

Certificate Management User Guide

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Overview

The Certificate Management module is used to manage certificates on your FreePBX server.

Logging In

- From the top menu click **Admin**
- In the drop down click **Certificate Management**

Certificate Management

 What is Certificate Manager?

[+ New Certificate](#) [+ Generate CSR](#) [x Delete Self-Signed CA](#) [Import Locally](#)  

Certificate	Description	Type	Default	Action
default	Default Self-Signed certificate	Self Signed	✓	 

Showing 1 to 1 of 1 rows

Hover over the 'Default' column and click to make a certificate the system default

Note: Making a certificate the 'default' changes certificate settings in Advanced Settings ONLY. It will force said certificate to be the default for options in Advanced Settings that require certificates. It will also place a standard set of the certificate and it's key into /etc/asterisk/keys/integration for use by other applications

On first login to your PBX a default self-signed certificate will have been created for you.

New Certificate

To add a new certificate click this button and select from one of the three drop downs.

Generate Let's Encrypt Certificate

Let's Encrypt Certificates are completely 100% free certificates that are generated via an automated process designed to eliminate the current complex process of manual creation, validation, signing, installation, and renewal of certificates for secure websites. Your PBX implements this same automated process.

This process requires port 80 access to your PBX from outbound1.letsencrypt.org, outbound2.letsencrypt.org, mirror1.freepbx.org and mirror2.freepbx.org. Using System Admin, Port Management, configure either the Admin interface or UCP to respond on port 80.

If you have the **Commercial (Full)** Sysadmin module, you can specify that a 'LetsEncrypt Only' service listens on port 80. See the [Port Management](#) page for more information.

New Let's Encrypt Certificate

Firewall Warning

LetsEncrypt requires the following hosts to be permitted for inbound http access:
outbound1.letsencrypt.org, outbound2.letsencrypt.org, mirror1.freepbx.org, mirror2.freepbx.org
PBX System Firewall is not in use so this can not be verified. Please manually verify inbound connectivity.

Let's Encrypt Certificates are **automatically** updated by FreePBX when required (Approximately every 2 months). Do not install your own certificate updaters!

Certificate Host Name 	localhost
Owners Email 	you@example.com
Challenge Over 	HTTP (Port 80)
Country	Canada 
State/Province/Region	Ontario 

There are several required options to generate a Let's Encrypt Certificate

- **Certificate Host Name:** The hostname you want to use for your certificate. This must be a fully qualified domain name that points back to your PBX.
- **Owners Email:** Your email address. This email is provided to Let's Encrypt to send you important information about your certificate
- **Challenge Over:** The only option here is HTTP (Port 80). The port can NOT be changed.
- **Country:** The country where you are located
- **State/Province/Region:** The state/Province where you are located

Once you are finished click "Generate Certificate". Your certificate will be added and will be automatically update approximately every 2 months

Added new certificate

Upload Certificate

Add New Certificate

Name	<input type="text" value="BaseName"/>
Description	<input type="text"/>
Passphrase	<input type="text"/>
CSR Reference	<input type="text" value="None"/>

Private Key

If you have a separate private key paste it here.

Certificate

After you have submitted a CSR to a CA, they will sign it, after validation, and return a Signed Certificate. That certificate should be pasted in the box below. If you leave this box blank, the certificate will not be updated.

Trusted Chain

Your CA may also require a Trusted Chain to be installed. This will be provided by the CA, and will consist of one, or multiple, certificate files. Paste the contents of all the Chain files, if any, into the box below. This may be left blank, or updated at any time. They can be added in any order.

- **Name:** Certificate Name. Usually the host name
- **Description:** Certificate description
- **Passphrase:** The Passphrase of the Private Key. This will be used to decrypt the private key and the certificate. They will be stored unpassworded on the system to prevent service disruptions.
- **CSR Reference:** Certificate Signing Request to reference. If 'None' is selected then you will be able to upload your own private key
- **Private Key:** Paste your private key here
- **Certificate:** Paste your certificate here
- **Trusted Chain:** Paste your trusted chain here

In order to view the certs to copy, you must open the TLS files using a plain text editor, and not necessarily the default application configured on the workstation.

