

# FAQ - Application server connection examples Certificates

## Introduction

On this page we would like to show some connection examples using Certificates and error descriptions.

### Set-up:

- Nx70 software 2.44.0
- DECT handset R700H software release 11
- ...

### Configuration:

1. The Application server must be enabled [FAQ - Application servers](#)
2. Messaging and Location enabled for the handset [FAQ - Messaging and Location how to enable/disable per handset](#)
3. How to generate your own security keys and certificates [FAQ - Generate own keys/certificates](#)
4. Upload ca.crt into your Nx70 [FAQ - Upload ca.crt](#)
5. Contact Gigaset to get the GigasetCA.pem that is needed on the server where mosquitto is executed [FAQ - GigasetCA.pem \(Hidden\)](#)
6. Add device to the known hosts [FAQ - Add device to the known hosts](#)

### Example of publish for getting basic information from system

```
mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -m '{"msgId":"1234","params":{}}' -t "as1/module/xxl/api/req/status" -p 8885 -h Einstein2 -u as1 -P 123456789012345678901234567890ab
```

### MQTT message example:

- Prio 1 message
- To handset with SIP ID 1014
- With "Fire" icon and some text

### MQTT example using Linux PC

Nx70 has no config/ssl directory so we used the **Einstein2** hostname as the Client certificate in the Nx70 CN=Einstein2

Mosquitto version 1.4.15

```
mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -p 8885 -h Einstein2 -u as1 -P 123456789012345678901234567890ab -t 'as1/msg/xxl/msgsrv/req/setMsg' -m '{"msgId":"1","payload":{"amsgId":"23642","sip_id":"1013","msg":{"server_msg_status":"new","prio":"1","title":{"text":"Message prio 1","color":"04"},"status_icon":"0D","status_text":"accept","ttl":"600","alert_info":{"msg_melody_low","override_silencing":"no","vibration":"no","ringtone_volume":"50","deletable":"yes","local_ignore":"yes","presentation_time":"30","body_starter":"Body starter","msg_icon":{"value":"28"},"body":{"msg_icon":{"value":"4E","color":"04"},"paragraph":{"text":"Prio 1 message: some longer test to check how long the message can be","blink":"no","underline":"yes","bold":"yes","align":"left","color":"00"},"paragraph":{"text":"This text is only shown in detailed view","blink":"no","underline":"no","bold":"no","align":"left"},"reply_options":{"option_id":"1","reply":{"text":"Msg1SK1"}},{option_id":"2","reply":{"text":"Msg1SK2"}},{option_id":"3","make_call":{"text":"Call","to":"1021"}}}}}}' -i as1
```

### MQTT example using Linux PC

Nx70 has no config/ssl directory so we used the **Einstein2** hostname as the Client certificate in the Nx70 CN=Einstein2

mosquitto version 2.0.11 (add "-i as1")

```
mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -p 8885 -h Einstein2 -u as1 -P 123456789012345678901234567890ab -t 'as1/msg/xxl/msgsrv/req/setMsg' -m '{"msgId":"1","payload":{"amsgId":"23642","sip_id":"1013","msg":{"server_msg_status":"new","prio":"1","title":{"text":"Message prio 1","color":"04"},"status_icon":"0D","status_text":"accept","ttl":"600","alert_info":{"msg_melody_low","override_silencing":"no","vibration":"no","ringtone_volume":"50","deletable":"yes","local_ignore":"yes","presentation_time":"30","body_starter":"Body starter","msg_icon":{"value":"28"},"body":{"msg_icon":{"value":"4E","color":"04"},"paragraph":{"text":"Prio 1 message: some longer test to check how long the message can be","blink":"no","underline":"yes","bold":"yes","align":"left","color":"00"},"paragraph":{"text":"This text is only shown in detailed view","blink":"no","underline":"no","bold":"no","align":"left"},"reply_options":{"option_id":"1","reply":{"text":"Msg1SK1"}},{option_id":"2","reply":{"text":"Msg1SK2"}},{option_id":"3","make_call":{"text":"Call","to":"1021"}}}}}}' -i as1
```

## MQTT example 2 using Linux PC

We have uploaded a new Client certificate:

Certificate:

Data:

```
Version: 3 (0x2)
Serial Number:
    f6:7a:af:8c:03:e7:3d:ed
Signature Algorithm: sha256WithRSAEncryption
Issuer: C=DE, ST=Germany, L=Bocholt, O=Gigaset Communications GmbH, OU=Certificate Authority, CN=Gigaset.net
Validity
    Not Before: Dec  6 11:19:04 2018 GMT
    Not After : Jun  6 11:19:04 2030 GMT
Subject: C=DE, ST=Germany, L=Bocholt, O=Gigaset Communications GmbH, CN=7C2F80F68993
Subject Public Key Info:
```

CN = 7C2F80F68993

Then we need to change the hosts file and add the device to the host file:

