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This sample chapter discusses how to use SAP ILM to shut down legacy systems with the retention warehouse. After an overview of the foundations and architecture of the retention warehouse, this chapter moves onto the core tasks: replicating legacy data, archiving that data, and transferring it to the retention warehouse system. The chapter closes by covering reporting on a system that has been shut down.



“System Shutdown with the Retention Warehouse”



Contents



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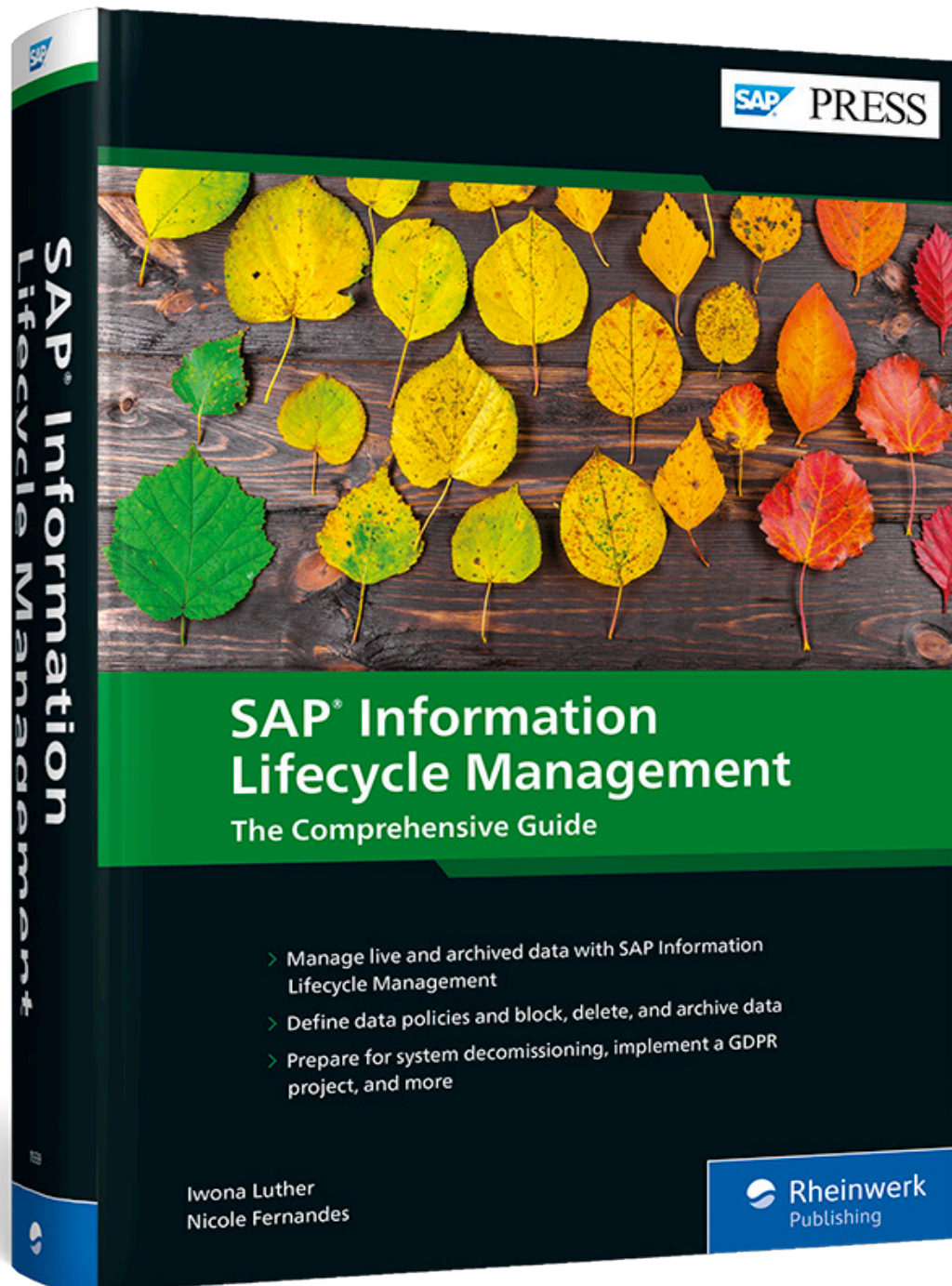
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Chapter 8

System Shutdown with the Retention Warehouse

Now that you're familiar with SAP ILM and the first application scenario, retention management, let's move on to the second SAP ILM scenario, retention warehouse. You'll learn how the retention warehouse scenario can be used to shut down legacy systems and the advantages and challenges that come with it.

This chapter gives you an overview of how you can use SAP ILM to shut down legacy systems. It deals specifically with the second of the two application scenarios that we discussed at the end of Section 1.1 in Chapter 1.

System Shutdown = System Decommissioning

In the literature or documentation, the term *system decommissioning* or *system decommissioning of legacy systems* is sometimes used in conjunction with system shutdown.



A system shutdown project with SAP ILM is usually managed by experts from SAP ILM Consulting because the subject and the related tasks are demanding. In this chapter, we want to give you an overview of the project stages and the SAP ILM retention warehouse functionalities.

8.1 Foundations and Definition

Before we explain the retention warehouse scenario solution, let's first discuss the underlying issues. To determine the challenges that SAP ILM can help you with, ask yourself the following questions:

- What is a legacy system?
- How do legacy systems come into being in your system landscape?
- Why can't you just switch off the legacy systems?
- Why shouldn't you just keep the legacy systems running?

A system must meet the following general criteria to be called a legacy system:

- The system should be read-only.
- If access to the system is required, it should only be granted to a few users. The purpose of the access is related to audits/inspections, legal aspects such as retention obligations, or similar.
- The system isn't connected to any productively used system.
- The system isn't used by any system in productive use.

So how is it that legacy systems occur in your system landscape? The possible reasons are these:

- Acquisitions of systems in mergers and acquisitions
- Upgrades of systems
- Implementations of new solutions

What about the option of simply switching off a legacy system? This option is generally out of the question due to legal aspects such as retention obligations or possible audits/inspections for which you have to keep certain data of the system.

Well, you might be wondering if the system could just continue to operate as before. Actually, this approach is rather shortsighted because, over time, running legacy systems can prove to be very costly for the following reasons:

- Legacy systems may no longer be subject to a maintenance contract.
- Running a legacy system consumes additional or very specific resources (appropriately trained staff who still know the system, etc.).
- Further expenditures may have to be made in connection with risk assessment in the operation of old hardware and software.

The solution to the legacy system problem is provided by the *retention warehouse scenario* of SAP ILM. You can use it to shut down legacy systems in your system landscape, while at the same time retaining data required to meet legal aspects and obligations.

The retention warehouse scenario offers you the following advantages:

- A central repository for all shutdown legacy systems
- Flexible reporting options
- Continuous implementation/compliance with retention obligations



Different Facets of the Retention Warehouse Scenario

This SAP ILM scenario has also been further developed over the years. For example, the first version didn't use an SAP Landscape Transformation Replication Server system (Section 8.2). Our chapter is devoted to the current version of the retention warehouse scenario and its use.

We've already described the business function you require for the retention warehouse scenario—business function ILM (Information Lifecycle Management)—in Chapter 2, Section 2.8. If you also want to use SAP Business Warehouse (SAP BW) for reporting, SAP provides suitable predefined content in business functions ILM_RWC_*

8.2 System Architecture

Let's first address the system architecture in an SAP ILM retention warehouse scenario. We'll look at Figure 8.1 and describe the individual components of this scenario on its basis.

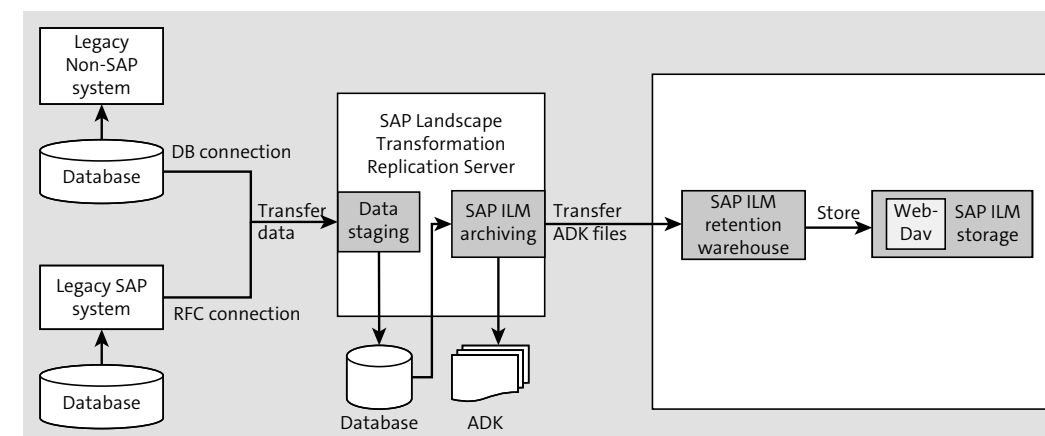


Figure 8.1 Retention Warehouse Scenario: System Architecture

1. In the left half of the screen, you can see the legacy system that is supposed to be shut down.
 - If it's an SAP system, you must install the DMIS (Data Migration Server) add-on. The version you need depends on the version of your legacy system. In this context, SAP Note 1000578 is certainly of interest to you.
 - If it's a non-SAP system, its database and version should be of a standard that is supported by SAP Landscape Transformation Replication Server. For more information, see SAP Note 1768805.
2. The SAP Landscape Transformation Replication Server box in Figure 8.1 represents the system that should also contain the DMIS add-on. The DMIS version should be at least 2011 SP14.
3. The **SAP ILM Retention Warehouse** box represents the retention warehouse system.
4. The box on the far right in Figure 8.1 represents the SAP ILM-enabled storage system (see Chapter 2, Section 2.6).



SAP Landscape Transformation Replication Server

An SAP Landscape Transformation Replication Server system enables the replication of data from one or more source systems to one or more target systems. The source systems can be SAP systems or non-SAP systems.



A New Home for Data from Shutdown Systems

The fact that the *retention warehouse system* is a new system that you have to set up in your system landscape sounds a bit absurd because, on one hand, we're talking about harmonizing your system landscape and *reducing* the number of your systems. But the savings, as you'll see, come with time. You can think of the retention warehouse system as a building where the data to be retained from different shutdown systems moves into separate apartments (see also Figure 2.40 in Chapter 2). The data in the source system (legacy system) remains unchanged; it isn't modified, archived, or deleted. Instead, the required data is copied to the new home—the retention warehouse system.

Let's now look at the connections between the systems just mentioned and the directions that are possible. You can set up the following connections:

1. From SAP Landscape Transformation Replication Server system to the legacy system

If the legacy system is an external system (non-SAP system), you need a database connection from the SAP Landscape Transformation Replication Server system to the legacy system. You can create this in Transaction DBCO (DB Connection Maintenance).

If the legacy system is an SAP system, you need an ABAP Remote Function Call (RFC) connection from the SAP Landscape Transformation Replication Server system to the legacy system.

2. From SAP Landscape Transformation Replication Server system to the database

In the SAP Landscape Transformation Replication Server system, you need another connection to the database. This new connection should point to a new *database schema*. In this way, you achieve better management of the database because you have objects in the primary database (tables, views, etc., in the primary database schema, which is usually called SAPR3), completely isolated from the database objects that you'll create as part of the shutdown project. For example, you can delete the additional database schema at the end of the project.

3. From SAP ILM retention warehouse system to SAP Landscape Transformation Replication Server system

Here you need one RFC connection per SAP Landscape Transformation Replication Server client.

4. From the SAP ILM retention warehouse system to the SAP ILM-enabled storage system

For this, you need an HTTP connection.

After these connections are established, you can move on to the next step—replicating data from the legacy system.

8.3 Replication of Data from the Legacy System

Let's begin with an explanation of the individual steps you take when shutting down a legacy system. We'll first introduce the replication of data from your legacy system.



Which Data from the Legacy System Is Still Needed?

An important question in a system shutdown project is the following: What data do you need to transfer to the SAP ILM retention warehouse system before you shut down the legacy system? Generally speaking, there are two approaches to this:

- All data is transferred because you can't tell 100% what will no longer be needed in the future.
- You invest a good amount of time in an extensive analysis that identifies the (not) required data.

