



Guidelines to apply for an SSUN Certificate

SSUN Workgroup

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1. Introduction

These “Guidelines to apply for an SSUN certificate” are intended for parties interested in SSUN which:

- Fulfill the requirements to participate in SSUN either as an SSUN Service Provider or as an SSUN User,
- Have (or are in the final steps of the process of building) a functioning SCION access (i.e., SCION connection and SCION EDGEs), and
- Need to obtain the necessary SSUN certificate.

The guidelines detail how to apply for an SSUN certificate, all the steps necessary to obtain the initial SSUN certificate and expand briefly on some relevant topics. The guideline is therefore structured as follows:

- **Procedure to apply for an SSUN certificate is the almost the same:**
 - a) For SSUN users
 - b) For SSUN service providers

Following the steps as detailed below, completing the fields as required, and providing the correct and complete documentation greatly facilitates the process of application for an SSUN certificate.



2. Procedure to apply for an SSUN certificate

To apply for an SSUN certificate, the applying organization, referred to as “the Applicant” in the rest of the document, must fulfil the requirements as defined in the SSUN Regulations Document, according to their role as an SSUN User and/or an SSUN Service Provider. The process to apply for an SSUN certificate differs slightly in the first step depending on whether the Applicant is an SSUN User or an SSUN Service Provider.

2.1 SSUN Users: Steps to apply for an SSUN certificate

The steps to be followed are divided in 2 categories:

- Steps to be fulfilled by the applicant
- Steps to be fulfilled by the Primary CA

Step 1: Apply for the SSUN Certificate

Applicant Action:

To apply for an SSUN certificate, the Applicant must send a request for receiving an SSUN certificate to: **info.ssun@axpo-systems.com**.

The email should be structured as follows:

- **Subject:** “Request for an SSUN certificate by [Organisation’s full name]”
- **Text:** “We, [Organisation’s full name], request an SSUN certificate as an SSUN user.”
- **Sender:** The email must be sent by an employee authorized by the company.

Primary CA Response:

The Primary CA will acknowledge the request and reply to the email with the “Application Form” necessary for the issuance of an SSUN certificate.



Step 2: Fill in required information

Applicant Action:

Complete empty fields in the Application Form

- Questions can be clarified via email: info.ssun@axpo-systems.com.

Send the Application Form with completed fields to info.ssun@axpo-systems.com in a direct reply to our previous email.

- Optionally include documents proving values entered in fields
- Sender: The email can be sent by the responsible person from the company applying.

Primary CA Response:

The Primary CA will validate the values entered in the form and initiate a discussion with the voting members about the candidate.

Once the applicant has been approved by the voting members the Primary CA will then return the contract ("SSUN CA Contract") by email and request that the potential user checks and signs it.

Applicant Action:

The applicant checks that all the information and fields in the contract are valid and correct.

Questions can be clarified via email to info.ssun@axpo-systems.com.

If everything is correct the applicant can now sign the contract electronically (e.g., by DocuSign). The signed contract should be sent back to the Primary CA.

Send the signed contract to info.ssun@axpo-systems.com in a direct reply to our previous email.

Sender: The email can be sent by the responsible person from the company applying.

Primary CA Response:

The Primary CA will validate the contract and if signed, countersign the contract and send it back to the applicant.

The Primary CA informs the applicant that the CSR process can now begin.



Step 3: Generate a CSR

Applicant Action:

- Use the data as noted in the SSUN CA Contract Part 4.
- The applicant will need to create the CSR. They can do it either on their own or, for support about generating a Certificate Signing Request (CSR), they can contact their supplier of their SCION appliance (their Managed Service Provider).
- Once the CSR is done, the CSR shall be sent to the Primary CA.

Primary CA Response:

The Primary CA will validate the values in the CSR and, if successful, create an initial SSUN certificate. Then the Primary CA will send the initial SSUN certificate (with a validity of 30 days) to the applicant.

Step 4: Install the initial SSUN certificate

Applicant Action:

Now the applicant should install the SSUN initial certificate. For help with installation, please contact your SCION appliance supplier.

After the installation and for initiating the renewal process for your SSUN certificate, please reach out to your SCION supplier.

