software AG

ARIS

INTERFACES TO SAP SOLUTION MANAGER

VERSION 10.0 - SERVICE RELEASE 18

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Contents

1   System architecture

ARIS contains different products and interfaces to connect ARIS with SAP® Solution Manager. Depending on the SAP® Solution Manager version, you need to perform further adjustments.

Further information is available in additional documents and in the help system. For details, see **ARIS for SAP® Solutions** manual and **ARIS Requirements for SAP® Solutions** manual available in the ARIS Download Center (https://aris.softwareag.com/) or on Empower (https://empower.softwareag.com/).

1.1 Using SAP Solution Manager 7.2

ARIS and SAP Solution Manager 7.2 communicate via HTTP access. Therefore, the requirements must be met in the SAP system. In general, the system no longer requires transport requests (page 10). SAP® JCo is only required for ARIS Architect or ARIS Designer if you want to run executables.

The transport request for synchronization and **sapjco3.jar** on the server side are needed only for data migration. For details, see **Migrating SAP projects to SAP® Solution Manager 7.2 solutions** contained in the ARIS installation package, ARIS Download Center (https://aris.softwareag.com/) or Empower (https://empower.softwareag.com/).

In order to use SAP Solution Manager 7.2, the following conditions must be met:

- **Authentication specified**

    The required privileges are contained in the **ZSOLDOCAPIACCESS.SAP** profile (see ARIS installation package\Add-ons\Extension_pack_SAP\Authentication). The profile is imported into the SAP system using the **PFCG** executable.

- **Service activated**

    In order to allow HTTP access to the system, the **PROCESSMANAGEMENT** service (default_host/sap/opu/odata/sap) must be activated. The service is activated using the **SICF** executable

- **Virus scan profile enabled**

    In order to avoid problems that might occur due to a virus scanner in use, a default virus scan profile is defined (**VSCANPROFILE** executable).

    Deactivate and activate the virus scan profile (**/IWFND/VIRUS_SCAN** executable). In case of problems, you can use the **/IWFND/ERROR_LOG** executable to check the error protocol.

1.1.1   ARIS Connector for SAP Solutions

If you are using ARIS in a cloud scenario, such as **ARIS Enterprise** edition, you must install ARIS Connector for SAP Solutions to exchange data between ARIS and SAP® Solution Manager 7.2 without a VPN connection. To install the connector, see ARIS Architect online help: **Install and configure ARIS Connector for SAP Solutions**.

1.1.1.1   Hardware requirements

Note the following requirements for installing ARIS Connector for SAP Solutions.

MEMORY

When you use the default settings, we recommend providing at least 4 GB of free memory on the computer where ARIS Connector for SAP Solutions is installed. If you are using a VM, this memory should be reserved exclusively for that machine.

DISK SPACE

The required disk memory depends on the settings of ARIS Connector for SAP Solutions. Disk memory needed depends on the size of the content transferred from or to the SAP system and the size and number of transferred documents.

NETWORK

ARIS Connector for SAP Solutions requires a fast network connection between the connected source system and the Internet. ARIS Connector for SAP Solutions must be able to connect to the source system and ARIS Server.

1.1.1.2 Security aspects

ENCRYPTION

The first time you configure credentials using the command line interface, a **key.secret** file is created in the <ARIS Connector for SAP Solutions installation directory>/**conf** folder. During ARIS Connector for SAP Solutions startup, this file is used to encrypt and decrypt passwords and credentials specified in the configuration files. Make sure to back up this file. You must not change the key it contains. If you delete the **key.secret** file from the **conf** folder so that the encryption key is not stored with the encrypted credentials, you must be able to restore the file. This is because this file is mandatory when ARIS Connector for SAP Solutions is restarted. If you cannot recover the **key.secret** file that was used for encryption, you must re-encrypt and submit the credentials. Otherwise, connections cannot be established.

HTTPS

Any communication between ARIS Connector for SAP Solutions, ARIS Cloud, and the SAP system is initiated by ARIS Connector for SAP Solutions, that is, communication is never started from outside of you network. Any communication must use HTTPS.