Experience from projects known to us shows that most customers choose the first option.

To begin replicating data from your legacy system, let's take a look at Figure 8.2. The replication (extraction) of data from the legacy system into the SAP Landscape Transformation Replication Server system requires the following two steps:

1. Set up the SAP Landscape Transformation Replication Server configuration for extraction.
2. Replicate (extract) data from the legacy system for the required tables.

These two steps will be described in detail in the following sections.



Replication, Export, Extraction

In the relevant literature, as well as in our book, there are various synonyms for this process: *replication*, *export*, or *extraction*.

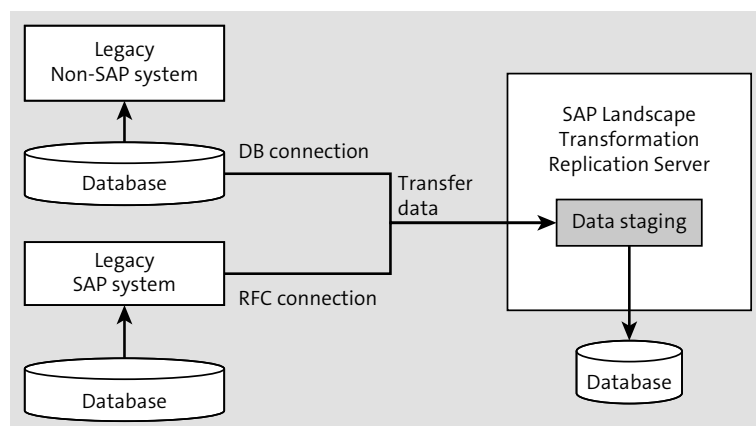


Figure 8.2 SAP ILM Retention Warehouse Scenario: Data Extraction

8.3.1 Configuration for Extraction in an SAP Landscape Transformation Replication Server System

For extraction in the SAP Landscape Transformation Replication Server system, you need to set up the configuration by following these steps:

1. Run Transaction LTRC (LT Replication Server Cockpit).
2. Select **Create Configuration** (see Figure 8.3).



Figure 8.3 SAP LT Replication Server Cockpit Screen: Create Configuration

3. Complete the **Configuration Name** and **Description** fields according to your naming convention (see Figure 8.4), and confirm your entries with **Next**.

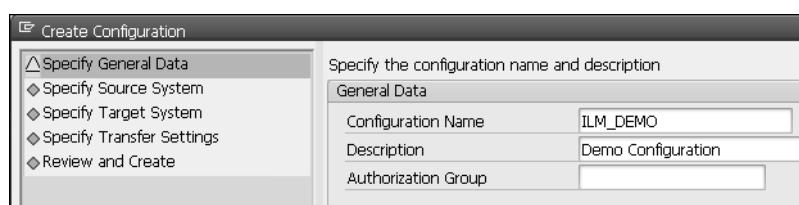


Figure 8.4 Create Configuration: General Data

4. Enter the details required for a connection to the source system (the legacy system) in the **Specify Source System** area.
5. If the legacy system is an SAP system, select the **RFC Connection** radio button, and enter the name of the RFC connection in the **RFC Destination** field (see Figure 8.5).
6. There are also two checkboxes that you should activate appropriately:
 - Select the **Allow Multiple Usage** checkbox if the RFC connection entered can also be used for other SAP Landscape Transformation Replication Server replication connections.
 - If the **Read from Single Client** checkbox is selected, data can only be transferred from one client of the legacy system. Select this checkbox if you plan to shut down data from only one client of the legacy system.

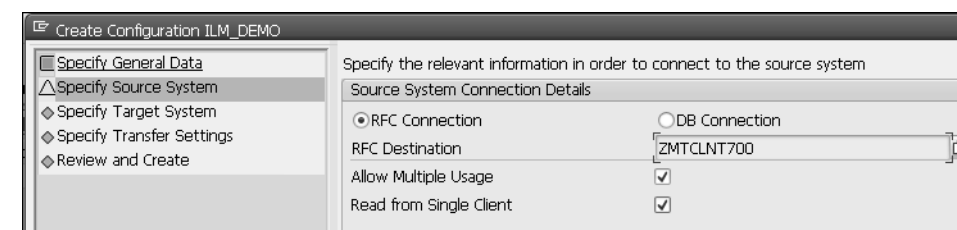


Figure 8.5 Creating a Configuration: Specifying the Source System (RFC Connection)

7. If the legacy system is an external system (non-SAP system), select the **DB Connection** radio button (see Figure 8.6), and make the following entries:
 - From the **Database System** dropdown list, select the type of database of the legacy system.
 - In the **DB Connection** field, enter the database connection name that you set up in Transaction DBCO (DB Connection Maintenance).
 - In the **Schema Name** field, enter the name of the database schema in which the table is located in the legacy system.
8. Confirm your entries with **Next**.

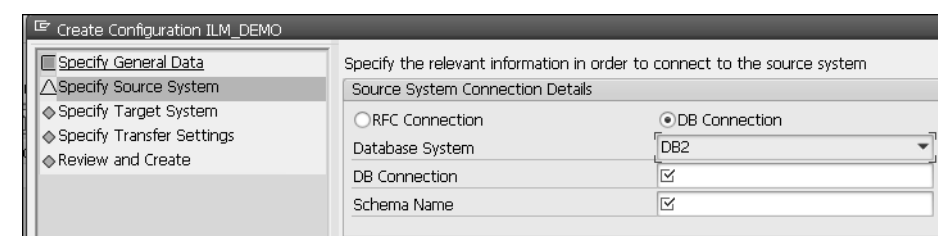


Figure 8.6 Create Configuration: Specify Source System (DB Connection)

9. Next, you can make entries for the target system. To do this, activate the **DB Connection** radio button (see Figure 8.7), and then describe the properties of the target system.

If you intend to use SAP HANA as the secondary database, complete the fields as follows:

- From the **Database System** dropdown list, select the **HANA** entry.
- Enter the name of the user who has permission to connect to the SAP HANA database in the **Administration User Name** field.
- Enter the password of the user in the **Password** field.
- Enter the host name of the database server in the **Host Name** field.
- Enter the instance number of the SAP HANA database server in the **Instance Number** field.
- In the **Logical Port Number** field, enter the logical port number of the SAP HANA database server.
- Select the **Use Encrypted Connection** checkbox. For SAP HANA SP 07 or higher (as a database in the SAP Landscape Transformation Replication Server system) the checkbox *must* be activated. This ensures that the data transfer takes place via an encrypted connection.

Figure 8.7 Creating a Configuration: Specifying the Target System as an SAP System

10. If you intend to use any other database supported by SAP Landscape Transformation Replication Server as the target database, complete the fields as follows (see Figure 8.8):

- From the **Database System** dropdown list, select the type of database of the legacy system.

- In the **DB Connection** field, enter the database connection name that you set up in Transaction DBCO (DB Connection Maintenance). It describes the target database to which the data will be replicated.
- In the **Schema Name** field, enter the name of the database schema in which the table is located in the legacy system.
- For some databases, such as DB6 or Oracle, you also need to specify the *tablespace* that is intended for the database schema.

11. Confirm your entries with **Next**.

Figure 8.8 Creating a Configuration: Specifying the Target System as an External System

12. On the left side of the screen, the **Specify Transfer Settings** section is now highlighted (see Figure 8.9). Make settings here that correspond to the system resources for replication.

Figure 8.9 Creating a Configuration: Settings for Transfer

13. Make sure you enter the value “ILM” in the **Application** field. This ensures that the required tables are generated in the SAP Landscape Transformation Replication Server system (and that the data can be transferred there from the legacy system). Not every application needs this procedure, but SAP ILM does, so it’s important that you enter this value exactly.
14. Confirm your entries with **Next**.
15. On the left side of the screen, the last area will be highlighted next: **Review and Create** (see Figure 8.10). Check the parameters and confirm your entries via the **Create** button.

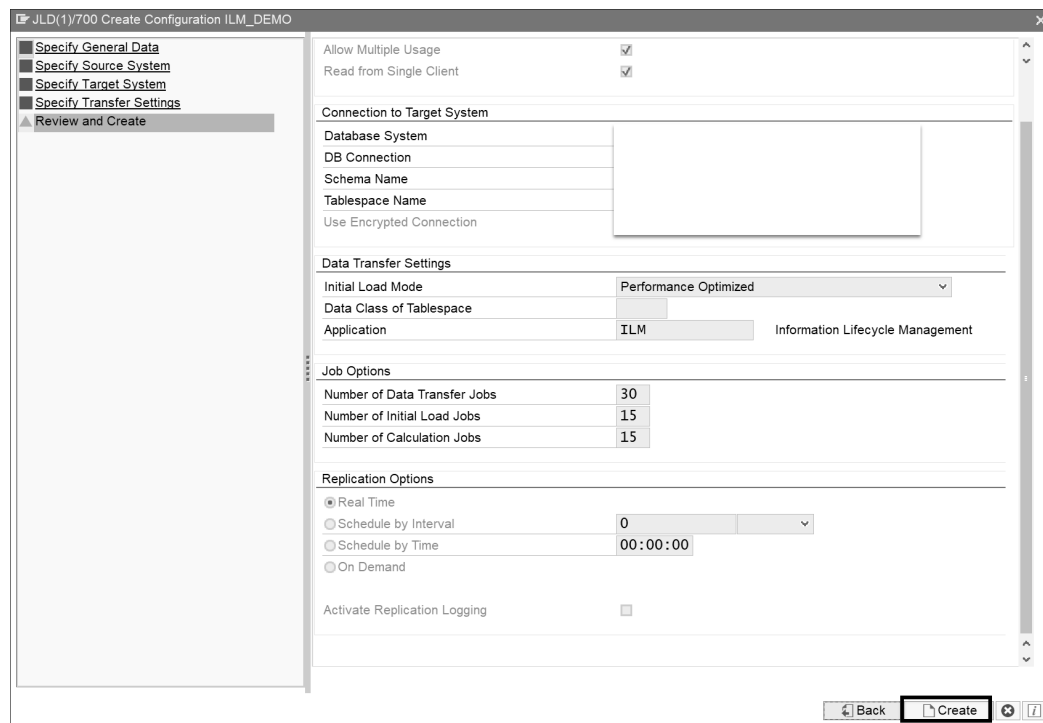


Figure 8.10 Creating a Configuration: Review and Create

The preparations for replication are now complete. The data to be shut down can subsequently be replicated from the source system (legacy system) to the (primary) database of the SAP Landscape Transformation Replication Server system.

8.3.2 Replication of Data from the Legacy System

The next logical step is to transfer the required data from the source system (legacy system) to the SAP Landscape Transformation Replication Server system. This is the replication/extraction mentioned earlier. The SAP Landscape Transformation Replication Server system serves as a kind of collection point (you’ll often find the term *staging area* for this). Follow these steps:

1. Run Transaction LTRC (LT Replication Server Cockpit).
2. Select the configuration you’ve created (in our example, it’s called **ILM_DEMO**), and then select **Display Configuration** (see Figure 8.11).

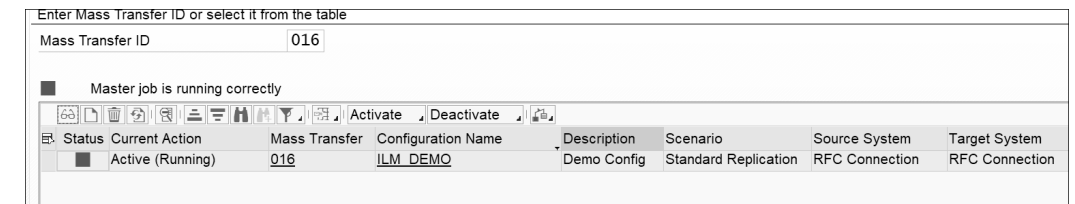


Figure 8.11 Transaction LTRC (LT Replication Server Cockpit)

3. Select the **Table Overview** tab (if it isn’t already displayed), and click the **Data Provisioning** button at the top (see Figure 8.12).

