



**AWS Connector for SAP**

**ABSTRACT**

| Installation Guide

## AWS CONNECTOR FOR SAP

### Table of Contents

<b><u>PREREQUISITES</u></b> .....	<b>3</b>
<b><u>ACTIONS TO DO IN AWS</u></b> .....	<b>3</b>
CLOUDFORMATION. ....	3
<b><u>ACTIONS TO DO IN SAP</u></b> .....	<b>7</b>
DOWNLOAD ADD-ON.....	7
LOGON TO CLIENT 000. ....	7
SAINT.....	7
CHECK HTTPS SERVICE. ....	22
<b>STRUST</b> .....	<b>22</b>
FIRST RUN OF /LNKAWS/AWS_STRUST.....	22
PROGRAMMING JOB /LNKAWS/AWS_STRUST. ....	29
<b>SICF, SERVICE AWSCONNECTOR_S3</b> .....	<b>34</b>
AUTHORIZATIONS DETAILS.....	35
<b><u>ACTIONS TO DO IN AWS CONNECTOR MANAGER</u></b> .....	<b>40</b>
CREDENTIALS.....	42
CREATE BUCKET. ....	42
<b>SSF CONFIGURATION</b> .....	<b>45</b>
CONFIGURATION OF YOUR OWN SSL CERTIFICATE .....	46
<b>MONITORING SETTINGS (SCMSMO)</b> .....	<b>51</b>
<b><u>CONCLUSION</u></b> .....	<b>55</b>

### REVISIONES

Versión	Autor	Fecha
v1.0	Linke – Gerard Lagalina	01/05/2019

## Prerequisites

To run AWS Connector in your SAP system, following prerequisites should be met:

- SAP Netweaver 7.0 or higher (SAP\_BASIS 700 0028 SAPKB70028)
- SAP Kernel release 720 or higher
- SAP Cryptolib properly installed
- System configured properly to run ABAP Webdynpros (check OSS note 1088717 and mind the host file)
- ICM Services HTTP and HTTPS configured and active
- Connectivity to the Internet (either directly or through a Proxy properly configured).
- To install the add-on, a user with enough privileges (please read Authorizations).

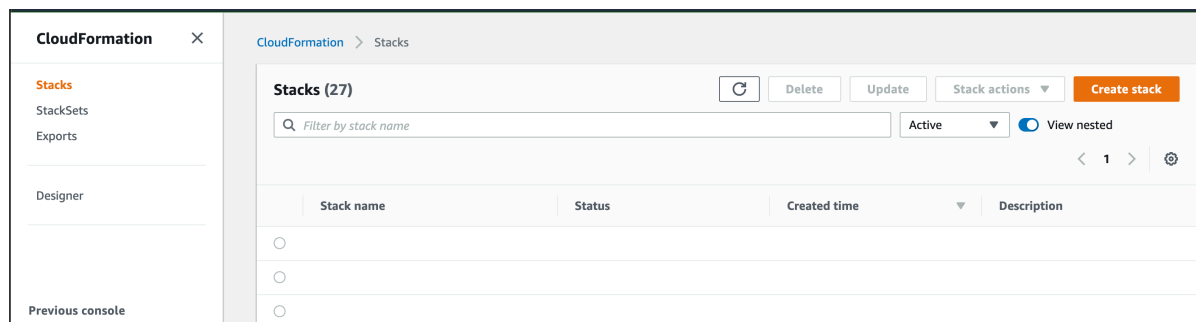
## Actions to do in AWS

### CloudFormation.

First step is download the CloudFormation Template from this link:

<https://s3-eu-west-1.amazonaws.com/docs.linkeit.com/repo/awsconnector/AWSConnectorCloudformation.yaml>

Go to the CloudFormation services on AWS console and press the Create stack Button.



In prepare template select the option “Template is ready”.  
in specify template menu, select the “upload a template file” and chose the yaml file downloaded previously.

The screenshot shows the 'Create stack' wizard in the AWS Management Console, specifically the 'Specify template' step. On the left, a navigation pane shows four steps: Step 1 (Specify template), Step 2 (Specify stack details), Step 3 (Configure stack options), and Step 4 (Review). The main content area is titled 'Create stack' and contains the following sections:

- Prerequisite - Prepare template:** A section with the heading 'Prepare template' and a sub-heading 'Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.' It contains three radio buttons: 'Template is ready' (selected), 'Use a sample template', and 'Create template in Designer'.
- Specify template:** A section with the heading 'Specify template' and a sub-heading 'A template is a JSON or YAML file that describes your stack's resources and properties.' It contains a 'Template source' section with two radio buttons: 'Amazon S3 URL' and 'Upload a template file' (selected). Below this is an 'Upload a template file' section with a 'Choose file' button and the filename 'AWSConnectorCloudFormation.yaml'. A note below states 'JSON or YAML formatted file'. At the bottom, there is an 'S3 URL' field with the value 'https://s3-eu-west-1.amazonaws.com/cf-templates-9wzpj0j5mh7-eu-west-1/2019288M0C-AWSConnectorCloudFormation.yaml' and a 'View in Designer' button.

At the bottom right of the main content area, there are 'Cancel' and 'Next' buttons.

In specify stack details menu, insert name “AWSConnectorCloudFormation” in field stack name.

The screenshot shows the 'Specify stack details' step of the 'Create stack' wizard. The navigation pane on the left shows Step 1 (Specify template) and Step 2 (Specify stack details) as the current step. The main content area is titled 'Specify stack details' and contains a 'Stack name' section with a text input field containing the value 'AWSConnectorCloudFormation'. Below the input field, a note states 'Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-)'.

In parameters menu, insert SAP SID value (only lowercase and numbers).

The screenshot shows the 'Parameters' step of the 'Create stack' wizard. The navigation pane on the left shows Step 4 (Review) as the current step. The main content area is titled 'Parameters' and contains the following sections:

- Policy Details:** A section with the heading 'AWSConnector Policy Name' and a sub-heading 'Instance Policy for AWSConnector'. It contains a text input field with the value 'AWSConnector\_policy'.
- User Details:** A section with the heading 'AWS Connector User Name' and a sub-heading 'If you don't want to create AWS Connector user, please, enter an existing IAM User.'. It contains a text input field with the value 'AWSConnector'.
- Do you want to create the AWS Connector User?:** A section with a sub-heading 'Create AWS Connector default User.'. It contains a dropdown menu with the value 'true' selected.
- Server that will use AWS Connector:** A section with the heading 'SAP SID' and a sub-heading '(Only lowercase and numbers)'. It contains a text input field.
- SAP SID:** A section with the heading 'SAP SID' and a sub-heading '(Only lowercase and numbers)'. It contains a text input field.
- SAP SID:** A section with the heading 'SAP SID' and a sub-heading '(Only lowercase and numbers)'. It contains a text input field.



Add one tag with these values:

Key = Product

Value = AWSConnector

CloudFormation > Stacks > Create stack

Step 1  
Specify template

Step 2  
Specify stack details

Step 3  
**Configure stack options**

Step 4  
Review

### Configure stack options

#### Tags

You can specify tags (key-value pairs) to apply to resources in your stack. You can add up to 50 unique tags for each stack. [Learn more.](#)

Product	AWSConnector	Remove
Key	Value	Remove

#### Permissions

Choose an IAM role to explicitly define how CloudFormation can create, modify, or delete resources in the stack. If you don't choose a role, CloudFormation uses permissions based on your user credentials. [Learn more.](#)

**IAM role - optional**  
Choose the IAM role for CloudFormation to use for all operations performed on the stack.

IAM role name	Sample-role-name	Remove
---------------	------------------	--------

In Review AWSConnectorCloudFormation step, check the option “I acknowledge that AWS CloudFormation might create IAM resources with custom names.”.

Press “create stack” button.

**Stack creation options**

Rollback on failure  
Enabled

Timeout  
-

Termination protection  
Disabled

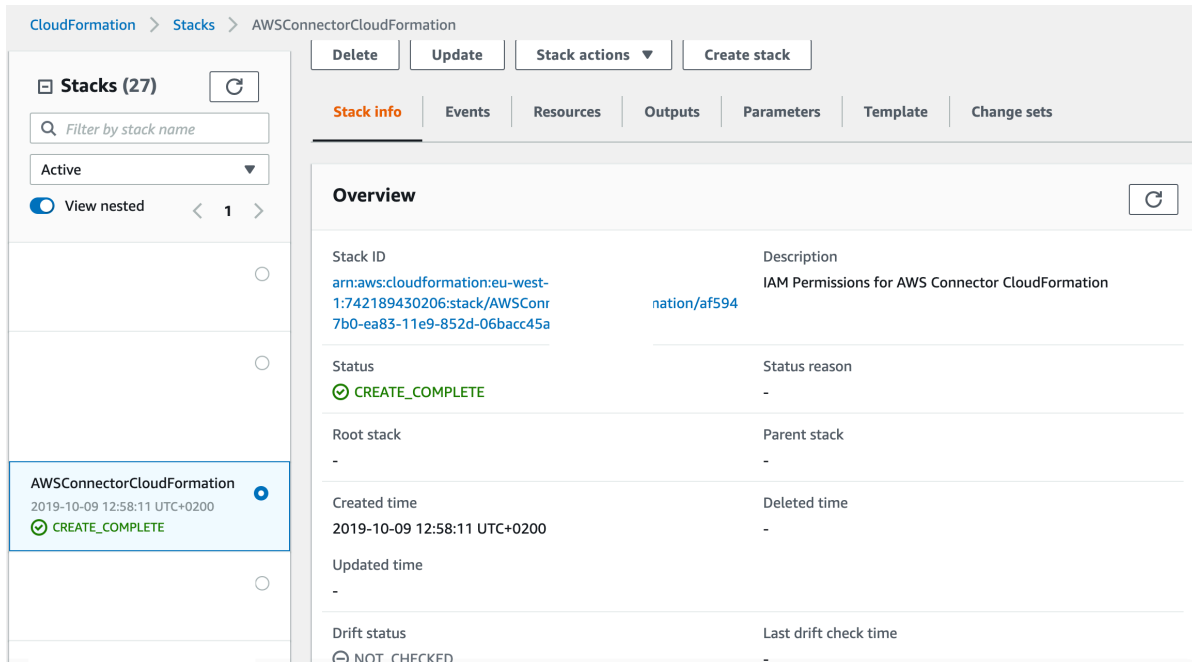
▶ Quick-create link

**Capabilities**

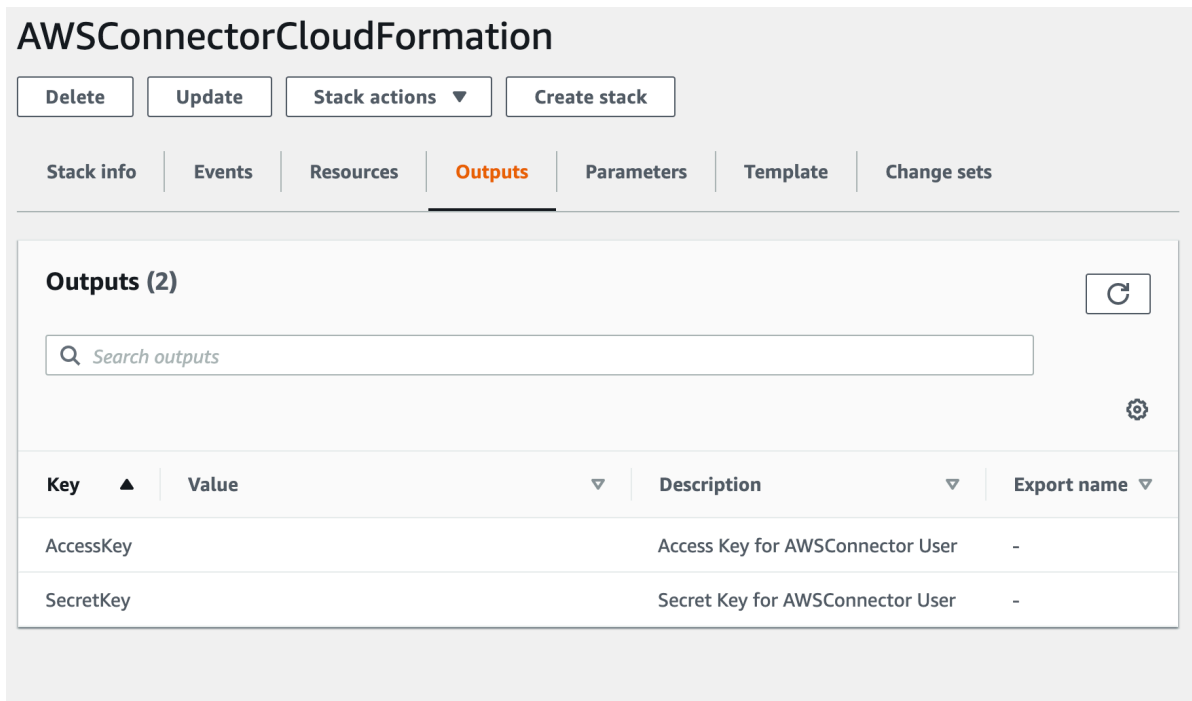
**ⓘ The following resource(s) require capabilities: [AWS::IAM::AccessKey, AWS::IAM::User]**  
This template contains Identity and Access Management (IAM) resources. Check that you want to create each of these resources and that they have the minimum required permissions. In addition, they have custom names. Check that the custom names are unique within your AWS account. [Learn more.](#)

I acknowledge that AWS CloudFormation might create IAM resources with custom names.

