



The Open Platform for Business Telephony



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1. Prérequis

Nous devons avoir une machine Linux, avec une IP fixe et un nom de machine qui permet de l'identifier facilement, ainsi que son réseau fonctionnel. Avoir un disque dur vierge

2. Qu'est-ce que la VOIP

La VOIP est un acronyme pour Voice over Internet Protocol. Il s'agit d'une technologie permettant le transport de la voix, tout comme par téléphone, passant par sa numérisation et transmission par internet ou par réseau Ethernet au destinataire.

3. Installation TrixBox



Pour lancer l'installation, nous devons presser la touche "< Enter>"

Welcome to trixbox	
	Keyboard Type What type of keyboard do you have? fi-latin1 fr_CH fr_CH-latin1 fr-latin1 fr-latin9 fr-pc gr OK
<tab>/<alt-tab> be</alt-tab></tab>	tween elements <space> selects <f12> next screen</f12></space>

Nous devons sélectionner la langue de notre clavier, on sélectionne donc "Fr", puis "OK"

Welcome to trixbox Time Zone Selection What time zone are you located in? System clock uses UTC Europe/Monaco Europe/Moscow Europe/Paris Europe/Paris Europe/Paris Europe/Paris	
<pre><tab>/<alt-tab> between elements <space> selects </space></alt-tab></tab></pre>	<f12> next screen</f12>

On sélectionne maintenant la Timezone dans notre cas "Europe/Paris"

Welcome to trixbox	
Root Password Pick a root password. You must type it twice to ensure you know what it is and didn't make a mistake in typing. Remember that the root password is a critical part of system security! Password: Password (confirm): W####################################	
<tab>/<alt-tab> between elements <space> selects <f12> next</f12></space></alt-tab></tab>	screen

On saisit le mot de passe de l'utilisateur "root", et cliquer sur "OK" pour l'appliquer



Nous avons l'avancé détaille de l'installation en cours



Une fois installé , il redémarre automatiquement, pour démarrer plus rapidement sélectionner "Trixbox-base"

4. Interface Web

Une fois installé, nous devons nous rendre sur l'interface web. L'IP est directement affichée dans la console. C'est depuis cette interface que nous allons configurer notre serveur TrixBox

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The Open Platform for Business T	Telephony				Server ti User n	me: 13:38:16 node <mark>[<u>switch</u>]</mark>
Home Portal MeetMe	FOP					
🦓 User Mode						
What is tribubox?? tribox is the world's most processary applications such several T1s for a million minu. Getting Started tribox is a distribution of a r description of same of the lateristic faceording started. This is the aktrinis faceording settings in Asteristic. Web NeetKie This application helps you mit row faceording settings in Asteristic. GOP Similar to HUDIte, FOP is an or Linux desktop.	opular Asterisk-based distribution. trixbox en as mysal and more. trixbox can be configured ute a month call center. number of other applications. Each of these ap adang applications within trixbox: g Interface. It provides a user friendly web int uanage the web based conferencing ability of t operator and call-control software. FOP runs i	ables even the novice use I to handle a single phone pplications help you mana terface to voicemail and co rrixbox. inside your web browser	er to quickly set line for a home age some portio all monitor recor using Flash, vs.	up a voice over IP phone e user, several lines for a n of your trixbox deployn dings. As well, it provide HUDlite which runs on yo	e system and othe small office, or nent. Below is a b s access to user pur Windows XP, f	er rief Mac
	v2.8.0.4 ©200	8 Fonality, inc All Rights Res	ierved.			

Pour passer en mode administrateur, nous devons cliquer en haut à droite sur "[switch]"

Authentification	Authentification requise X							
?	Le site http://172.16.53.151 demande un nom d'utilisateur et un mot de passe. Le site indique : « Restricted Area »							
Utilisateur :	maint							
Mot de passe :	•••••							
	OK Annuler							

Une fenêtre de connexion apparait, les identifiants sont <u>Utilisateur</u> : maint <u>Mot de passe</u> : password