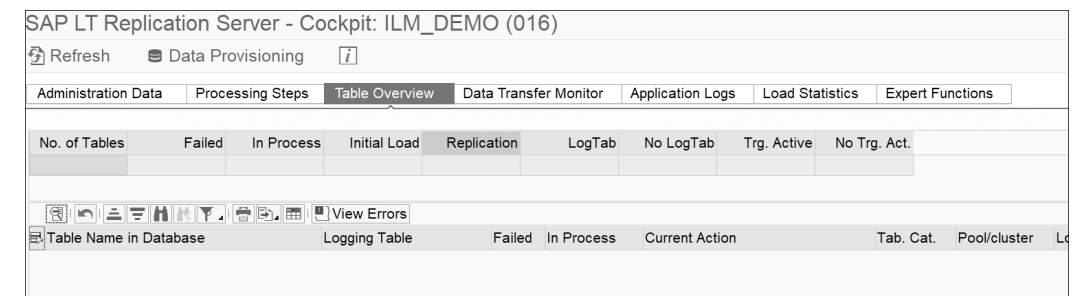


Figure 8.12 Transaction LTRC (Data Provisioning)

4. Enter the name of the table in the **Table Name in Database** field (see Figure 8.13), select the **Start Load** radio button, and then click **Execute** (F8).

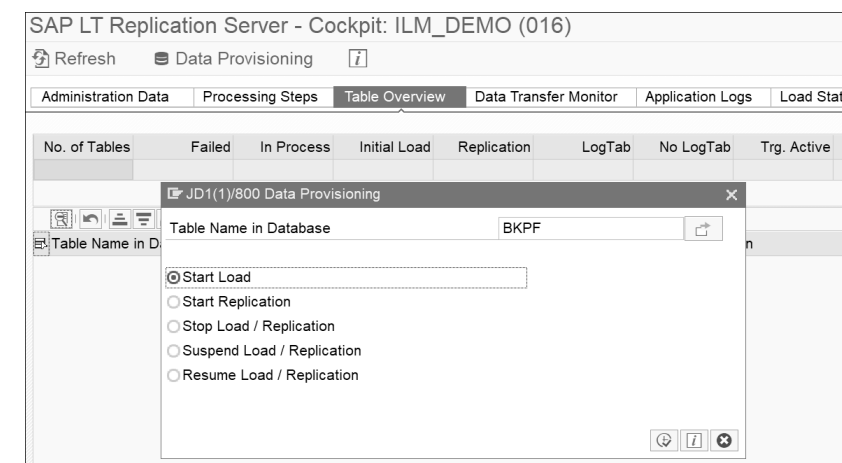


Figure 8.13 Data Provisioning: Start Loading Process



Provide Multiple Tables Simultaneously

You can also enter several table names in the screen displayed in Figure 8.13. However, we recommend that you don't enter more than 5,000 tables at once.

The entered table name appears in the **Table Overview** tab (see Figure 8.14). This confirms that the table exists in the source system (legacy system) and that data retrieval will take place.

No. of Tables	Failed	In Process	Initial Load	Replication	LogTab	No LogTab	Trg. Active	No Trg. Act.
1	1		1				1	1

Table Name in Database	Logging Table	Failed	In Process	Current Action	Tab. Cat.	Pool/cluster	Log. Tab. Created	Trigger Status	Proxy Table	Tab. in Target Sys.	Sy
BKPF		X		Load Table (No Replication)	TRANSP				Table created	Table created	Sy

Figure 8.14 Transaction LTRC: Confirmation of Selected Tables

In the first step, an associated target table is generated in the SAP Landscape Transformation Replication Server system. You can find information about this table by clicking on the link in the **Proxy Table** column in the overview of all tables. A possible result screen is shown in Figure 8.15.

Field	Key	Initi...	Data element	Data Type	Length	Decim...	Short Description
MANDT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		CLNT	3		0Client
BUKRS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		CHAR	4		0Company Code
BELNR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		CHAR	10		0Accounting Document Number
GJAHR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		NUMC	4		0Fiscal Year
BLART	<input type="checkbox"/>	<input type="checkbox"/>		CHAR	2		0Document Type
BLDAT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Document Date in Document
BUDAT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Posting Date in the Document
MONAT	<input type="checkbox"/>	<input type="checkbox"/>		NUMC	2		0Fiscal Period
CPUDT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Day On Which Accounting Document Was Entered
CPUTM	<input type="checkbox"/>	<input type="checkbox"/>		TIMS	6		0Time of Entry
AEDAT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Date of the Last Document Change by Transaction
UPDDT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Date of the Last Document Update
WWERT	<input type="checkbox"/>	<input type="checkbox"/>		DATS	8		0Translation Date
USNAM	<input type="checkbox"/>	<input type="checkbox"/>		CHAR	12		0User name
TCODE	<input type="checkbox"/>	<input type="checkbox"/>		CHAR	20		0Transaction Code
BVORG	<input type="checkbox"/>	<input type="checkbox"/>		CHAR	16		0Number of Cross-Company Code Posting Transaction

Figure 8.15 Transaction LTRC: Confirmation of Table Information

At this point, you certainly want to know the status of the data provisioning (extraction). To do this, select a table in the table overview, and click on the **Data Transfer Monitor** tab (see Figure 8.16).

No. of Tables	Failed	In Process	Created	Not Created	Generated Not Generated	Calculated Not Calculated	Loaded	Not Loaded
1	1		1		1	1	1	

Seq.	Table Name	Tab. cat.	Failed	In Process	Defined	Generated	Calculated	Loaded	Processing Mode	Reading Type	Write Mode
30	BKPF	TRANSP	-	-	X	X	X	X	Single Processing	5 - Sender Queue	Insert

Figure 8.16 Transaction LTRC: Data Transfer Monitor

To enable you to track the status of processing, the following information is provided here:

- **Failed**
This column displays an “X” if one of the steps for data transfer has failed. You can see information about the cause by clicking on the corresponding line and selecting the **View Errors** button above the list.
- **In Process**
This column displays an “X” if the data transfer is in one of the following steps (**Defined**, **Generated**, **Calculated**, etc.).
- **Defined**
This column displays an “X” if the table metadata has been successfully determined and the tables have been successfully created in the SAP Landscape Transformation Replication Server system. The table metadata includes the fields of the tables, their type description, and so on. This metadata is needed, on the one hand, to generate the table and, on the other hand, to generate the programs that transfer the data from the source to the target table.
- **Generated**
This column displays an “X” if runtime replication objects have been created. Function modules and coding are required to replicate the data from the source system to the target system.
- **Calculated**
This column displays an “X” if the access plan has been calculated. Data replication first collects certain metadata and creates an access plan. With its help, the reading and replication process can be optimized. Certain processing operations can be carried out in parallel, if possible.
- **Loaded**
This column displays an “X” if the data was successfully loaded from the source system (legacy system) into the table in the SAP Landscape Transformation Replication Server system.

After the data has been extracted, the **Load Statistics** tab will also provide you with more information (see Figure 8.17). For example, the **Records Inserted** and **Records Read** columns show the corresponding numbers.

Table Name	Portions In Proc.	Finish	Errors	Records Inserted	Records Updated	Records Deleted	Calc. Records	Records Read	Start Time
BKPF	7	7		38.534	0	0	38.534	38.534	14.11.2018 10:47:57

Figure 8.17 Transaction LTRC: Load Statistics

Another way to check the status of data provisioning (extraction) for a table is to take a look at the data provided. You can use the *Data Browser*, for example (see Figure 8.18).

Data Browser: Table /1LT/80000000201: Selection Screen

Number of Entries

Company Code: [] to []

Accounting Document Number: [] to []

Fiscal Year: JD1(1)/800 Display Number of Entries

Width of Out: []

Maximum No: []

Number of entries which meet the selection criteria: 38.534

Close

Figure 8.18 Data Browser for Extracted Tables

8.4 Archiving Data from the Legacy System

The *Legacy Extraction Workbench* is an SAP ILM solution that works in conjunction with SAP Landscape Transformation Replication Server replication. You can use the Legacy Extraction Workbench to archive data that you've replicated from the legacy system to the SAP Landscape Transformation Replication Server system, as described in Section 8.3. The Legacy Extraction Workbench is therefore an SAP ILM solution that you'll use in the SAP Landscape Transformation Replication Server system.



Why Archive Replicated Data in the SAP Landscape Transformation Replication Server System?

One of the core features of the system shutdown concept with SAP ILM (the retention warehouse scenario) is that the shutdown data is available in the retention warehouse system in the format of SAP ILM-enabled archive files. One step in the shutdown scenario must therefore be the archiving of such data. The advantage is that the data is available in compressed form, the retention period is flagged directly on the archive file (if known), and data from different legacy systems is available in separate areas.

If your legacy system is an SAP system, you must have replicated the following tables from the legacy system to the SAP Landscape Transformation Replication Server system to use the Legacy Extraction Workbench:

- DD03L (Table Fields)
- ARCH_OBJ (Objects for Archiving and Reorganization)
- ARCH_DEF (Definition of Archiving Object)
- ARCH_TXT (Description of Archiving Objects)

You also need an RFC connection from the SAP Landscape Transformation Replication Server system to the legacy system.

If your legacy system is a non-SAP system, a functioning database connection between the legacy system and the SAP Landscape Transformation Replication Server system is sufficient at this point. We will provide information on the configuration required for the Legal Extraction Workbench and its use when running an archiving procedure in the following sections.

8.4.1 Configuration

Let's now look at the configuration for the Legacy Extraction Workbench, which you make in Transaction ILM_LTCONFIG (Landscape Transformation System Configuration). It consists of two tasks, which we'll discuss separately in a moment:

1. Storing the mass transfer information
2. Defining the archiving object

Let's begin with storing the mass transfer information by following these steps:

1. In Transaction ILM_LTCONFIG on the left side of the screen, double-click on the **Mass Transfer Information** entry.
2. Switch to change mode, and create a new entry. Make the following entries (see Figure 8.19):
 - Assign a *mass transfer ID* in the **Mass Transfer ID** column. As you can see from the field value help (**F1**), it specifies a unique identifier that is assigned to a mass transfer session between the legacy system and the SAP Landscape Transformation System.
 - In the **Legacy System ID** column of the source system, enter the ID of the source system from which the data is to be read. If the legacy system is a non-SAP system, enter a name consisting of three characters.
 - In the **Legacy System Client** column, specify the client of the source system from which you want to read. If it's a non-SAP system, enter a name consisting of three digits.
 - Select the **IS SAP System** checkbox if the legacy system is an SAP system.

- If you've selected the **Is SAP System** checkbox, specify the RFC connection from the current system to the legacy system in the **RFC Connection: LT to Legacy SAP System** column.
- The **Legacy System Configuration Status** column is an output field and displays the status of the configuration created.

3. Save your entries.

Mass Transfer ID	Legacy System ID	Legacy System Client	Is SAP System	RFC Connection: LT to SAP Legacy System
00A	IP3	400	<input checked="" type="checkbox"/>	IP3CLNT400
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	

Figure 8.19 Transaction ILM_LTCONFIG: Mass Transfer Information



Do I Always Have to Define an Archiving Object?

The table has its own repository of archiving objects, so to speak. Regardless of which archiving objects Transaction SARA (Archive Administration) displays in the SAP Landscape Transformation Replication Server system, you must create all required archiving objects in the Legacy Extraction Workbench (again, if necessary), as we describe here.

We'll now turn to the second task mentioned at the beginning of this section—defining the archiving object—by following these steps:

1. Select the mass transfer ID you've just created, and select **Archiving Object** in the tree on the left.

Archiving Object	Description
SN_FIDOCU	Financial Transactions

Figure 8.20 Transaction ILM_LTCONFIG: Archiving Object

2. Create a new entry for an archiving object in change mode on the right-hand side of the screen. Make the following entries (see Figure 8.20):
 - In the **Archiving Object** column, enter a name of your choice (up to 10 characters) for the new archiving object.

- Enter a suitable description for the archiving object in the **Description** column.
- **Configuration Status of the Object** is an output field and displays the status of the configuration created for the archiving object.

3. Save your entries.

4. Select the archiving object you've just defined, and click on **Structure Definition** in the tree on the left.

Your next task is to enter the tables that can be archived using the archiving object by following these steps (see Figure 8.21):

1. Type a number for the table you want to enter in the **Sequence** column.
2. Enter the name of the superordinate table (parent table) in the **Parent Table** column.
3. In the **Child Table** column, enter the name of the subordinate table. If it's the header table (leading table), enter its name again here.
4. Select the **Is Relationship Single** checkbox if the child table can only have one entry per entry in the parent table. Don't select it if there can be multiple entries.
5. Save your entries.