Any communication between ARIS Connector for SAP Solutions, ARIS Cloud, and the SAP system is initiated by ARIS Connector for SAP Solutions, that is, communication is never started from outside of you network. Communication between ARIS Connector for SAP Solutions and the SAP system might use http because both systems are located within your network.

TIMEOUT

When ARIS Connector for SAP Solutions is started, the parameters specified in the **ARISConfiguration.json** file and the **SAPConfiguration.json** file are used for authentication. If the authentication was successful, the SAP system is available in ARIS. From start-up to shut-down, ARIS Connector for SAP Solutions frequently checks ARIS Server for requests. ARIS Connector for SAP Solutions automatically re-establishes the connection if a token issued by ARIS Administration is no longer valid. If the connection fails, an error is logged. Every few seconds, an attempt is made to re-establish the interrupted connection.

ARIS waits for ARIS Connector for SAP Solutions to respond:

- 1 minute for a short term request - ARIS Administration, startup SAP synchronization.
- 30 minutes for a long term request - execute SAP synchronization.
- 2h for a very long term request - update documents.

After the listed period of time, the request is aborted and a timeout error is logged.

STATUS

The status of ARIS Connector for SAP Solutions depends on the polling time stamp listed in ARIS Architect. The time stamp is written when ARIS Connector for SAP Solutions is starting. Every two minutes the time stamp is updated. Status values are:

- **not connected** - no polling time stamp listed.
- **connected** - last polling time stamp was written in the last two minutes.
- **not responding** - last polling time stamp is older than two minutes.

RESTART

ARIS Connector for SAP Solutions cannot be restarted if its state is **connected**. ARIS Connector for SAP Solutions can be restarted after a minimum time span of two minutes to a maximum time span of four minutes. A restart deletes all jobs pending.

1.2   Using SAP Solution Manager 7.1

ARIS contains multiple products and interfaces to connect ARIS with SAP® Solution Manager 7.1. This chapter describes the interfaces.

Depending on the functions provided you may need to perform further adjustments.

- Use SAP® synchronization

- Use customizing executables/views

- ARIS Publisher:From ARIS 10.0.13.0 on ARIS Publisher and IT Inventory are no longer delivered. This means that you can no longer install or update ARIS Publisher Server. You can still use your current ARIS Publisher installation, but since this component is no longer supported, no more features will be developed. We strongly recommend using the ARIS portal (Published content) instead of ARIS Publisher in the future.

- Ensure that the users have been created in the SAP® system and have the required privileges (page 13).

    Further information is available in additional documents and in the help system. For details see **ARIS for SAP Solutions** and **SAP Requirements** contained in the ARIS installation package, ARIS Download Center (https://aris.softwareag.com/) or Empower (https://empower.softwareag.com/).

1.2.1 ARIS

The ARIS interface provides you with all the functions you need to connect ARIS with SAP®
Solution Manager.

Depending on the required functional scope, the file **sapjco3.jar** must be provided on client
computers and/or on ARIS Server. This connector is used to create the connection to the
SAP® system using SAP® access parameters. For licensing reasons, it may not be installed
automatically. The file **sapjco3.jar** is required for the following functions.

- **Synchronization** (ARIS Server)
- **Run executable** (client)
- **Show blueprint** (client)
- **Show configuration** (client)
- **Documentation** (client)

For these client functions, a local SAP® GUI for Windows installation is required. For details see
ARIS for SAP and **SAP Requirements** in the downloaded ARIS installation package, ARIS
Download Center (https://aris.softwareag.com/) or Empower
(https://empower.softwareag.com/).