Once you are finished click "Upload Certificate".

Added new certificate

Generate Self-Signed Certificate

Self Signed Certificates are not recommended as many browsers outright reject these certificates, they can, however, be useful for internal testing

Your PBX also generates a self signed certificate on first boot

If you have previously deleted the self-signed CA when you go to create a new self-signed certificate your screen will look like this:

Add New Certificate

Host Name ?	localhost 
Description ?	
Organization Name ?	My Super Organization

- **Host Name:** The hostname of the system. Should be a fully qualified domain name
- **Description:** Description of this certificate
- **Organization Name:** Organization name, Used in the Certificate Authority generation process

Otherwise the New Certificate screen will look like this:

Add New Certificate

Host Name ?	localhost
Description ?	
Certificate Authority ?	localhost.localdomain 

- **Host Name:** The hostname of the system. Should be a fully qualified domain name
- **Description:** The description of the certificate
- **Certificate Authority:** The Certificate Authority that will generate this certificate. You can delete the CA from this page as well by

clicking this icon 

Once you are finished click "Generate Certificate".

Added new certificate

Generate CSR (Certificate Signing Request)

You can generate a CSR from your PBX to be used for the process of obtaining certificates from valid certificate authorities online

New Certificate Signing Request

Name ?	BaseName 
Common Name (Host Name) (CN)	localhost
Organization Name (O) ?	Sangoma Technologies, Inc.
Organization Unit (OU) ?	
Country (C) ?	US
State/Province (ST) ?	Wisconsin
City or Locality (L) ?	Neenah

- **Name:** The name of this CSR
- **Common Name (CN):** The common name (also known as hostname)
- **Organization Name (O):** Organization Name such as Sangoma Technologies, Inc.
- **Organization Unit (OU):** Organizational Unit. This can be a doing business as (DBA) name, or the name of a department within the business. This may be left blank.
- **Country (C):** Two letter country code, such as "US", "CA", or "AU".
- **State/Province (ST):** State or province such as "Queensland" or "Wisconsin" or "Ontario." Do not abbreviate. Enter the full name.
- **City of Locality (L):** City name such as "Toronto" or "Brisbane." Do not abbreviate. For example, enter "Saint Louis" not "St. Louis"

Click "Generate CSR".

Added new certificate signing request

After the request has processed a new button will appear on the main page of Certificate Manager which allows you you download the CSR so you can submit it to a Certificate Authority.

 **Download CSR**

You can then later reference this CSR/Private Key when you upload your certificate:

Add New Certificate

Name ⓘ	BaseName 
Description ⓘ	<input type="text"/>
Passphrase ⓘ	<input type="password"/> 
CSR Reference ⓘ	MyCSR 

Certificate

After you have submitted a CSR to a CA, they will sign it, after validation, and return a Signed Certificate. That certificate should be pasted in the box below. If you leave this box blank, the certificate will not be updated.

Paste new certificate here

Trusted Chain

Your CA may also require a Trusted Chain to be installed. This will be provided by the CA, and will consist of one, or multiple, certificate files. Paste the contents of all the Chain files, if any, into the box below. This may be left blank, or updated at any time. They can be added in any order.

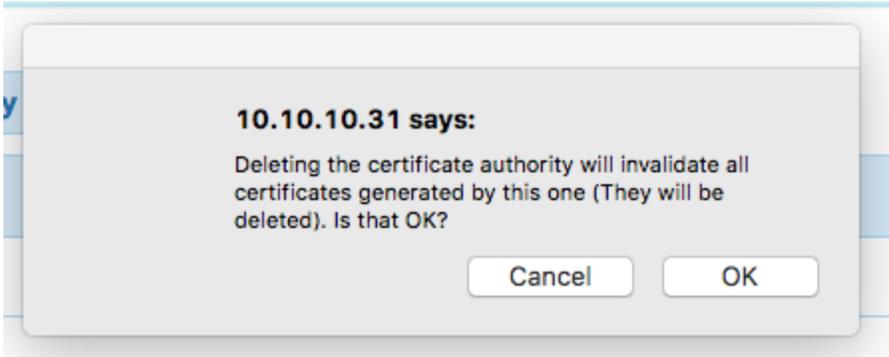
Paste new certificate here

Delete Self-Signed CA

You can delete the self signed certificate authority at any time by clicking the red button labeled "Delete Self-Signed CA".