Note: The Anapaya implementation of the certificate renewal creates a new key at each AS certificate renewal and safely disposes of the old key automatically.

Step 5: Finalise setup of SSUN connectivity

Applicant Action:

Complete the setup of your SCION connection and perform connectivity tests to ensure that you can reach the desired services.

- For support on SSUN connectivity setup, contact the supplier of your SCION EDGE.



Step 6: Contact the Primary CA

Applicant Action:

Once all the steps are done, contact the Primary CA to inform that all steps have been fulfilled.

Primary CA:

The primary CA will check if a new certificate was issued and confirm that the CA issuing process works as intended.

2.2 SSUN Service Providers: Steps to apply for an SSUN certificate

The steps to be followed are divided in 2 categories:

- Steps to be fulfilled by the applicant
- Steps to be fulfilled by the Primary CA

One important prerequisite is that the applicant has been approved by the SSUN voting members as a SSUN service provider and has already signed and returned the "Agreement regarding SSUN Certificate" document.

Step 1: Apply for the SSUN Certificate

Applicant Action:

To apply for an SSUN certificate, send a request for receiving an SSUN certificate to:
info.ssun@axpo-systems.com.

The email should be structured as follows:

- **Subject:** "Request for an SSUN certificate by [Organisation's full name]"
- **Text:** "We, [Organisation's full name], request an SSUN certificate as an SSUN Service Provider"
- **Sender:** The email must be sent by the responsible person from the applying company.

Primary CA Response:

The Primary CA will acknowledge the request and reply to the email with the "Application Form" necessary for the issuance of an SSUN certificate.



Step 2: Fill in required information

Applicant Action:

Complete empty fields in the Application Form

- Questions can be clarified via email: info.ssun@axpo-systems.com.

Send the Application Form with completed fields to info.ssun@axpo-systems.com in a direct reply to our previous email.

- Optionally include documents proving values entered in fields
- Sender: The email can be sent by the responsible person from the company applying.

Primary CA Response:

The Primary CA will validate the values entered in the form and initiate a discussion with the voting members about the candidate.

Once the applicant has been approved by the voting members the Primary CA will then return the contract ("SSUN CA Contract") by email and request that the potential user checks and signs it.

Applicant Action:

The applicant checks that all the information and fields in the contract are valid and correct.

- Questions can be clarified via email to info.ssun@axpo-systems.com.

If everything is correct the applicant can now sign the contract electronically (e.g., by DocuSign). The signed contract should be sent back to the Primary CA.

Send the signed contract to info.ssun@axpo-systems.com in a direct reply to our previous email.

- Sender: The email can be sent by the responsible person from the company applying.

Primary CA Response:

The Primary CA will validate the contract and if signed, countersign the contract and send it back to the applicant.

The Primary CA informs the applicant that the CSR process can now begin.



Step 3: Generate a CSR

Applicant Action:

- Use the data as noted in the SSUN CA Contract Part 4.
- The applicant will need to create the CSR. They can do it either on their own or, for support about generating a Certificate Signing Request (CSR), they can contact their supplier of their SCION appliance (their Managed Service Provider).
- Once the CSR is done, the CSR shall be sent to the Primary CA.

Primary CA Response:

The Primary CA will validate the values in the CSR and, if successful, create an initial SSUN certificate. Then the Primary CA will send the initial SSUN certificate (with a validity of 30 days) to the applicant.

Step 4: Install the initial SSUN certificate

Applicant Action:

Now the applicant should install the SSUN initial certificate. For help with installation, please contact your SCION appliance supplier.

After the installation and for initiating the renewal process for your SSUN certificate, please reach out to your SCION supplier.

Note: The Anapaya implementation of the certificate renewal creates a new key at each AS certificate renewal and safely disposes of the old key automatically.

Step 5: Finalise setup of SSUN connectivity

Applicant Action:

Complete the setup of your SCION connection and perform connectivity tests to ensure that you can reach the desired services.

- For support on SSUN connectivity setup, contact the supplier of your SCION EDGE.



Step 6: Contact the Primary CA

Applicant Action:

Once all the steps are done, contact the Primary CA to inform that all steps have been fulfilled.

Primary CA:

The primary CA will check if a new certificate was issued and confirm that the CA issuing process works as intended.

