handle 'dynamic-meetme' context in Agi. (#154525542)
- 37. Monitor.php: rotate mon.log files properly. (#232226142)
- 38. agi: disable CDR for static and callback members. (#229238414)
- 39. Replaced the word 'FAX' with 'Fax' everywhere. (#166531016)
- 40. DB: removed old CDR queries. (#229574273)
- 41. Voicemail: Transcription request error handling. (#228442169)
- 42. HTTP. Increase request time for API calls. (#229195555)
- 43. Queue callback: agent answer mode, uses an outbound CallerID. (#227694069)
- 44. Revert Ring Groups: Removed 'r' as the default dial option. (#225304802)
- 45. DIDs: QUEUE\_PRIO variable channel inheritance. (#226991346)
- 46. DB: remotedb was closed before the update. (#225896096)
- 47. Do not Disturb: Ignore a temporary DND setting when switching DND. (#225324068)
- 48. Queue statistics: callback report handles new transfer events. (#225552583)
- 49. Extension operation time applying before DND. (#225321962)
- 50. Recordings: the beep works if the recording is on the B side. (#197233004)
- 51. Voicemail: Accept PIN changes from Voicemail app and update the database. (#162857522).
- 52. Fax: From /tmp directory, remove .tif files older than 1 week. (#160553569)
- 53. DIDs: Do not play Greeting if Closed Operation Times is on. (#143616978)
- 54. DIDs: Do not allow a Recording to run if a destination is Fax. (#159707759)
- 55. LXC: Detect LXC via /proc/1/environ. (#223459215)
- 56. Auto provisioning: Removed support for Xlite devices. (#213466447)
- 57. IVR statistics: change log\_ivr\_calls table date\_time field from varchar to int(11). (#220911382)
- 58. File system: Faxes cleanup. (#220926665)
- 59. PJSIP. Increase max\_initial\_qualify\_time. (#262165126)
- 60. PJSIP. Disable sending unsolicited mwi to all endpoints on startup. (#262164597)
- 61. Features.conf: We should not include per-tenant config files. (#261403084)
- 62. Autoprovisioning: A simple increase in the number of directory entries for Yealink phones.

(#260235000)

- 63. Action Log: LDAP, e-mail is taken into consideration. (#256855447)
- 64. Settings > Servers: Renamed the 'Set CallerID' label for Group Hunt calls. (#144178135)
- 65. Tenants: The Other Networks button is hidden on the master tenant. (#245431695)
- 66. OSC Services: save issues. (#256943959)
- 67. Action Logs: OSC to display properly. (#256999229)
- 68. Operation Times: Inherit option for Simple Routing OT. (#257257641)
- 69. API Enhanced Services / CallerID: Trunk names. (#255790264)
- 70. Action Logs: Increased log to 10,000 entries. (#256858222)
- 71. Action Logs: Default sorting is descending. (#256942067)
- 72. Destinations: Permissions setting via JavaScript. (#256561416)
- 73. Extensions: Copy As New and Destinations permissions. (#255414002)
- 74. Autoprovisioning: Multiple extensions on Cisco SPA. (#236326857)
- 75. Auto provisioning: Transport type for Yealink phones. (#235923655)
- 76. Queue: if ringinuse is changed, reloading members is required. (#255758857)
- 77. Archiving storage: Enable Folder Name option for call center systems. (#249469436)
- 78. Hot Desking: Ability to download and upload a CSV with location. (#249823022)
- 79. API: Update the mp3\_auto\_conv field. (#245753195)
- 80. Settings > About: Show only numeric values. (#249448474)
- 81. Archiving storage: Changed time format to use **dashes** instead of **colons**. (#248985370)
- 82. Routes: show a proper error if an export fails. (#202885374)
- 83. Routes: Database export. (#245839133)
- 84. API: Update API docs with register\_expiration. (#248194364)
- 85. Trunks: Expose Register expiration time in GUI. (#247870751)
- 86. Extensions: Voicemail group moved to the top right. (#247057395)
- 87. CDR Summary: Expose it with the new GUI. (#245485323)
- 88. IVR Statistics: Double Quote datepicker strings. (#245759290)
- 89. Action Logs: Sorting. (#245115650)
- 90. Action Log: DIDs on MT. (#243480628)
- 91. Action Logs: Delete DID group action is stored in the database. (#245120379)
- 92. Action Log: Information about Page. (#245116848)
- 93. Action Logs: Changes for the new API. (#241448051)
- 94. Action Logs: Action log tracking on iframes. (#237503363)
- 95. Auto provisioning: Custom configuration order for Grandstream UADs. (#235587625)
- 96. Fax: download to include a file extension. (#243133009)
- 97. Extensions: Invalid Service Plan Package Date was shown. (#243131711)
- 98. Trunks: Remove Hangup() from dialplan due to double CDRs. (#243073859)

