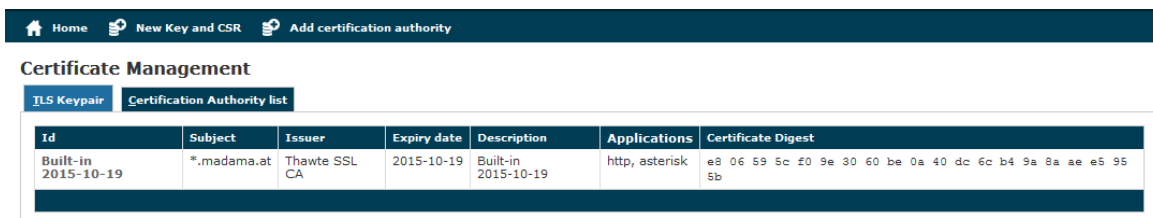


## 2.3 Certificates management

### 2.3.1 Introduction


The certificates management is related to the server name and the services provided (please refer to [2.2 Network Segregation](#) for details about the certificate assignment to a specific NIC/IP/name). In order to provide to the client a sure match of your identity you need to load and configure a secure certificate bonded to your server name (ie: name.server.tld).



Certificate Management						
TLS Keypair   Certification Authority list						
Id   Subject   Issuer   Expiry date   Description   Applications   Certificate Digest						
Built-in 2015-10-19	*.madama.at	Thawte SSL CA	2015-10-19	Built-in 2015-10-19	http, asterisk	e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ee e5 95 5b

figure 1. Certificate configuration, default certificate installed

You can get the certificates configuration page using the **Certificate Management** link in the **main menu**. As shown above the default page is listing the installed TLS Keypair.

 By default, on PrivateServer it's installed one "\*.madama.at" wildcard certificate as shown in [figure 1. Certificate configuration, default certificate installed](#)

### Certificate Management

TLS Keypair

Certification Authority list

figure 2. The tabs to access the two section related with the certificate management

From this page you can decide to view and delete your keypairs or the Certification Authority entries, using the tabs shown in the above [figure 2. The tabs to access the two section related with the certificate management](#).

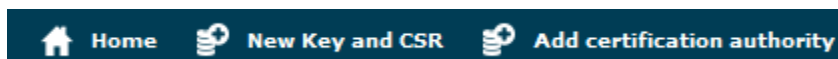


figure 3. link for creating new key and CSR or add new CAs

Instead if you need to create a new TLS key pair or add a new CA, then you have to use the buttons above the "TLS Keypair" list (the ones shown in [figure 3. link for creating new key and CSR or add new CAs](#)).

### 2.3.2 Create New Certificate

Add a new Certificate is a delicate matter, because it involves sensible informations like private Key Management and concealing. Adding a New Certificate on PrivateServer means that you can create your own **Certificate Signing Request** directly on PrivateServer and no need for external Private Key creation/management tools. Of course you need to have your CSR signed by a known Certificate Authority before you can actually use it.

Certificate Creation is thus split in **two steps**:

1. New Key and CSR creation (before CA sign)
2. New Certificate upload (after CA sign)

#### New Key and CSR

So first of all you start by creating a CSR: click on the **New Key and CSR** link above the certificate table.

## New Key and CSR

Description:	*	<input type="text"/>
Two-letter country code:		<input type="text" value="Afghanistan"/>
State - Province:	*	<input type="text"/>
Locality - City:	*	<input type="text"/>
Organization:	*	<input type="text"/>
Organization unit:	*	<input type="text"/>
Common Name:	*	<input type="text" value="server.hostname.here"/>
Email:	*	<input type="text"/>
Bits:		<input type="text" value="2048"/>



 **Generate**

figure 4. New certificate form

You are redirected on page shown in [figure 4. New certificate form](#). Here you can fill the form with all basics data needed to create a Certificate Signing Request.

 All the fields in above form are standard ones for creating new TLS Key pairs/Certificate Signing Requests.

## New Key and CSR

Description:	*	<input type="text" value="Test"/>
Two-letter country code:		<input type="text" value="Italy"/>
State - Province:	*	<input type="text" value="Lombardia"/>
Locality - City:	*	<input type="text" value="Milan"/>
Organization:	*	<input type="text" value="PrivateWave Italia SpA"/>
Organization unit:	*	<input type="text" value="Docs Team"/>
Common Name:	*	<input type="text" value="myserver.privatewave.com"/>
Email:	*	<input type="text" value="support@privatewave.com"/>
Bits:		<input type="text" value="2048"/>


 **Generate**

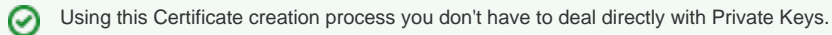
figure 5. example values for new CSR

Once you're done you can just press **Generate** button at the bottom of the form.

TLS Keypair		Certification Authority list				
ID	Subject	Issuer	Expiry date	Description	Applications	Certificate Digest
Built-in 2015-10-19	*.madama.at	Thawte SSL CA	2015-10-19	Built-in 2015-10-19	http, asterisk	e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ae e5 95 5b
Test	myserver.privatewave.com			Test		


figure 6. new CSR created and listed


A warning confirming creation and a new row in TLS Keypair list shows generation process has been successful.



