SAP S/4 HANA Access Request Integration with SAP Cloud Identity Access Governance

SAP

Content

1 Prerequisites

To implement the solution the following specific purchased license/product are required in order to use this Iflow

- SAP Cloud Identity Access Governance services
- SAP Identity Authentication service
- SAP Identity Provisioning service
- SAP Business Rules Service running on IAG Service
- SAP Cloud Integration Service
- S/4HANA Source Application
- Target Application (on-Premise, cloud)
- SAP Cloud Connector (optional)

Implementation sequence:

- Implement S/4HANA custom Abap code and schedule jobs, as required.
- Implement SAP IAG according to HR Driven Identity Lifecycle Management without SAP SF HR Trigger https://help.sap.com/docs/SAP_CLOUD_IDENTITY_ACCESS_GOVERNANCE -> Integration Scenarios -> HR Driven Identity Lifecycle Management.
- Configure Business Rule for Role Determination via Business Rules API on SAP IAG subaccount.
- Configure SAP IAG Access Request via IAG API
- Configure and deploy custom SAP CPI IFlow to receive HR information and call IAG/Business Rule APIs.

2 Documentation

You can integrate the SAP Cloud Identity Access Governance solution with your S/4HANA HR systems. This enables changes in employee status (HR triggers) in the HR system (S/4 HANA) to initiate access requests. The access request service converts the data to change requests, which are then provisioned to target applications.

- The HR event triggers the creation of an access request in SAP Cloud IAG (Access Request Service)
  Abap Development requirements in section 4.

- SAP IAS Processes (check if new user, create user, read manager).
  API Details: https://api.sap.com/api/IAS_SCIM/resource

- Role mapping is done via Business Rules within SAP Cloud IAG.
  API Details: https://api.sap.com/package/SAPCPBusinessRulesAPIs/rest

- API Orchestrations done via SAP Cloud Integration Suite

- User is provisioned/deleted on the target system/s.

The illustration below shows a high-level process flow.
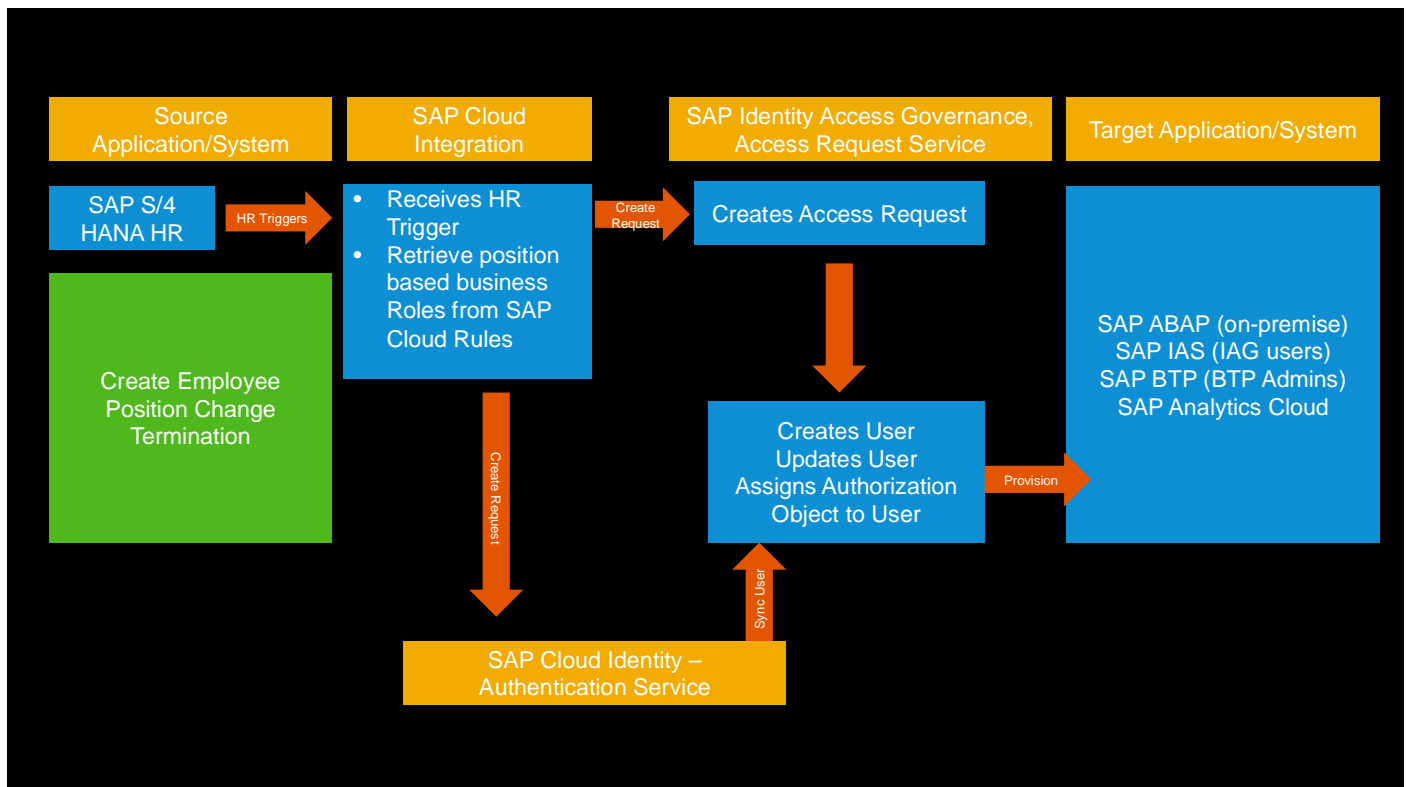
The next illustration below shows the custom integration process flow (iFlow) in detail.

