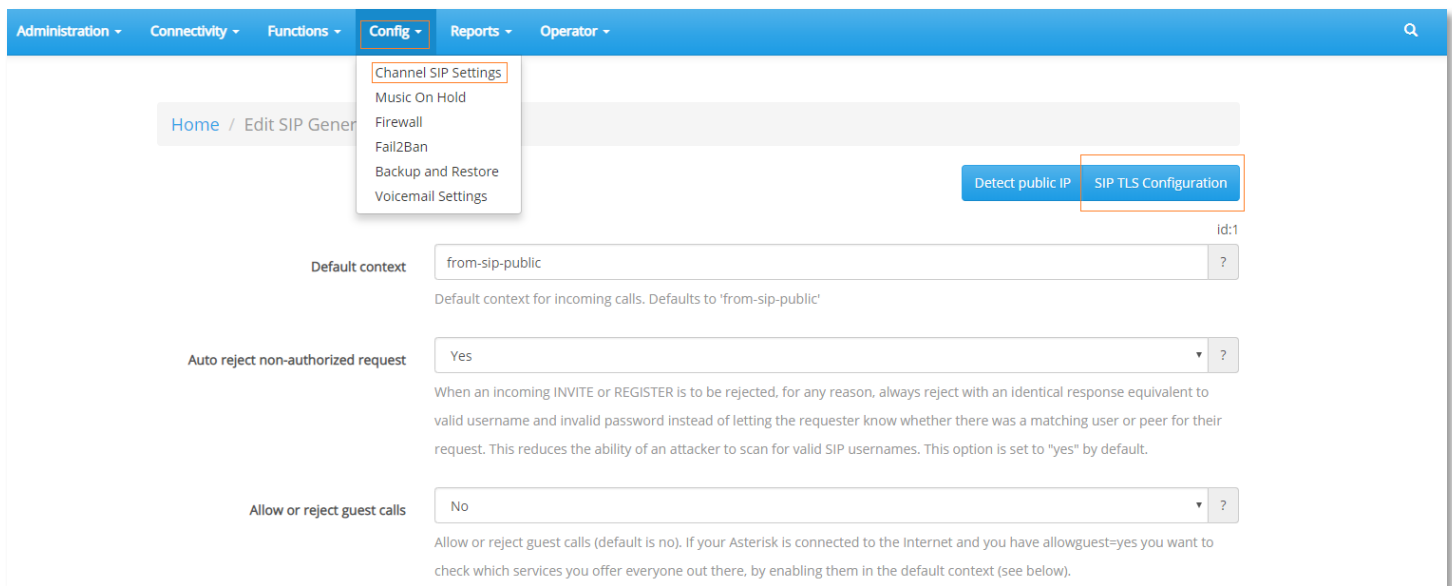


Setting up TLS

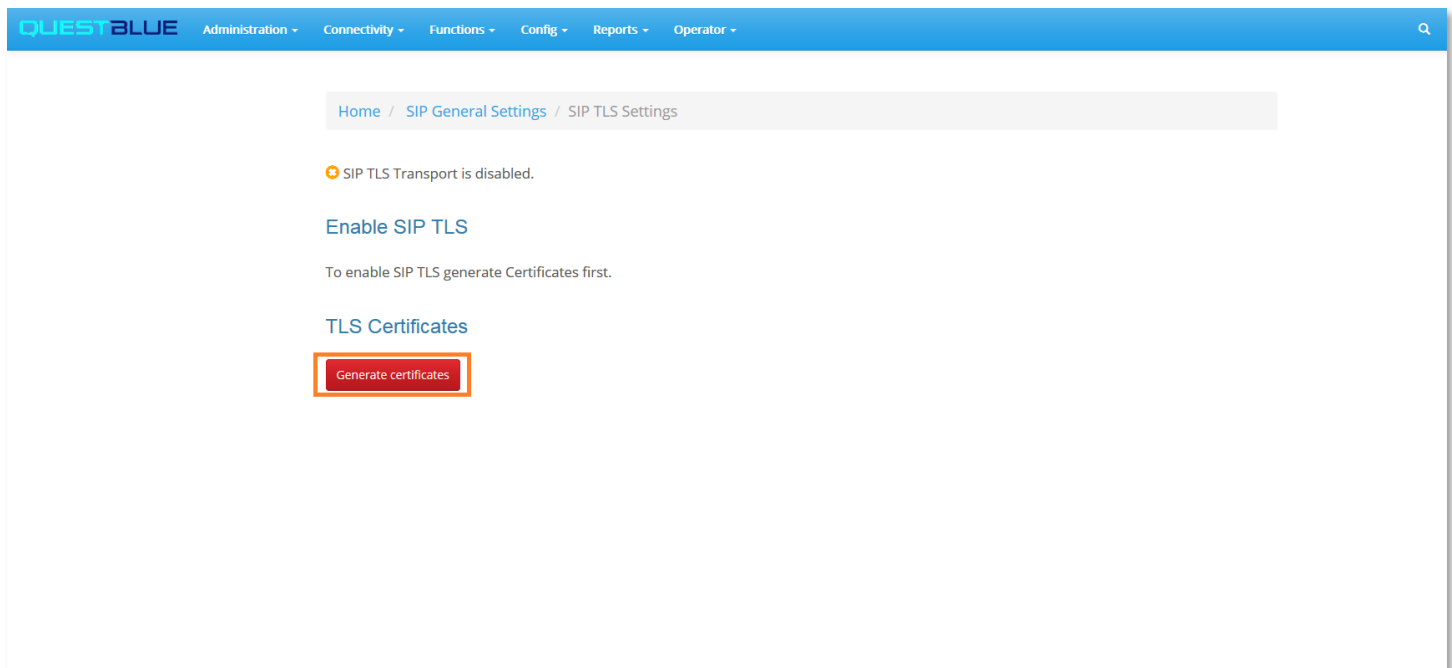
I. Configure QuBePBX Channel SIP Settings for TLS