When the stack is created successfully a screen similar to this will be displayed.



In Outputs menu, you can see the AccessKey and the SecretKey. These keys should be used later in credentials tab on AWS Connector management transaction.



## Actions to do in SAP.

### Download Add-on.

Download Add-on from this link: [https://s3-eu-west-1.amazonaws.com/docs.linkeit.com/repo/awsconnector/D040020760607\\_0000016.PAT](https://s3-eu-west-1.amazonaws.com/docs.linkeit.com/repo/awsconnector/D040020760607_0000016.PAT)

### Logon to client 000.

Installation of AWS Connector must be done in client 000.

### SAINT.

Go to transaction **SAINT**.

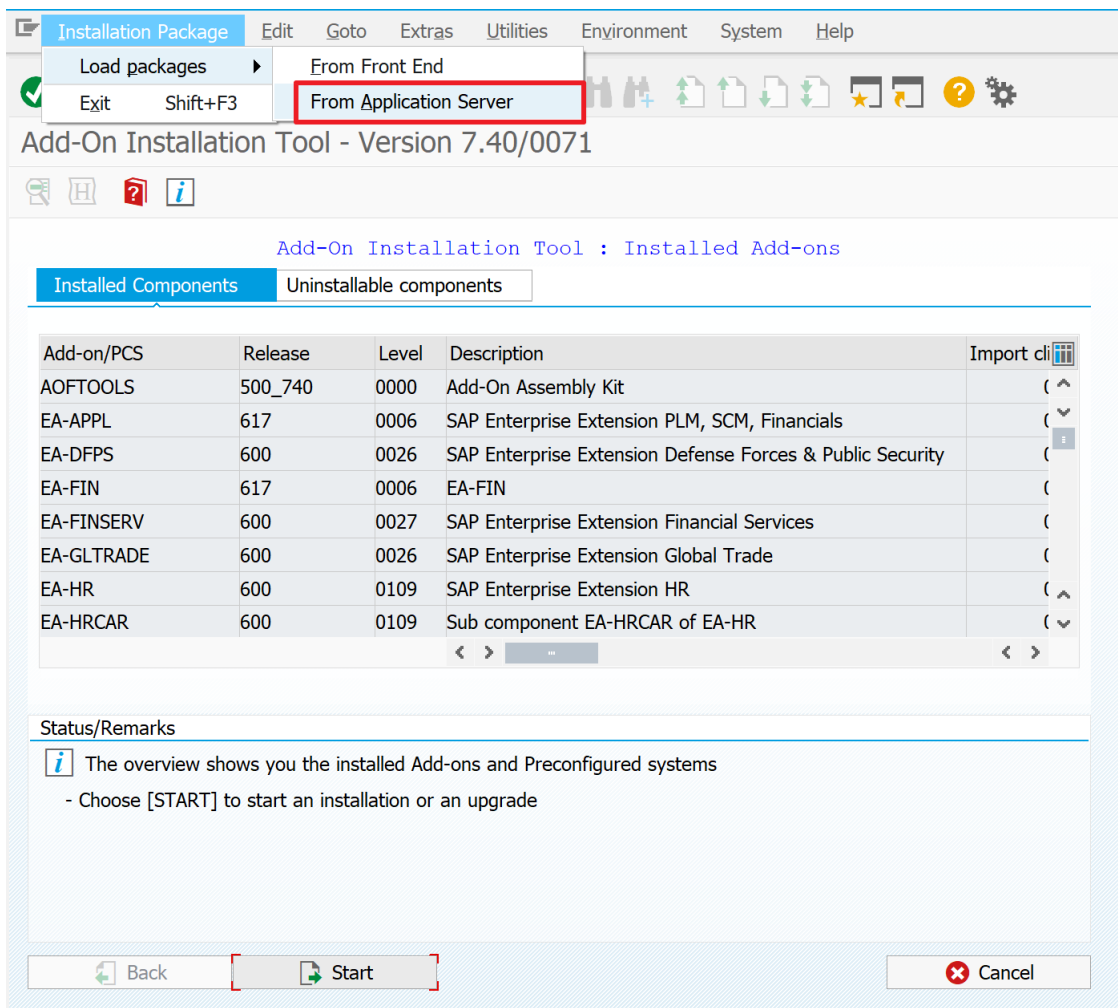
Add-On Installation Tool - Version 7.40/0071

The screenshot shows the 'Add-On Installation Tool' window. The title bar reads 'Add-On Installation Tool - Version 7.40/0071'. Below the title bar is a menu bar with icons for help, home, and information. The main area is titled 'Add-On Installation Tool : Installed Add-ons'. It features two tabs: 'Installed Components' (selected) and 'Uninstallable components'. Below the tabs is a table with the following data:

Add-on/PCS	Release	Level	Description	Import cli
AOFTOOLS	500_740	0000	Add-On Assembly Kit	( ^
EA-APPL	617	0006	SAP Enterprise Extension PLM, SCM, Financials	( v
EA-DFPS	600	0026	SAP Enterprise Extension Defense Forces & Public Security	(
EA-FIN	617	0006	EA-FIN	(
EA-FINSERV	600	0027	SAP Enterprise Extension Financial Services	(
EA-GLTRADE	600	0026	SAP Enterprise Extension Global Trade	(
EA-HR	600	0109	SAP Enterprise Extension HR	( ^
EA-HRCAR	600	0109	Sub component EA-HRCAR of EA-HR	( v

Below the table is a 'Status/Remarks' section with an information icon and the text: 'The overview shows you the installed Add-ons and Preconfigured systems - Choose [START] to start an installation or an upgrade'. At the bottom of the window are three buttons: 'Back', 'Start', and 'Cancel'.

Installation Package menu -> Load package -> From Application Server.



In the pop up that appears press the yes button.

Add-On Installation Tool - Version 7.40/0071

Add-On Installation Tool : Installed Add-ons

Installed Components | Uninstallable components

Add-on/PCS	Release	Level	Description	Import cli
AOFTOOLS	500_740	0000	Add-On Assembly Kit	( ^
EA-APPL	617			
EA-DFPS	600			
EA-FIN	617			
EA-FINSERV	600			
EA-GLTRADE	600			
EA-HR	600			
EA-HRCAR	600			

SAINT: Confirm upload

The EPS inbox is located under the following path: /usr/sap/trans/EPS/in

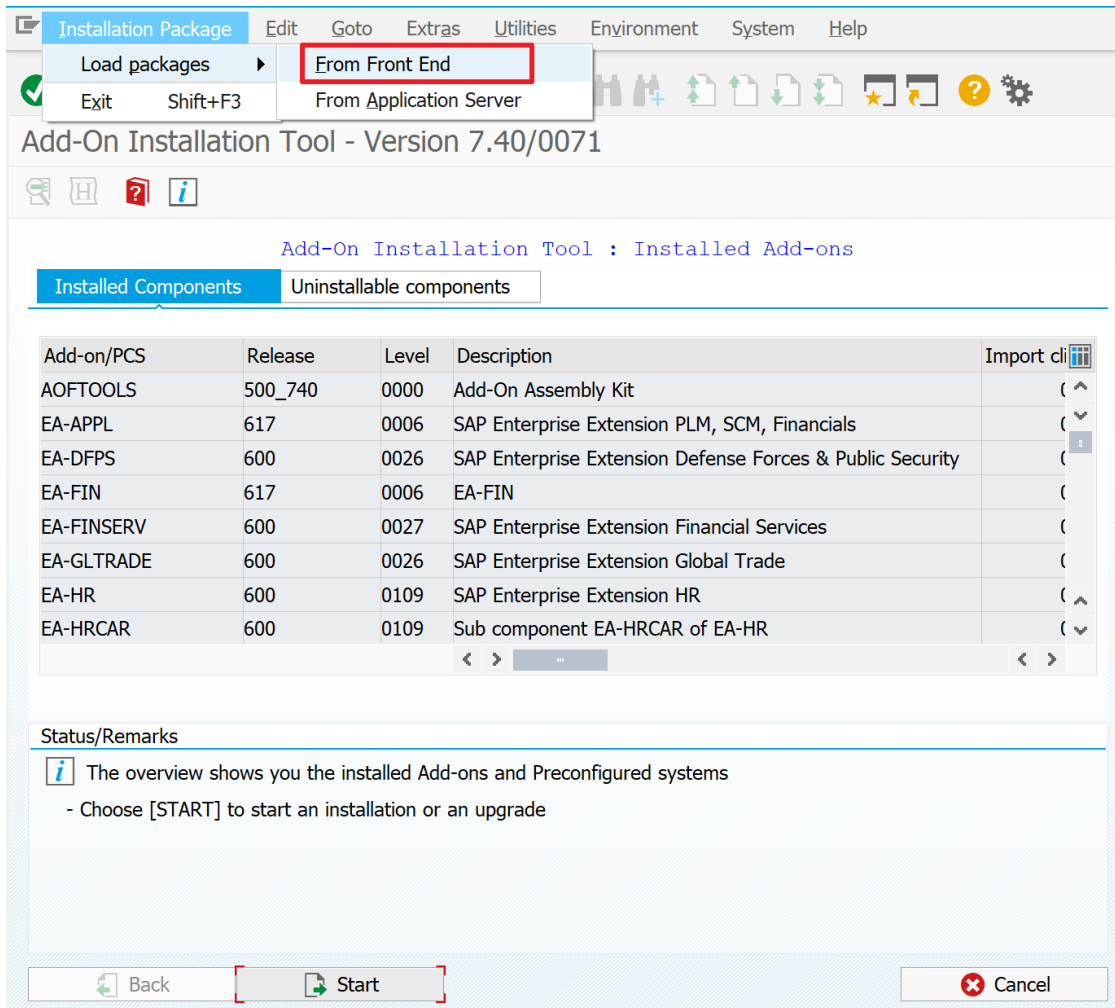
Do you want to upload OCS Packages from the EPS inbox?

Yes No

The overview shows you the installed Add-ons and Preconfigured systems  
- Choose [START] to start an installation or an upgrade

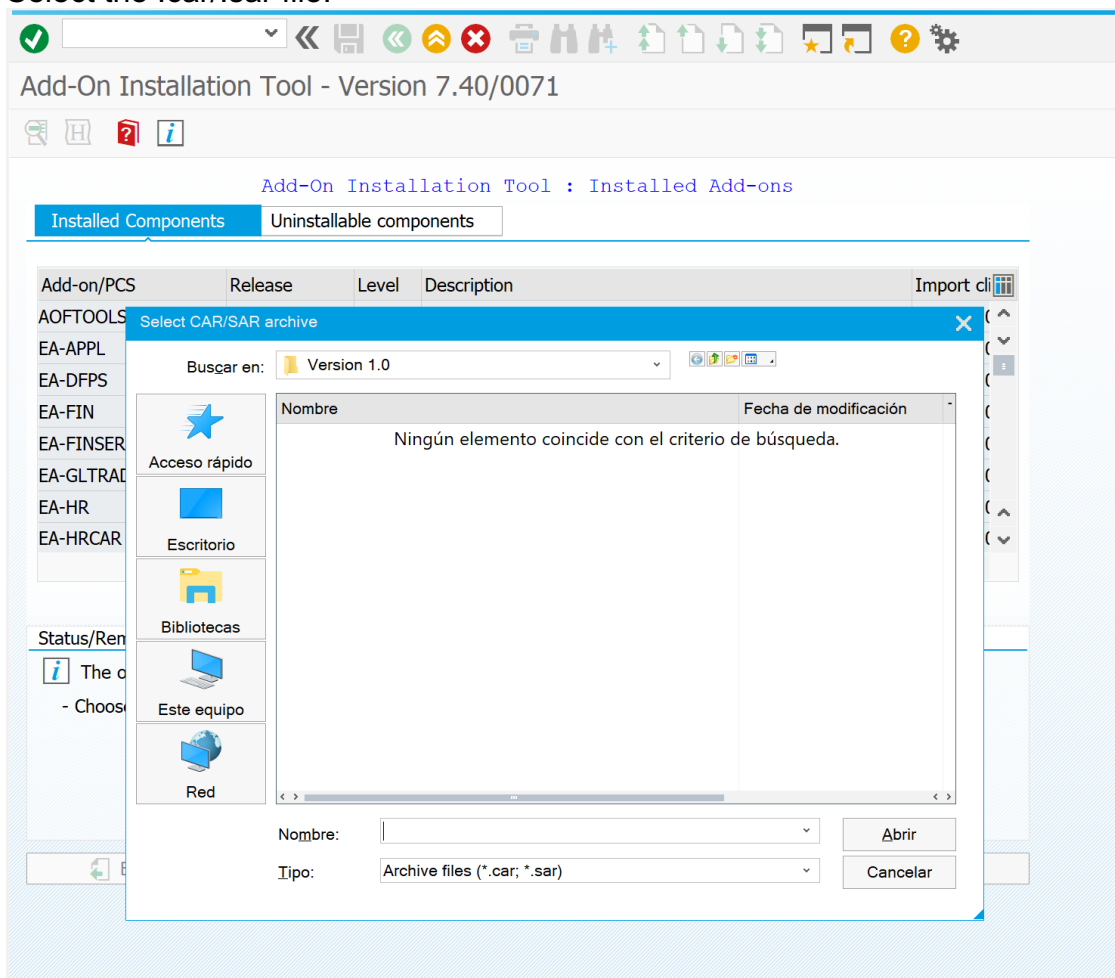
Back Start Cancel

Or also the add-on can be install from Frontend. Installation Package menu -> Load package -> From Front end.