Additional iflow logic:

- If new employee is created (empStatusID = 3), then the new access will be created.
- If an employee changes (empStatusID = 3 and prevPosID != " "), then the old access will be removed and the new access will be created.
- If employee is terminated (empStatusID != 3), then the access will be removed.

Data Mapping:

Within the Abap Proxy structure all fields of RPLDAP_EXTRACT_IDM where exposed to cater for future updates.

For this iFlows version only a subset of those fields got utilized for processing the access request.

Error Handling:

Due to the nature of the integration being synchronous, errors will be reported back within the response to the sender.

The sender will need to analyze the errors and log and reprocess the data accordingly.

3 Configuration steps on SAP Cloud Integration

3.1 Configure S/4HANA SOAP Sender Adapter

Configure the SOAP Sender Adapter via the following details. Security can be setup from S/4HANA either via OAuth or Certificate based authentication against the user role in SAP Cloud Integration.

Note: It's not recommended by SAP to use basic authentication in a production environment.

Example SOAMANAGER Configuration within S/4HANA (Transaction SOAMANAGER). Example shows authentication with OAuth2 but can be changed to any other authentication options.

| Consumer Security | Messaging | Transport Settings | Message Attachments | Identifiable Business Context | Operation Settings | Administrative Information |

Reliable Messaging (Asynchr.)

RM Protocol: SAP RM

Message ID (Synchronous)

Message ID Protocol: Suppress ID Transfer

Metering of Service Calls

Data transfer scope: Enhanced Data Transfer

Transfer protocol: Transfer via SOAP header

| Consumer Security | Messaging | Transport Settings | Message Attachments | Identifiable Business Context | Operation Settings | Administrative Information |

URL Access Path

⦿ URL ◯ URL components

* URL: https://<CPI HOST>/cxf/v1/IAGAccessRequest

Logon Language: Language of User Context

Proxy

Name of Proxy Host:

Port Number of Proxy Host:

User Name for Proxy Access:

Password of Proxy User:

3.2 Configure IAG HTTP Receiver Adapter

One API call to be setup against API:

https://{{IAG Hostname}}/com/sap/grc/iag/service/eaccessrequest.svc/CreateRequestIAGInterface

Configure "Replicate Access Request from S4HANA to SAP IAG"

Sender   Receiver   More

Connection

Receiver:	SAP_IAG
Adapter Type:	HTTP
Address:	{{IAG Hostname}}/com/sap/grc/iag/service/eaccessrequest.svc/CreateRequestIAGInterface
IAG Hostname:	https://IAGHostAddress
Proxy Type:	Internet
Method:	POST
Authentication:	OAuth2 Client Credentials
Credential Name:	<IAG Credential Name>
Timeout (in ms):	60000
Throw Exception On Failure:	✔

Security Material - OAuth2 Client Credentials setup:

Setup: Client ID, Client Secret and Token Service URL from your IAG Service.