The following graphic shows the interaction of the individual systems and components when performing the above functions.
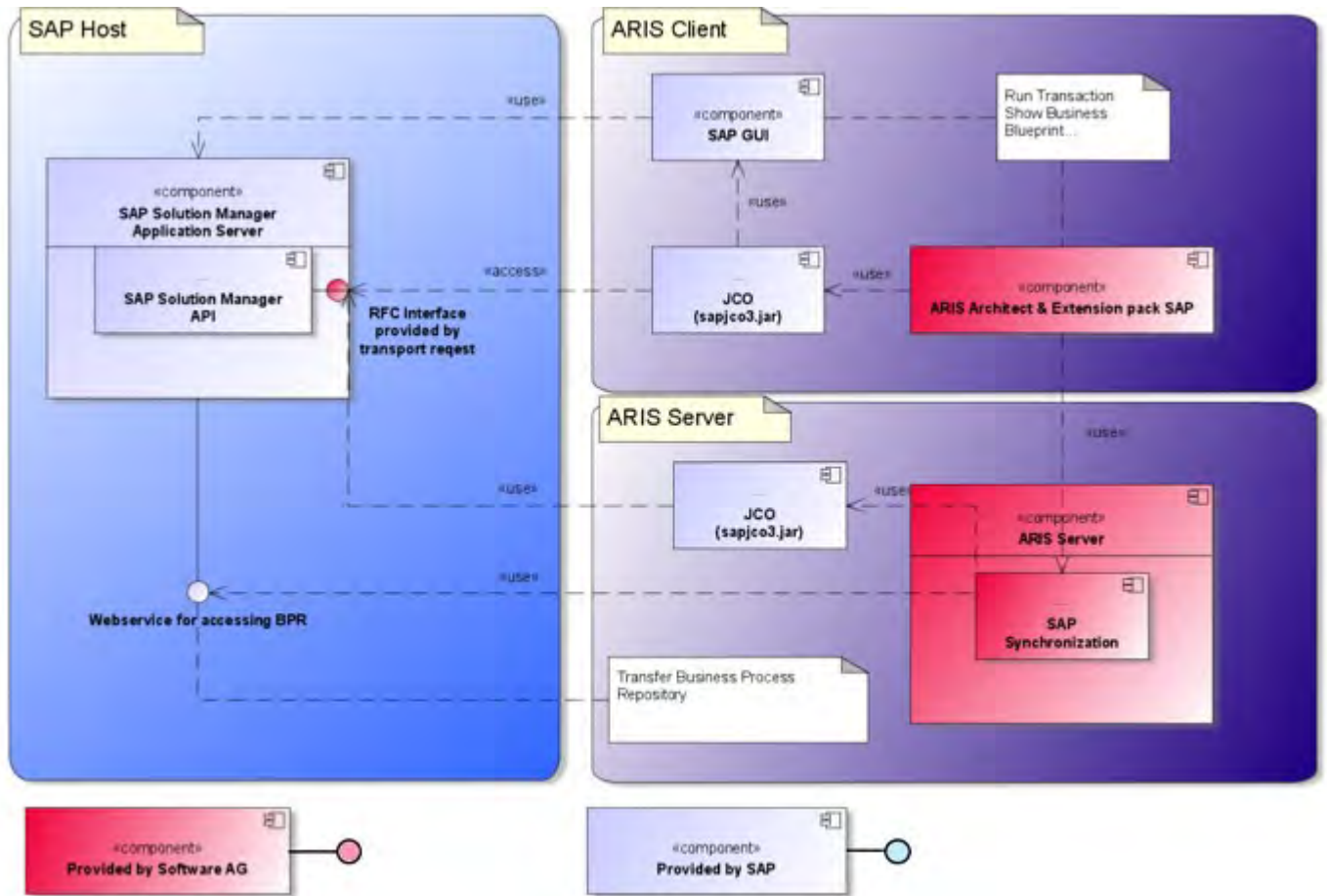
Figure 1: SAP® synchronization, run executable, show blueprint

To use the **Synchronization** function, please make SAP® Java Connector available on the server. Furthermore, you need SAP® Solution Manager. For details, see **ARIS for SAP® Solutions** manual and **ARIS Requirements for SAP® Solutions** manual available in the ARIS Download Center (https://aris.softwareag.com/) or on Empower (https://empower.softwareag.com/).

The Software AG RFC interface encapsulates the internal SAP API of SAP® Solution Manager. All calls via the interface use SAP-proprietary functions and functions used by SAP itself. This ensures that SAP changes are as transparent to the interface as possible.

If you use SAP® Solution Manager 7.2, transport requests are no longer required.

To ensure that SAP® synchronization between **ARIS** and **SAP® Solution Manager 7.1** is available, your administrator must import the current transport request into the SAP® system.