Sequence	Parent Table	Child Table	Is Relationship Single
1	BKPF	BKPF	<input type="checkbox"/>
2	BKPF	BSEG	<input type="checkbox"/>
			<input type="checkbox"/>

Figure 8.21 Transaction ILM_LTCONFIG: Archiving Object, Structure Definition

Numbers of Tables in the Archive Hierarchy

The number in the **Sequence** column must be unique (a number should therefore only occur exactly once); otherwise, it has no further meaning. We recommend that you assign the numbers for the tables in ascending order. You can determine the increment as you wish. Start with the header table.

The next step is to define the table relationships. Follow these steps (see Figure 8.22):

1. Select the row in which you entered the parent and child tables, and double-click the **Table Relationship** entry in the tree on the left.
2. In the **Position** column, enter a number representing the table relationship. We recommend that you assign the numbers in ascending order; you can determine the increment as you wish.
3. Enter the name of the table field of the superordinate table that is to be used as the foreign key for the table relationships in the **Parent Field** column.

4. In the **Child Field** column, enter the name of the table field of the subordinate table that has a foreign key relationship with the field of the superordinate table.
5. Save your entries.

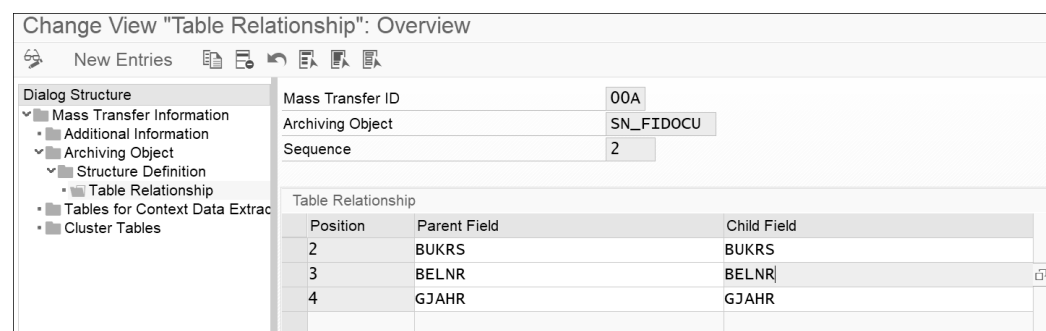


Figure 8.22 Adjusting the Table Relationship



Retrieve Table Relationships

If the legacy system is an SAP system and the table relationships between the parent and child table are part of the table key, you can alternatively click on the **Get Table Relationship** button. The system creates a suggestion for the table relationships, which you can adjust if necessary.

8.4.2 Running an Archiving Procedure via the Legacy Extraction Workbench

Now that the configuration is complete, let's discuss how to run archiving in the SAP Landscape Transformation Replication Server system.



Archive Using Transaction SARA or Legacy Extraction Workbench?

We want to emphasize once again that the Legacy Extraction Workbench, and not Transaction SARA (Archive Administration), is used to archive data that exists in the SAP Landscape Transformation Replication Server system (and was replicated there from the legacy system). This section shows you how to proceed.

Follow these steps:

1. Run Transaction ILM_LTRUN (SAP ILM Landscape Transformation Configuration: Object Execution).
2. Double-click on the left side of the screen on the mass transfer ID created as in the previous section on configuration. In the right half of the screen, you can now see the corresponding archiving objects that were also created during configuration (see Figure 8.23).
3. Select the name of the required archiving object, and click **Create Archiving File**.

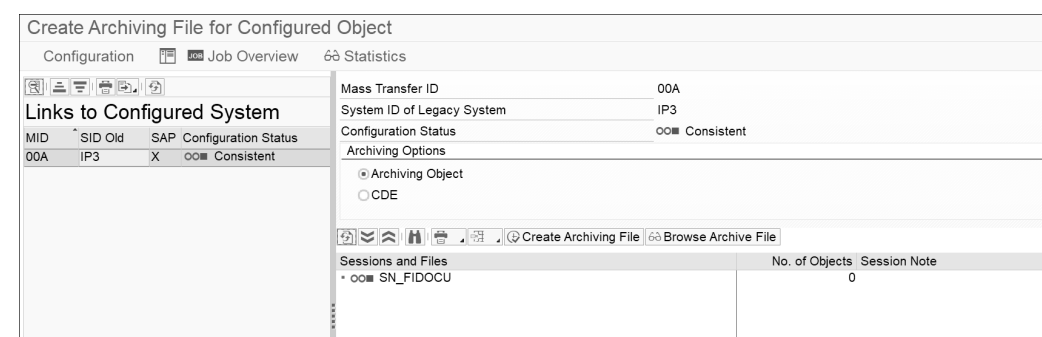


Figure 8.23 Transaction ILM_LTRUN: Generate Archive Write Program



Generating the Archiving Object

If you select the **Create archiving file** function mentioned in step 3 for the first time, the archiving object is generated first. The system informs you of this in steps 4 to 6 described in this section, but if you've already created archive files using this archiving object, these steps aren't required.

4. A popup window appears informing you about the generation of the archive write program. Read it and confirm it with the **Generate** button.
5. You'll now see a popup window with all fields from the parent (leading) table (see Figure 8.24). Select the fields that you want to have as selection parameters in the selection screen of the archive write program. Then confirm the popup window.

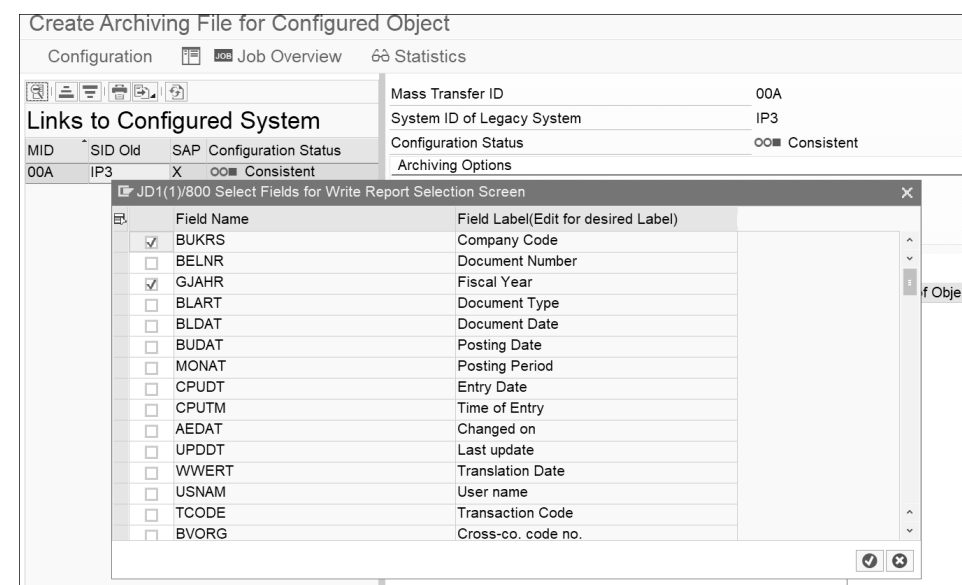


Figure 8.24 Generate Archive Write Program: Determining Fields for Selections

6. You'll then receive a success message with the name of the generated archive write program (e.g., the name could be ZILM_RW_SN_FIDOCU_00A_WRI.) The archiving object is now generated. An example of how the selection screen of the archive write program might look is shown in Figure 8.25.

Figure 8.25 Start Archive Session: Maintain Variant for the Archive Write Program



Mini Archiving Object

The archiving object generated here consists only of the archive write program and some required Customizing settings. For example, it doesn't have a delete or read program; these aren't required for the shutdown concept.



Related SAP ILM Object and Its Settings

A related SAP ILM object hasn't been generated. Your task is therefore to do this in Transaction IRM_CUST (Information Retention Manager Customizing). (For more information, see Chapter 9, Section 9.5. ABAP development skills and a good understanding of the table structure of the associated archiving object are required). You must then make an assignment to at least one audit area and create suitable rules for the retention period (see Chapter 2, Section 2.3 and Section 2.5).

7. Double-click on the name of the (now-generated) archiving object, and click **Create Archiving File** again.
8. A popup window appears in which you can make entries for the variant for the archive write program, the start date, and the spool parameters. To create a variant, click on **Maintain/Edit**. We consider a certain knowledge of how to handle these actions, that

is, knowledge of data archiving, to be a prerequisite for reading this book (for further links with information on related subjects, see Chapter 1, Section 1.1).

Archive Files in the SAP Landscape Transformation Replication Server System

Project experience shows that it's advantageous to create SAP ILM-enabled archive files (i.e., archive files with a calculated retention period) when archiving in the SAP Landscape Transformation Replication Server system because everything is written in a better order right from the beginning. In this case, you have to transport the archiving objects, SAP ILM objects, and audit areas created from the SAP Landscape Transformation Replication Server system to the retention warehouse system. We recommend that you also transport the rules. If the SAP Landscape Transformation Replication Server system is no longer available after some time, you can view the defined rules in the retention warehouse system at any time.

The alternative is to first create the SAP ILM-enabled archive files in the retention warehouse system. In this case, you only need to transport the archiving objects from the SAP Landscape Transformation Replication Server system to the retention warehouse system. (The other objects would not yet exist, so the archive files aren't yet SAP ILM-enabled.) You would first create the other objects mentioned, such as SAP ILM objects and audit areas, in the retention warehouse system.

Then schedule the archive run. You'll receive a confirmation message. You can find information about the job in the job overview as usual (see Figure 8.26). To run it, click on the **Job Overview** button at the top of Transaction ILM_LTRUN (SAP ILM Landscape Transformation Configured Object Execution).

JobName	Spool list	Job documentation	Job CreatedBy	Status
IRWOBJ_SN_FIDOCU_20			I064	Finished
*Summary				

Figure 8.26 Transaction ILM_LTRUN: Job Overview

After the job for the run is complete, you can refresh the screen of Transaction ILM_LTRUN. The **Refresh** button is located on the left-hand side of the screen above the list of available mass transfer IDs. In the right-hand part of the screen, the archiving session that has been executed appears as an entry under the corresponding archiving object (see Figure 8.27).

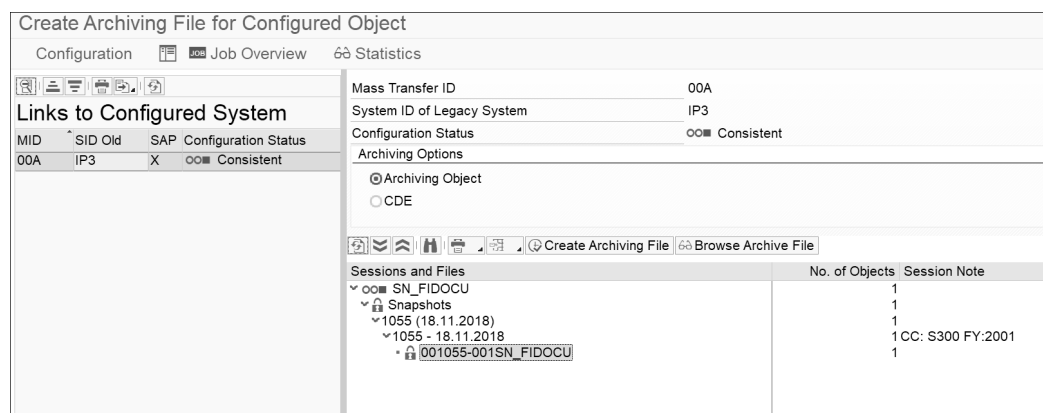


Figure 8.27 Transaction ILM_LTRUN: Sessions for Archiving Object

You can also obtain information on the archive file as usual in Transaction SARA (see Figure 8.28).