3.3 Configure IAS HTTP Receiver Adapter

One API call to be setup against IAS APIs:
https://{{IAS Address}}/scim/Users

One API call to be setup against IAS APIs:
https://{{IAS Address}}/scim/Groups/{{IAS Group UUID}}
Maintain Group UUID, which needs to be defaulted within API call to assign a new user to the group.

Configure "Replicate Access Request from S4HANA to SAP IAG"

| Sender | Receiver | More |

Connection

Receiver:	SAP_IAS
Adapter Type:	HTTP
Address:	{{IAS Address}}/scim/Groups/{{IAS Group UUID}}
IAS Address:	https://IASHostAddress
IAS Group UUID:	IASGroupUUID
Proxy Type:	Internet
Authentication:	Basic
Credential Name:	<IAS Credential Name>
Timeout (in ms):	60000
Throw Exception On Failure:	☑

Security Material - User Credentials setup:

Setup: User Name and Password from your IAS Service.

Edit User Credentials

Name:*	IAS_DEV
Description:	
Type:*	User Credentials
User:*	d7ba4c61-2b4d-da1c-95f4-dmo4aad2ec8g
Password:	••••••••••••••
Repeat Password:	••••••••••••••

Deploy   Cancel

3.4 Configure Business Rules HTTP Receiver Adapter

During the runtime of the integration the new position and previous position ID to retrieve position based business Roles from SAP Cloud Business Rules.

One API call to be setup against Business Rule APIs:

https://{{BR Address}}/rules-service/rest/v2/workingset-rule-services

Configure "Replicate Access Request from S4HANA to SAP IAG"

| Sender | Receiver | More |

Connection

Receiver:	SAP_BusinessRule
Adapter Type:	HTTP
Address:	{{BR Address}}/rules-service/rest/v2/workingset-rule-services
BR Address:	https://BusinessRuleRuntimeHostAddress
Proxy Type:	Internet
Method:	POST
Authentication:	OAuth2 Client Credentials
Credential Name:	\<Business Rule Credential Name\>
Timeout (in ms):	60000
Throw Exception On Failure:	☑

Security Material - OAuth2 Client Credentials setup:

Setup: Client ID, Client Secret and Token Service URL from your Business Rule Service.

Edit OAuth2 Credentials

Name:*	BusinessRule_DEV
Grant Type:	Client Credentials
Description:	
Token Service URL:*	https://\<host\>.authentication.ap10.hana.ondema...
Client ID:*	sb-clone-e40f33e3-fc59-4e9a-aa53-6d6d48499f...
Client Secret:*	••••
Client Authentication:	Send as Request Header
Scope:	
Content Type:	application/json
Resource:	
Audience:	

Deploy   Cancel

3.5 Configure Additional Parameters

The following additional parameters will need to be configured:

- RM Rule Service Id:
- Default Manager IAS UUID: HR Extract for employee will contain manager SU01.ID that will be used to find the PNUMBER of user in IAS, as Access Request API require P-number as manager. If no IAS manager is found then get the top (1) row of user assigned default manager group in IAS via IAS UUID for Default Manager Group.
- HTTP Session Reuse: leave set to onIntegrationFlow
- IAG Source: e.g. HCM
- IAS Host Name: Host Name of the IAS tenant
- Payload Logging: TRUE or FALSE
- Allowed Header: Leave blank.

- Subdomain of IAG: Subscriber tenant ID, which is the tenant Id from where to retrieve the token

Configure "S4HANA to IAG Access Request Integration"

Sender   Receiver   **More**

Type:	All Parameters ⌄
Allowed Header:	
BRM Rule Service Id:	f2873b47a7314f379c501106b877b4f7
Default Manager IAS UUID:	545d0bf4-a365-436d-aca5-bfa9d182bee6
HTTP Session Reuse:	onIntegrationFlow
IAG Source:	HCM
IAS Host Name:	<IAS Host>
Payload Logging TRUE or FALSE:	TRUE
Subdomain of IAG:	<Subdomain URL of IAG>

4 Abap Development S/4HANA Backend system

4.1 Design

SAP IDM use report RPLDAP_EXTRACT_IDM to extract HCM data, which can be used as baseline.