- 99. PJSIP Trunks: Enable line registration by default. (#242633342)
- 100. Queue panel: Showing the wrong time. Problems with the clock sync with the server. (#241017543)
- 101. API: Small fixes. (#198564293)
- 102. ES API: Non-existing API calls. (#199654592)
- 103. Trunks Edit: PHP 7 string to int conversion issue. (#239343467)
- 104. Queues: Allow Voicemail Group for Max Wait Extension and Exit Digit. (#238532996)
- 105. Providers: Make sure 'Incoming IP Addresses' is not a required field. (#240109349)
- 106. Tenants: Loader. (#238262054)
- 107. Email Templates: Reset button on the New Extension template. (#238201691)
- 108. Queue statistics: Members filter to use PJSIP instead SIP. (#228899535)
- 109. AES Encryption: Trimming of a decrypted value. (#237907240)
- 110. PJSIP. Remove DTMF short info. (#237873916)
- 111. Tenants: Do not traverse the sounds directory when creating a tenant. (#239243066)
- 112. Access codes: Send res\_parking.conf properly. (#237873710)
- 113. Create the name as a URL on some pages. (#234414544)
- 114. Action log tracking on some pages. (#234408882)
- 115. Master tenant access codes page. (#234410117)
- 116. Action log entry for delete tenant action. (#230727494)
- 117. Show in Desktop/Mobile App: available only on the extensions page. (#237824336)
- 118. Service Plans: handle fields properly on Call Rating templates. (#237824027)
- 119. Fax: Cover page preview to work with tcpdf library. (#237510756)
- 120. Delete fpdf and tfpdf libraries. (#237510861)
- 121. Extensions: Make sure Call Rating info actions are disabled properly. (#229991601)
- 122. CDR: The **Listen** button not working for offloaded records (caused by licensing implementation). (#235600484)
- 123. Service plans: Editing rates for countries starting with 'Z'. (#235597434)
- 124. IP Restrictions > Policies: Edit and Delete buttons. (#234746096)
- 125. Conferences: A pop-up in GUI was broken for CDR if participants used quotes in their names. (#226624442)
- 126. Archiving storage: Changed nginx routing for rsproxy. (#234337590)
- 127. Archiving storage: Licensing added. (#221221049)
- 128. Archiving storage: Added limit to Upload rate and default placeholder for Upload limit and Max Simultaneous Uploads. (#232939249)
- 129. Archiving Storage: Fixed spelling mistakes. (#231087120)
- 130. Reports: pass user auth when requesting archived records. (#230292864)
- 131. Archiving Storage: Disabled autorun. (#229605088)
- 132. Extensions Edit: set Show in Directory to Yes by default. (#230991144)
- 133. PJSIP. Maximum Expiration spelling mistake fixed. (#228813055)