Archive File	001055-001SN_FIDOCU
Date	18.11.2018
Time	00:43:21
Number of Objects	1
Size in MB	0,010
Status	Backup Completed
URI	/jd1/800/sn/sn_fidocu/s300/2001/20011231/001055/001055-001sn_fidocu.adk
Expiration Date	31.12.2002
Mand. Destr. Date	31.12.2006
Changeable Settings	
Notes	
File Name	SN_FIDOCU_20181118_004321_0.ARCHIVE
Logical Path	ARCHIVE_GLOBAL_PATH
Physical File Name	E:\usr\sap\JD1\SYS\global\SN_FIDOCU_20181118_004321_0.ARCHI..
	Archive File Is Accessible

Figure 8.28 Transaction SARA: Archive File Details



Archiving Object SN_META

The configuration steps described in this chapter aren't necessary for archiving object SN_META (CDE: Snapshots META - Metadata). This means that you don't need to create the archiving object. However, you must create the corresponding SAP ILM object, make the assignment to at least one audit area, and create suitable rules for the retention period.

The archiving object SN_META appears in Transaction ILM_LTRUN if you select the CDE option on the right-hand side of the screen (see Figure 8.29).

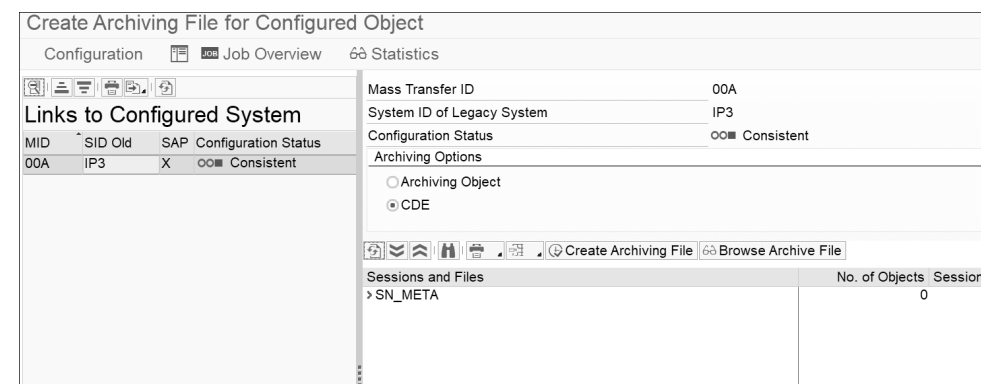


Figure 8.29 Transaction ILM_LTRUN: CDE

You should always execute runs for archiving object SN_META (CDE: Snapshots META, metadata) as the last step. This ensures that the complete and current configuration of the archiving objects is taken into account.

8.5 Transferring Archived Data to the SAP ILM Retention Warehouse System

After the archiving stage in the SAP Landscape Transformation Replication Server system, you must next transfer the archive files to the retention warehouse system, convert them there (if you haven't already done so in the SAP Landscape Transformation Replication Server system, contrary to the preceding recommendation), and store them in the certified SAP ILM store that is connected to the retention warehouse system. You can use Transaction ILM_TRANS_ADMIN (Transfer of Archive Administration) for this purpose. Run this transaction in your retention warehouse system. You can see the initial screen displayed in Figure 8.30.

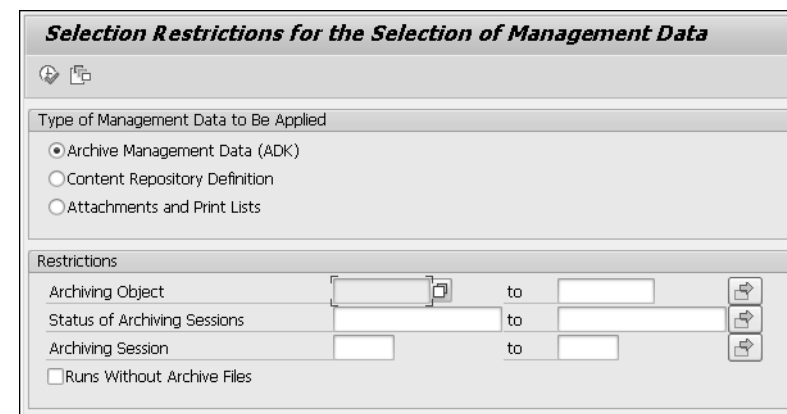


Figure 8.30 Transaction ILM_TRANS_ADMIN: Initial Screen

The **Archive Management Data (ADK)** radio button is already activated as the type in the **Type of Management Data to Be Applied** data group. If you want, you can also make entries in the **Restrictions** data set. Next, select **Execute** (F8).

The following screen shows the three tabs **Transfer Administrative Data**, **Convert Files**, and **Store Files** (see Figure 8.31). They represent the three actions that must take place for each archive file.

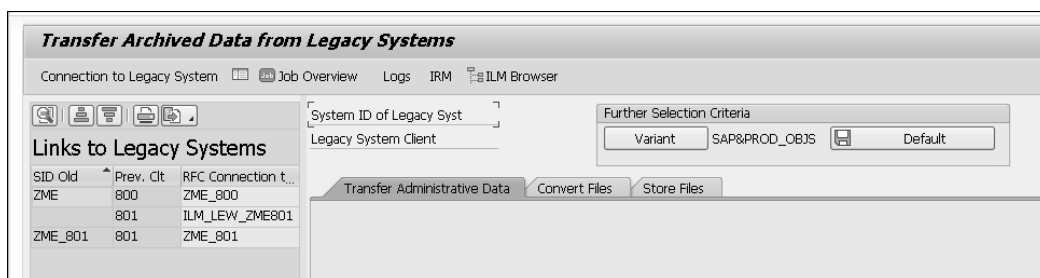


Figure 8.31 Transaction ILM_TRANS_ADMIN: Transfer of Archive Administration (Initial Screen)

Click on the **Connection to Legacy System** button at the top of the screen, and enter the RFC connection to the legacy system (source system) once in the **RFC to Source System** column. Enter the **Legacy System ID** and **Legacy System Client**, as shown in Figure 8.32.

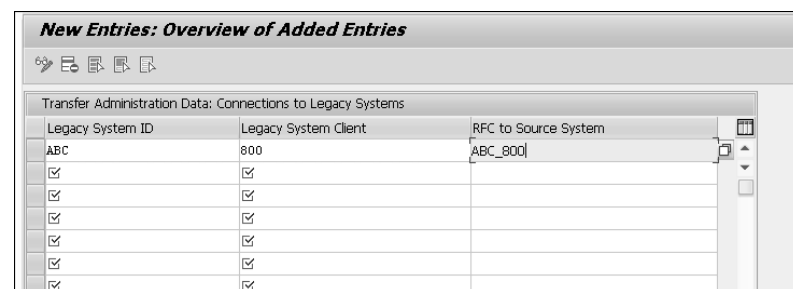


Figure 8.32 Transaction ILM_TRANS_ADMIN: Specifying the RFC Connection to the Legacy System

If the connection is specified, the legacy system is listed on the left of the screen; you can double-click on it. On each of the three tabs just mentioned, you can see archiving objects and their sessions or files that have already undergone the corresponding stage of processing. The following subsections explain the three steps in more detail.



Availability of Archiving Objects

To view an archiving object, you must ensure that the same archiving object (and SAP ILM object) exists in the retention warehouse system. As mentioned previously, we recommend that you transport these objects from the SAP Landscape Transformation Replication Server system to the retention warehouse system.

8.5.1 Transferring Administration Data

Let's start with the **Transfer Administrative Data** tab. In this first step, you must transfer administrative information about the archive files from the SAP Landscape Transformation Replication Server system to the retention warehouse system. This administrative information includes, for example, the session number and the number of allocated archive files. Select an archiving object, and click the **Data Transfer** button.

Transfer Administration Data for Several Sessions

To transfer the administration data for several sessions, you can select several sessions, select the archiving object, or even select several archiving objects.

In the popup window that appears, select the desired processing option in the **Processing Options** data set (see Figure 8.33). Enter the **Start Date** and the **Spool Parameters** as usual. Then schedule the transfer using the **Schedule** button in the popup window. As usual, you can monitor the background processes using the **Job Overview** button.

The transfer of the administration data leads to the creation of a new session (with a new session number) in the retention warehouse system for each session in the SAP Landscape Transformation Replication Server system.

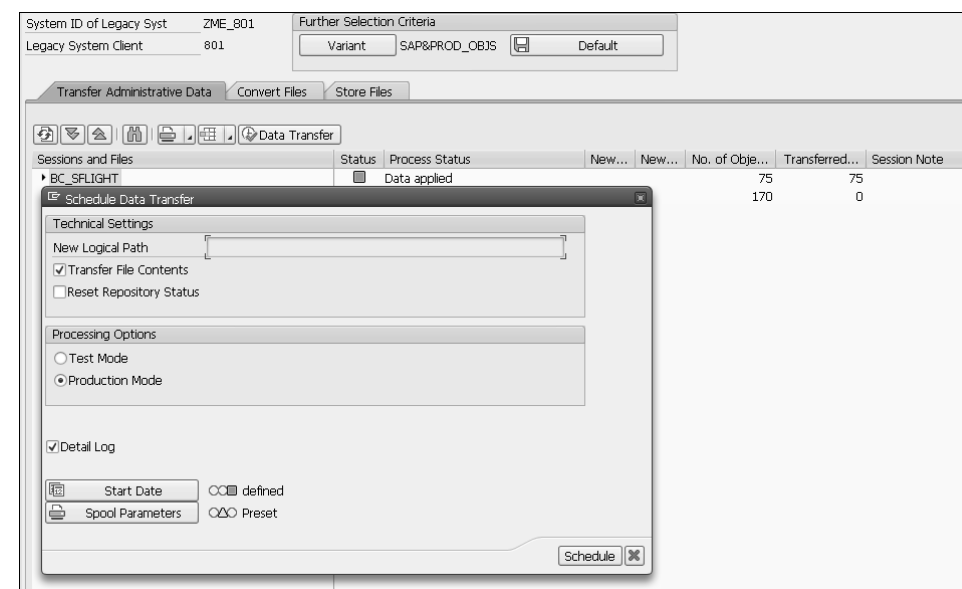


Figure 8.33 Transaction ILM_TRANS_ADMIN: Transfer Administration Data

Transfer File Content or Not?

If you've set up a shared file system between the SAP Landscape Transformation Replication Server and retention warehouse systems during the configuration stage, it's

sufficient to transfer the administration data for the archive files via the RFC connection to the legacy system specified in Transaction ILM_TRANS_ADMIN (Transfer of Archive Administration). This is because if access to the archive files is required in the next step (file conversion), this can be carried out using the shared file system.

However, if this isn't possible, activate the **Transfer File Contents** checkbox. In this case, the content of the archive files in the source system is also read and copied to the target system via RFC, in addition to the administration data.

8.5.2 Converting Files

The next or the second step is the *file conversion*. Here, the SAP ILM retention rules are determined for the data in the archive file. You can find the basics on this subject in Chapter 2, Section 2.6.6.



SAP ILM-Enabled Archive Files?

If the archive files that you transfer to the retention warehouse system are already SAP ILM-enabled (sorted), the file conversion step isn't necessary. These files are already displayed as converted. Project experience has shown that it's advantageous to do this already in the SAP Landscape Transformation Replication Server system.

Select the **Convert Files** tab, select an archiving session, and then click the **File Conversion** button. In the popup window that appears next, select the desired processing option in the **Processing Options** data set and the desired scope of log information (**Detail Log** and **Log Output**), as shown in Figure 8.34. Under **Technical Settings**, the **With Conversion** checkbox must be activated.

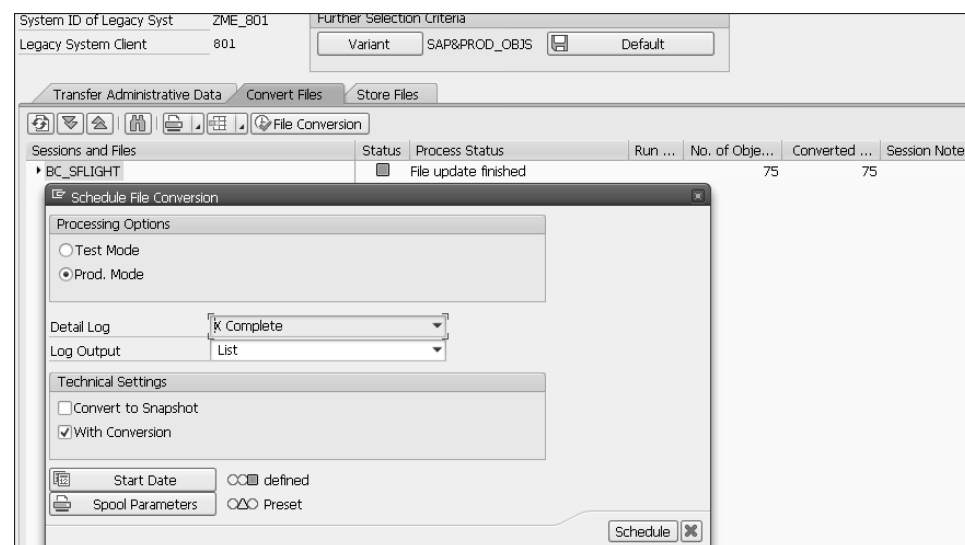


Figure 8.34 Transaction ILM_TRANS_ADMIN: Convert Files

Procedure for Archiving Object SN_META

The archiving object SN_META (CDE: Snapshots META, Metadata) is a special case in which the **With Conversion** checkbox does *not* have to be activated. Instead, you must select the **Convert to Snapshot** checkbox.