You find the transport request in the ARIS installation package (.../Add-ons/Extension_pack_SAP/ABAP/Solution Manager/). The function modules are created in the **/IDS/ARIS_SOLAR** package in the **/IDS/ARIS_SOLAR_001** function group.

The following graphic shows the interaction of the individual systems and components when performing the function **Run customizing transaction/view** (client).
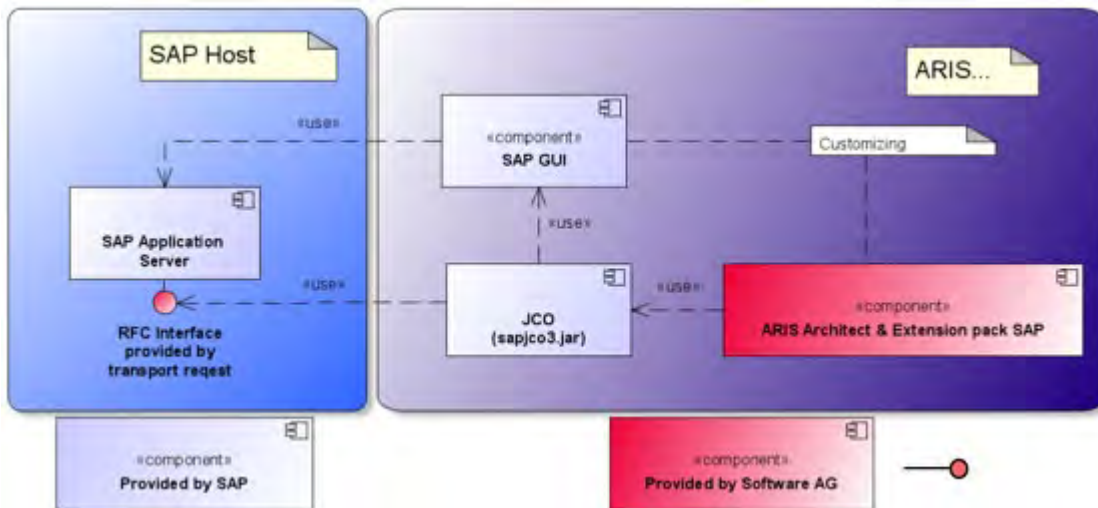

Figure 2: Customizing

The RFC interface to customizing is streamlined and consists only of one function module that enables you to call the view editing executable with the view specified in ARIS as a parameter.

1.2.2 SAP system

Depending on the functions that are to be provided, you must import various transport requests, create users, and assign privileges.

1.2.2.1 SAP transport requests

ARIS requires specific function modules for access to SAP® systems.

SAP® SYNCHRONIZATION

If you use SAP® Solution Manager 7.2, transport requests are no longer required.

To ensure that SAP® synchronization between **ARIS** and **SAP® Solution Manager 7.1** is available, your administrator must import the current transport request into the SAP® system.

You find the transport request in the ARIS installation package (.../Add-ons/Extension_pack_SAP/ABAP/Solution Manager/). The function modules are created in the **/IDS/ARIS_SOLAR** package in the **/IDS/ARIS_SOLAR_001** function group.

The following objects are contained in the transport request.

```
┌─⊟
│   Object list of Request
│   ├─⊟  Comment Entry: Released
│   │
│   │        └─── S04K900473 20121030 115235 DEVELOP1
│   │
│   ├─⊟  Package
│   │
│   │        └─── /IDS/ARIS_SOLAR
│   │
│   ├─⊟  Data Element
│   │
│   │        ├─── /IDS/SOLAR_ATTR_TYPE
│   │        ├─── /IDS/SOLAR_ATTR_VALUE
│   │        ├─── /IDS/SOLAR_ATTR_VALUE_TYPE
│   │        ├─── /IDS/SOLAR_DOCFORMAT
│   │        ├─── /IDS/SOLAR_DOCTYPE
│   │        ├─── /IDS/SOLAR_PRIO_DESCR
│   │        └─── /IDS/SOLAR_TCODE
│   │
│   ├─⊟  Function Group
│   │
│   │        └─── /IDS/ARIS_SOLAR_001
│   │
│   └─⊟  Program
│
│            ├─── /IDS/ARIS_SOLAR_001DCL
│            ├─── /IDS/ARIS_SOLAR_CON01
│            ├─── /IDS/ARIS_SOLAR_CON02
│            ├─── /IDS/ARIS_SOLAR_TYP01
│            ├─── /IDS/SOLAR_GET_NODE_KEYWORDS
│            ├─── /IDS/SOLAR_PROJECTS_CHECK
│            └─── /IDS/SOLAR_TP_TADIR_CREATION
```