Now you can download your CSR to make a Certificate Authority sign it, creating a brand new Server Certificate.

### Edit TlsKeyPair

 Download CSR

 Upload certificate

---

Subject: myserver.privatewave.com

Issuer:

Expiry date:

Description:

**Applications:**

Certificate Digest:



 Update  Delete

figure 7. Edit CSR form

Just click on Certificate's name in main list and you get form shown in [figure 7. Edit CSR form](#). From here you can fully manage your CSR, upgrading it to a proper Certificate or modifying its description.

**Edit TlsKeyPair**  
↓ Download CSR  
↑ Upload certificate

figure 8. CSR management links

Anyway you need to **Download CSR** before you're done with Certificate creation, so use first link shown in detailed view [figure 8. CSR management links](#).

### New Certificate upload

Once you have your CSR you just follow instructions by CA of your choice to obtain a new Certificate. As it's done, you can get back to form in [figure 7](#). [Edit CSR form](#) and this time **Upload certificate**.

## Upload certificate and chain

Certificate:

Cert Chain:



 **Upload**

figure 9. Upload Certificate form

You can fill **Certificate** text box with actual Certificate as it has been release from Certificate Authority. If you got also some **intermediate** Certificate, then you have to paste it in **Cert Chain**.

 All the fields must be in **PEM (Privacy Enhanced Mail)** format.

When your done you just press the **Upload** button on the bottom line: PrivateServer will validate entire Certificate Chain and if it went thought it then you should have a new line in you TLS/Keypair.

## Edit TlsKeyPair

-  **Download Certificate**
-  **Download Certificate chain**
-  **Upload certificate**

Subject:	*.madama.at
Issuer:	Thawte SSL CA
Expiry date:	2015-10-19
Description:	Built-in 2015-10-19
Applications:	<ul style="list-style-type: none"><li>• asterisk</li><li>• http</li></ul>
Certificate Digest:	e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ae e5 95 5b

figure 10. Details of the new Certificate

If you click on Certificate's **Id** then you can read Certificate's details as shown in [figure 10. Details of the new Certificate](#).

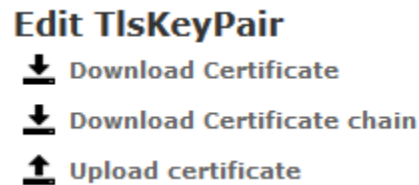


figure 11. Edit new Certificate

You can notice that now you can also Download both Certificate and Certificate chain. **Upload certificate** can come handy in case of renewal.

⚠ Even if it's possible to extend Certificates validity period, PrivateWave Italia S.r.l. it is a good practice to create a fresh new CSR each time instead. We also think it is wise to keep validity period of each Certificate just one year long.

### 2.3.3 Add Certification Authority

You might need to upload a new CA (Certification Authority) if you tried to install a Certificate which wasn't signed by an installed CA.

ℹ By default PrivateServer contains a default list of pre-loaded Certification Authorities.

#### Certificate Management

TLS Keypair			Certification Authority list		
subject		expiryDate			
		2029-04-22 02:00:00.0		Delete	
GeoTrust Global CA		2022-05-21 06:00:00.0		Delete	
GeoTrust Global CA 2		2019-03-04 06:00:00.0		Delete	
GeoTrust Primary Certification Authority		2036-07-17 01:59:59.0		Delete	
GeoTrust Primary Certification Authority - G2		2038-01-19 00:59:59.0		Delete	
GeoTrust Primary Certification Authority - G3		2037-12-02 00:59:59.0		Delete	
GeoTrust Universal CA		2029-03-04 06:00:00.0		Delete	
GeoTrust Universal CA 2		2029-03-04 06:00:00.0		Delete	
Thawte Premium Server CA		2021-01-01 00:59:59.0		Delete	
thawte Primary Root CA		2036-07-17 01:59:59.0		Delete	
thawte Primary Root CA - G2		2038-01-19 00:59:59.0		Delete	
thawte Primary Root CA - G3		2037-12-02 00:59:59.0		Delete	
Thawte Server CA		2021-01-01 00:59:59.0		Delete	

figure 12. the default CA list

The new CA installation becomes mandatory because without a complete certificate chain the new TLS key pair would not be accepted by PrivateServer . If you need to upload a new certificate, click on the **Add certification authority** button above the certificate list table.

Home

Certificate Management

### Add Certification Authority

Certificate:

Create

figure 13. New Certification Authority

You get the form shown in [figure 13. New Certification Authority](#) which is pretty straightforward. You just have to cut 'n' paste the CA's content in the **Certificate** box and click on the **Create** button at the bottom.