Enter the **Start Date** and **Spool Parameters** as you did before, and then schedule the conversion using the **Schedule** button in the popup window. Here, too, you can monitor the background processes using the **Job Overview** button.

8.5.3 Storing Files

The last or third step is the *file storage* where the archive file is stored here in the SAP ILM-enabled storage. The retention rule, which also provides the information about the retention period, will determine the SAP ILM-enabled storage used for this. This step must be carried out for all archive files that contain data from the legacy system and that are to be stored in the retention warehouse system.

Automatic Storage after Conversion

If you use Transaction ILM_TRANS_ADMIN (Transfer of Archive Administration), you must always store the archive files as described in this section. Automatic storage after the conversion stage isn't possible. (Related settings in the technical settings of archiving object-specific Customizing [Transaction SARA]—that is, the **Start Automatically** checkbox in the **File Archiving in Storage System** group—aren't taken into account here.)

Select the **Store Files** tab, select an archiving session, and click the **File Archiving** button. In the popup window that appears, enter the **Start Date** and **Spool Parameters** as usual (see Figure 8.35).

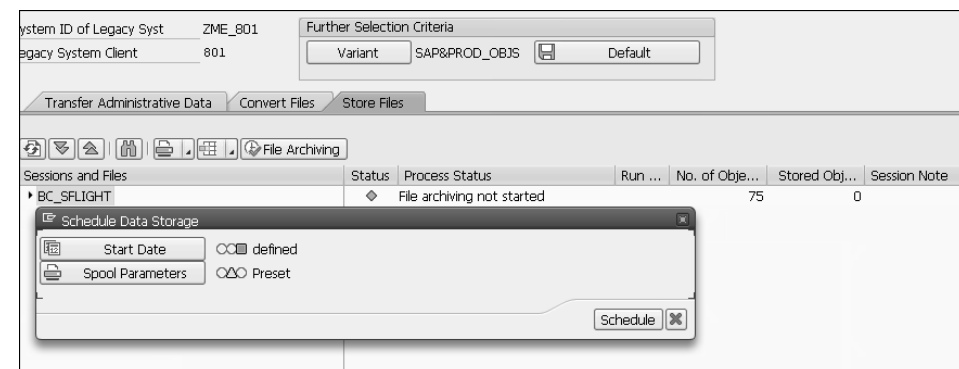


Figure 8.35 Transaction ILM_TRANS_ADMIN: Storing Files

Then schedule the implementation using the **Schedule** button in the popup window. As usual, you can monitor the background processes using the **Job Overview** button.

After you've carried out all the steps described in this section, the data to be shut down has arrived in its new home, the SAP ILM retention warehouse system. The associated retention periods are also known to the system. Now we can discuss the reporting of this data.

8.6 Reporting in the SAP ILM Retention Warehouse System

Finally, we'll deal with the subject of reports that you can carry out on shutdown data. At the beginning of this chapter, we discussed scenarios in which this may be necessary, together with the question of why the data should be transferred to the retention warehouse system at all (Section 8.1).

We'll now look at the reporting functions and their benefits in more detail. First, you'll learn how a report can be executed in a shutdown system, as compared to in a productive system. Second, we'll introduce the reporting tools that are available to carry out reporting in a shutdown system, which is followed by a detailed example of how to use local reporting. Finally, we'll provide you with some insights in accelerated reporting and in the application of SAP BusinessObjects Business Intelligence (BI) to optimize your reporting.

8.6.1 Reporting Data and Process Flow

Table 8.1 shows you the differences in reporting data in productive systems compared to reporting data from shutdown systems.

Aspects	Productive System	SAP ILM Retention Warehouse System
Reporting reason and necessities	Productive use of data	Retention warehouse-specific reasons, such as audits; reporting must be tailored for such reasons.
User	Many different users with different roles	Limited set of users; users with access rights to data from shutdown systems.
Data access pattern	Versatile: access to individual documents as well as reporting on a large amount of data	Access mainly to a large amount of data and using specific criteria such as fiscal year or company code.

Table 8.1 Comparison Reporting in the Productive System and in the Retention Warehouse System

Aspects	Productive System	SAP ILM Retention Warehouse System
Preparations for data access	No special preparations necessary because the data is kept in the database or archive (if necessary, suitable Archive Information System [AS] info structures)	Data preparation is necessary (in particular, specifying which data are to be reported). These are described in this section.
Output	Direct output in the allocated transactions	Mostly a download in files that are later reported elsewhere.
Data format	Very flexible	Flexible, yet you usually know in advance which fields of which tables are required.

Table 8.1 Comparison Reporting in the Productive System and in the Retention Warehouse System (Cont.)

As you know, the location of structured data in the retention warehouse system is the SAP ILM-enabled storage. This is where the archive files (ADK files) are located. They contain the data from the legacy system that you want to shut down. Certain preparations are necessary to access this data in the SAP ILM retention warehouse system. We'll describe these preparations in this section.

Determine how many *audit areas* you need and which SAP ILM objects should be assigned to them. This decision is significantly influenced by your reporting requirements for audits, inspections, and so on (refer to Table 8.1). You can gain the basic knowledge about audit areas in Chapter 2, Section 2.3.

In this context, we're now introducing a new term: *SAP ILM audit package template*. If you were to perform a report based on an audit area, this would define which SAP ILM objects may be considered (i.e., the assigned ones). In the next step, this would also determine which tables can be evaluated, that is, those that belong to the scope of the archiving object that is assigned to an SAP ILM object. At this point, you may want to make only certain tables or even only certain table fields available for an audit, for example. An audit package template serves this exact purpose. You can use it to define not only tables and table fields but also views that you want to use in reports. You can use Transaction ILMAPT (Audit Package Template Processing) to work with audit package templates (see Figure 8.36).

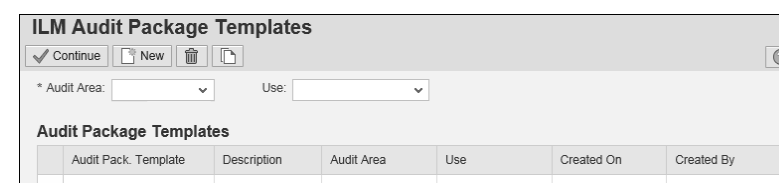


Figure 8.36 Transaction ILMAPT: Processing of Audit Package Templates

The next logical step is to determine the archive files you want to evaluate using a particular audit package template. The selection of suitable archive files reflects the legacy system from which you want to analyze data for specific organizational units and/or fiscal years. This is the purpose of the SAP ILM audit package. In other words, an audit package is a concrete instance of an audit package template. You can use Transaction IWPO1 (Audit Package Handling) to work with audit packages (see Figure 8.37).

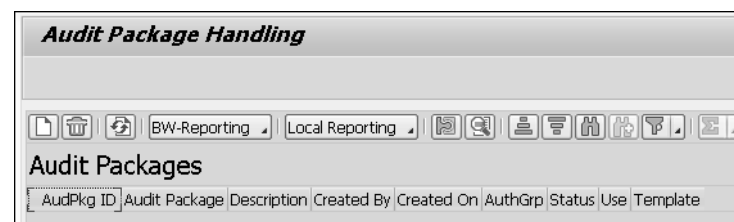


Figure 8.37 Transaction IWPO1 (Audit Package Handling)

Figure 8.38 shows you the entire process for this. You begin with the definition of the audit areas. On the basis of these, you create the required audit package templates. These serve as templates to create audit packages and other filter criteria with the required data for each legacy system. At this point, this data is read from the relevant archive files. Reporting can now begin on the required data. At the end, when the data is no longer required (e.g., when the audit is complete), you delete the audit package. As at the beginning of this process, the data is now only available in the shape of archive files.

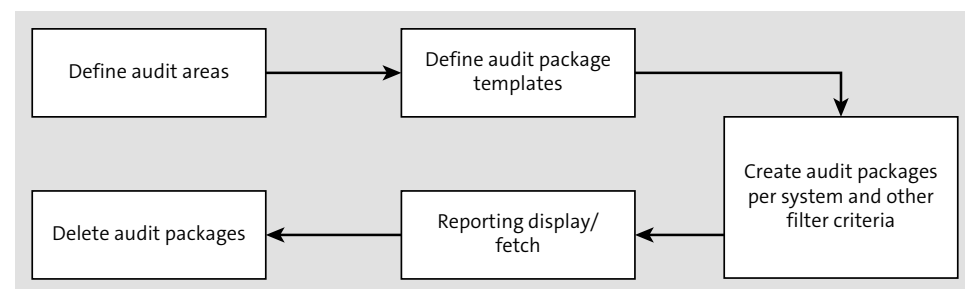


Figure 8.38 SAP ILM Retention Warehouse Reporting: Process Flow

8.6.2 Reporting Tools

Let's now look at the tools you can use to report on the shutdown data in an SAP ILM retention warehouse system:

■ Local reporting

Local reporting (Section 8.6.3) is a generic reporting tool that SAP ILM provides in the retention warehouse system. Local reporting is similar to the Data Browser (Transaction SE16). At the level of table names and field names, you can restrict which data

will be displayed. An export function allows you to export the data to Microsoft Excel. Another function is the download of large amounts of data in a background job.

Local reporting aims to produce ad hoc reports and simple reports. This refers to all reports where selection using tables and fields meets the requirements. Local reporting also allows you to define views to map join relationships between tables from the legacy system.

■ Accelerated reporting

The accelerated reporting variant accelerates reporting on shutdown data and enables the use of SAP BusinessObjects BI tools. Tools that can connect to ABAP tables in the SAP system are suitable.

8.6.3 Reporting Example with Local Reporting

We'll now describe the possible procedure for local reporting using an example scenario. To do this, we'll start from the following requirement: Deliveries, financial accounting documents, and billing documents from a legacy system with the ID BB2 are supposed to be reported on in the retention warehouse system. In detail, the documents from sales organization SOC and fiscal year 1999 are to be used for reporting. Access should only be granted to special tables and their fields. The corresponding list is available to you.

Your first task is to define the required audit area and assign the required SAP ILM objects in it. Because only certain tables should be available for reporting, you can store these in the definition of your audit area.

Restriction to Tables and/or Table Names

The restriction to tables and/or table names in the audit area is recommended if it applies to all reports based on this audit area. We'll show you another option for this in this section. In other words, for the audit area, select the tables and/or table names that represent the maximum possible number of accesses for the respective audit area. Don't select fields that you'll never need.

You use a function that is available specifically for this purpose, in the context of the SAP ILM retention warehouse scenario (for this reason, we didn't describe it in Chapter 2, Section 2.3). Select the corresponding SAP ILM object, and click on the **Select Tables and Fields** button (see Figure 8.39).

In the **Selection** column on the right, select the tables required for the report (see Figure 8.40).