- 134. Multi-Digit IVR / Pin-Based IVR: Delete action for value '0'. (#229208441)
- 135. PJSIP. Spelling for option disable\_direct\_media\_on\_nat. (#230300121)
- 136. Extensions: Copy as New reset Caller ID name. (#230329857)
- 137. Queue: exit digit can be 0. (#230316263)
- 138. Servers: Increased Emergency Services to 16 digits. (#229169270)
- 139. Global GUI search bar. (#229549315)
- 140. Auto provisioning: BLF fetching on MT for additional MAC addresses. (#228534157)
- 141. Extensions: Copy as New destinations permission. (#229196950)
- 142. Extensions: Show inclusive minutes as minutes. (#183044718)
- 143. Updated flag icons URLs to the newest version. (#206185316)
- 144. Reports: get\_dropdown\_trunks return name as id for reports page. (#228505175)
- 145. PJSIP. Ability to specify insecure and incoming IP address on Extensions. (#227305938)
- 146. Queues panel: today's data set as default. Data. (#228095487)
- 147. Auto provisioning: Directory was not working after auto provisioning. (#227733263)
- 148. Operations Times on IVR not working properly. (#227305837)
- 149. Reports: Listen to Recordings volume slider height is broken. (#224507996)
- 150. Monitor > Extensions: Monitor action is broken on MT. (#226623528)
- 151. Extensions edit: removed 'sorted' class from the departments drop-down. (#225276366)
- 152. DIDs: CSV upload where number\_zerofill is 0. (#226573225)
- 153. Conferences: Do not write conferences to meetme.conf. (#226265385)
- 154. Voicemail: reload when creating new custom Voicemail extension. (#225694756)
- 155. DIDs CSV: External Number and Deny Access CSV upload was broken. (#183347709)
- 156. UI: A lot of time unit labels fixed. (#213207269)
- 157. Operation Times Week names forced to English all the time. (#224835680)
- 158. UI: A lot of of Label renames. (#213488644)
- 159. Trunks: Hostname fields are stripped of additional spaces. (#224531352)
- 160. Statistics: fixed escaping translation strings in buttons. (#224082000)
- 161. Transport settings correctly set on extension according to the UAD setup. (#222743512)
- 162. CDR: Multiple files with the same name can be present in the same zip archive. (#222766008)
- 163. Extensions: CallerID name not escaping HTML quotes. (#182528779)
- 164. Settings > About: Licensee details in case Branding is on. (#197528827)
- 165. Reports > CLI messages: Restore Google search from v4. (#213208456)
- 166. Trunks: fixed IP addresses that contain spaces. (#223950965)
- 167. Servers Edit: Announce trunks option default to 'Not Set'. (#189856663)
- 168. Extensions Save: PHP notice. (#167612730)
- 169. Auto provisioning: Moved BLF start options below the BLF list. (#209550087)
- 170. PJSIP. Save additional mailboxes properly. (#222679423)

- 171. PJSIP. Do not write disallow field per endpoint at all. (#222345162)
- 172. PJSIP Trunks: Make sure Outbound Proxy has sip: prefix. (#222344629)
- 173. Branding: It must be shown only to Site Administrators. (#221644700)
- 174. Search: Special characters in the search query. (#206143583)
- 175. Parked Calls: Enable Recording on picked up calls option. (#213847732)



## **About Bicom Systems**

#### Vision Statement We Unify Communications!

#### **Mission Statement**

We provide the Communication World with the most Complete Turnkey Communication Systems available by Creating, Unifying and Supporting the Most Advanced of Current Technologies.

#### Overview

Bicom Systems was the first company to deliver Open Source Communications Software as Professional Turnkey Solutions.

By combining the best of open source telephony and its own proprietary software, Bicom Systems can provide enterprises with turnkey solutions that take account of the clients' exact needs within a very cost-effective framework giving CIOs the safest choice. This mix includes royalty-free software, vibrant open source communities, available custom development backed up by accountable, professional support services.

The company finds innovative open source communication projects and professionalizes the project by creating, unifying and supporting turnkey systems with its proprietary in-house software. Bicom Systems provides the resources, core development and support services to enable popular open source projects to scale into enterprise-class communications software.

Bicom Systems (USA) 3901 South Ocean Drive Suite 9E Hollywood, Florida 33019-3003 United States	Bicom Systems (CAN) Hilyard Place B-125 Saint John, New Brunswick E2K 1J5 Canada	Bicom Systems (UK) Unit 5 Rockware BC 5 Rockware Avenue Greenford, London UB6 0AA United Kingdom	Bicom Systems (France) 188 Route de Blessy St. Quentin Aire-sur-la-Lys 62120 France
Tel: +1 (954) 278 8470 Tel: +1 (619) 760 7777 Fax: +1 (954) 278 8471	Tel: +1 (647) 313 1515 Tel: +1 (506) 635 1135	Tel: +44 (0) 20 33 99 88 00 Fax: +44 (0) 20 33 99 88 01	Tel: +33 (0) 3 60 85 08 56
sales@bicomsystems.com	sales@bicomsystems.com	sales@bicomsystems.com	sales@bicomsystems.com