## Certificate Management

TLS Keypair			Certification Authority list
CertificationAuthority added			
subject	expiryDate		
	2029-04-22 02:00:00.0	Delete	
GeoTrust Global CA	2022-05-21 06:00:00.0	Delete	
GeoTrust Global CA 2	2019-03-04 06:00:00.0	Delete	
GeoTrust Primary Certification Authority	2036-07-17 01:59:59.0	Delete	
GeoTrust Primary Certification Authority - G2	2038-01-19 00:59:59.0	Delete	
GeoTrust Primary Certification Authority - G3	2037-12-02 00:59:59.0	Delete	
GeoTrust Universal CA	2029-03-04 06:00:00.0	Delete	
GeoTrust Universal CA 2	2029-03-04 06:00:00.0	Delete	
	2015-04-19 14:34:16.0	Delete	
Thawte Premium Server CA	2021-01-01 00:59:59.0	Delete	
thawte Primary Root CA	2036-07-17 01:59:59.0	Delete	
thawte Primary Root CA - G2	2038-01-19 00:59:59.0	Delete	
thawte Primary Root CA - G3	2037-12-02 00:59:59.0	Delete	
Thawte Server CA	2021-01-01 00:59:59.0	Delete	

figure 14. CA list updated

As shown in [figure 14. CA list updated](#) the Certification Authority list shows a new entry. You can check the entry by subject (which is the entity that release the certificate) and the expiry Date (that shows how long the certificate is considered valid).


### 2.3.4 Delete TLS key pair

In a day-by-day secure VoIP service administration it's not unusual to delete a TLS key pair. The procedure starts right at the **Certificate Management** page (the one shown in [figure 1. Certificate configuration, default certificate installed](#)).

Certificate Management						
TLS Keypair		Certification Authority list				
Id	Subject	Issuer	Expiry date	Description	Applications	Certificate Digest
Built-in 2015-10-19	*.madama.at	Thawte SSL CA	2015-10-19	Built-in 2015-10-19	http, asterisk	e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ae e5 95 5b
testing_entry_to_delete	*.madama.at	Thawte SSL CA	2015-10-19	testing_entry_to_delete		e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ae e5 95 5b

figure 15. the TLS key pair list with a testing entry to be deleted

In [figure 15. the TLS key pair list with a testing entry to be deleted](#) you can see we added an entry conveniently named **testing entry to be deleted** and that's what we're going to do.

 Please make sure no services got association with the TLS entry you're going to remove, or else the deletion would fail.

First you click on the chosen entry and get a detail of the TLS key pair (as in [figure 10. Details of the new Certificate](#)).



figure 16. Update and Delete buttons

At the bottom of the form there's one **Delete** button. Just press it.

Certificate Management

TLS Keypair

Certification Authority list

1 TlsKeyPair 17 deleted

Id	Subject	Issuer	Expiry date	Description	Applications	Certificate Digest
Built-in 2015-10-19	*,madama.at	Thawte SSL CA	2015-10-19	Built-in 2015-10-19	http, asterisk	e8 06 59 5c f0 9e 30 60 be 0a 40 dc 6c b4 9a 8a ae e5 95 5b

figure 17. the deletion is confirmed

Confirm the deletion in the following pop-up windows. After that you get the new TLS key pair list without the deleted entry and with a warning which explains the entry has been deleted (as in [figure 17. the deletion is confirmed](#)).

### 2.3.5 Delete Certification Authority

You cannot edit an entry in the CA list, but you still can delete a CA and create a new one for replacement. That said, the way for deleting a CA entry is quite simple. From the CA list shown in [figure 14. CA list updated](#) choose the CA you want to expunge and press the **Delete** link in the last right column.

### Delete Certificate authority

Certificate Digest:

Subject:

Issuer:

Expiry date:

2029-04-22

 Delete

figure 18. CA's details

First you get a detail of the certificate you're going to delete. Just press the **Delete** button at the bottom and confirm your choice in the next pop up window.

## Certificate Management

[TLS Keypair](#)

[Certification Authority list](#)

<div><div><div></div><div>CertificationAuthority</div></div><div>deleted</div></div>		
subject	expiryDate	
GeoTrust Global CA	2022-05-21 06:00:00.0	Delete
GeoTrust Global CA 2	2019-03-04 06:00:00.0	Delete
GeoTrust Primary Certification Authority	2036-07-17 01:59:59.0	Delete
GeoTrust Primary Certification Authority - G2	2038-01-19 00:59:59.0	Delete
GeoTrust Primary Certification Authority - G3	2037-12-02 00:59:59.0	Delete
GeoTrust Universal CA	2029-03-04 06:00:00.0	Delete
GeoTrust Universal CA 2	2029-03-04 06:00:00.0	Delete
	2015-04-19 14:34:16.0	Delete
Thawte Premium Server CA	2021-01-01 00:59:59.0	Delete
thawte Primary Root CA	2036-07-17 01:59:59.0	Delete
thawte Primary Root CA - G2	2038-01-19 00:59:59.0	Delete
thawte Primary Root CA - G3	2037-12-02 00:59:59.0	Delete
Thawte Server CA	2021-01-01 00:59:59.0	Delete

figure 19. The CA list updated and the warning

You receive a confirmation about the deletion in the new CA list page (shown above in [figure 19. The CA list updated and the warning](#)). Plus the list no more shows the deleted CA entry.

[2.2 Network Segregation](#)

[2.4 Advanced configurations](#)