1. Login to the QuBe PBX GUI
2. Click 'Config' > 'Channel SIP Settings'
3. Click the 'SIP TLS Configuration' button



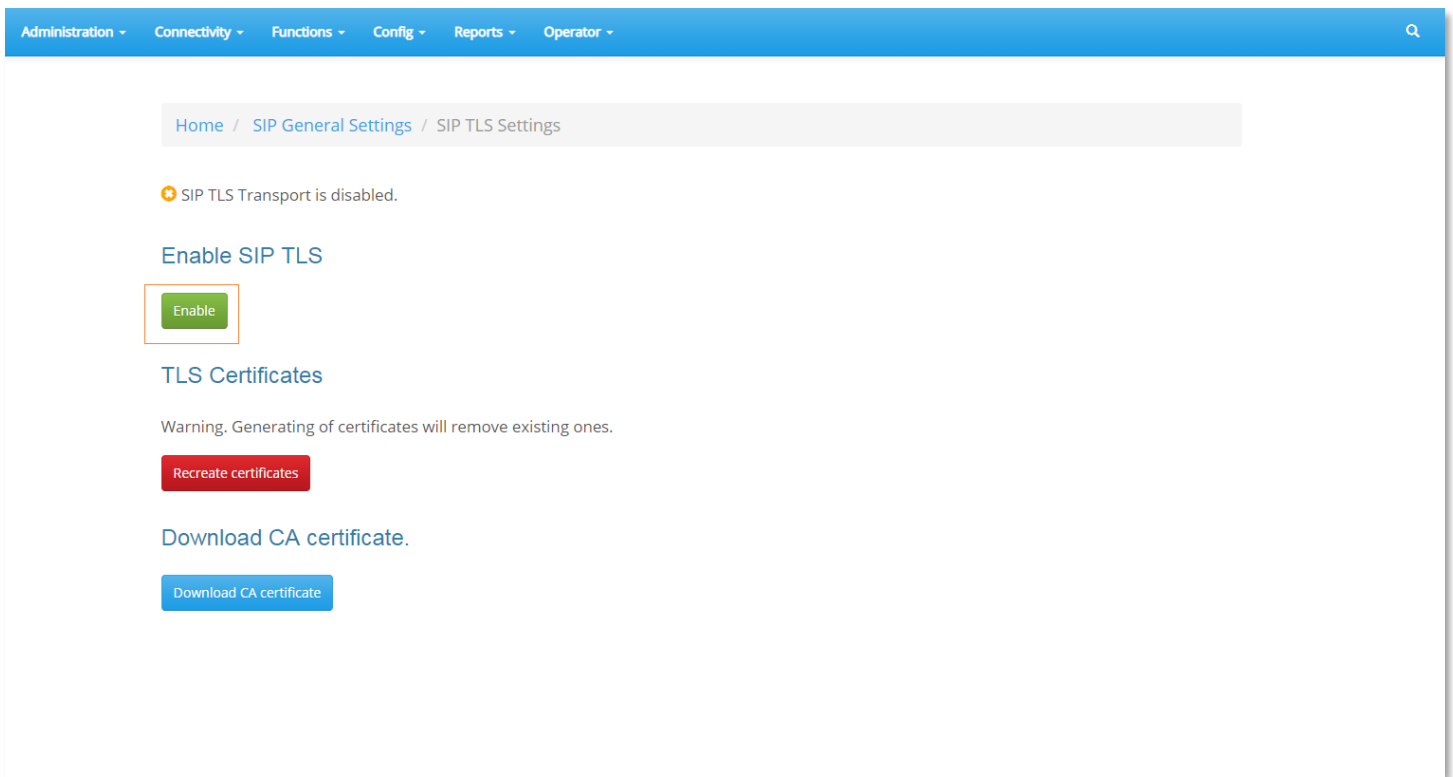
The screenshot shows the QuBePBX GUI with the 'Config' menu open. The 'Channel SIP Settings' option is highlighted. The 'SIP TLS Configuration' button is highlighted with a red box. The page shows settings for 'Default context' (from-sip-public), 'Auto reject non-authorized request' (Yes), and 'Allow or reject guest calls' (No).