Figure 3: Transport request: SAP® synchronization (1)

```
──┬─ 🗁 Table
  │     ──── /IDS/SOLAR_ATTR_LINE
  │     ──── /IDS/SOLAR_COMP_LINE
  │     ──── /IDS/SOLAR_DOCT_TO_STATES_LINE
  │     ──── /IDS/SOLAR_FUNC_VERS_S
  │     ──── /IDS/SOLAR_GLATT_LINE
  │     ──── /IDS/SOLAR_INST_COMPS_S
  │     ──── /IDS/SOLAR_KEYWORD_LINE
  │     ──── /IDS/SOLAR_MAPPING_LINE
  │     ──── /IDS/SOLAR_NODE_S
  │     ──── /IDS/SOLAR_PROD_COMP_S
  │     ──── /IDS/SOLAR_PROD_CONFLICT_S
  │     ──── /IDS/SOLAR_PROD_INSTANCE_S
  │     ──── /IDS/SOLAR_PROJECT_STATUS_S
  │     ──── /IDS/SOLAR_PROJ_DOC
  │     ──── /IDS/SOLAR_PROJ_PERMISSION_S
  │     ──── /IDS/SOLAR_ROLE_LINE
  │     ──── /IDS/SOLAR_SELECT_VALUE_LINE
  │     ──── /IDS/SOLAR_STARTREL_2_S
  │     ──── /IDS/SOLAR_STARTREL_LINE
  │     ──── /IDS/SOLAR_TPROJECTT_EXTD_LINE
  │     ──── /IDS/SOLAR_TPROJECTT_LINE
  │     ──── /IDS/SOLAR_TRANSACT_LINE
  │     ──── /IDS/SOLAR_USED_CONTEXT_LINE
  │     ──── /IDS/SOLAR_VERSIONS_S
  │     ──── /IDS/SOLAR_VERS_CONFLICT_S
  └─ 🗁 Table Type
        ──── /IDS/SOLAR_ATTR_SELECT_VALUES
        ──── /IDS/SOLAR_ATTR_TAB
        ──── /IDS/SOLAR_COMP
        ──── /IDS/SOLAR_COMPS
        ──── /IDS/SOLAR_DOCT_STATES_MAPPING
        ──── /IDS/SOLAR_GLATT_TAB
        ──── /IDS/SOLAR_KEYWORD_T
        ──── /IDS/SOLAR_MAPPING
        ──── /IDS/SOLAR_PROD_COMP_T
        ──── /IDS/SOLAR_PROD_CONFLICT_T
        ──── /IDS/SOLAR_PROJ_DOCS
        ──── /IDS/SOLAR_STARTREL_TAB
        ──── /IDS/SOLAR_TPROJECTT_EXTD_TAB
        ──── /IDS/SOLAR_TPROJECTT_TAB
        ──── /IDS/SOLAR_USED_CONTEXT
        ──── /IDS/SOLAR_VERSIONS_T
        ──── /IDS/SOLAR_VERS_CONFLICT_T
```

Figure 4: Transport request: SAP® synchronization (2)

CUSTOMIZING

To be able to run IMG transactions (customizing transactions) and open customizing views from ARIS, you must import the current transport request into the SAP® system. The transport request is contained in the ARIS installation package under **Add-ons\Extension pack SAP\ABAP\Customizing**. The function module **IDS/VIEW_MAINTENANCE_CALL** is created in the **IDS/ARIS_CUSTOMIZING** function group. This function group is assigned to the **IDS/ARIS_CUSTOMIZING** package.