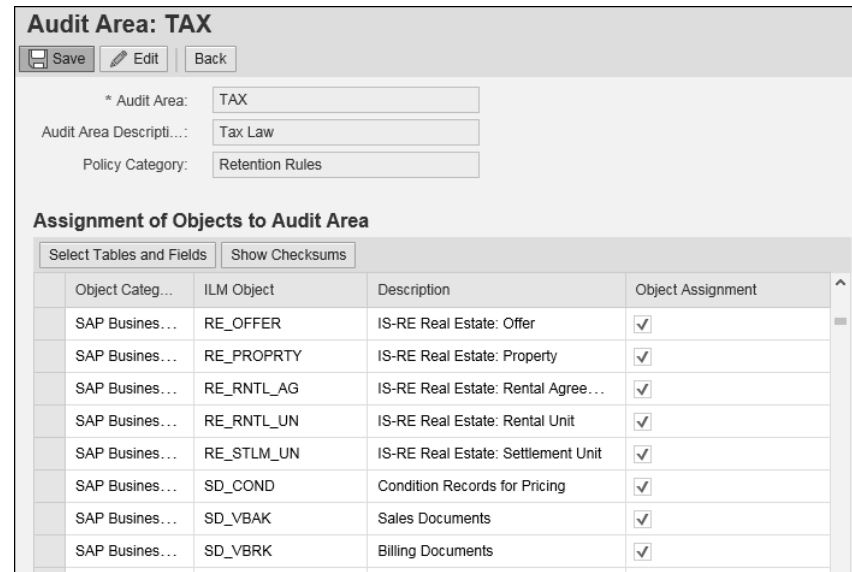


Figure 8.39 Transaction ILMARA: Selecting Tables and Fields for an SAP ILM Object (1)

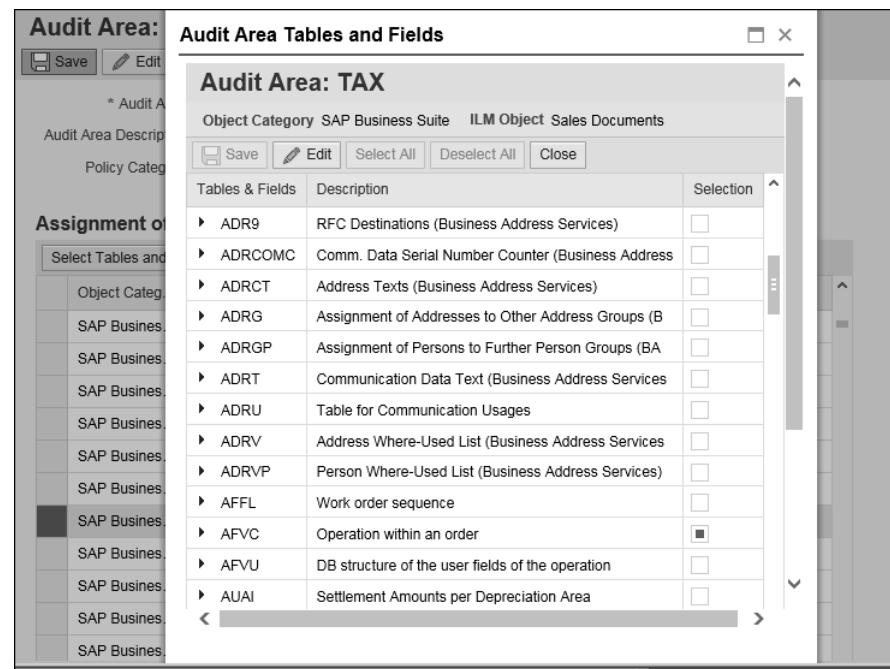


Figure 8.40 Transaction ILMARA: Selecting Tables and Fields for an SAP ILM Object (2)

Next, run Transaction ILMAPT (Audit Package Template Processing), select the required audit area, and click on the **New** button (see Figure 8.41). A popup window opens in

which you make the required entries (the figure shows an example of local reporting). Confirm your entries with **OK**.

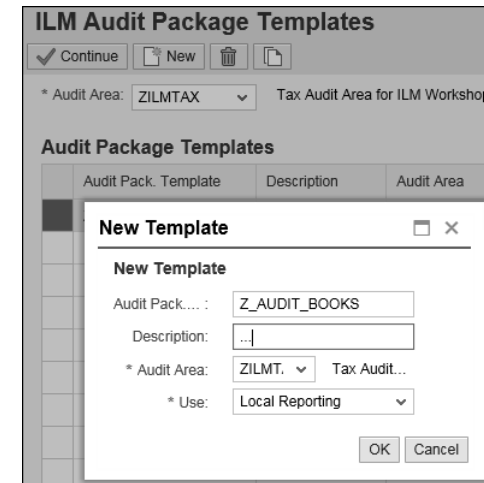


Figure 8.41 Transaction ILMAPT: Creating an Audit Package Template

As shown in Figure 8.42, you can further restrict the number of tables and fields already defined in the audit area (to meet the specific requirements of the report you're preparing). Click **Save**, and enter a transport request that you've already created.

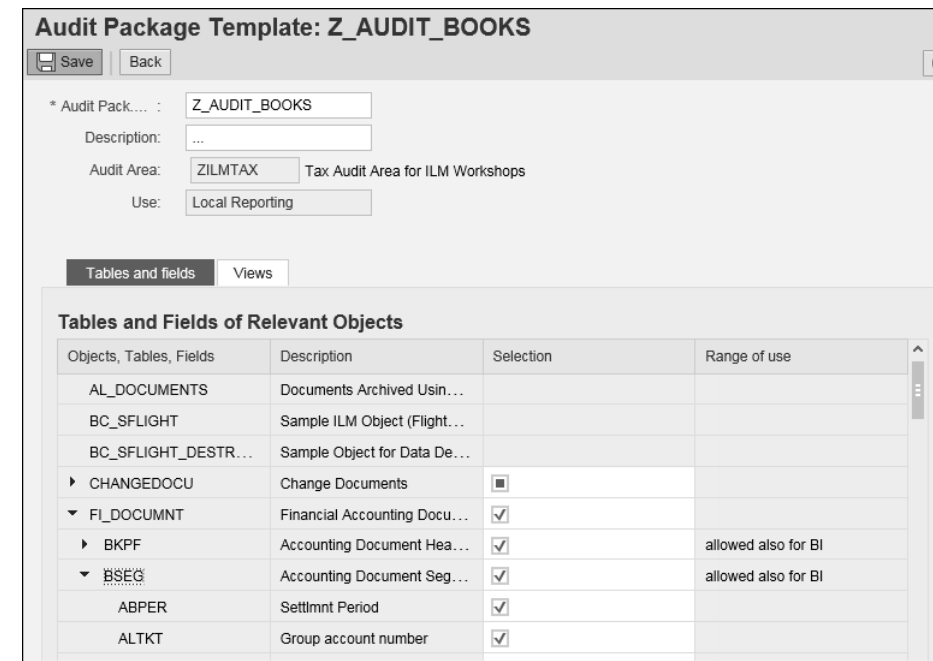


Figure 8.42 Transaction ILMAPT: Creating an Audit Package Template, Selection of Tables and Fields



Reusing Audit Package Templates

You can of course use the audit package template more than once if there are repeated reporting requirements that it describes appropriately.

The next step is to access the corresponding archive files and read the required data. Before we get to this, we recommend that you activate the *optimized retention warehouse* in IMG now. This has the effect that when data is loaded from archive files, a Data Dictionary (DDIC) table is created for each table that is read from the archive. The data for which you want to run reporting is temporarily stored there, which leads to better performance (for more information, Section 8.6.4).

Run Transaction SPRO (Customizing – Edit Project), select **SAP Reference IMG**, and then follow the path **SAP NetWeaver • Application Server • Basic Services • Information Lifecycle Management • Retention Warehouse • Generic Settings • Enable Optimized Retention Warehouse** (see Figure 8.43). Select the **Enable Optimized RW** checkbox shown in Figure 8.44.

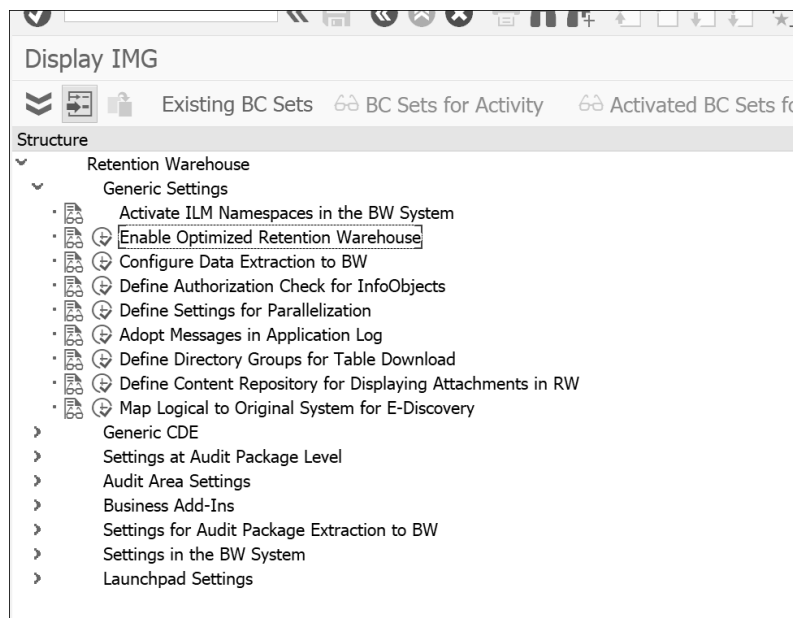


Figure 8.43 Activate Optimized Retention Warehouse (1)



Figure 8.44 Activate Optimized Retention Warehouse (2)

Enough of preparations—now we get to the creation of the audit package. You need the audit package because all SAP ILM retention warehouse reports are based on it. The audit package describes exactly from which archive files (and therefore from which clients in which legacy systems) you make which data (via archiving objects and their tables and fields) available for reporting purposes. Run Transaction IWPO1 (Audit Package Handling). The screen shown earlier in Figure 8.37 appears. Click on the button for creating new entries. The screen shown in Figure 8.45 appears next.

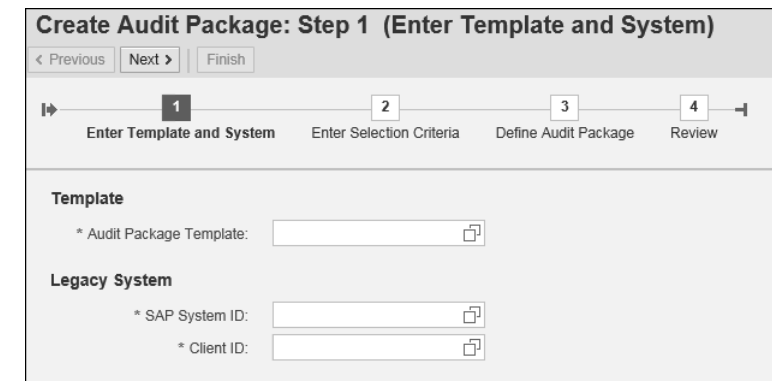


Figure 8.45 Transaction IWPO1: Processing of Audit Packages (1)

Select the audit package template that you want to use as the basis for your audit package. Specify the legacy system (**SAP System ID**) and client (**Client ID**) from which you want to use data for reporting. Click **Next** and make the required entries in the following screens (see Figure 8.46 for an example).

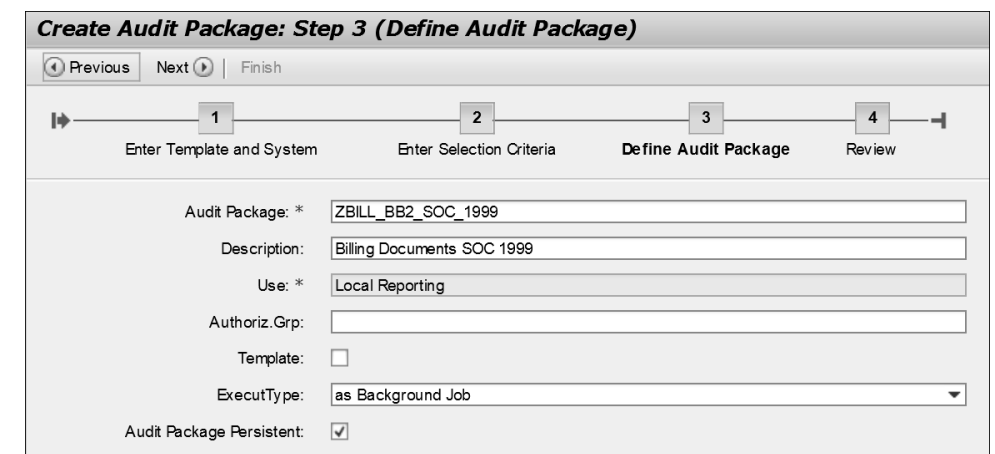


Figure 8.46 Transaction IWPO1: Processing of Audit Packages (2)



Selection of Archive Files

You can't select archive files manually! This isn't necessary because the system decides on the appropriate archive files based on all your previous entries.