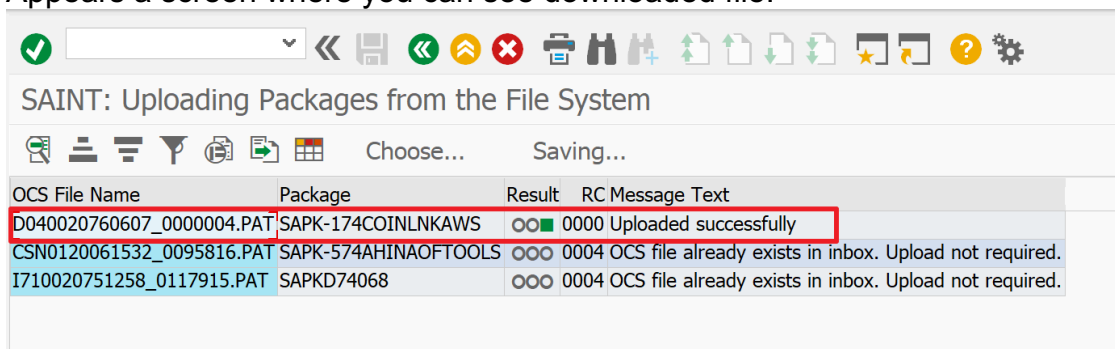


It

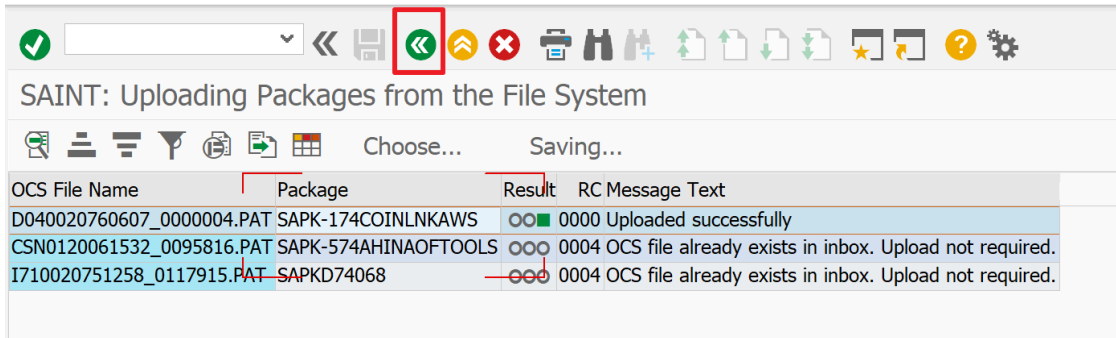
Select the .car/.sar file.



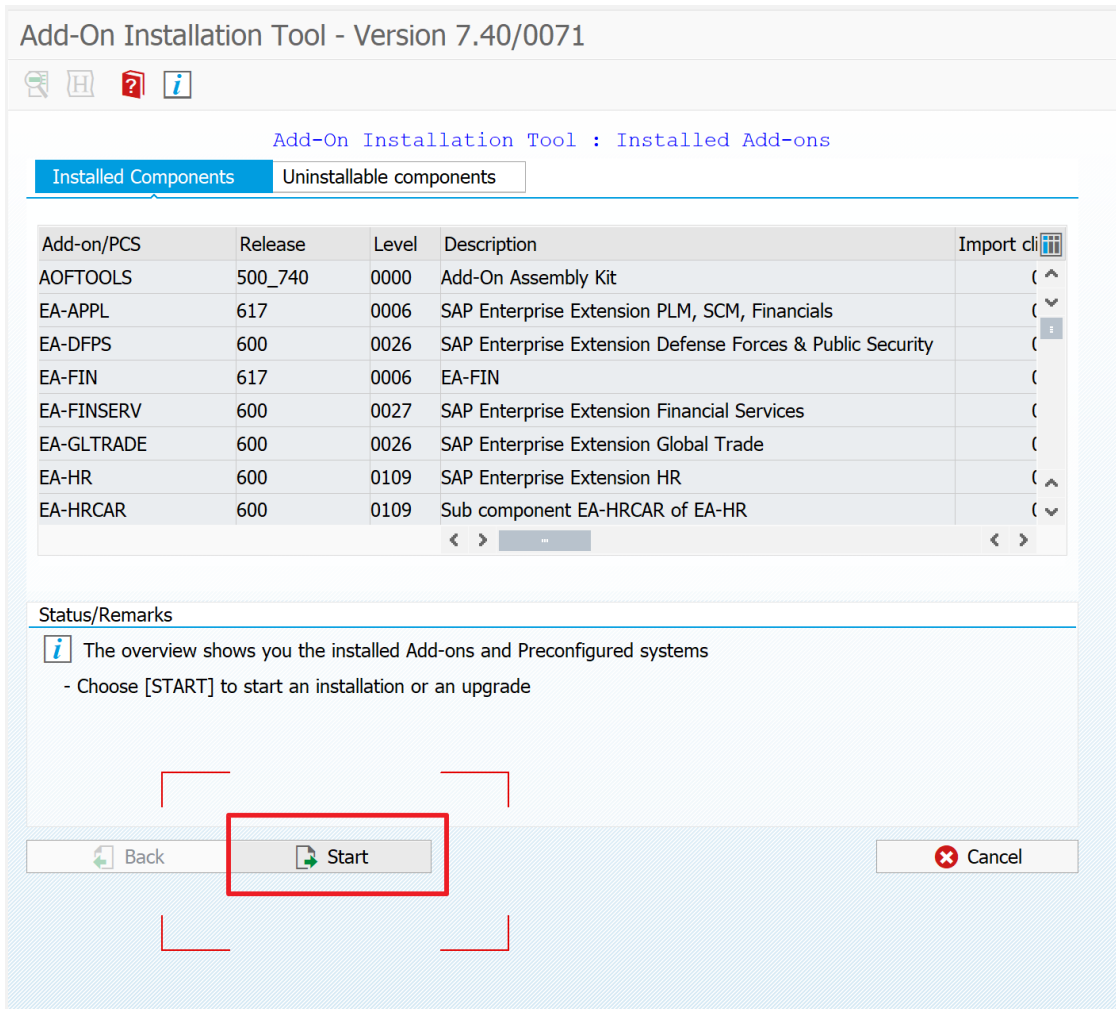
Appears a screen where you can see downloaded file.



Press the back button.



Press the start button.





If the add-on is not displayed on screen, you must press the load button.

Add-On Installation Tool - Version 7.40/0071

The screenshot shows the 'Add-On Installation Tool: PCS package selection' window. At the top, there are navigation icons and the title 'Add-On Installation Tool: PCS package selection'. Below this is a table titled 'Installable PCS packages in the System'. The table has four columns: 'PCS', 'Release', 'Description', and 'Package type'. The 'Description' column contains the text 'No fitting Installation Packages are available'. Below the table is a 'Status/Remarks' section with an information icon and the text 'Select a package from the installable PCS packages'. It lists three instructions: '- Choose [CONTINUE] to start the calculation of the installation queue', '- Choose [BACK] to go back to the overview of the installed Add-ons', and '- Choose [LOAD] to load additional packages from the application server'. At the bottom, there are four buttons: 'Back', 'Continue', 'Load', and 'Cancel'. The 'Load' button is highlighted with a red box. The text 'Screen 1 / 4' is visible to the right of the buttons.

PCS	Release	Description	Package type
		No fitting Installation Packages are available	

Status/Remarks

*i* Select a package from the installable PCS packages

- Choose [CONTINUE] to start the calculation of the installation queue
- Choose [BACK] to go back to the overview of the installed Add-ons
- Choose [LOAD] to load additional packages from the application server

Back Continue **Load** Cancel

Screen 1 / 4

Press the yes button.

Add-On Installation Tool - Version 7.40/0071

Add-On Installation Tool: PCS package selection

Installable PCS packages in the System

PCS	Release	Description	Package type
		No fitting Installation Packages are available	

**SAINT: Confirm upload**

The EPS inbox is located under the following path: /usr/sap/trans/EPS/in

Do you want to upload OCS Packages from the EPS inbox?

Status/Remarks

- Select a package from the installable PCS packages
- Choose [CONTINUE] to start the calculation of the installation queue
- Choose [BACK] to go back to the overview of the installed Add-ons
- Choose [LOAD] to load additional packages from the application server

Back Continue Load Screen 1 / 4 Cancel

Once loaded the add-on, press the continue button

Add-On Installation Tool - Version 7.40/0071

Add-on Installation Tool: Add-on selection

Stack XML file

Installable Add-on packages for your system

Add-On	Release	Description	Package type
LNKAWS	100_740	LNKAWS 100_740: Add-On Installation	Installation

Status/Remarks

- Select one or several packages from the installable Add-on packages
- Choose [CONTINUE] to start the calculation of the installation queue
- Choose [BACK] to go back to the overview of the installed Add-ons
- Choose [LOAD] to load additional packages from the application server

Back Continue Load Screen 1 / 6 Cancel

Press the continue button.

Add-On Installation Tool - Version 7.40/0071

Installation of several Add-ons : Support Package selection

Installation queue    **Support Package selection**

Software Comp.	Target Support Package	Level	Calculated Package	Level
LNKAWS	<input type="text"/>	<input type="text"/>	SAPK-174COINLNKAWS	0000
SAP_BASIS	<input type="text"/>	<input type="text"/>		
SAP_ABA	<input type="text"/>	<input type="text"/>		
SAP_GWFND	<input type="text"/>	<input type="text"/>		
SAP_UI	<input type="text"/>	<input type="text"/>		
PI_BASIS	<input type="text"/>	<input type="text"/>		
ST-PI	<input type="text"/>	<input type="text"/>		
SAP_BW	<input type="text"/>	<input type="text"/>		

Status/Remarks

You can extend the installation queue with further Support Packages

- Choose the required target Support Package for each component
- Choose [CONTINUE] to start the calculation of the extended installation queue
- Choose [BACK] to go back to the Add-on selection
- The tab page "Installation queue" displays the preliminary installation queue

   Screen 2 / 6

Press the continue button.

Add-On Installation Tool - Version 7.40/0071

Installation of several Add-ons : Calculated queue

Installation queue | Software Components

OCS Package	Package type	Software Component	Release	Short description
SAPK-174COINLNKAWS	Installation	LNKAWS	100_740	LNKAWS 100_740

Status/Remarks

*i* The displayed packages must be imported when installing the Add-on

- You have not selected any further Support Packages
- Choose [CONTINUE] to add Modification Adjustment Transports to the queue
- Choose [BACK] to go back to the Support Package selection

Back | **Continue** | Logs | Screen 3 / 6 | Cancel

In the displayed pop up, press yes button.

Add-On Installation Tool - Version 7.40/0071

Installation of several Add-ons : Calculated queue

Installation queue | Software Components

OCS Package	Package type	Software Component	Release	Short description
SAPK-174COINLNKAWS	In	Add Modification Adjustment Transports to the Queue		

Do you want to add Modification Adjustment Transports to the queue?

Yes No Info

Status/Remarks

- The displayed packages must be imported when installing the Add-on
- You have not selected any further Support Packages
- Choose [CONTINUE] to add Modification Adjustment Transports to the queue
- Choose [BACK] to go back to the Support Package selection

Back Continue Logs Screen 3 / 6 Cancel

Press continue button.

Add-On Installation Tool - Version 7.40/0071

Installation of several Add-ons: Add adjustment transports

Installation queue | Selection of adjustment trnsp.