 **Delete Self-Signed CA**

A prompt will then come up warning you that all certificates that relied on this self signed certificate authority will be invalidated



Once you have deleted the self-signed CA you can then generate another one by clicking "New Certificate" then "Generate Self-Signed Certificate"

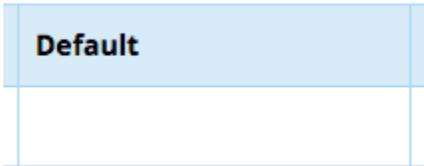
Import Locally

To manually import your certificates you need to drop the *.key and *.crt files into /etc/asterisk/keys. Then click the Import Locally button.

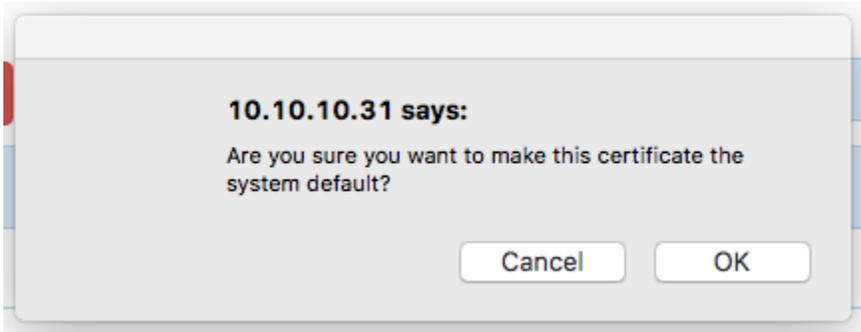
When this has finished your certificates will show up in the list of PBX certificates.

Setting a default certificate

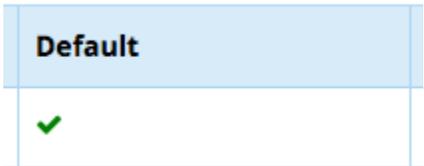
Making a certificate the 'default' changes certificate settings in Advanced Settings ONLY. It will force said certificate to be the default for options in Advanced Settings that require certificates. It will also place a standard set of the certificate and it's key into /etc/asterisk/keys/integration for use by other applications



To select a certificate as the default move you mouse over the blank/empty column in the list of certificates. A grey checkmark will appear. Click that checkmark to make it the default



After this process has completed the checkmark will turn from grey to green and stick after you move your mouse away.



Using a certificate with System Admin

After you have added at least one certificate and activated your system you will be able to select that certificate as the default that system admin should use for the Apache webserver.

Go to System Admin then click "HTTPS Setup". Next hit the "settings" tab.

System Admin

HTTPS Setup

Instructions Settings

Certificate Manager: --Select a Certificate-- Install

Certificate Name:

Certificate Issuer:

You have a previous certificate installed that was used by system admin to setup SSL in apache. If you would like to import this certificate into Certificate Manager please click 'Import'

Apache Config: Error parsing /etc/pki/tls/certs/localhost.crt Import

Certificate Name:

Certificate Issuer:

DNS

Intrusion Detection

Network Settings

Hostname

Notifications Settings

Power Options

Port Management

PnP Configuration

HTTPS Setup

Time Zone

Storage

Support

Select a certificate to use from the list of certificates provided by Certificate Manager:

Certificate Manager: --Select a Certificate-- Install

Certificate Name:

Certificate Issuer:

Then click install. When the process has completed you will see your certificate detailed under "Apache Config"

Certificate Manager: localhost Install

Certificate Name: localhost

Certificate Issuer: localhost

You have a previous certificate installed that was used by system admin to setup SSL in apache. If you would like to import this certificate into Certificate Manager please click 'Import'

Apache Config: Apache Configured Import

Certificate Name: localhost

Certificate Issuer: localhost