- Create a custom Abap consumer proxy (sync) to extract HCM data in similar manner as RPLDAP_EXTRACT_IDM
- Schedule job to call CPI Iflow, extract information and send to IAG
- Exception handling of synchronous response will need to be performed within Abap Proxy (e.g. log SLG1)
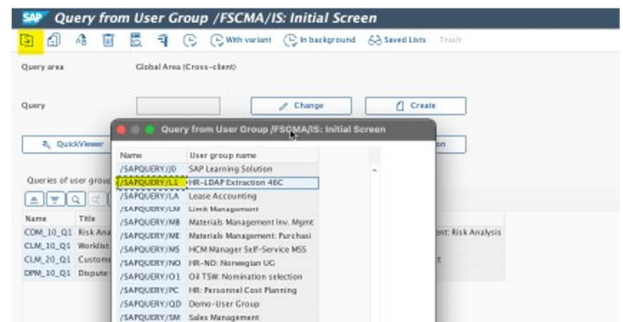
Extract Employee only when:

- A valid POSITION ID
- Alias = SNC NAME; IT0105, 9003
- SNC Name = p:CN=:<UPN>; IT0105, 9004
- USER GROUP = N/A
- USER = IT0105, 0001
- DEPARTMENT = N/A
- EMAIL = IT0105, 0010

RPLDAP_EXTRACT_IDM

Extracted/Processed Employees are marked as X

SQ01 Query : LDAPQUERY604

4.2 Pseudo Code

Technical Details:

Flow Diagram:
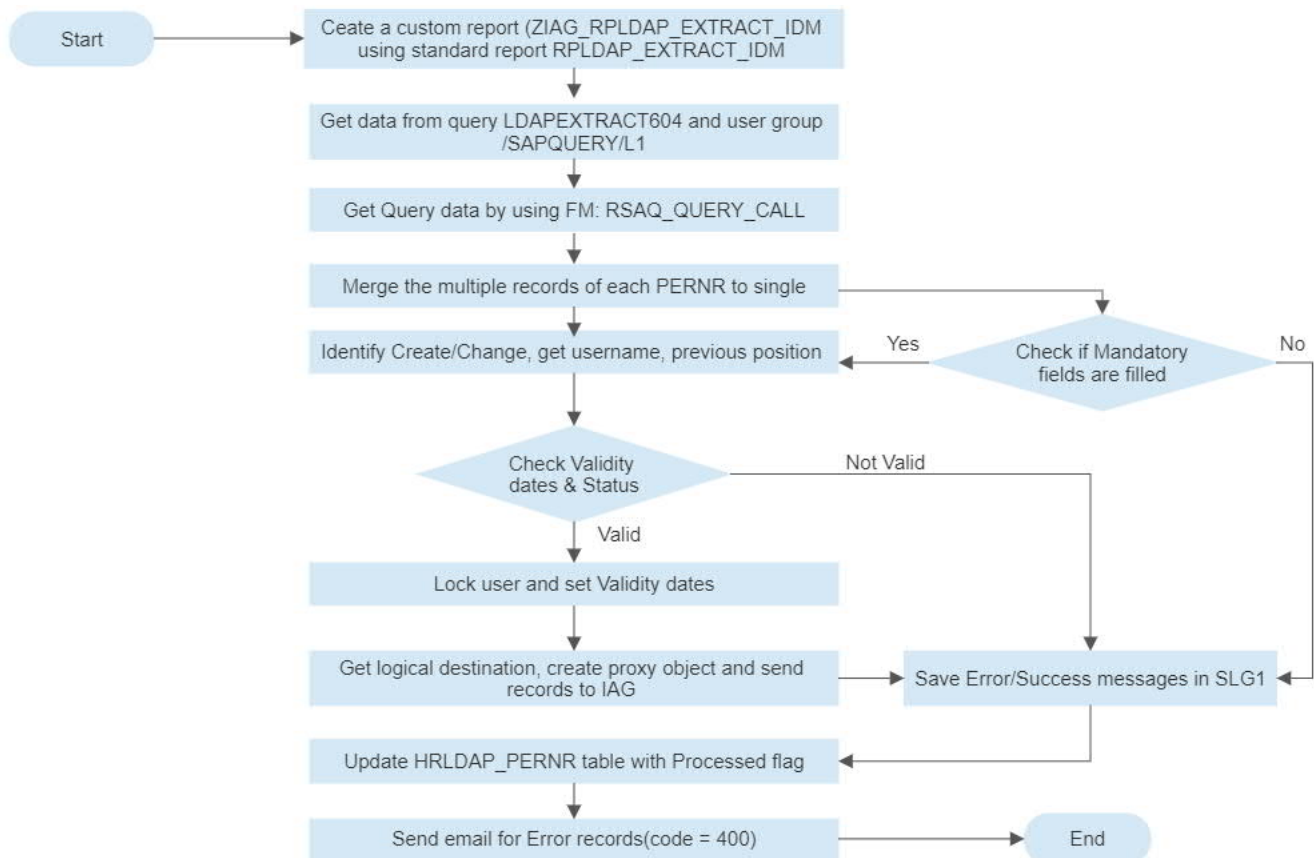
Steps:

- The standard report RPLDAP_EXTRACT_IDM is copied to a custom report (ZIAG_RPLDAP_EXTRACT_IDM).
- The standard report gets data from the query passed at selection screen.
- While executing report ZIAG_RPLDAP_EXTRACT_IDM, query used will be LDAPEXTRACT604 from user group: /SAPQUERY/L1
- Fetch the data by using standard Function module: RSAQ_QUERY_CALL.
- Merge the multiple records of each PERNR into single records taking the latest values of all the columns.
- The columns POS_ID, SNCNAME, UPNNAME, SYS_USER, E_MAIL, LAST_NAME are considered to be mandatory. It is required to check the condition for each PERNR.
- Identify each record whether it is a CREATE/CHANGE scenario. Get data from table HRLDAP_PERNR for all the PERNRs in progress.
- Get USERNAME for each PERNR's MNGT_PERS_NO from PA0105.
- Get the PREVIOUS POSITION ID from HRP1001 of the latest End date except 31.12.9999. For getting all the records UPTO TODAY – filter the records which have Begin Date > System Date.
- Skip the records which are not valid as of today and for which User position or Employment status has not changed
- Remove the Position id if the employee status is 'Withdrawn'
- Lock user and set User status and validity dates till system date.
- Get logical destination from parameter table and create proxy object to send data to IAG for creating access requests.
- Sent data to IAG via proxy and collect success/failure messages.
- The messages will be saved in the SLG1 log in the system with object = 'ZIAG' and Sub-object = 'ZIAG_SUB'.
- Update table 'HRLDAP_PERNR' with flag PROCESSED = X for the successful records.
- Send email for Error records (code = 400: position error) to the Distribution List maintained in the Parameter table.

Execution details:

Sample selection screen:

Sample logging within transaction SLG1:

4.3 WSDL for Abap Consumer Proxy

```xml
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:p1="http://www.sap.com/IAGAccessRequest" xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy" xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" name="IAGAccessReq" targetNamespace="http://www.sap.com/IAGAccessRequest">
    <wsdl:documentation/>
    <wsdl:types>
        <xsd:schema targetNamespace="http://www.sap.com/IAGAccessRequest" xmlns="http://www.sap.com/IAGAccessRequest" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
            <xsd:element name="IAGAccessReq" type="IAGAccessReq"/>
            <xsd:element name="IAGAccessRes" type="IAGAccessRes"/>
            <xsd:complexType name="IAGAccessRes">
                <xsd:sequence>
                    <xsd:element name="status" type="xsd:string">
                        <xsd:annotation>
```

```xml
                    <xsd:documentation>Status of the whole interface</xsd:documentation>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="item" minOccurs="0" maxOccurs="unbounded">
                <xsd:annotation>
                    <xsd:documentation>Status per line item, if returned</xsd:documentation>
                </xsd:annotation>
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="persNo" type="xsd:string"/>
                        <xsd:element name="code" type="xsd:string"/>
                        <xsd:element name="message" type="xsd:string" minOccurs="0"/>
                        <xsd:element name="description" type="xsd:string" minOccurs="0"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="IAGAccessReq">
        <xsd:sequence>
            <xsd:element name="item" maxOccurs="unbounded">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="action" type="xsd:string">
                            <xsd:annotation>
                                <xsd:documentation>create or change</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="persNo" type="xsd:string">
                            <xsd:annotation>
                                <xsd:documentation>Personnel Number</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="centralPerson" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Central Person</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="splitStart" type="xsd:date" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Start Date</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="splitEnd" type="xsd:date" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>End Date</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="lastName" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Last Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="firstName" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>First Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="birthName" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Name at Birth</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="empName" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Formatted Name of Employee or
Applicant</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="TitleID" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Academic title of person ID</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="Title" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Academic title of person</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="formOfAddressKey" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Form-of-Address Key</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="formOfAddress" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Form-of-Address Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="language" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Communication Language</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="posID" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Position ID</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="pos" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Position Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="prevPosID" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Previous Position ID</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="jobID" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Job ID</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="job" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Job Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="orgUnitID" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Organizational Unit ID</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="orgUnit" type="xsd:string" minOccurs="0">
                            <xsd:annotation>
                                <xsd:documentation>Organizational Unit Name</xsd:documentation>
                            </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="eSgrpID" type="xsd:string" minOccurs="0">
```

```xml
            <xsd:annotation>
                        <xsd:documentation>Employee Subgroup ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="eSgrp" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Employee Subgroup Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="workContractID" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Work Contract ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="workContract" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Work Contract Name</xsd:documentation>
            </xsd:annotation>
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            <xsd:annotation>
                        <xsd:documentation>Company Code ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="coCd" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Company Code Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Personnel Area ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="pA" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Personnel Area Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="eEGrpID" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Employee Group ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="eEGrp" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Employee Group Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="pSubareaID" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Personnel Subarea ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Personnel Subarea Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Business Area ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Business Area Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="costCtrID" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Cost Center ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="costCtr" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Cost Center Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Employment Status ID</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>Employment Status Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
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            <xsd:annotation>
                        <xsd:documentation>System User Name</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="eMail" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>E-mail</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="tele" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Tele Area Code + Local Access
Code</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="teleExten" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Tele Extension</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="mobile" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Mobile Number</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="mngtPersNo" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Personnel number of superior (Org.
Management)</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="mngtUser" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Personnel User ID of superior (Org.
Management)</xsd:documentation>
            </xsd:annotation>
</xsd:element>
<xsd:element name="buildingID" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                        <xsd:documentation>Building</xsd:documentation>
```

```xml
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="building" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Building</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="city" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>City</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="cty" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Country/Region</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="sourceSys" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Source System</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="address" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Street and House Number</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="roomNo" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Physical Room Number</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="mngFlag" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Personnel Number is Manager Flag</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="nickName" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Nick Name</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="pegasusID" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>Pegasus ID</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="SNCName" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>SNC Name</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                        <xsd:element name="UPNName" type="xsd:string" minOccurs="0">
                                                                <xsd:annotation>
                                                                        <xsd:documentation>UPN Name</xsd:documentation>
                                                                </xsd:annotation>
                                                        </xsd:element>
                                                </xsd:sequence>
                                        </xsd:complexType>
                                </xsd:element>
                        </xsd:sequence>
                </xsd:complexType>
        </xsd:schema>
</wsdl:types>
<wsdl:message name="IAGAccessReq">
        <wsdl:documentation/>
        <wsdl:part name="IAGAccessReq" element="p1:IAGAccessReq"/>
</wsdl:message>
<wsdl:message name="IAGAccessRes">
        <wsdl:documentation/>
        <wsdl:part name="IAGAccessRes" element="p1:IAGAccessRes"/>
</wsdl:message>
<wsdl:portType name="IAGAccessReq">
        <wsdl:documentation/>
        <wsdl:operation name="IAGAccessReq">
                <wsdl:documentation/>
                <wsp:Policy>
                        <wsp:PolicyReference URI="#OP_IAGAccessReq"/>
                </wsp:Policy>
                <wsdl:input message="p1:IAGAccessReq"/>
                <wsdl:output message="p1:IAGAccessRes"/>
        </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="IAGAccessReqBinding" type="p1:IAGAccessReq">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
        <wsdl:operation name="IAGAccessReq">
                <soap:operation soapAction="http://sap.com/xi/WebService/soap1.1" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
                <wsdl:input>
                        <soap:body use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
                </wsdl:input>
                <wsdl:output>
                        <soap:body use="literal" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"/>
                </wsdl:output>
        </wsdl:operation>
</wsdl:binding>
<wsp:UsingPolicy wsdl:required="true"/>
<wsp:Policy wsu:Id="OP_IAGAccessReq"/>
</wsdl:definitions>
```