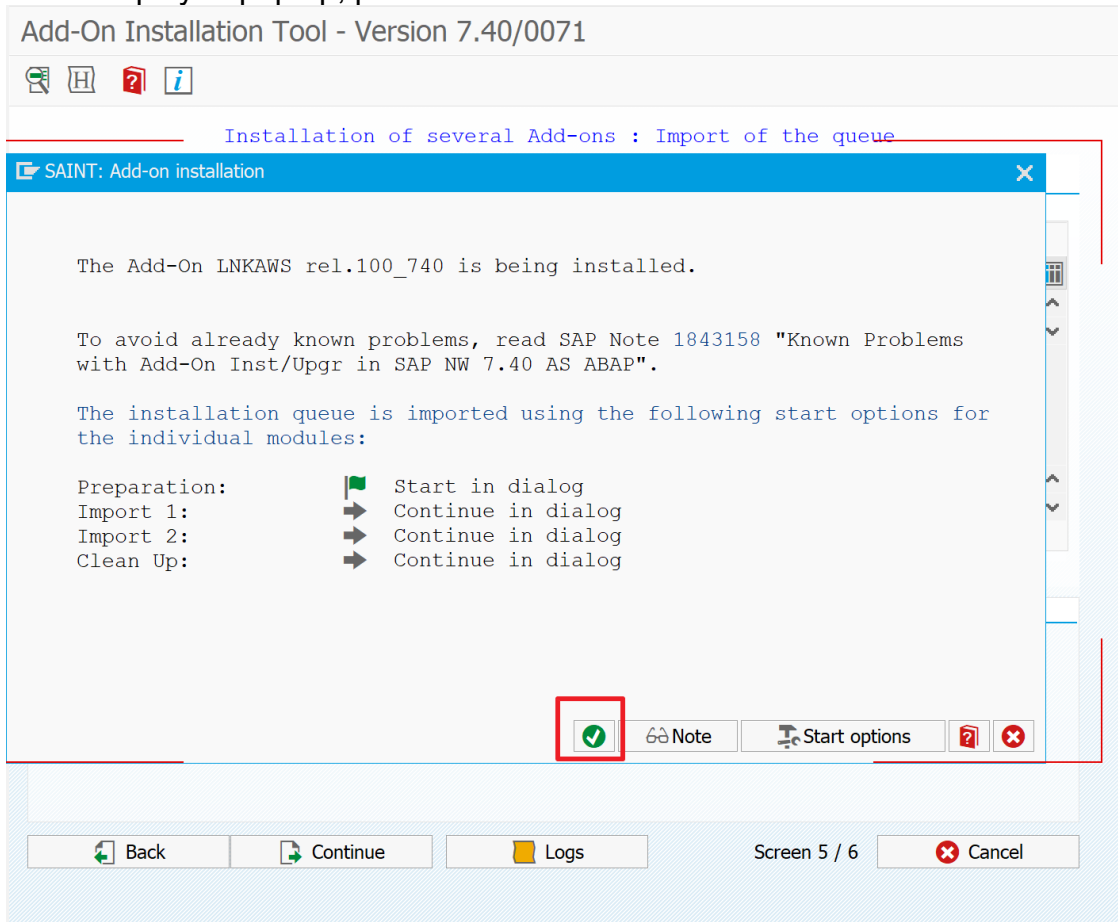
Adjustment transport	Check Result	Short Description
----------------------	--------------	-------------------

Status/Remarks

- There are no Modification Adjustment Transports available
- Choose [SEARCH] to search for Modification Adjustment Transports
- Choose [CONTINUE] to import the complete queue
- Choose [BACK] to go back to the queue calculation

Back Continue Search Screen 4 / 6 Cancel

In the displayed pop up, press the Ok button.



Press finish button.

Add-On Installation Tool - Version 7.40/0071

Installation of several Add-ons : Imported queue

Installation queue | Software Components

OCS Package	Package type	Software Component	Release	Short description
SAPK-174COINLNKAWS	Installation	LNKAWS	100_740	LNKAWS 100_740

Status/Remarks

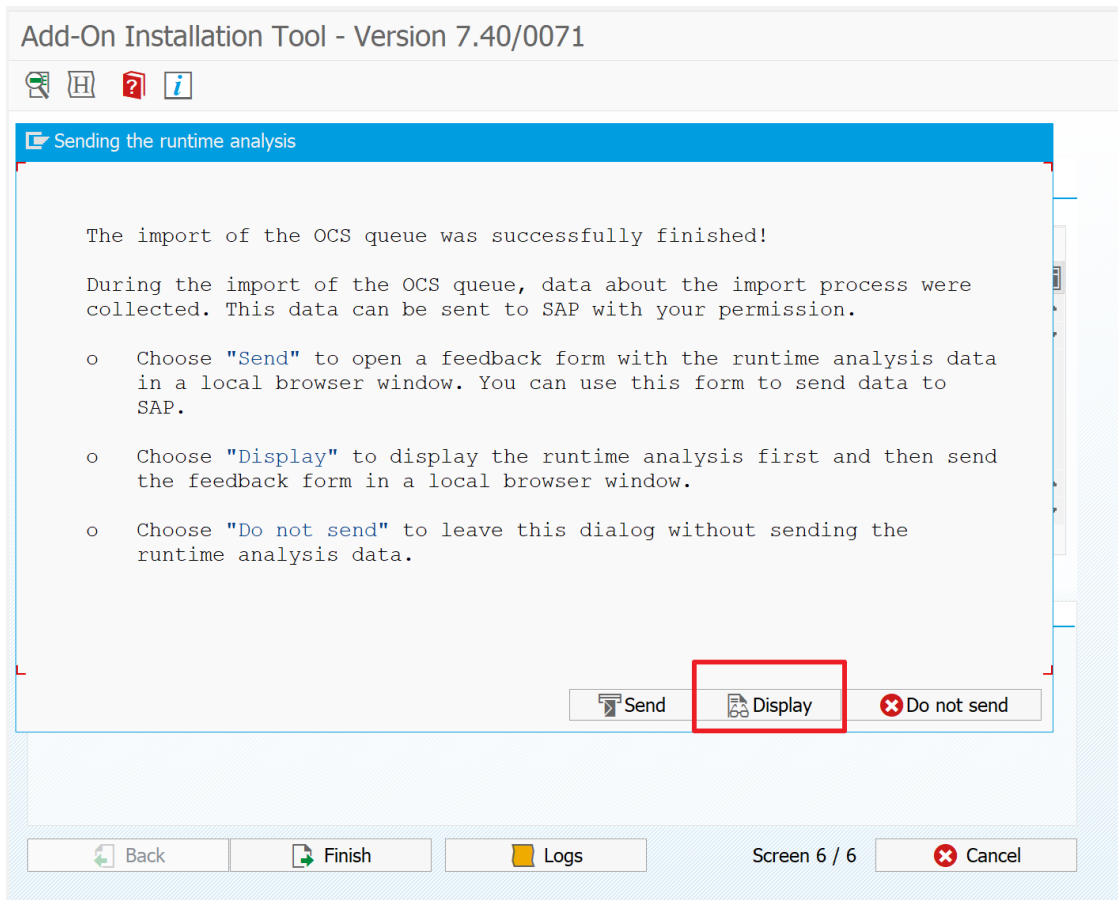
*i* The Add-on was successfully imported with the displayed queue

- Choose [LOGS] to display the import logs
- Choose [FINISH] to complete the installation

Back | **Finish** | Logs | Screen 6 / 6 | Cancel

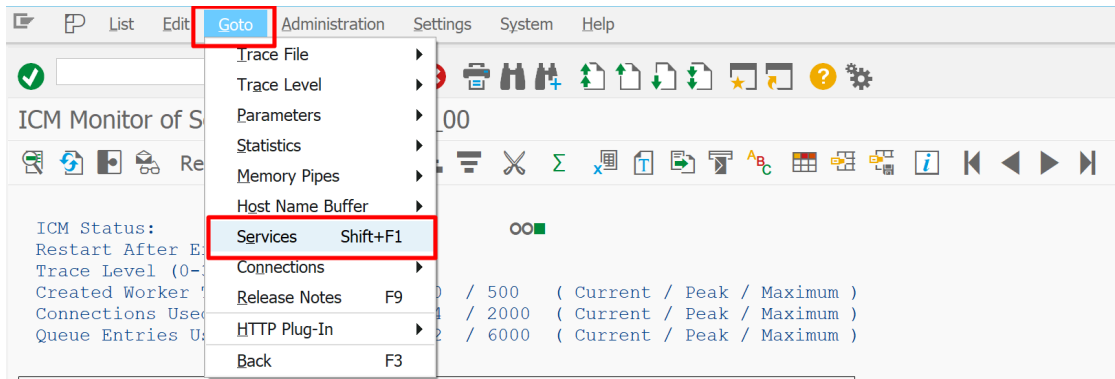


In the sending the runtime analysis pop-up, you can press the display button or do not send button.



### Check HTTPS service.

Ensure HTTP and HTTPS services are existing and active.  
Go to transaction **SMICM**.



The screenshot shows the 'ICM Monitor - Service Display' window. It displays a table of active services. The 'HTTP' and 'HTTPS' rows are highlighted with red boxes. The 'HTTPS' row has a green checkmark in the 'Actv' column, also highlighted with a red box.

No.	Protocol	Service Name/Port	Host Name	Keep Alive	Proc.Timeo	Actv	External Bind	ACL File
1	HTTP	8001	sapdev01.dev.linkeit	600	600			
2	HTTPS	8443	sapdev01.dev.linkeit	600	600	✓		

## STRUST

### First run of /LNKAWS/AWS\_STRUST.

The system must be configured to add to STRUST in SSL client the AWS certificates.

This is automatically done with transaction /LNKAWS/AWS\_STRUST.

A preparation must be done priori running /LNKAWS/AWS\_STRUST. Run transaction SM69.

If the operating system is Linux:

Create a new command:

Type	Command name	Op.system	External program	Parameters of external program	Additional Trace	Created By	Date	Time
SAP	ARCAUTO	ANYOS	arcauto		X	SAP	07.08.1995	11:12:1
SAP	BACKUP_HISTORY	ANYOS	sddb6his		X	SAP	08.11.1996	15:12:5
SAP	BRARCHIVE	ANYOS	brarchive		X	SAP	02.08.1995	18:23:5
SAP	BRBACKUP	ANYOS	brbackup		X	SAP	02.08.1995	18:24:0
SAP	BRCCONNECT	ANYOS	brconnect		X	SAP	25.07.2000	19:07:5

## OpenSSL.

Create an External Command

**Command**

Command Name	ZOPENSSL
Operating System	Linux
Type	

**Create and Last Change**

Created By	
	00:00:00
Last Changed By	
	00:00:00

**Definition**

Operating System Command  
openssl


Parameters for Operating System Command

Additional Parameters Allowed  
 Trace

Check Module

## Wget.

### Create an External Command



<b>Command</b>	
Command Name	ZWGET
Operating System	Linux
Type	

<b>Create and Last Change</b>	
Created By	
	00:00:00
Last Changed By	
	00:00:00

<b>Definition</b>	
Operating System Command	wget
Parameters for Operating System Command	
<input checked="" type="checkbox"/> Additional Parameters Allowed	
<input type="checkbox"/> Trace	
Check Module	

If the operating system is Windows:

1.- Configure path in the /LNKAWS/CONST table (SM30): The Low field informs the path where you want to store the openSSL and Wget executables. The data to be entered in the table are the following:

Data Browser: Table /LNKAWS/CONST Select Entries 3

MANDT	PROGRAM_NAME	FIELD_NAME	COUNTER	SIGN	OPTIONS	LOW	HIGH	COMMENTS
800	/LNKAWS/AWS_STRUST	PATH	1	I	EQ			
800	/LNKAWS/OPENSSL_FILE	PATH	1	I	EQ			
800	/LNKAWS/WGET_FILE	PATH	2	I	EQ			

2.- Create a new command:

External Operating System Commands

Type	Command name	Op.system	External program	Parameters of external program	Additional Trace	Created By	Date	Time
SAP	ARCAUTO	ANYOS	arcauto		X	SAP	07.08.1995	11:12:1
SAP	BACKUP_HISTORY	ANYOS	sddb6his		X	SAP	08.11.1996	15:12:5
SAP	BRARCHIVE	ANYOS	brarchive		X	SAP	02.08.1995	18:23:5
SAP	BRBACKUP	ANYOS	brbackup		X	SAP	02.08.1995	18:24:0
SAP	BRCONNECT	ANYOS	brconnect		X	SAP	25.07.2000	19:07:5

3.- OpenSSL.