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← → ♂ ଢ	i 172.16.53.	152/maint/index.php?home	•••	♥☆ ○	२ Rechercher	\ ⊡ ≡
trixb The Open Platform for Busi	iness Telephony					Server time: 17:00:40 Admin mode [<u>switch</u>]
System Status Package	s PBX System	Settings Help				(?
Server Status		Network Usag	e			trixbox Status
Asterisk Running web server Running cron server Running	Device lo eth0 sit0	Received 446.60 KB 552.04 KB 0.00 KB	Sent 446.60 KB 3.31 MB 0.00 KB		Err/Drop 0/0 0/0 0/0	Hostname: trixbox2.freshome.lan Local IP: 172.16.53.152
SSH server Running		Memory Usad	a			Public IP: Unknown
Mysql Running Helpful Links Forum Recent Posts HUD Lite	Type - Kernel + application - Buffers - Cached Disk Swap	Percent Capacity s 23% 23% 53%	Free 760.88 MB	Used 113.30 MB 115.24 MB 268.34 MB 0.00 KB	Size 760.88 MB	Active Channels SIP: 0 IAX: 1 Current Registrations SIP: 1
Video Tutorials		Mounted Filesyst	ems			IAX: 1
FtOCC Buy Support	Mount Type / ext3 /boot ext3 /dev/shm tmpfs	Partition Percent Capacity /dev/sda2 8% (2%) /dev/sda1 18% (1%) tmpfs 0% (1%) Totals : 8%	Free 16.12 GB 75.53 MB 251.62 MB 16.44 GB	Used 1.47 GB 18.09 MB 0.00 KB 1.49 GB	Size 18.55 GB 98.72 MB 251.62 MB 18.89 GB	SIP Peers Online: 1 Offline: 0 Unmonitored: 0
		System Uptim	e			Online: 2 Offline: 1
	Server Uptime: 1 Asterisk Uptime: 1 Last Reload Time:	hours, 16 minutes 1 hour, 8 minutes, 11 seconds 11 minutes, 25 seconds				Unmonitored: 0 Extensions DND

Voici l'interface d'accueil de TrixBox, nous pouvons naviguer dans les paramètres avec la barre de menu

5. Ajout de comptes SIP

Afin de créer des utilisateurs pouvant passer des appels, nous devons nous rendre "PBX / PBX Settings"

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The Open Platform for Busines	s Telephony		Server time: 13:41:38 Admin mode [switch]
System Status Packages	PBX System Settings Help		(?
	Admin Reports Panel Recordings Help		
Setup Tools	Add an Extension		English ~
System Status	Please select your Device below then click Submit		Add Extension
Module Admin			Add Extension
Basic	Device		yohan2 <100>
Extensions			
Feature Codes	Device Generic STP Device		
General Settings	Solicite Sa Scilice		
Outbound Routes	Cubert		
Support	Submit		
Trunks			
Administrators			
Inbound Call Control			
Inbound Routes			
Zap Channel DIDs			
Announcements			
Blacklist			
CallerID Lookup Sources			
Day/Night Control			
Follow Me			
IVR			
Queues			~

Nous devons nous rendre dans " PBX / PBX Settings / Extensions", puis sélectionner "Generic SIP Device" puis "Submit"

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Setup Tools	Add SIP Exte	ISION				English
Module Admin Basic	Add Extension		_			yohan2 <100>
Extensions						
eature Codes	User Extension	101				
3eneral Settings	Display Name	101				
Outbound Routes	CID Num Alias					
Support	SIP Alias					
Trunks						
Administrators	Extension Ontions					
abound Routes	-					
an Channel DIDs	-					
apouncements	Outbound CID	101				
Blacklist	Ring Time	Default 🗸				
CallerID Lookup Sources	Call Waiting	Enable V				
Day/Night Control	Call Screening	Disable				
ollow Me	Entretaining	U.Subre V				
VR	Emergency CID					
Queues	-					
Ring Groups	Assigned DID/CID					
Time Conditions						
Time Groups	DID Description					
Internal Options & Configura	Add Ishawed DID					
Conferences	Add mbound DID					
DISA	Add Inbound CID					
anguages						
lusic on Hold	Device Options					
PIN Sets						
Paging and Intercom	This device uses sip	technology.				
Parking Lot	secret	101				
System Recordings	dimfmada					
VoiceMail Blasting	utminiode	1102033				

Nous devons créer un compte avec des informations comme le nom, le numéro et un mot de passe. J'ai utilisé le numéro comme nom

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The Open Platform for Business	s Telephony	Server time: A 13:42:31 Admin mode [<u>awitch</u>]
System Status Packages	PBX System Settings Help Admin Reports Panel Recordings Help F Apply Configuration Changes	(?)
Setup Tools Admin System Status Module Admin	Add an Extension Please select your Device below then click Submit	English ~
Basic Extensions Feature Codes General Settings	Denice Ceneric SP Device v	101 <101>
Outbound Routes Support Trunks	Submit	
Administrators Inbound Call Control Inbound Routes		
Zap Channel DIDs Announcements		
Blacklist CallerID Lookup Sources		
Day/Night Control Follow Me		
IVR Queues		
Ring Groups Time Conditions		
Time Groups Internal Options & Configuratic Conferences		
DISA Languages		~