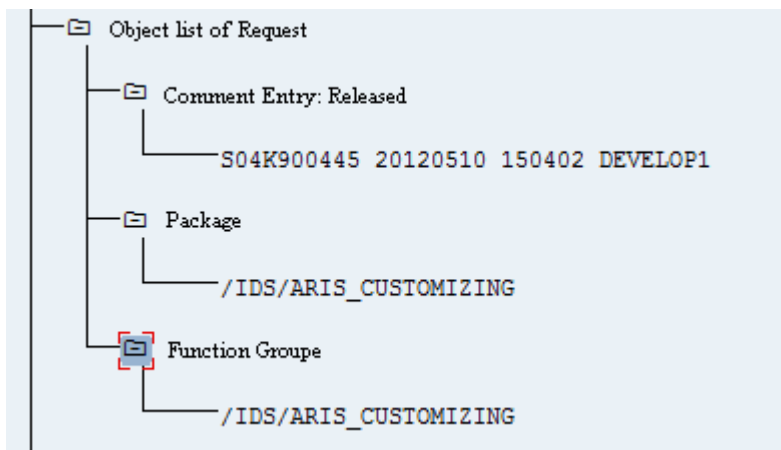The following objects are contained in the transport request.

Figure 5: Transport request: Customizing

1.2.2.2   Requirements and privileges in the SAP system

If you are going to use **ARIS for SAP® Solutions**, additional requirements must be met. For details, see **ARIS for SAP® Solutions** manual and **ARIS Requirements for SAP® Solutions** manual available in the ARIS Download Center (https://aris.softwareag.com/) or on Empower (https://empower.softwareag.com/).

▪ Ensure that the users have been created in the SAP® system and have RFC privileges.

▪ The special SAP ports **sapgw00 3300/tcp** and **sapdp00 3200/tcp** must be enabled in the Windows Services file of the client computer (C:\Windows/ system32/ drivers/ etc/services). In general, these ports are added automatically during SAP GUI installation.

▪ If you use server groups for access (SAP routers), you need to enter the SAP ports manually in consecutive sequence. By default, the syntax for a port number is as follows **3300** plus the **<SAP system number>** will be used. If, for example, the system number is **03**, the port number **3303** must be entered. Entries that have not been entered in consecutive sequence are ignored.

1.2.2.3   Privileges for SAP synchronization

Users must be assigned certain roles in the SAP® system to access this function. This gives the users all the necessary authorizations. You must assign the following roles:

- The predefined role **SAP_SOLAR01_ALL**
- The predefined role **SAP_SMSY_ALL** (read privilege)
- A role to be defined with RFC privileges.

You create the role to be defined using the **PFCG** executable. You assign the authorization objects **S_RFC** and **S_RFCACL** to the role.

VALUES FOR AUTHORIZATION OBJECT S_RFC

The graphic shows all values to be entered.

Select the **Run** activity in the **ACTVT** box.

Find all the names to be entered for authorization object **S_RFC** for the RFC object to be protected in the **RFC_NAME** box. The selected entries **SDIFRUNTIME**, **STFC**, and **IDS/ARIS_SOLAR_001** must be added.

Select the **Function group** type in the **RFC_TYPE** box.

Figure 6: Authorization object 'S_RFC'

