Installing FreePBX 15 Asterisk 16

SangomaOS 7.6 (2002.043)

FreePBX 15 Installation (Asterisk 16) – Recommended   >
FreePBX 15 Installation (Asterisk 13)   >

FreePBX 15 Advanced Installation   >
Advanced and Troubleshooting options   >

Boot from local drive

Press [Tab] to edit options

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T E C H N O L O G I E S

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        FreePBX 15 Installation (Asterisk 16) - Recommended

Graphical Installation - Output to VGA                              >
Graphical Installation via VNC - Output to Serial                   >
Graphical Installation via VNC - Output to Serial and VGA           >

Fully Automatic Installation - Output to VGA
Fully Automatic Installation - Output to Serial


              Press [Tab] to edit options
```

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T E C H N O L O G I E S

Graphical Installation — Output to VGA

FreePBX Standard

Press [Tab] to edit options

Automatic install of Asterisk 16 and FreePBX 15
Note that if more than two identically sized HDDs are detected,
a RAID will be created and they will assigned to it
This install deletes all existing data on this machine

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TECHNOLOGIES

```
[    0.215170] NetLabel: Initializing
[    0.216003] NetLabel:  domain hash size = 128
[    0.217003] NetLabel:  protocols = UNLABELED CIPSOv4
[    0.218000] NetLabel:  unlabeled traffic allowed by default
[    0.219070] amd_nb: Cannot enumerate AMD northbridges
[    0.220065] Switched to clocksource kvm-clock
[    0.226167] pnp: PnP ACPI init
[    0.227105] ACPI: bus type PNP registered
[    0.228544] pnp: PnP ACPI: found 5 devices
[    0.229550] ACPI: bus type PNP unregistered
[    0.245151] NET: Registered protocol family 2
[    0.247200] TCP established hash table entries: 16384 (order: 5, 131072 bytes
)
[    0.251124] TCP bind hash table entries: 16384 (order: 6, 262144 bytes)
[    0.253465] TCP: Hash tables configured (established 16384 bind 16384)
[    0.255838] TCP: reno registered
[    0.258032] UDP hash table entries: 1024 (order: 3, 32768 bytes)
[    0.259116] UDP-Lite hash table entries: 1024 (order: 3, 32768 bytes)
[    0.260310] NET: Registered protocol family 1
[    0.262429] pci 0000:00:00.0: Limiting direct PCI/PCI transfers
[    0.264355] pci 0000:00:01.0: PIIX3: Enabling Passive Release
