SAP Content Management - Link between SAP Objects and originals

The original documents can be stored in SAP via different methods as below:

- SAP DMS
- Generic Object Services
- Direct upload as in CRM, PPM
- Business Document Services
- Archivelink

All above methods except archivelink use the concept of LOIO and PHIO class concept to upload the originals in SAP. There are PHIO and LOIO classes linked to each method of document upload except archivelink. SAP Object is linked to LOIO id and original documents are linked to PHIO id. And there is relationship between LOIO and PHIO ids for each method of document upload.

By default for each method of document upload except archivelink, the originals are stored in SAP database table. The default SAP database table is available for each upload method in the table SDOKPHCL against respective PHIO class. These originals can be directed to content servers, if required, using the configuration.

For SAP DMS, we can define the content servers and during originals upload, the respective content server can be selected. For others upload method, the default SAP database option can be changed to content servers via transaction SKPR08 by changing the content category.

Archivelink documents are always uploaded in content server. And archivelink documents are linked to arc_doc_id which are subsequently linked to document originals.

Based on PHIO id, the originals can be retrieved from database table or content server wherever applicable. The originals in database table are available in binary format.

The url of the respective document from the content server can be retrieved using the function module SDOK_PHIO_GET_URL_FOR_GET. For SAP DMS, additionally, the originals can be retrieved through the report DMS_KPRO_READ.

Alternatively, the url as below can be used to retrieve the documents from the content server

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- `<Server_Name>` = Content server (IP address or name of content server)
- `<Port_No>` = Port No. of the server
- `<Version_No>` = Version No fof content server (Transaction OACT)
- `<Content_Rep>` = content category of the server (Transaction OAC0)
- `<PHIO_ID>` = PHIO Id derived for each upload method

SAP DMS

PHIO Class: DMS_PCD1
LOIO Class: DMS_LCD1
Default Content Category: DMS_C1_ST
SAP Database Content Table: DMS_CONT1_CD1
PHIO and LOIO Relationship table: DMS_PH_CD1
SAP Object and LOIO Relationship Table: DMS_DOC2LOIO

Follow the process as below to fetch the originals:
1) Fetch LOIO id for the document using table DMS_DOC2LOIO.
2) Fetch the PHIO id from the table DMS_PH_CD1 corresponding to LOIO id.
3) Get the original from the content server or SAP database table based on PHIO id.

Generic Object Services

PHIO Class: SOFFPHIO
LOIO Class: SOFFLOIO
Default Content Category: SOFFDB
SAP Database Content Table: SOFFCONT1
PHIO and LOIO Relationship table: SOFFPHIO

Follow the process as below to fetch the originals:
1) Fetch INSTID_B id for SAP object using table SRGBTBREL using SAP object id as INSTID_A and TYPEID_A as business object.
2) Use Function module SO_OBJECT_GET_CONTENT to get LOIO id using INSTID_B as input. Use only the external id from INSTID_B as EXT36000000237423 (INSTID_B is FOL31000000000004EXT36000000237423)
3) Fetch the PHIO id from the table SOFFPHIO corresponding to LOIO id.
4) Get the original from the content server or SAP database table based on PHIO Id.

SAP CRM
PHIO Class: CRM_P_ORD
LOIO Class: CRM_L_ORD
Default Content Category: CRMORDER
SAP Database Content Table: CRMORDERCONT,
PHIO and LOIO Relationship table: CRMORDERPHIO

Follow the process as below to fetch the originals
1) Fetch LOIO id for SAP CRM object using table SKWG_BREL based on SAP CRM object GUID as INSTID_A. INSTID_B is the LOIO Id for SAP CRM object.
2) Fetch the PHIO id from the table CRMORDERPHIO corresponding to LOIO id.
3) Get the original from the content server or SAP database table based on PHIO id.

SAP PPM
PHIO Class: CFF_VERS
LOIO Class: CFF_DOC
Default Content Category: CFFCONTENT
SAP Database Content Table: CFF_CONT
PHIO and LOIO Relationship table: CFF_PHIO

Follow the process as below to fetch the originals
1) Fetch LOIO id for SAP PPM object using table SKWG_BREL based on SAP PPM object GUID as INSTID_A. INSTID_B is the LOIO Id for SAP PPM object.
2) Fetch the PHIO id from the table CFF_PHIO corresponding to LOIO id.
3) Get the original from the content server or SAP database table based on PHIO id.

BDS Documents
PHIO Class: All classes which start with BDS_P (like BDS_POC1)
LOIO Class: All classes which start with BDS_L (like BDS_LOC1)
Default Content Category: All categories which start with BDS (like BDS_DB)
Default Content Table: All tables which start with BDS (BDS_CONT1)
PHIO and LOIO Relationship table: All tables which start with BDS (BDS_PHIO)

Follow the process as below to fetch the originals
1) Fetch LOIO id for SAP object using function module BDS_ALL_CONNECTIONS_GET based on SAP object id as object key and class name as SAP business object.
2) Fetch the PHIO id from the table as BDS_PHIO corresponding to LOIO id.
3) Get the original from the content server or SAP database table based on PHIO id.

Archivelink Documents
Follow the process as below to fetch the originals
1) Fetch arc_doc_id for SAP object using function module ARCHIV_GET_CONNECTIONS based on SAP object id as object id and object type as SAP business object.
2) Get the original from the content server based on arc_doc_id.