4. Click the Generate Certificates button,
 - a. The page will reload and there will be more buttons.



The screenshot shows the QuBePBX GUI with the 'SIP TLS Settings' page. The 'SIP TLS Transport is disabled' message is shown. The 'Enable SIP TLS' button is highlighted. The 'Generate certificates' button is highlighted with a red box.

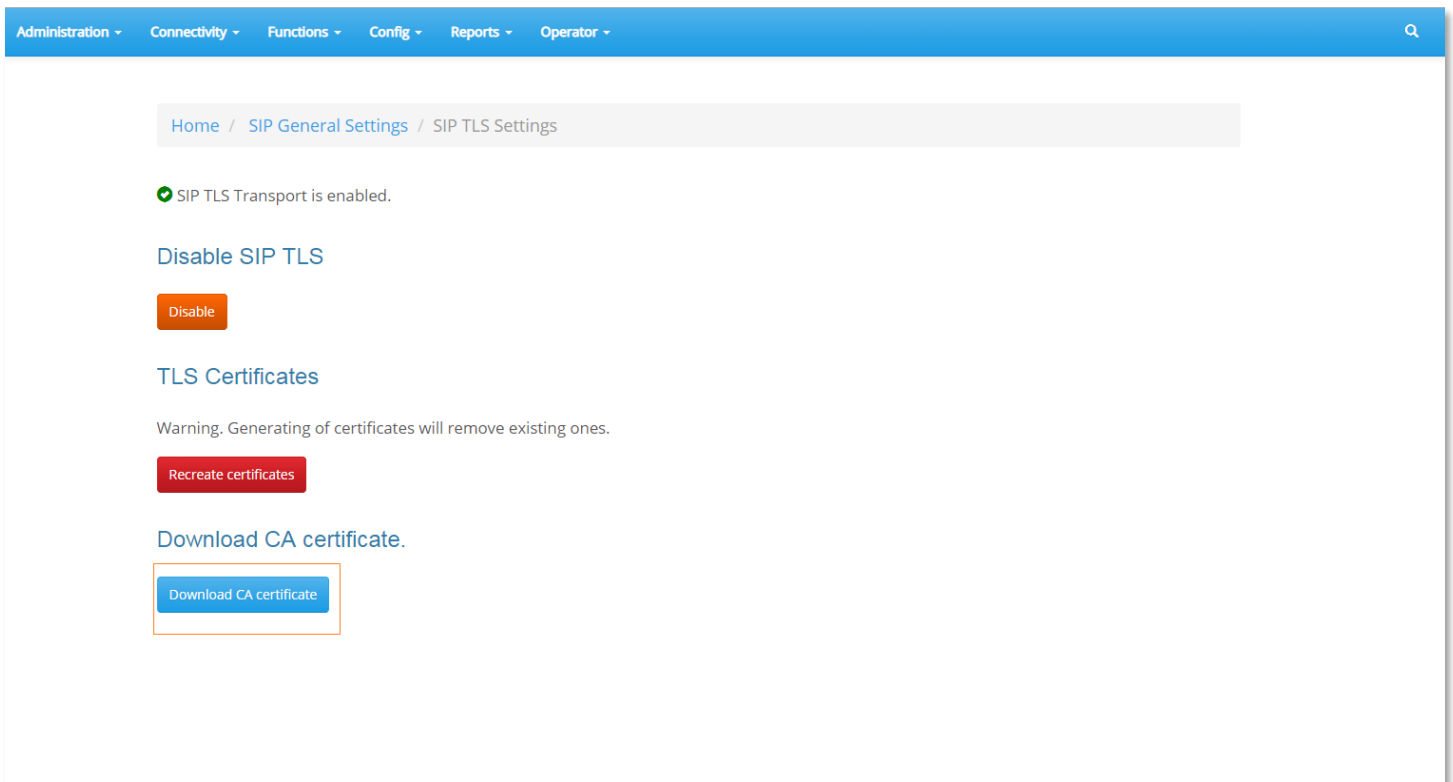
5. Click the Enable button



The screenshot shows the 'SIP TLS Settings' page in a web application. The navigation bar at the top includes 'Administration', 'Connectivity', 'Functions', 'Config', 'Reports', and 'Operator'. The breadcrumb trail is 'Home / SIP General Settings / SIP TLS Settings'. A status message indicates 'SIP TLS Transport is disabled.' Below this, the section 'Enable SIP TLS' contains a green 'Enable' button, which is highlighted with a red rectangular box. Further down, the 'TLS Certificates' section includes a warning: 'Warning. Generating of certificates will remove existing ones.' and a red 'Recreate certificates' button. At the bottom, there is a blue 'Download CA certificate' button.

6. Click the Download CA certificate button to download the TLS certificate.

- a. This will create a .crt file called 'ca'. There is no need to open the file, just save it to a safe place; we will need this later when configuring the transport and security settings on the phone.



The screenshot shows the 'SIP TLS Settings' page after the 'Enable' button was clicked. The status message now reads 'SIP TLS Transport is enabled.' with a green checkmark icon. The 'Disable SIP TLS' section contains an orange 'Disable' button. The 'TLS Certificates' section remains the same, with the warning and the red 'Recreate certificates' button. The blue 'Download CA certificate' button is now highlighted with a red rectangular box.

II. Configure QuBePBX Extensions for TLS+

1. Go to Connectivity > Extensions
2. Click Edit on the Extension that needs to be set up with TLS
3. Scroll to the Device SIP settings header and click on it
4. Find Transport
 - i. TLS
5. Find Port
 - i. 5061
6. Click Save