[    0.266315] pci 0000:00:01.0: Activating ISA DMA hang workarounds
[    0.268678] ACPI: PCI Interrupt Link [LNKC] enabled at IRQ 11
[    0.270792] Unpacking initramfs...
_
```

Enter Network and Host Name

us   Help! (F1)

USER SETTINGS

ROOT PASSWORD
Root password is not set

USER CREATION
User asterisk will be created

⟳ Starting package installation process

⚠ Please complete items marked with this icon before continuing to the next step.

Enter Password for root access of FreePBX

USER SETTINGS

ROOT PASSWORD
Root password is set

USER CREATION
User asterisk will be created

Running post-installation scripts

Reboot

Enter IP address in your Web Browser and begin entering the user credential information
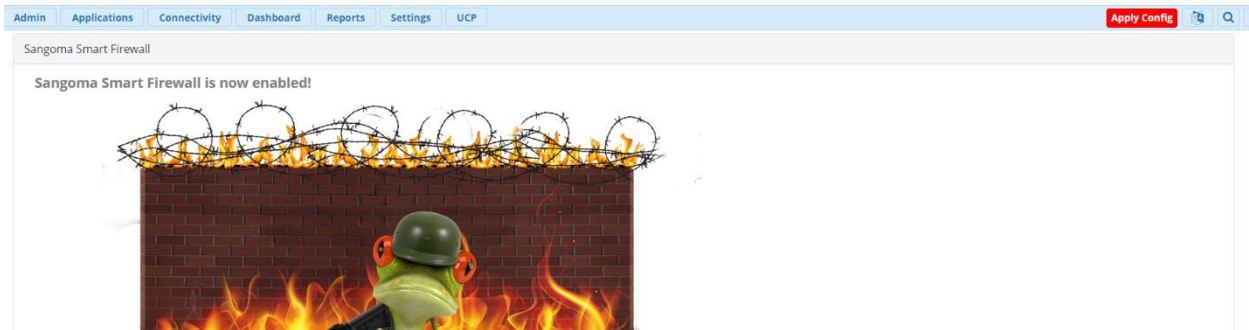
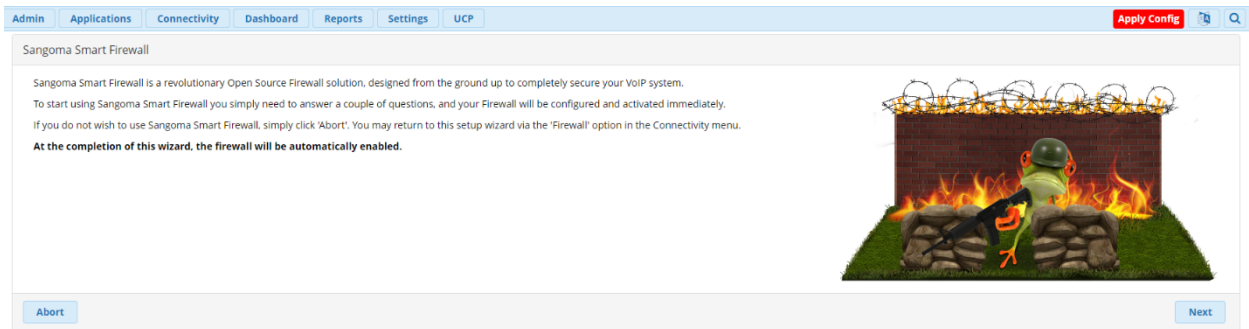FreePBX Administration   User Control Panel   Operator Panel   Get Support

Login to GUI by clicking FreePBX Administration

Sangoma Firewall will automatically open select continue

Next

Sangoma Smart Firewall

Should the client you're using be trusted?

It is highly recommended that the client you're currently using (_____) should be marked as Trusted. This will ensure that you can not accidentally be locked out of this server.

You would normally select **Yes** to this question. The only time you would pick No is if you are not using the client machine you will be using in the future to manage this system.

Abort   No   Yes

Yes

Sangoma Smart Firewall

Should your current network be trusted?

The network you are currently using (_____ to manage this server isn't marked as Trusted.

If this is a known secure network, you should add it to the Trusted zone

Please ensure that you are not inadvertently allowing unauthorized hosts access to your machine. You should only select 'Yes' if you are sure the network (above) is not accessible by any unknown third parties.

Abort   Yes   No

Yes

Sangoma Smart Firewall

Enable Responsive Firewall?

Enabling Responsive Firewall allows remote clients to securely register to this server without explicitly whitelisting them.

It is recommended to turn this on if you have remote clients.

Further information is available at the PBX Wiki.

Abort   No   Yes

No

Sangoma Smart Firewall

Automatically configure Asterisk IP Settings?

Firewall should now auto-detect and configure External IP settings. This will assist with NAT or Translation issues.