VALUES FOR AUTHORIZATION OBJECT S_RFCACL

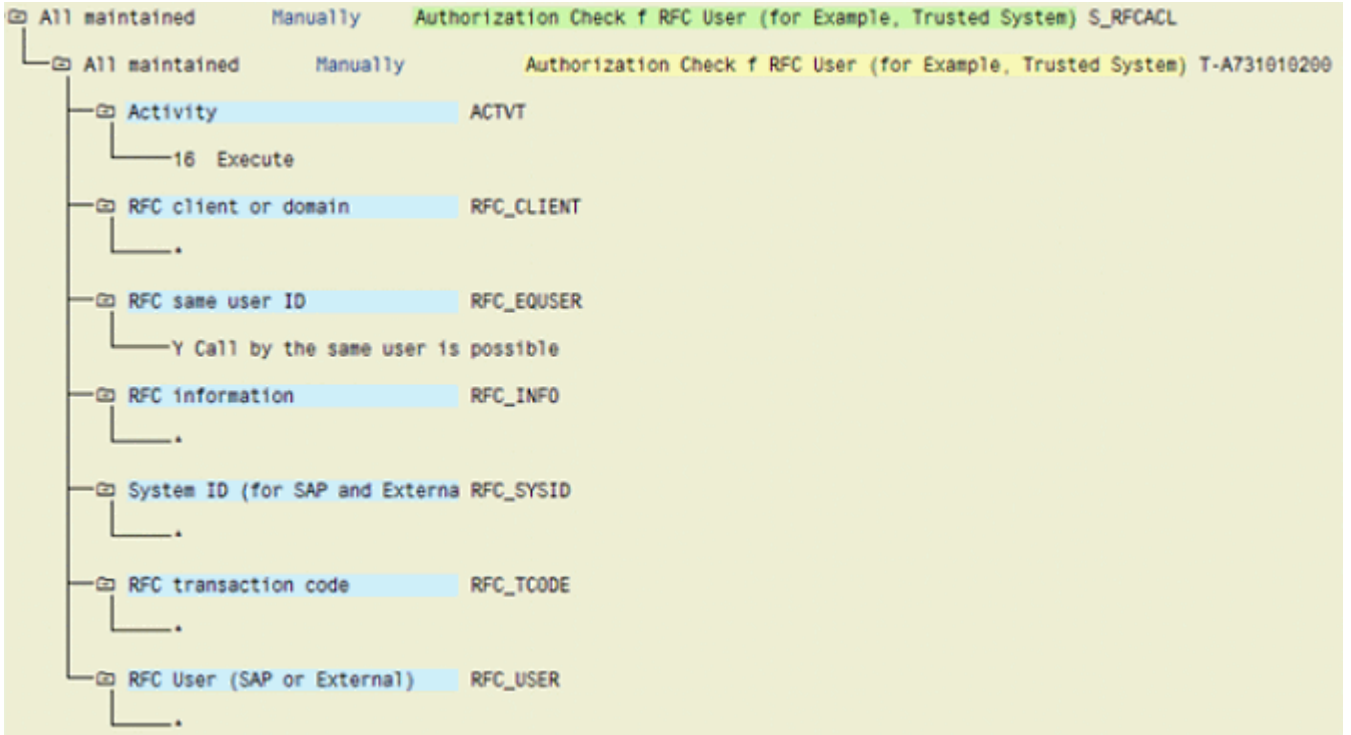The authorization object **S_RFCACL** requires all privileges.

Figure 7: Authorization object 'S_RFCACL'

2 Legal information

2.1 Documentation scope

The information provided describes the settings and features as they were at the time of publishing. Since documentation and software are subject to different production cycles, the description of settings and features may differ from actual settings and features. Information about discrepancies is provided in the Release Notes that accompany the product. Please read the Release Notes and take the information into account when installing, setting up, and using the product.

If you want to install technical and/or business system functions without using the consulting services provided by Software AG, you require extensive knowledge of the system to be installed, its intended purpose, the target systems, and their various dependencies. Due to the number of platforms and interdependent hardware and software configurations, we can describe only specific installations. It is not possible to document all settings and dependencies.

When you combine various technologies, please observe the manufacturers' instructions, particularly announcements concerning releases on their Internet pages. We cannot guarantee proper functioning and installation of approved third-party systems and do not support them. Always follow the instructions provided in the installation manuals of the relevant manufacturers. If you experience difficulties, please contact the relevant manufacturer.

If you need help installing third-party systems, contact your local Software AG sales organization. Please note that this type of manufacturer-specific or customer-specific customization is not covered by the standard Software AG software maintenance agreement and can be performed only on special request and agreement.

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If you have any questions on specific installations that you cannot perform yourself, contact your local Software AG sales organization (https://www.softwareag.com/corporate/company/global/offices/default.html). To get detailed information and support, use our websites.

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You can find the product documentation on our documentation website.

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- Explore our communities.
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- Add product feature requests.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.