External Command "ZOPENSSL" for "Windows NT"

Command

Command Name	ZOPENSSL
Operating System	Windows NT
Type	Customer

Create and Last Change

Created By	LNKABAP
	24.01.2019
	11:56:16
Last Changed By	LNKABAP
	30.01.2019
	14:33:45

Definition

Operating System Command  
/LNKAWS/CONST-LOW







Parameters for Operating System Command

Additional Parameters Allowed  
 Trace

Check Module

#### 4.- Wget.

External Command "ZWGET" for "Windows NT"

Command	
Command Name	ZWGET
Operating System	Windows NT
Type	Customer

Create and Last Change	
Created By	LNKABAP
	30.01.2019
	14:27:36
Last Changed By	LNKABAP
	30.01.2019
	14:32:58

Definition	
Operating System Command	/LNKAWS/CONST-LOW + wget .exe
Parameters for Operating System Command	
<input checked="" type="checkbox"/> Additional Parameters Allowed	
<input type="checkbox"/> Trace	
Check Module	

Once added ZOPENSSL and ZWGET to SM69, Run transaction /LNKAWS/AWS\_STRUST with these parameters:

AWS Connector. STRUST automatic maintenance for SSL certificates

Parameters

Endpoint

Remove old SSL certificates

Remove certs, days before

For initial installation only! (if SSL Client (Standard) does not exist)

Create SSL Client (Standard)

Expect to have this result:

```
AWS Connector. STRUST automatic maintenance for SSL certificates

AWS Connector. STRUST automatic maintenance for SSL certificates

Certificate import success for dl.cacerts.digicert.com/DigiCertBaltimoreCA-2G2.crt.pem
Certificate import success for dl.cacerts.digicert.com/BaltimoreCyberTrustRoot.crt.pem
Certificate import success for www.amazontrust.com/repository/SFSRootCAG2.pem
Certificate import success for www.amazontrust.com/repository/AmazonRootCA1.pem
Certificate already exists for: www.amazontrust.com/repository/SFSRootCAG2.pem
Certificate already exists for: www.amazontrust.com/repository/AmazonRootCA1.pem
Certificate import success for aws.amazon.com
Certificate already exists for: dl.cacerts.digicert.com/BaltimoreCyberTrustRoot.crt.pem
Certificate already exists for: dl.cacerts.digicert.com/DigiCertBaltimoreCA-2G2.crt.pem
Certificate import success for s3-ap-northeast-1.amazonaws.com
Certificate import success for s3-ap-northeast-2.amazonaws.com
Certificate import success for s3-ap-south-1.amazonaws.com
Certificate import success for s3-ap-southeast-1.amazonaws.com
Certificate import success for s3-ap-southeast-2.amazonaws.com
Certificate import success for s3-ca-central-1.amazonaws.com
Certificate import success for s3.eu-central-1.amazonaws.com
Certificate import success for s3-eu-west-1.amazonaws.com
Certificate import success for s3-eu-west-2.amazonaws.com
Certificate import success for s3-sa-east-1.amazonaws.com
Certificate import success for s3.amazonaws.com
Certificate import success for s3-us-east-2.amazonaws.com
Certificate import success for s3-us-west-1.amazonaws.com
Certificate import success for s3-us-west-2.amazonaws.com
Certificate import success for iam.amazonaws.com
TCM restarted
```

You can check the result in transaction STRUST:

Trust Manager: Display

The screenshot shows the SAP Trust Manager interface. On the left is a tree view of certificate stores. The 'SSL client SSL Client (Standard)' store is expanded, and two certificates are highlighted with a red box: 'Inksap10\_D01\_02' and 'sapdev01\_D01\_00'. The main area displays the details for the selected 'Own Certificate'. The subject is 'CN=IDE SSL client SSL Client (Standard), OU=I0020760607, OU=SAP Web AS, O=SAP.T', and it is self-signed. Below this is a 'Certificate List' table with three entries:

Subject
CN=Amazon Root CA 1, O=Amazon, C=US
CN=Baltimore CyberTrust Root, OU=CyberTrust, O=Baltimore, C=IE
CN=Starfield Services Root Certificate Authority - G2, O="Starfield Technologies, In

At the bottom, there is a 'Certificate' section with fields for Subject, Subject (Alt.), Issuer, Serial Number (Hex.), Serial Number (Dec.), Valid From, to, Algorithm, Key Length, Check Sum (MD5), and Checksum (SHA1). There are also buttons for 'Veri. PSE', 'Password', and 'Add to Certificate List'.



### Programming job /LNKAWS/AWS\_STRUST.

AWS certificates can be invalidated or can be expired.  
If this happens, new certificate(s) must be installed in STRUST to ensure AWS Connector can run properly.  
The program /LNKAWS/AWS\_STRUST will take care of it.  
We recommend programming a job /LNKAWS/AWS\_STRUST on a daily basis.  
To do so, go to transaction SM36:

The screenshot shows the 'Define Background Job' interface in SAP. The 'Step' tab is selected and highlighted with a red box. The 'General Data' section contains the following information:

Job Name	/LNKAWS/LNKAWS_STRUST
Job Class	C
Status	Scheduled
Exec. Target	
	Spool List Recipient

Below the 'General Data' section are two empty tables: 'Job Start' and 'Job Frequency'. At the bottom, there is a 'Job Steps' section which is currently empty.

### Define Background Job

Start condition   Step   Job selection   Own jobs   Job wizard   Standard jobs

Create Step 1

User: LNKABAP

Program values

ABAP program   External command   External program

**ABAP program**

Name: /LNKAWS/AWS\_STRUST

Variant:

Language: EN

External command (command pre-defined by system administrator)

Name:

Parameters:

Operating sys.:

Target server:

External program (direct command input by system administrator)

Name:

Parameter:

Target host:

Check   Save   Print specifications

Navigation icons: Back, Forward, Stop, Print, Refresh, Undo, Redo, Home, Search, Help, Settings

#### Step List Overview

Spool

No.	Program name/command	Prog. type	Spool list	Parameters	User	Lang.
1	/LNKAWS/AWS_STRUST	ABAP			LNKABAP	EN

### Define Background Job

**Start condition** | Step | Job selection | Own jobs | Job wizard | Standard jobs

General Data

Job Name	/LNKAWS/LNKAWS_STRUST	
Job Class	C	
Status	Scheduled	
Exec. Target		Spool List Recipient

Job Start | Job Frequency

Job Steps

1 Step(s) successfully defined

### Define Background Job

Start condition | Step | Job selection | Own jobs | Job wizard | Standard jobs

Start Time

Immediate | **Date/Time** | After Job | After Event | At Operation Mode

Date/Time

After Job | At Operation Mode

After Event

Check | Save | Close

Inform the next day and the time you wish this job to run (the job takes a few seconds to execute, light workload).

Define Background Job

Start condition Step Job selection Own jobs Job wizard Standard jobs

Start Time

Immediate Date/Time After Job After Event At Operation Mode

Date/Time

Scheduled Start	Date	18.01.2019	Time	09:00:00
No Start After	Date		Time	

After Job

At Operation Mode

After Event

Periodic Job

Check Period values Restrictions

Choose daily period

Period Values

Hourly

Daily

Weekly

Monthly

Other period

Check Save Restrictions

## Save

Start Time

Immediate | Date/Time | After Job | After Event | At Operation Mode

Date/Time

Scheduled Start	Date	22.02.2019	Time	09:00:00
No Start After	Date		Time	

After Job

At Operation Mode

After Event

Periodic Job

Check | | Period values | Restrictions

## And save

### Define Background Job

Start condition | Step | Job selection | Own jobs | Job wizard | Standard jobs

General Data

Job Name	/LNKAWS/LNKAWS_STRUST
Job Class	C
Status	Scheduled
Exec. Target	Spool List Recipient

Job Start

Planned Start			
Date	22.02.2019	Time	09:00:00

Job Frequency

Daily

Job Steps

1 Step(s) successfully defined

Job /LNKAWS/LNKAWS\_STRUST saved with status: Released

### SICF, service awsconnector\_s3

Run transaction /N/LNKAWS/SICF.

With this transaction, the SICF service awsconnector\_s3 will be created and optionally the user for the service.

A selection screen will appear with a 3 options radio button.

**User proposal.** The proposed user is LNKAWSICFUSE. This user will be automatically created.

Creation of SICF node with service awsconnector\_s3

Parameters

- User proposal
- I specify the user (will be automatically created if it does not exist)
- I have Central User Administration

User Name: LNKAWSICFUSE

Password: \_\_\_\_\_

**I specify the user.** The Username and password fields open. Specify user and password. If the user does not exist, it will be created automatically.

Creation of SICF node with service awsconnector\_s3

Parameters

- User proposal
- I specify the user (will be automatically created if it does not exist)
- I have Central User Administration

User Name: \_\_\_\_\_

Password: \*\*\*\*\*

**I have Central User Administrator.** The Username and password fields open. Specify user and password. The user must exist.

Creation of SICF node with service awsconnector\_s3

Parameters

- User proposal
- I specify the user (will be automatically created if it does not exist)
- I have Central User Administration

User Name: \_\_\_\_\_

Password: \*\*\*\*\*

Choose your option. In our case we show it with “User proposal”. Execute.

Creation of SICF node with service awsconnector\_s3

Parameters

User proposal  
 I specify the user (will be automatically created if it does not exist)  
 I have Central User Administration

User Name   
 Password

A list shows the configuration result.

Creation of SICF node with service awsconnector\_s3

---

Creation of SICF node with service awsconnector\_s3

User LNKAWSICFUSE created  
 SICF node awsconnector\_s3 activated

### Authorizations details

This is just to document what authorizations are given to the SICF user. The user for the service must have authorization for the object S\_RFC\_ADM with these values:

Maintain Authorization

Maintain values ...    Field documentation

**Class:** AAAB    **Text:** Administration for RFC Destination  
**Object:** S\_RFC\_ADM    **Text:** Cross-application Authorization Objects  
**Authorization:** /LNKAWS/AUTH    **Text:** AWS Connector. Authorization  
**Change** IDADMIN    01.02.2019 11:39:37  
**Status** Active    Saved

Field Text	Field name	From (New)	To (New)	From(Act.)	To (Actv.)
Activity	ACTVT	03		03	
Internet Communication Framework Values	ICF_VALUE	''	''	''	''
Logical Destination (Specified in Function Call)	RFCDDEST	LNKAWS*	LNKAWS*	LNKAWS*	LNKAWS*
Type of Entry in RFCDES	RFCTYPE	G		G	

This is done in the profile /LNKAWS/SICF, which is automatically added to the service user.

In some cases we have realized that the profile is not created on an automatic way, so we have created it manually. In order to do this we follow next steps:

First go to TCODE SU02 to create the profile /LNKAWS/SICF.

The screenshot shows the SAP SU02 transaction interface. At the top, there are buttons for 'Generate Work Area' and 'Information'. Below this is an 'Important note' section with text advising to use the Profile Generator instead of this transaction. A button labeled 'To Profile Generator' is provided. The 'Manually edit authorization profiles' section contains a search field for the profile name, which is set to '/LNKAWS/SICF'. Below the search field are checkboxes for 'Active only' and 'Maintained only'. A button labeled 'Create work area for profiles' is at the bottom of this section. The 'Profile List' section at the bottom shows a table header with columns for 'Profile name', 'Type', 'Version', and 'Text'. The 'Profile name' column header is highlighted with a red box.



### Profile List

📄 ✎ 🗑️ ✨ 🏠 📄
Documentation
🔄 🚚 Single transport
🚚

Profile name	Type	Version	Text

📄 Create New Profile
✕

Profile

Text

ProfType

Single profile

Composite Profile

### Maintain Profile

🔍 📄 + Add authorization
📄 + Add object
📄 🗑️

Profile

Texts in User Master

Text

Changed By

Modification date

Modification time

Status  Saved/unsaved

Consisting of Authorizations

Tabix for User Mast.  /

Object	Text	Authorization

### Add the Object S\_RFC\_ADM with authorization /LNKAWS/AUTH

Maintain Profile

Add authorization   
 Add object   
   

Profile: /LNKAWS/SICF  
 Texts in User Master: Single profile  
 Text: AWS Connector. Authorization profile for S4  
 Changed By: IDADMIN  
 Modification date: 22.02.2019    Modification time: 11:36:27  
 Status: Active    Saved/unsaved: Saved

Consisting of Authorizations

Tabix for User Mast. 1 / 1

Object	Text	Authorization
S_RFC_ADM	Administration for RFC Destination	/LNKAWS/AUTH

As /LNKAWS/AUTH does not exist yet, double click on it to create

Authorization Text

Text: AWS Connector. Authorization

Maintain Authorization

Maintain values ...   
 Field documentation

**Class:** AAAB    **Text:** Administration for RFC Destination  
**Object:** S\_RFC\_ADM    **Text:** Cross-application Authorization Objects  
**Authorization:** /LNKAWS/AUT2    **Text:** Authorization

Field Text	Field name	From (New)	To (New)	From(Act.)	To (Actv.)
Activity	ACTVT				
Internet Communication Framework Values	ICF_VALUE				
Logical Destination (Specified in Function Call)	RFCDEST				
Type of Entry in RFCDES	RFCTYPE				

Click on button

Maintain values ...

Include the needed values

Maintain Authorization

Maintain values ...    Field documentation

**Class:** AAAB      **Text:** Administration for RFC Destination  
**Object:** S RFC\_ADM      **Text:** Cross-application Authorization Objects  
**Authorization:** /LNKAWS/AUTH      **Text:** AWS Connector. Authorization

Field name    From (New)    To (New)    From(Act.)    To (Act.)