The screenshot shows the Asterisk SIP settings page for an extension. The page has a blue header with navigation tabs: Administration, Connectivity, Functions, Config, Reports, and Operator. A search icon is in the top right. Below the header, a blue bar contains the title "Device SIP Settings" with a dropdown arrow. Below this, a light blue box contains the text "Extension device SIP settings. Settings of Asterisk channel SIP." The main content area contains several settings, each with a label, a value field, and a help icon (?). The "Transport" setting is highlighted with an orange box and is set to "TLS".

Context	from-users	?
Context for outgoing calls from this Extension. NOTE. Default context 'from-users'. Do not change it if you do not know what it means.		
Host	dynamic	?
Extension host. Deafault is 'dynamic' for extension password authentication		
Type	friend	?
Device type. Default is 'friend'.		
Transport	TLS	?
SIP Transport protocols. Default UDP.		
DTMF Mode	rfc2833	?
DTMF passthrough mode.		
Direct Media	no	?
Media passthrough handling settings. Formerly 'canreinvite'.		

III. Configure QuBePBX Firewall for TLS Enabled Mobile Devices.

Only set this up if a mobile device will be connecting to the QuBePBX, otherwise skip this section.

1. Go to 'Config' > 'Firewall'
 - a. External Devices
 - b. Click 'Add New+'
 - i. Description
 1. descriptive that helps to remember what it does. So, something like "Mobile Phone" could also work here.
 - ii. SIP Transport
 1. TLS
 - iii. IP address
 1. 0.0.0.0
 - iv. Netmask
 1. All 0.0.0.0
 - v. Click 'Submit'

The screenshot shows the Quest Blue Firewall Configuration interface. The top navigation bar includes 'Administration', 'Connectivity', 'Functions', 'Config', 'Reports', and 'Operator'. The main content area is titled 'Home / Firewall Configuration' and includes a 'Firewall Status' button. Below this are sections for 'Trusted Networks', 'Trusted Domains', 'External Devices', and 'Trusted Service Users'. The 'External Devices' section is highlighted with an orange border and contains a table with the following data:

Description	SIP Transport	IP Address	Netmask	Delete
TLS	TLS	0.0.0.0	All 0.0.0.0	