4.4 Example Request / Response

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
        <soap:Body>
                <n0:IAGAccessReq xmlns:n0="http://www.sap.com/IAGAccessRequest">
                        <item>
                                <action>CHANGE</action>
                                <persNo>00012389</persNo>
                                <centralPerson>50026319</centralPerson>
                                <splitStart>2022-10-31</splitStart>
                                <splitEnd>9999-12-31</splitEnd>
```

```xml
                              <lastName>Tina</lastName>
                              <firstName>Turner</firstName>
                              <empName> Tina Turner </empName>
                              <formOfAddressKey>1</formOfAddressKey>
                              <formOfAddress>Mr</formOfAddress>
                              <posID>50007014</posID>
                              <pos>Plant Operator</pos>
                              <prevPosID>50011210</prevPosID>
                              <jobID>00000000</jobID>
                              <orgUnitID>50006720</orgUnitID>
                              <orgUnit>Crew</orgUnit>
                              <eSgrpID>A4</eSgrpID>
                              <eSgrp>Wages Annualised</eSgrp>
                              <coCdID>4250</coCdID>
                              <coCd>Coal Limited</coCd>
                              <pAID>1312</pAID>
                              <pA>Coal</pA>
                              <eEGrpID>1</eEGrpID>
                              <eEGrp>Full Time</eEGrp>
                              <pSubareaID>WA01</pSubareaID>
                              <pSubarea>Premier</pSubarea>
                              <costCtrID>0042503100</costCtrID>
                              <costCtr>Ops Management</costCtr>
                              <empStatusID>3</empStatusID>
                              <empStatus>Active</empStatus>
                              <sysUser> TTURNER </sysUser>
                              <eMail>Tina.Turner@music.com </eMail>
                              <mobile>0451 495 099</mobile>
                              <mngtPersNo>00002467</mngtPersNo>
                              <mngtUser>MANAGER1</mngtUser>
                              <sourceSys>XXXCLNT100</sourceSys>
                              <SNCName>Tina.Turner</SNCName>
                              <UPNName>Tina.Turner@music.com</UPNName>
                       </item>
                </n0:IAGAccessReq>
        </soap:Body>
</soap:Envelope>
```

Success:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<n1:IAGAccessRes xsi:schemaLocation="http://www.sap.com/IAGAccessRequest IAGAccessRes.xsd"
xmlns:n1="http://www.sap.com/IAGAccessRequest" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <status>Success</status>
        <item>
                <persNo> TTURNER </persNo>
                <code>200</code>
                <message>Request 4 created succesfully</message>
        </item>
</n1:IAGAccessRes>
```

Item Error:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<n1:IAGAccessRes xsi:schemaLocation="http://www.sap.com/IAGAccessRequest IAGAccessRes.xsd"
xmlns:n1="http://www.sap.com/IAGAccessRequest" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <status>Success</status>
        <item>
                <persNo> TTURNER</persNo>
                <code>400</code>
                <message>Item BR_POS_50007014 does not exist in repository </message>
        </item>
</n1:IAGAccessRes>
```

Integration Error:

```xml
<n1:IAGAccessRes xsi:schemaLocation="http://www.sap.com/IAGAccessRequest IAGAccessRes.xsd"
xmlns:n1="http://www.sap.com/IAGAccessRequest" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <status>Error: <captured exception message></status>
</n1:IAGAccessRes>
```