Field Text	Field name	From (New)	To (New)	From(Act.)	To (Act.)
Activity	ACTVT				
Internet Communication Framework Values	ICF_VALUE	03			
Logical Destination (Specified in Function Call)	RFCDDEST				
Type of Entry in RFCDES	RFCTYPE	LNKAWS*	LNKAWS*	LNKAWS*	LNKAWS*
		G		G	

Save and Activate

Go to SU01 and add the profile created to the user manually

Maintain Users

User: LNKAWSICFUSE  
 Changed By: IDADMIN    22.02.2019 11:12:28    Status: Revised

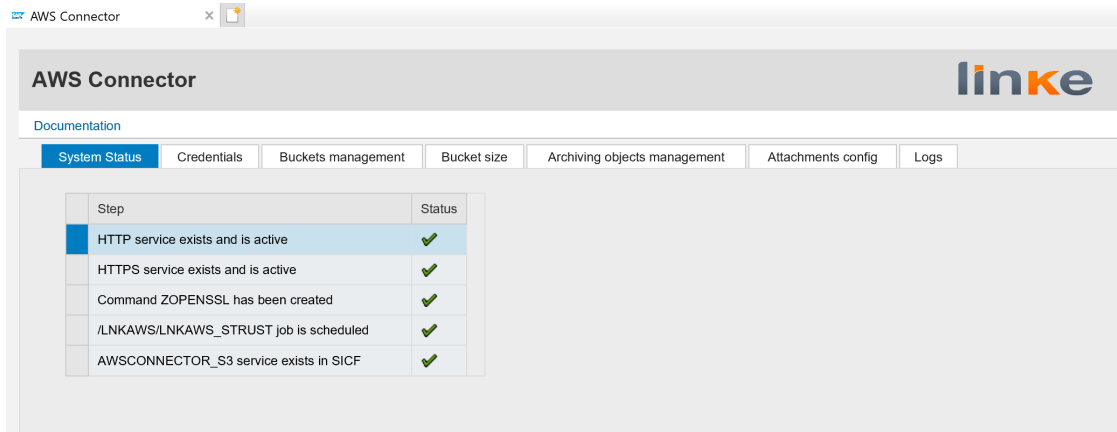
Address    Logon Data    SNC    Defaults    Parameters    Roles    **Profiles**    Groups    Personalization    Lic. Data

Assigned Authorization Profiles

Profile	Type	Text
/LNKAWS/SICF		AWS Connector. Authorization profile for S4

## Actions to do in AWS Connector Manager

### Run transaction /N/LNKAWS/S4MANAGER



**Note:** In case Service cannot be reached when running transaction /N/LNKAWS/S4MANAGER:

### Service cannot be reached

#### What has happened?

URL call was terminated because the corresponding service is not available.

#### Note

The termination occurred in system with error code **403** and for the reason **Forbidden**.

#### What can I do?

Please select a valid URL.

HTTP 403 - Forbidden

Your SAP Internet Communication Framework Team

Go to SICF and activate the service in  
sap/bc/webdynpro/lnkaws/wd\_rocketsteam\_s3:

Maintain service

Create Host/Service External Aliases System Monitor Active

Filter Details

Virtual Host Service Path

ServiceName

Description

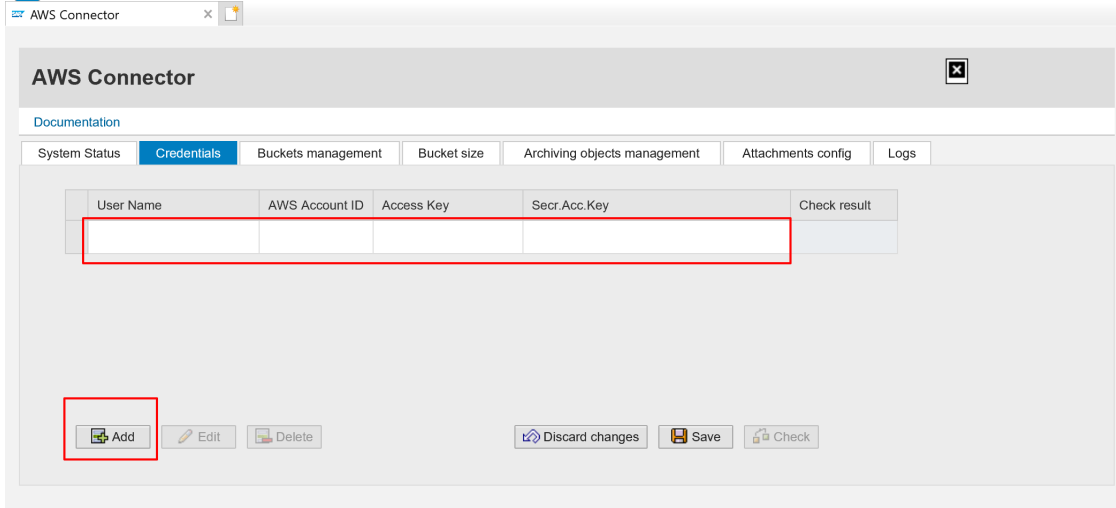
Lang. EN English Ref.Service:

Apply Reset Fine-Tune

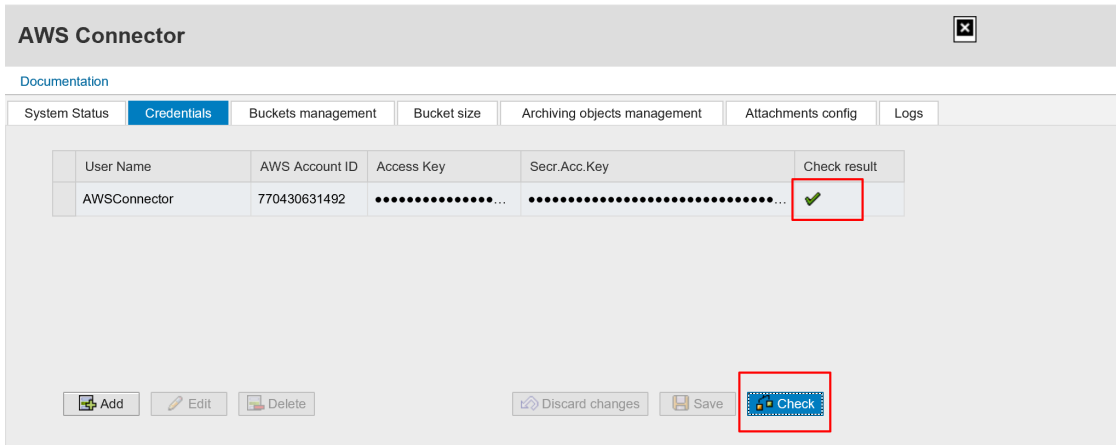
Virtuelle Hosts / Services	Documentation	Referenz Service
> ui2	UI Extension	
> ui2suite	ui2suite ICF services	
> ui5_demokit	SAPUI5 demokit	
> ui5_ui5	SAPUI5 Application Handler SAPUI5 Application c...	
> vmc_test	VMC Test	
> wappush	Handler for WAP PUSH	
> wdisp	SAP Web Dispatcher	
> wdvd	HTTP Service View Designer	
> wd_trace_tool	WebDynpro TraceTool	
> webapp	WEBAPP REDIRECT HANDLER	
> webdynpro	Web Dynpro (WD) Runtime	
> 1wda	Namespace	
> bcv	Namespace	
> bev2	Namespace	
> bobf	Namespace	
> bofu	Namespace	
> cbad	Namespace	
> ipro	NAMESPACE IPRO	
> j7l	Namespace	
> kyk	Namespace	
> lnkaws	Namespace	
> WD_LICENSE_SAAS	AWS Connector. License UI	
> WD_ROCKETSTEAM_S3	AWS Connector	
> pimu	Namespace	
> sap	NAMESPACE SAP	
> SPE	Wed Dynpro Applications for Consolidator Portal ...	
> srmerp	Namespace	
> ui2	Namespace	
> webflow	WebFlow	

## Credentials.

In Credentials tab add your credentials



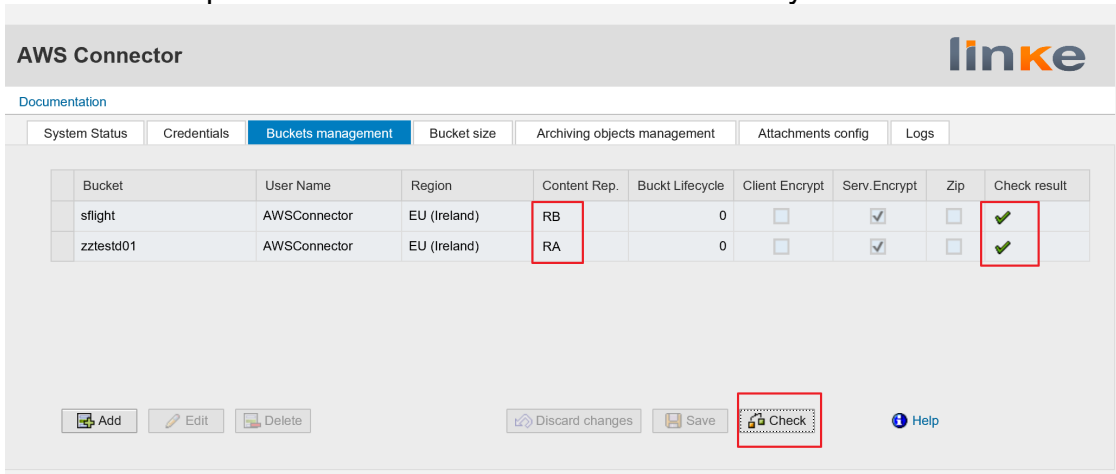
Press Check to check the credentials



Proceed with Buckets Management tab, and Attachments config.

## Create bucket.

In Buckets Management create a bucket. Mind the bucket prefix. Once created press Check. Check result should be okay.



Look at the Content Rep created (this will usually be RA, but may be another in case RA is already existing). This will be used to check the content server.

#### Check the content server.

Run transaction OAC0 and display content server (in this case RA)


Display Content Repositories: Overview

Content Repository	Document Ar...	Storage type	Version	Description
LLS_COR_DOC_REP	/SAPSL/CO	SAP System Databas.	0046	Document Repository on DB Basis
LXE_TTX	LXE_LTTX	SAP System Databas.	0046	LXE: Repository for TTX Files
MA	ARCHLINK	SAP System Databas.	0046	ma
MIME	MIME	SAP System Databas.	0045	MIME Object Storage
NOTES_RUIBB		SAP System Databas.	0046	
NWECM_PL_DB_REPOSITORY	NWECM_PLDB	SAP System Databas.	0046	
QMM_STRUCT	QM_MANUAL	Structure storage sy.	0045	Structure repository for QM
RA		HTTP content server	0045	AWS Connector. Content server AWS S3
RB		HTTP content server	0045	AWS Connector. Content server AWS S3
RC		HTTP content server	0045	RocketSteam. Content server AWS S3
REISCN01	SRM	SAP System Databas.	0045	DB Storage for Customer Content
REISRO01	SRM	SAP System Databas.	0045	DB Storage for Customer Content
REN01	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RMPS_POID_DIRECTORY		SAP System Databas.	0046	SRM POID Directory for RMPS
RMPS_POID_DIRECTORY_CL.		SAP System Databas.	0046	SRM POID Directory for RMPS (client-dependent)
RPD01	SRM	SAP System Databas.	0045	
RPD02	SRM	SAP System Databas.	0045	
RPD03	SRM	SAP System Databas.	0045	
RPD04	SRM	SAP System Databas.	0045	
RPD05	SRM	SAP System Databas.	0045	
RPD06	SRM	SAP System Databas.	0045	
RPR01	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR02	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR03	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR04	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR05	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR06	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR08	SRM	SAP System Databas.	0045	DB Storage for Customer Content
RPR09	SRM	SAP System Databas.	0045	

Press on Status information and check the server status is running.

Display Content Repositories: Detail

Simple admin. Full administration

Content Rep.	RA	Active	1 / 1
Description	AWS Connector. Content server AWS S3		
Document Area	▼		
Storage type	04 HTTP content server ▼		
Protocol	SAPHTTP		CS Admin
Version no.	0045	Content Server version 4.5	
HTTP server	10.254.253.10		
Port Number	8001	SSL Port Number	
HTTP Script	sap/bc/awsconnector_s3		
Phys. path	/usr/sap/D01/SYS/global/		
Server status	running		
Description			
Vendor	http://www.linkeit.com		
Version	V1.5		
Build	20171005_1		
pVersion	0045		
Server time	22.02.2019 16:45:36		
Contrep status	running		
Description			

Time created	13.11.18	11:15:39
Created by	LNKABAP	
Name	LNKABAP	
Last Changed At	15.11.18	13:12:07
Last changed by	LNKABAP	
Name	LNKABAP	



**Note:** In case server status is not running, check the user in the service SICF

awsconnector\_s3. Ensure client is 000 and the user is OK.

Create/Change a Service

Path: /default\_host/sap/bc/

Service Name: awsconnector\_s3 Service (Active)

Lang.: EN English

Description: AWS Connector. Archive Link to AWS S3.

Logon Data

Client: 000

User: LNKAWSICFUSE

Language: [dropdown]

Password Status: Set

Security Requirement: Standard

Authentication: Standard SAP User

Reauthentication: Deactivated system-wide: No

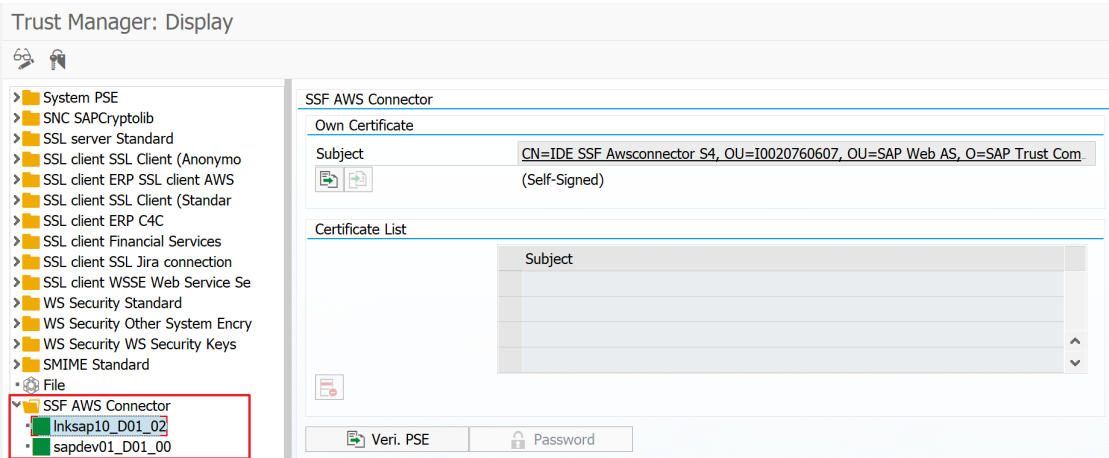
### SSF configuration.