Une fois notre compte créé, nous devons appliquer les modifications en cliquant sur "Apply Configuration Changes"

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The Open Platform for Business	s Telephony						Admin	Serve 13:4 mode [;	r time: ^ (2:39 (mitch)
System Status Packages	PBX System Settings Help								۲
Setup Tools Admin Bysten Status Modula Admin Datid Extensions Reature Codes General Settings Outbound Routes Surroot	Adams Reports Panel Records Add an Extension Please select your Device below Device Device Generic SIP Device Submit	ps Help Analy Contor then click Submit					English Add Es yohan2 101 <1		
Touris Administratos Administratos Notores Can Control Discourse Control Discourse Castinet C		Apply Configura Reloading will apply all configu engine and make them active. Continue with reload Cancel reload and go l	tion Changes ration changes to back to editing	your PBX					ľ
Time Groups Time Groups Thierd St Options & Contenant C Conferences DESA 172.16.53.151/admin/config.	ohp?type=setup&display=extensions#								

On confirme bien que l'on souhaite continuer et reload en cliquant sur "Continue with reload"



On peut vérifier que l'on peut bien appeler avec 2 comptes SIP et 2 logiciels reliés au même IPBX, on peut voir que l'appel est bien reçu

6. Configuration du lien truck entre 2 serveurs TrixBox

Afin de lier 2 serveurs TrixBox ayant 2 plans de numérotations différents et autoriser les appels entre eux. Cela est pratique lorsque l'on veut un serveur par site (lieu entreprise) et les liés entre eux.

IPBX configuration : IPBX1 : 172.16.53.151 - 1XX

IPBX2: 172.16.53.152 - 2XX





	a. Configuratio	n Trunk IPB	3X1				
Configurat	ion du Trunk coté IPBX	L – IP : 172.16.53	3.151 – Num	néro : 100 à 1	99		
🔶 trixbox - Admin M	1ode X 🔶 trixbox -	Admin Mode	× +			- 🗆 ×	
← → ⊂ ŵ	i 172.16.53.151/ma	int/index.php?freep	80 %	… ♥ ☆	Q Rechercher	\ ① ≡	
← → C ^I ♠ Setup Tools Admin System Status Module Admin Basic Extensions Feature Codes General Settings Outbound Routes Support Trunks Administrators Inbound Call Control Inbound Routes Zap Channel DIDs Announcements Blacklist CallerID Lookup Sources Day/Night Control Follow Me IVR	(i) 172.16.53.151/ma керогтя Ралец кесс Edit IAX Trunk In use by 1 route In use by 1 route General Settings Outbound Caller ID: IPBX Never Override CallerID: Imaximum Channels: Imaximum Channels: Disable Trunk: Imaximum Channels: Imaximum Channels: Outgoing Dial Rules Dial Rules: Imaximum Channels:	int/index.php?freepi prangs Help	Enable	···· 💟 分	Q. Rechercher	English Add Trunk Trunk ZAP/g0 Trunk IAX2/IPBX2	
IVR Queues Ring Groups Time Conditions Time Groups Internal Options & Configuratic Conferences DISA Languages Music on Hold PIN Sets Paging and Intercom Parking Lot System Recordings VoiceMail Blasting	Dial Rules Wizards: (pick Outbound Dial Prefix: Outgoing Settings Trunk Name: IPBX PEER Details: allow=all context=from-internal host=172.16.53.152 insecure=very gualify=yes type=friend	1 & Remove duplicates		~			
	Incoming Settings USER Context: IPBX USER Details: allow=all context=from-internal host=172.16.53.151 insecure=very qualify=yes type=friend	i					
	Retranscrire la	configuration à l'iden	tique ou hien ao	anter selon la situ	ation		2