You should say 'Yes' to this, unless you have an extremely complex network with multiple external default gateways.

You can verify these settings in Sip Settings after this wizard is complete. If you have a non-static IP address, you may need to use a DDNS provider which will require manual configuration.

Abort   No   Yes

Yes
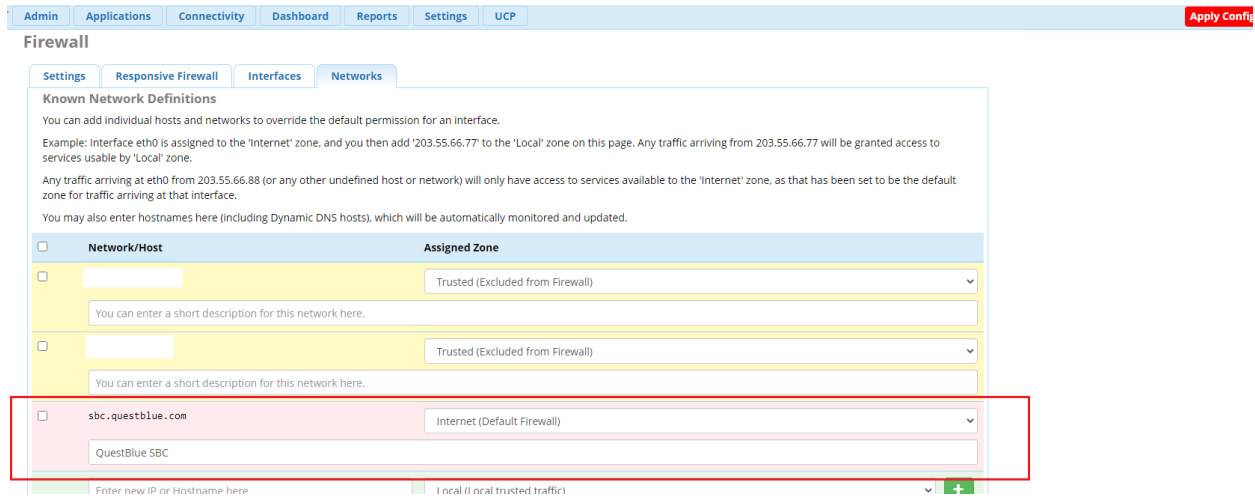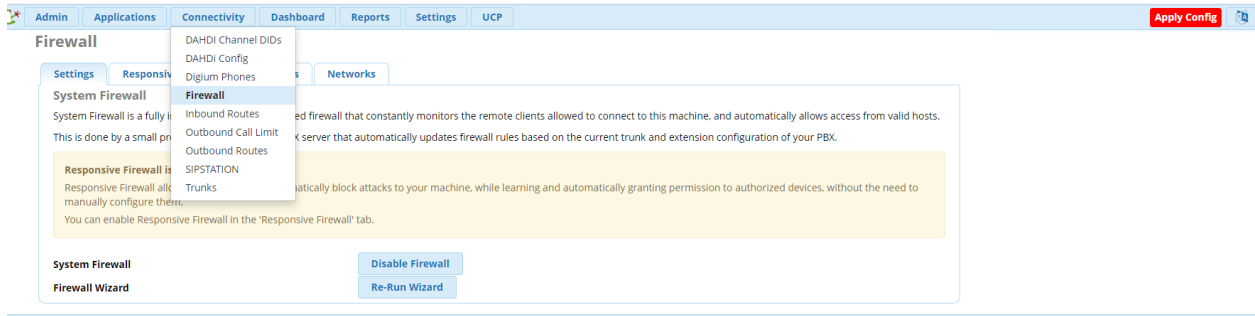
Enter sbc.questblue.com
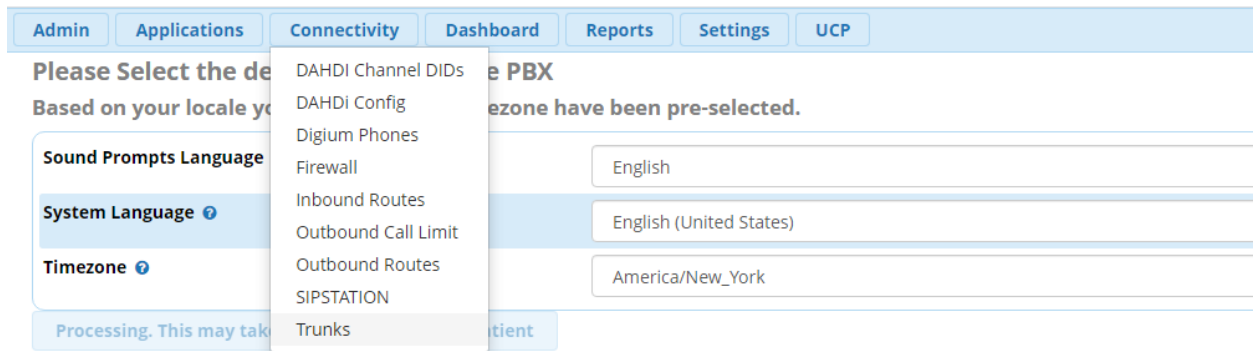
Create your SIP Trunk

Trunks

This page is used to manage various system trunks

+ Add Trunk ▾

	Tech	CallerID	Status
+ Add SIP (chan_pjsip) Trunk			
+ Add SIP (chan_sip) Trunk	No matching records found		
+ Add DAHDi Trunk			
+ Add IAX2 Trunk			
+ Add ENUM Trunk			
+ Add DUNDi Trunk			
+ Add Custom Trunk			

Add pjsip Trunk

SIP-accounts → Create New SIP Account

Create new SIP account or SIP Registration

Trunk name * [   ]   [SIP-accounts]
Only alphanumeric value, no spaces

Trunk Type   [Trunk Registration ▾]

* required field

Create SIP account

In your customer.questblue.com account create the SIP Trunk as registration trunk

Below follow the instructions for creating the SIP Trunk in FreePBX

Add Trunk

| General | Dialed Number Manipulation Rules | pjsip Settings |

Trunk Name ❷	QuestBlue
Hide CallerID ❷	Yes **No**
Outbound CallerID ❷	enter your phone number in the following format NXXNXXXXXX without dashes or spaces
CID Options ❷	**Allow Any CID** Block Foreign CIDs Remove CNAM Force Trunk CID
Maximum Channels ❷	
Asterisk Trunk Dial Options ❷	T Override **System**
Continue if Busy ❷	Yes **No**
Disable Trunk ❷	Yes **No**
Monitor Trunk Failures ❷	Yes **No**

Apply Config

Add Trunk

General | **Dialed Number Manipulation Rules** | pjsip Settings

Dial Number Manipulation Rules

These rules can manipulate the dialed number before sending it out this trunk. If no rule applies, the number is not changed. The original dialed number is passed down from the route where some manipulation may have already occurred. This trunk has the option to further manipulate the number. If the number matches the combined values in the **prefix** plus the **match pattern** boxes, the rule will be applied and all subsequent rules ignored. Upon a match, the **prefix**, if defined, will be stripped. Next the **prepend** will be inserted in front of the **match pattern** and the resulting number will be sent to the trunk. All fields are optional.

Rules:
X matches any digit from 0-9
Z matches any digit from 1-9