You can skip SSF configuration in case you do not plan to use Client Encrypt. If you plan to use the option “Client Encrypt”, SSF is used to encrypt the files before uploading to AWS S3, and decrypt it after downloading from AWS S3.

In this way, the files stored in AWS S3 can only be retrieved by your system. ##### Automatic configuration SSF will be automatically configured as soon as you create your first Bucket with the option “Client Encrypt”. AWS Connector creates an entry in Application-Specific SSF Parameter (table SSFAPPLIC) with key /LAWS/:

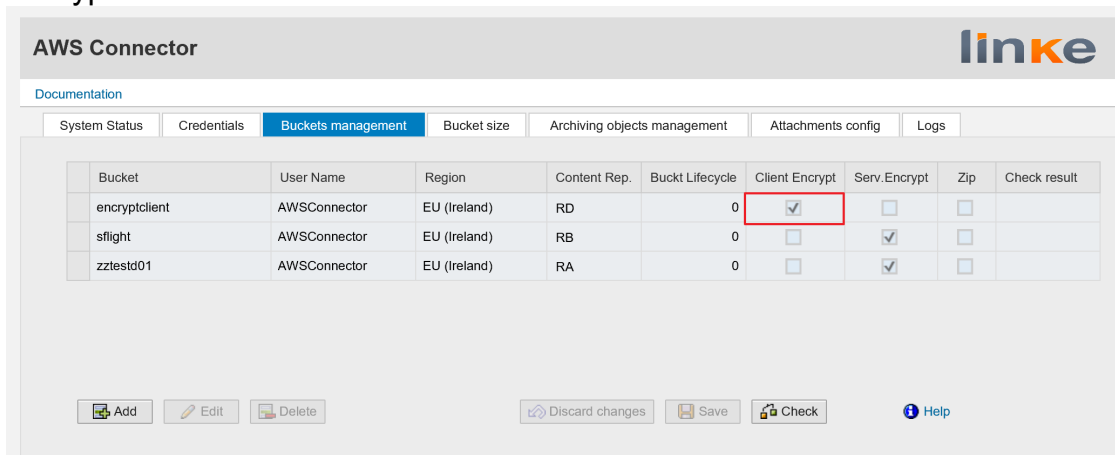
APPLIC	B_TOOLKIT	B_FORMAT	B_PAB	B_PROFID	B_PROFILE	B_HASHALG	B_ENCRALG	B_INCCERTS	B_DETACHED	B_ASKPWD	B_DISTRIB	DESCRIPT
/LAWS/	X	X	X	X	X	X	X	X	X	X	X	AWS Connector
BSNAGT	X	X	X	X	X	X	X	X	X	X	X	
CCARD	X	X	X	X	X	X	X	X	X	X	X	Encryption of Payment Cards in SAP R/3
CERTREQ	X	X	X	X	X	X	X	X	X	X	X	Certificate Request

AWS Connector creates also in STRUST the PSE for SSF AWS Connector:

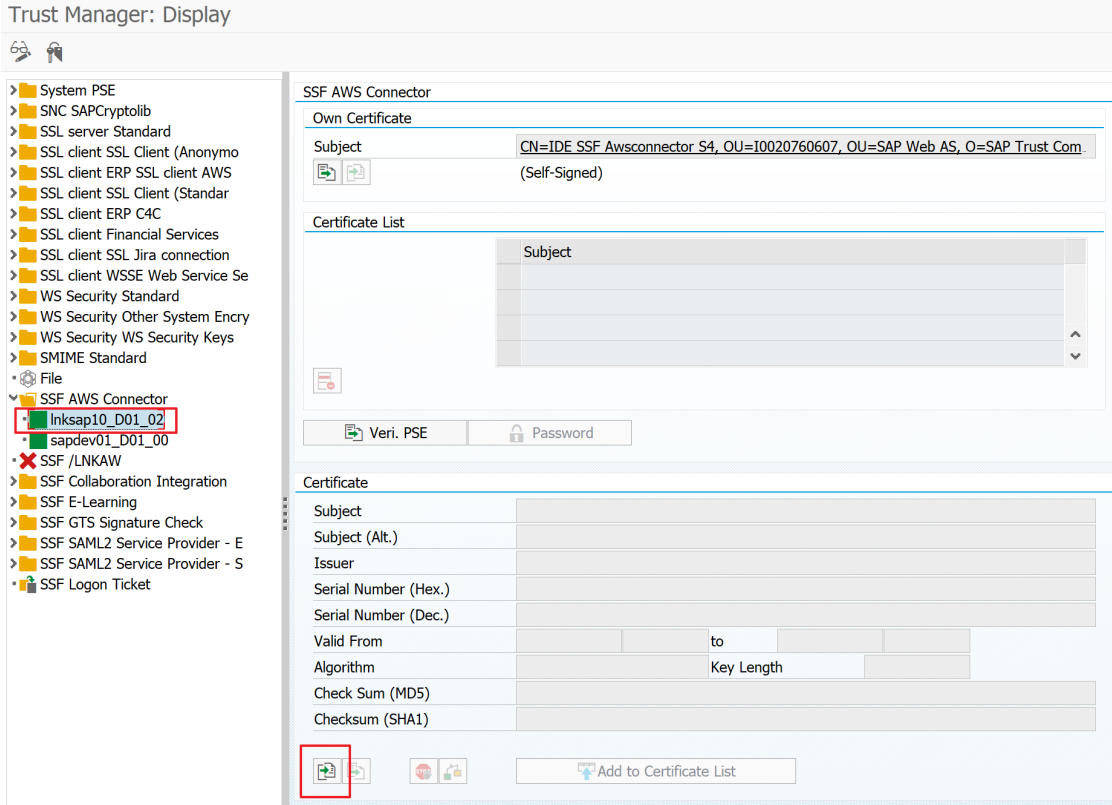


### Configuration of your own SSL certificate

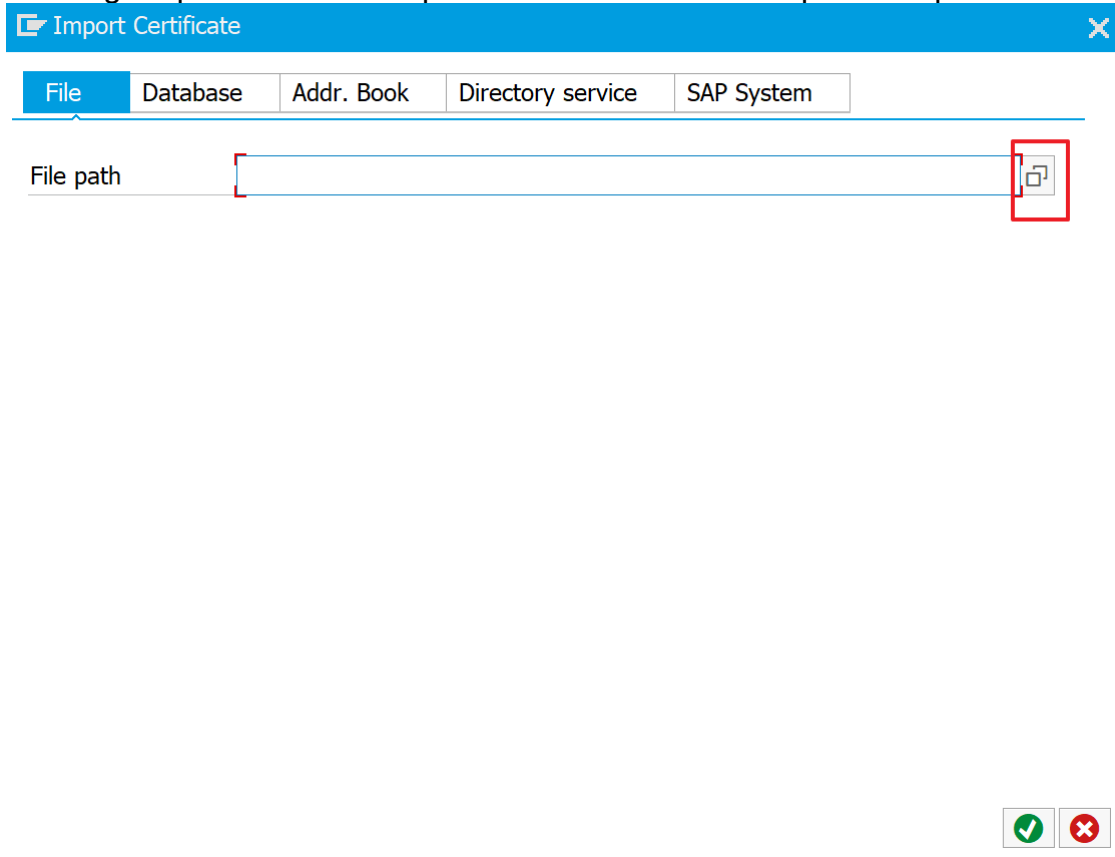
If you plan to use your own SSL certificate, you must follow this procedure. Run transaction /N/LNKAWS/S4MANAGER and create a first bucket with “Client Encrypt” enabled:



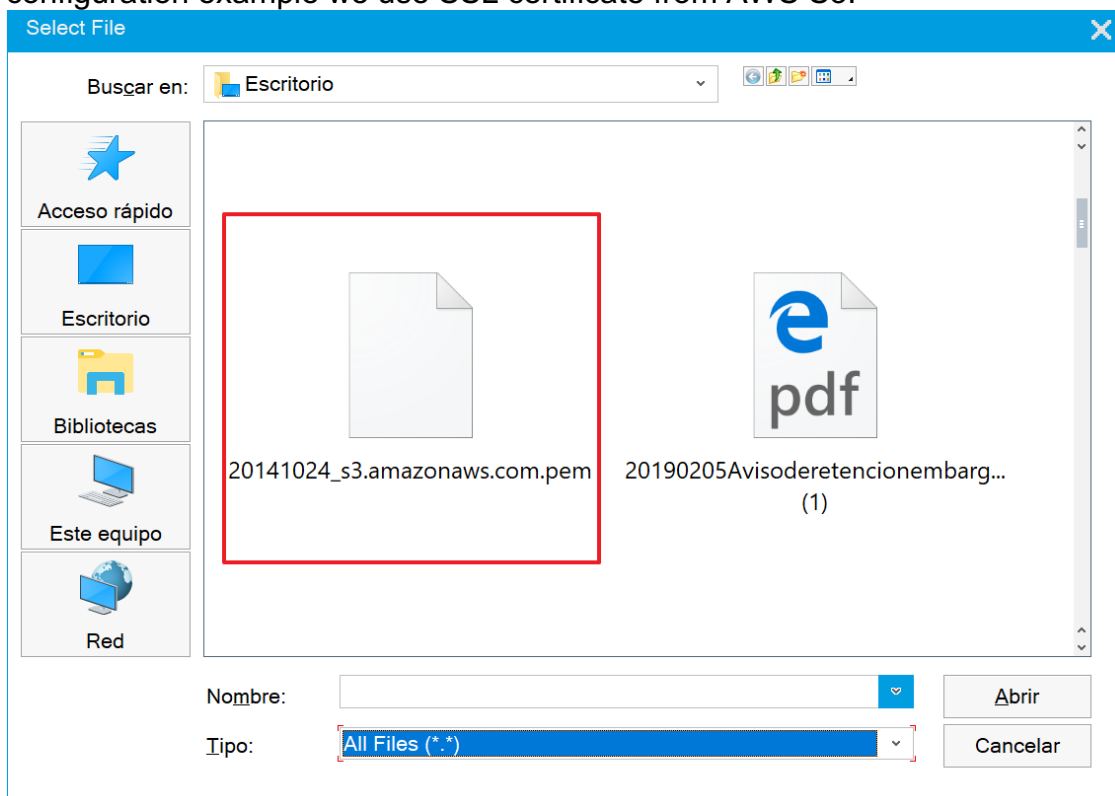
AWS Connector performs automatic configurations, explained above.  
Run STRUST. Select the folder SSF AWS Connector and press Import certificate.