Création de la route pour rediriger les appels 200 à 299 vers IPBX2

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The Open Platform for Business	s Telephony					Server time 14:26:49 Admin mode [ﷺ]
System Status Packages	PBX System Setting	s Help				(9)
	Admin Reports Panel	Recordings Help				
Setup Tools Admin	Edit Route					English v
System Status	Delete Route IPBX					Add Route
Module Admin	E CONTRACTOR					0.9 outside
Basic	Route Name:	IPBX Rename				• 5_00.5100
Extensions	Route Password:					1 (DRV
Feature Codes	PIN Set:	None 🗸				TIPDA
General Settings	Emergency Dialing:					-
Outbound Routes	Intra Company Route					
Support	Music On Hold?	default				
Trunks	Dial Dattama					
Administrators Inbound Call Control	Dial Patterns	2XX				
Inbound Routes						
Zap Channel DIDs						
Announcements						
Blacklist		.:				
CallerID Lookup Sources	Distantion	Clean & Remove duplicates				
Day/Night Control	Dial patterns wizards:	(pick one) v				
Follow Me	Trunk Sequence					
IVR	0	IAX2/IPBX2 🗸 🗃				
Queues		~				
Ring Groups		Add				
Time Conditions						
Time Groups	Submit Changes					
Internal Options & Configuratic						
Conferences						
DISA						
Languages						
Music on Hold						
PIN Sets						
Paging and Intercom						
Parking Lot						
System Recordings						
VoiceMail Blasting						
		v2.8.0.4 ©2008 Fonality,	inc All Rights Reser	ved.		
	Ret	ranscrire la configuration à l'ident	ique ou bien ado	apter selon la	situation	

Configu	uration du Trunk coté	e IPBX2 – IP : 172.16	5.53.152 - M	lumér	o : 200 a	à 299			
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Setup Tools Admin System Status Module Admin Basio Extensions Feature Codes General Settings Outbound Routes Support Trunks Administrators Inbound Call Control Inbound Routes Zap Channel DIDs Announcements Blacklist CallerID Lookup Sources Day/Night Control Follow Me are	Admin Reports Panel Edit IAX Trunk Delete Trunk IPBX1 In use by 1 route General Settings Outbound Caller ID: Never Override CallerID: Maximum Channels: Disable Trunk: Monitor Trunk Failures: Outgoing Dial Rules Dial Rules:	Recordings Help	Enable				English Add Trunk Trunk ZAF Trunk IAX2	2/IPBX1	
IVR Queues Ring Groups Time Conditions Time Conditions Internal Options & Configuratic Conferences DISA Languages Music on Hold PIN Sets Paging and Intercom Parking Lot System Recordings VoiceMail Blasting	Dial Rules Wizards: Outbound Dial Prefix: Outgoing Settings Trunk Name: PEER Details: allow=all context=from-internal host=172.16.53.151 insecure=very qualify=yes type=friend	Clean & Remove duplicates (pick one) IPBX 1		~					
	Incoming Settings USER Context: USER Details: allow=all context=from-internal host=172.16.53.152 insecure=very qualify=yes type=friend	:: IPBX2							~

b. Configuration Trunk IPBX2

Retranscrire la configuration à l'identique ou bien adapter selon la situation

Création de la route pour rediriger les appels 100 à 199 vers IPBX1

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trixb The Open Platform for Business						Ad	Serve 16: min mode (er time 25:02 switch]
System Status Packages	PBX System Setting	Help						(?)
	Admin Reports Panel	Recordings Help						
Setup Tools	Edit Route					Eng	lish	\sim
System Status	Delete Route IPBX						Add Rou	te
Module Admin								ide
Basic	Route Name:	IPBX Rename					0 9_00ts	lue
Extensions	Route Password:						4.000	
Feature Codes	PIN Set:	None 🗸					TIPBA	
General Settings	Emergency Dialing:						-	
Outbound Routes	Intra Company Route							
Support	Music On Hold?							
Trunks	Dial Patterns	deridare v						
Administrators	Dial Fatterns	499						
Inbound Routes		100						
Zap Channel DIDs								
Announcements								
Blacklist								
CallerID Lookup Sources		Clean & Remove duplicates						
Day/Night Control	Dial patterns wizards:	(pick one) 🗸						
Follow Me	Trunk Sequence							
IVR	0	IAX2/IPBX1 🗸 箇						
Queues								
Ring Groups		Add						
Time Conditions								
Time Groups	Submit Changes							
Internal Options & Configuratic								
Conferences								
DISA								
Languages								
Music on Hold								
Pin Sets								
Paying and intercom								
System Recordings								
VoiceMail Blasting								
Volcement pressing								
		v2.8.0.4 ©2008 Fonality	, inc All Rights Res	erved.				

Retranscrire la configuration à l'identique ou bien adapter selon la situation

c. Vérification de la liaison Trunk

Afin de vérifier la liaison trunk fonctionne bien, nous devons configurer des comptes SIP sur chaque IPBX et utiliser un compte de chaque IPBX sur les Softphones et effectuer un appel de 100 vers 200



Comme on peut le voir, on peut appeler un autre numéro ne faisant pas parti du même IPBX, nous avons bien une liaison qui s'effectue entre les deux.