N matches any digit from 2-9
[1237-9] matches any digit or letter in the brackets (in this example, 1,2,3,7,8,9)
. wildcard, matches one or more characters (not allowed before a | or +)

✏ Dial patterns wizards

(1)	prefix	[NXXNXXXXXX	+ 🗑
(prepend)	prefix	[1NXXNXXXXXX	+ 🗑

Outbound Dial Prefix ❓

General | **Dialed Number Manipulation Rules** | pjsip Settings

PJSIP Settings

General | Advanced | Codecs

Username	Enter Trunk Name
Secret	
Authentication ❓	**Outbound** Inbound Both None
Registration ❓	**Send** Receive None
Language Code ❓	Default
SIP Server ❓	sbc.questblue.com
SIP Server Port ❓	5060
Context ❓	from-trunk
Transport ❓	0.0.0.0-udp

Enter the same SIP Trunk name as created on customer.questblue.com

Secret: Enter the password that was generated when creating the SIP Trunk in customer.questblue.com

Authentication: Outbound

Registration: Send

SIP Server: sbc.questblue.com

SIP Server Port: 5060

Add Trunk

General | Dialed Number Manipulation Rules | pjsip Settings

PJSIP Settings

General | Advanced | Codecs

DTMF Mode ❓	Auto
Send Connected Line ❓	Yes **No**
Permanent Auth Rejection ❓	Yes **No**
Forbidden Retry Interval ❓	30 Seconds
Fatal Retry Interval ❓	30 Seconds
General Retry Interval ❓	60 Seconds
Expiration ❓	3600 Seconds
Max Retries ❓	10000
Qualify Frequency ❓	60 Seconds
Outbound Proxy ❓	
Contact User ❓	
From Domain ❓	sbc.questblue.com
From User ❓	

Enter the settings above for the pjsip page. All other features are optional

Add Trunk

General | Dialed Number Manipulation Rules | pjsip Settings

PJSIP Settings

General | Advanced | Codecs

Check the desired codecs, all others will be disabled. Drag to re-order.

- ☑ ulaw
- ☐ alaw
- ☐ gsm
- ☐ g726
- ☐ g722
- ☐ g723
- ☐ speex
- ☐ speex16

Trunks

This page is used to manage various system trunks

+ Add Trunk ▾   Search

Name	Tech	CallerID	Status	Actions
QuestBlue	pjsip	...*****30*	Enabled	✏ 🗑

Showing 1 to 1 of 1 rows

Apply setting and click Apply Config.

Next, create your inbound route from Connectivity > Inbound Routes

Inbound Routes

Route: Test

👤 Edit Extension 1000 (Test)

General	Advanced	Privacy	Fax	Other

Description ❓	Test
DID Number ❓	
CallerID Number ❓	ANY
CID Priority Route ❓	Yes **No**
Alert Info ❓	None
Ringer Volume Override ❓	None
CID name prefix ❓	
Music On Hold ❓	Default
Set Destination ❓	Extensions
	1000 Test

Create your inbound route with DID number in the format NXXNXXXXXX

Submit, apply config