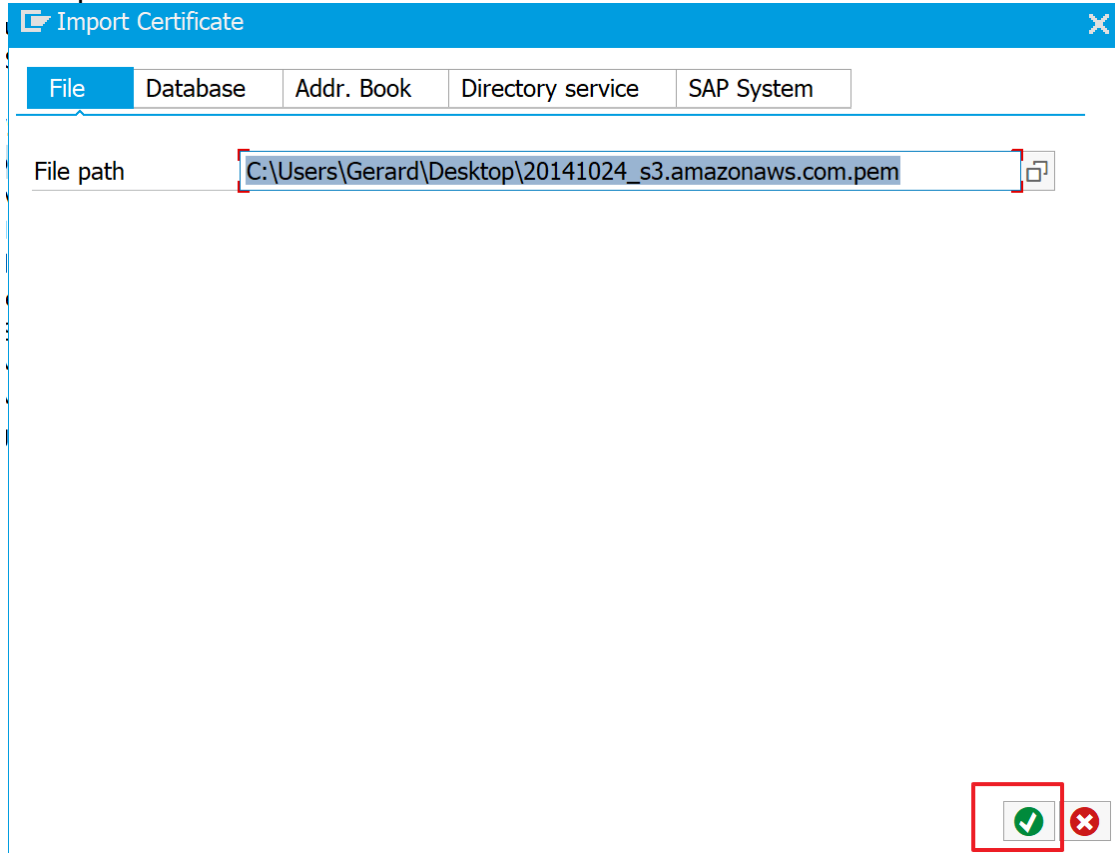
A dialog “Import Certificate” opens. Press the search help for File path.



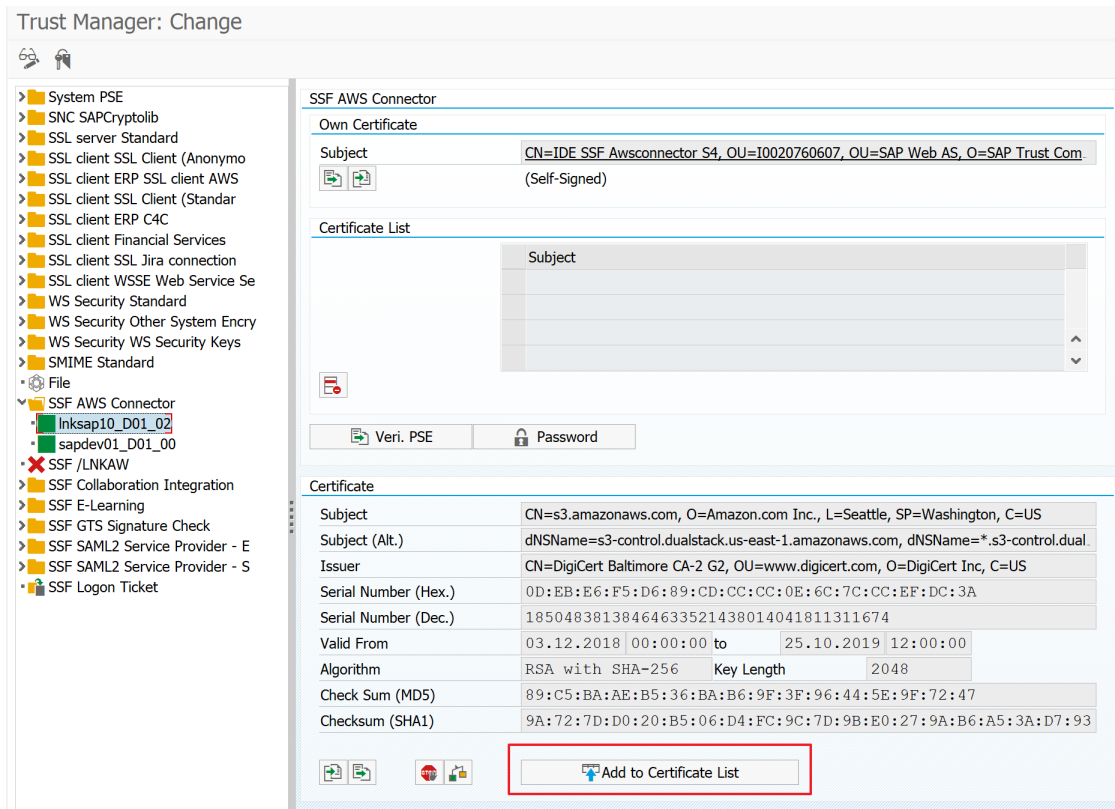
A file browser dialog opens. Choose a pem file containing your certificate. In this configuration example we use SSL certificate from AWS S3.



### Accept



### Press "Add to Certificate List"



### Press Save

The screenshot shows the SAP Trust Manager interface. At the top, there is a toolbar with a 'Save' icon highlighted by a red box. Below the toolbar, the title is 'Trust Manager: Change'. On the left, there is a tree view of trust relationships. The main area displays details for 'SSF AWS Connector'.

**SSF AWS Connector**

**Own Certificate**

Subject: CN=IDE SSF Awsconnector S4, OU=I0020760607, OU=SAP Web AS, O=SAP Trust Com  
 (Self-Signed)

**Certificate List**

Subject
<u>CN=s3.amazonaws.com, O=Amazon.com Inc., L=Seattle, SP=Washington, C=US</u>

Buttons: Veri. PSE, Password

**Certificate**

Subject	CN=s3.amazonaws.com, O=Amazon.com Inc., L=Seattle, SP=Washington, C=US		
Subject (Alt.)	dNSName=s3-control.dualstack.us-east-1.amazonaws.com, dNSName=*.s3-control.dual		
Issuer	CN=DigiCert Baltimore CA-2 G2, OU=www.digicert.com, O=DigiCert Inc, C=US		
Serial Number (Hex.)	0D:EB:E6:F5:D6:89:CD:CC:0E:6C:7C:CC:EF:DC:3A		
Serial Number (Dec.)	18504838138464633521438014041811311674		
Valid From	03.12.2018   00:00:00 to	25.10.2019   12:00:00	
Algorithm	RSA with SHA-256	Key Length	2048
Check Sum (MD5)	89:C5:BA:AE:B5:36:BA:B6:9F:3F:96:44:5E:9F:72:47		
Checksum (SHA1)	9A:72:7D:D0:20:B5:06:D4:FC:9C:7D:9B:E0:27:9A:B6:A5:3A:D7:93		

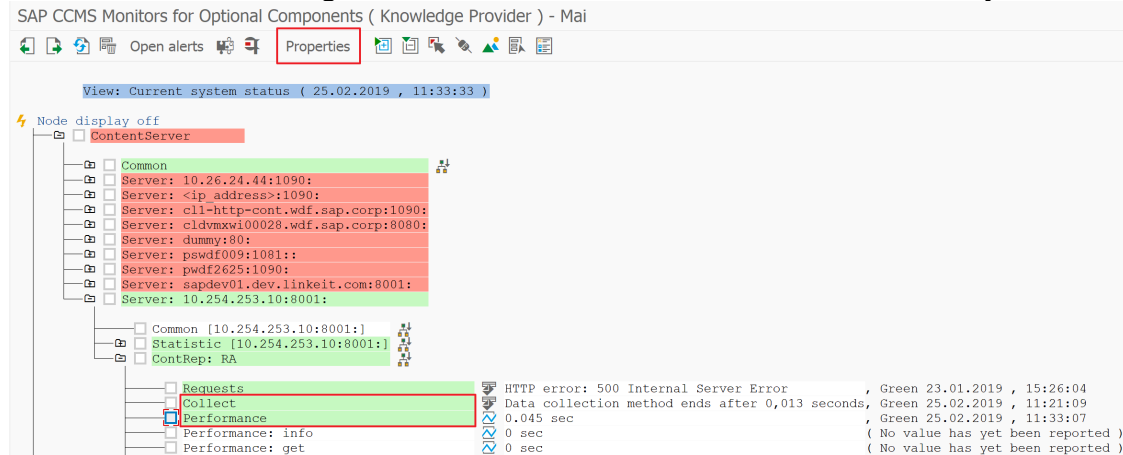
Buttons: Add to Certificate List

## Monitoring settings (SCMSMO)

For each bucket you created, a Content Repository is created with name RX (Starting with RA ... RZ ... SA... SZ...).

In transaction **SCMSMO** you can access to monitoring.

We recommend setting Collect and Performance data collection every 900 seconds.



Monitoring: Properties and Methods

Properties of **D01\ContentServer\Server: 10.254.253.10:8001:\ContRep: RA\Collect**  
MTE class **KPRO\_CS\_Collect**

General | Status attribute | **Methods** | Addnl info

Method execution

Start the data collection method every  seconds

In the absence of values deactivate after  seconds

Methods effective for MTE nodes

Data collection method	<input type="text" value="SCMS_CONTENT_SERVER_COLLECT_CREP"/> <input type="text" value="Content server data collection"/>
Auto-reaction method	<input type="text" value="&lt;NO_METHOD&gt;"/> <input type="text"/>
Analysis method	<input type="text" value="SCMS_CONTENT_SERVER_ANALYZE"/> <input type="text" value="Content server Customizing"/>



### Monitoring: Properties and Methods

Properties of    
MTE class

General PerformanceAttribute **Methods** Addnl info

Method execution

Start the data collection method every  seconds

In the absence of values deactivate after  seconds

Methods effective for MTE nodes

Data collection method	<input type="text" value="SCMS_CONTENT_SERVER_COLLECT_PERF"/> <input type="text" value="Content server data collection"/>
Auto-reaction method	<input type="text" value="&lt;NO_METHOD&gt;"/> <input type="text"/>
Analysis method	<input type="text" value="SCMS_CONTENT_SERVER_ANALYZE"/> <input type="text" value="Content server Customizing"/>

We also recommend Performance threshold values (you may need to adjust this depending on your server and connection):

SAP CCMS Monitors for Optional Components ( Knowledge Provider ) - Mai

View: Current system status ( 25.02.2019 , 11:35:47 )

Node display off

- ContentServer
  - Common
    - Server: 10.26.24.44:1090:
    - Server: <ip\_address>:1090:
    - Server: c11-http-cont.wdf.sap.corp:1090:
    - Server: cldvmxwi00028.wdf.sap.corp:8080:
    - Server: dummy:80:
    - Server: pswdf009:1081::
    - Server: pswdf2625:1090:
    - Server: sapdev01.dev.linkeit.com:8001:
    - Server: 10.254.253.10:8001:
  - Common [10.254.253.10:8001:]
  - Statistic [10.254.253.10:8001:]
  - ContRep: RA
    - Requests
    - Collect
    - Performance**
      - Performance: info
      - Performance: get
      - Performance: docGet
      - Performance: create

HTTP error: 500 Internal Server Error  
 Data collection method ends after 0,013 seconds  
 0.045 sec  
 0 sec  
 0 sec  
 0 sec  
 0 sec

---

### Monitoring: Properties and Methods

Properties of **D01\ContentServer\Server: 10.254.253.10:8001:\ContRep: RA\Performance**  
 MTE class **KPRO\_CS\_Performance**

General **PerformanceAttribute** Methods Addnl info

Performance properties assigned from group **KPRO\_CS\_Performance**

Comparison Value

Last reported value       Smoothing over last 1 min.  
 Average in the last hour       Smoothing over last 5 min.  
 Average in the last quarter of an hour       Smoothing over last 15 mins

Threshold values

Change from GREEN to YELLOW	3.000	1/1000 sec
Change from YELLOW to RED	10.000	1/1000 sec
Reset from RED to YELLOW	10.000	1/1000 sec
Reset from YELLOW to GREEN	3.000	1/1000 sec

Alert is triggered if the comparative value

falls below threshold value       exceeds the threshold value

Alert text

Message class **CMS**  
 Message number **090**  
 Text **&1 &3 > &2 &3 current value over threshold value**

---

## Conclusion

At this point you have configured AWS Connector, which is ready to be used. We hope you enjoy using AWS Connector.