192.168.178.195 7C2F80F68993

The MQTT command will now use the MAC address instead of Einstein2

```
mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -p 8885 -h 7C2F80F68993 -u as1 -P
123456789012345678901234567890ab -t 'as1/msg/xxl/msgsrv/req/setMsg' -m '{"msgId":"1","payload":{"amsId":"23642","sip_id":"1014","msg":
{"server_msg_status":"new","prio":"1","title":{"text":"Message prio 1","color":"04"},"status_icon":"0D","status_text":"accept","ttl":"600","alert_info":
"msg_melody_low","override_silencing":"no","vibration":"no","ringtone_volume":"50","deletable":"yes","local_ignore":"yes","presentation_time":"30",
body_starter":"Body starter","msg_icon":{"value":"28"},"body":{"msg_icon":{"value":"4E","color":"04"},"paragraph":{"text":"Prio 1 message: some
longer test to check how long the message can be","blink":"no","underline":"yes","bold":"yes","align":"left","color":"00"},"paragraph":{"text":"This
text is only shown in detailed view","blink":"no","underline":"no","bold":"no","align":"left"},"reply_options":{"option_id":"1","reply":{"text":"
Msg1SK1"}},{"option_id":"2","reply":{"text":"Msg1SK2"}},{"option_id":"3","make_call":{"text":"Call","to":"1021"}}}}}'
```

## MQTT example 2 using Windows PC

Windows: mosquitto version 2.0.14

Nx70: Software 2.44.0

```
.\mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -p 8885 -h Einstein2 -u as1 -P 123456789012345678901234567890ab -t
'as1/msg/xxl/msgsrv/req/setMsg' -m '{"msgId":"1","payload":{"amsId":"23642","sip_id":"1013","msg":{"server_msg_status":"new","
prio":"1","title":{"text":"Message prio1","color":"04"},
"status_icon":"0D","status_text":"accept",
"ttl":"600",
"alert_info":"msg_melody_low",
"override_silencing":"no",
"vibration":"no",
"ringtone_volume":"50",
"presentation_time":"30",
"deletable":"yes",
"local_ignore":"yes",
"presentation_time":"30",
"body_starter":"Body starter",
"msg_icon":{"value":"28"},
"body":{"msg_icon":{"value":"4E","color":"04"},
{"paragraph":{"text":"Prio 1 message: some longer test to check how long the message can be","blink":"no","underline":"yes","bold":"
yes","align":"left","color":"00"},
{"paragraph":{"text":"This text is only shown in detailed view","blink":"no","underline":"no","bold":"no","align":"left"},
"reply_options":{"option_id":"1","reply":{"text":"Msg1SK1"}},{"option_id":"2","reply":{"text":"Msg1SK2"}},{"option_id":"3","
make_call":{"text":"Call","to":"1021"}}}}}' -i as1
```

Windows: mosquito version 2.0.15

```

./mosquitto_pub --cafile GigasetCA.pem --cert client.crt --key client.key -p 8885 -u Einstein2 -u as1 -P 123456789012345678901234567890ab -t 'as1/msg/xxl/msgsrv/req/setMsg' -m "{\\"msgId\\":\\"1\\",\\"payload\\":{\\"amsgId\\":\\"23642\\",\\"sip_id\\":\\"1013\\",\\"msg\\":{\\"server_msg_status\\":\\"new\\",\\"prio\\":\\"1\\",\\"title\\":{\\"text\\":\\"Message prio1\\",\\"color\\":\\"04\\"},\\"status_icon\\":\\"0D\\",\\"status_text\\":\\"accept\\",\\"ttl\\":\\"600\\",\\"alert_info\\":\\"msg_melody_low\\",\\"override_silencing\\":\\"no\\",\\"vibration\\":\\"no\\",\\"ringtone_volume\\":\\"50\\",\\"presentation_time\\":\\"30\\",\\"deletable\\":\\"yes\\",\\"local_ignore\\":\\"yes\\",\\"presentation_time\\":\\"30\\",\\"body_starter\\":\\"Body starter\\",\\"msg_icon\\":{\\"value\\":\\"28\\"},\\"body\\":{\\"msg_icon\\":{\\"value\\":\\"4E\\",\\"color\\":\\"04\\"}},{\\"paragraph\\":{\\"text\\":\\"Prio 1 message: some longer test to check how long the message can be\\",\\"blink\\":\\"no\\",\\"underline\\":\\"yes\\",\\"bold\\":\\"yes\\",\\"align\\":\\"left\\",\\"color\\":\\"00\\"}},{\\"paragraph\\":{\\"text\\":\\"This text is only shown in detailed view\\",\\"blink\\":\\"no\\",\\"underline\\":\\"no\\",\\"bold\\":\\"no\\",\\"align\\":\\"left\\"}},\\"reply_options\\":{\\"option_id\\":\\"1\\",\\"reply\\":{\\"text\\":\\"Msg1SK1\\"}},{\\"option_id\\":\\"2\\",\\"reply\\":{\\"text\\":\\"Msg1SK2\\"}},{\\"option_id\\":\\"3\\",\\"make_call\\":{\\"text\\":\\"Call\\",\\"to\\":\\"1021\\"}}}}}" -i as1

```