After you've finished creating the audit package, two background jobs are scheduled:

- **CREATE_<PRÜFPAKET_NAME>**
This job creates certain metadata for the audit package and determines the list of relevant archive files (URIs).
- **IWP_CREATE_DP_***
This job reads the relevant archive files and inserts the read data into generated tables.

After both background jobs are finished, you can start reporting the data. We'll show you this using the example of local reporting.

Run Transaction IWP01 (Audit Package Handling). The screen shown in Figure 8.47 appears. Select the line containing the audit package template that you want to use as a basis for your evaluation. Select **Local Reporting • Display Table or Create File**.

AudPkg ID	Audit Package	Process Created Files	Created By	Created On	AuthGrp	Status	Use	Audit Pack. Template
40272	ZBILL_BB2_SOC_1995	Delete All Created Files	I029811	13.11.2018		New	Local Reporting	ZBILLING_DOCS
40271	RR1_ASSET_MASTER	RR1 Asset Master data	I029811	05.01.2018		New	Local Reporting	ZILM_ASSET

Figure 8.47 Transaction IWP01: Start Local Reporting

In the next step, select the table that you want to report on (**Structure** column in Figure 8.48). The system informs you in the upper part of the screen whether files with corresponding data already exist. If not, you can use the following buttons to decide how you want to proceed with the required data:

- **Display Data**
Click this button to load and display the data from the archive files.
- **Create File**
Click this button to load the data from the archive files and download it to a file.

Depending on which option you choose, the subsequent images will differ slightly because you only need to enter file names in the second case. If the data you want to see is a large amount of data, we recommend that you download the data into a file.

Local Reporting

No files found for the structure VBRK

Structure	ILM Object
EKP	SD_VBRK
FLA	SD_VBRK
KONV	SD_VBRK
VBRK	SD_VBRK
VBRP	SD_VBRK
VBUK	SD_VBRK

Filename	Description	File Size	Path

Figure 8.48 Transaction IWP01: Display Data or Create File

In the next step, you can define the desired selection criteria (see Figure 8.49). To do this, you can select any of the fields in the table using the corresponding buttons.

Local Reporting Table Browser: Step 1 (Define Selection Criteria)

Define Selection Criteria Define Output Display Table Content or File

Audit Package: 0000040272

Table Name: VBRK

Define Selection Options

Show Non-key fields Reset

Key Fields

Client: To

Billing document: To

Figure 8.49 Local Reporting: Define Selection Criteria

In step 2, **Define Output**, you determine the maximum number of records and which table fields are to be displayed (see Figure 8.50).

Figure 8.50 Local Reporting: Define Output

As a result you'll see a preview of the requested data (see Figure 8.51). It consists of 200 records. (As you can see from the figure, the **Create File** option was selected here beforehand because the system asks for file names.)

After you've made all the entries, click on **Create** in the top-left corner. The system creates a background job that now executes the required tasks (see Figure 8.52).



File Format

The format of a file that you can create in this way is the *Audit Information System (AIS)* format.

Client	Billing document	Billing type	Billing category	SD document category	SD document currency	S
400	0090030560	FX	X	M	EUR	0
400	0090031402	FX	X	M	EUR	0
400	0090031403	FX	X	M	EUR	0
400	0090031404	FX	X	M	EUR	0
400	0090031575	FX	X	M	EUR	0
400	0090031576	FX	X	M	EUR	0
400	0090031577	FX	X	M	EUR	0
400	0090031578	FX	X	M	EUR	0
400	0090031579	FX	X	M	EUR	0
400	009000763	B2	K	O	DEM	1

Figure 8.51 Local Reporting: Display table Content or File (Preview)

JobName	Spool	Job doc	Job CreatedB	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
WRITE_TO_SERVER VBRK_ZBILL_BB2			I029811	Finished	02.01.2019	12:32:17	16	0
*Summary							16	0

Figure 8.52 Local Reporting: Job for File Creation

Export to Excel

The **Export** button is available in two places: when previewing the data (refer to Figure 8.51) and when displaying the desired data, that is, after you've selected **Display Data** in Figure 8.53. Keep in mind that this may not be the best performance solution (especially in the second case) if you have a large number of records. If you deal with large amounts of data, we recommend that you choose the **Create File** button in the upper-left corner of the screen displayed in Figure 8.53.

When the job is finished, you'll see a screen like Figure 8.53; the file has been created. You can select it and display it using the **Display Data** button.

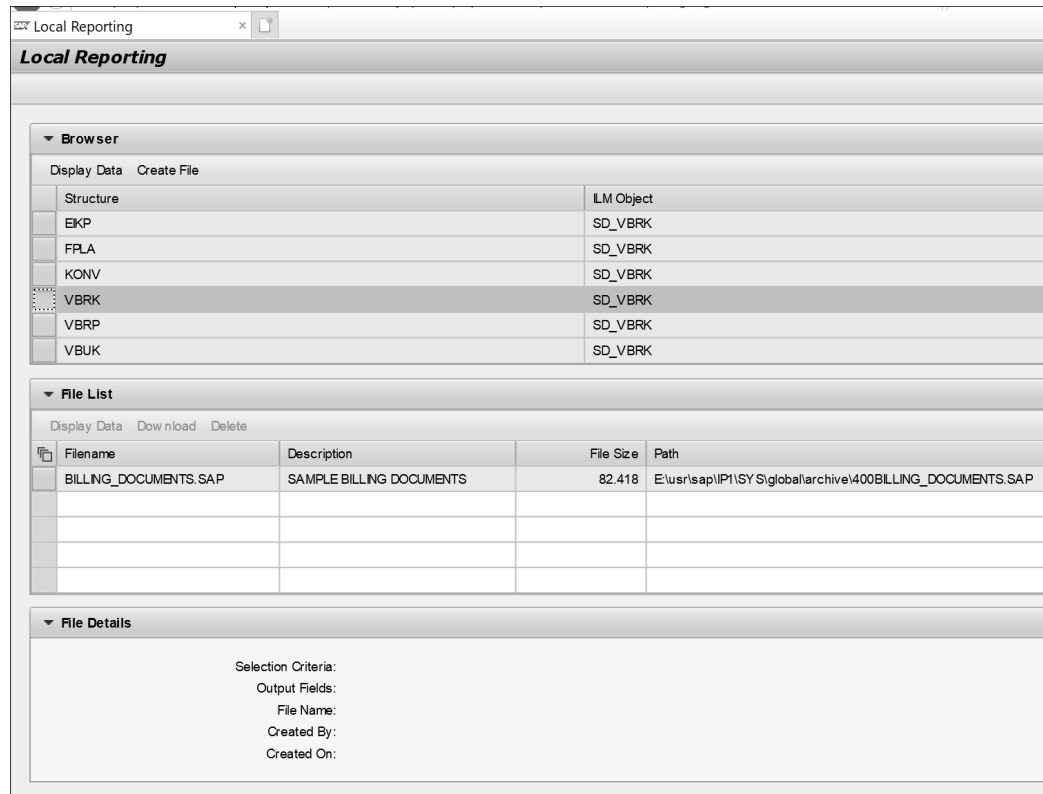


Figure 8.53 Local Reporting: File Created

8.6.4 Accelerated Reporting and Use of SAP BusinessObjects BI

Accelerated reporting is a variation of the procedure just described for reporting based on data from shutdown systems in the SAP ILM retention warehouse system. As described in the box at the end of this section, it also enables you to use certain SAP BusinessObjects BI tools.

The prerequisite for the use of accelerated reporting is the activation of the optimized retention warehouse, as shown earlier in Figure 8.43 and Figure 8.44. This activation has the effect that when data is loaded from archive files, a DDIC table is created for each table. The table generation takes place when an audit package is created. The data for which you want to run reporting is temporarily stored there, which leads to better performance. The generated tables contain all the fields of the respective table as they existed in the SAP Landscape Transformation Replication Server system (and in the legacy system if the legacy system was an SAP system) for this table. They also contain a field with the URI of the archive file that contains the corresponding data.

Let's now turn to the advantage of this approach. It becomes evident as soon as you create more than one audit package for the same table from the same legacy system and

client. (It doesn't matter whether you use the same audit package template or not.) In this case, the generated table is used. A table view is generated to distinguish the data that belongs to the different audit packages. This view contains the URIs of the archive files that are used as filter criteria.

You can see the generated DDIC objects by choosing an audit package and selecting the **Display Optimized Content** button in Transaction IWPO1 (Audit Package Handling) (see Figure 8.54). You can see the result in Figure 8.55.

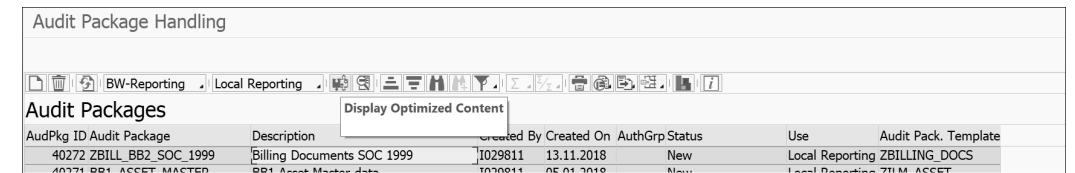


Figure 8.54 Accelerated Reporting: Display Optimized Content Button

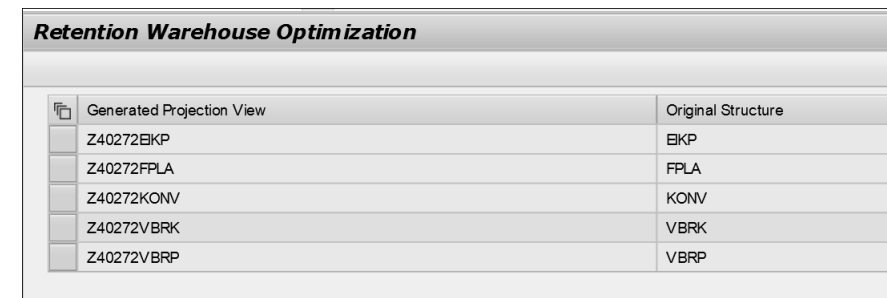


Figure 8.55 Accelerated Reporting: Optimized Content

Names of the Generated Tables

If you're interested in the names of the generated tables for each audit package, you can find them in table IWP_DP_AP_GENTAB. Figure 8.56 shows an example.

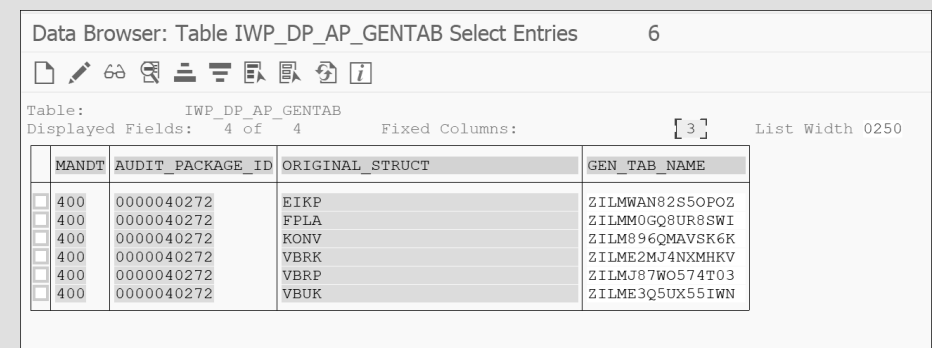


Figure 8.56 Accelerated Reporting: Table IWP_DP_AP_GENTAB



Use with SAP BusinessObjects BI Tools

You can also analyze the data loaded into the generated tables with generic reporting tools such as those from SAP BusinessObjects BI. In our case, all tools that can connect to ABAP tables in the SAP system can also connect to the generated tables in SAP ILM retention warehouse.

8.7 Summary

This chapter described how to use SAP ILM to shut down legacy systems. We began by discussing some of the underlying issues of legacy systems and then moved on to the system architecture in an SAP ILM retention warehouse scenario. Next, we discussed moving your data: how to replicate it from a legacy system, archive it, and then transfer it into an SAP ILM retention warehouse. We closed the chapter with a discussion of reporting on retention warehouse data.

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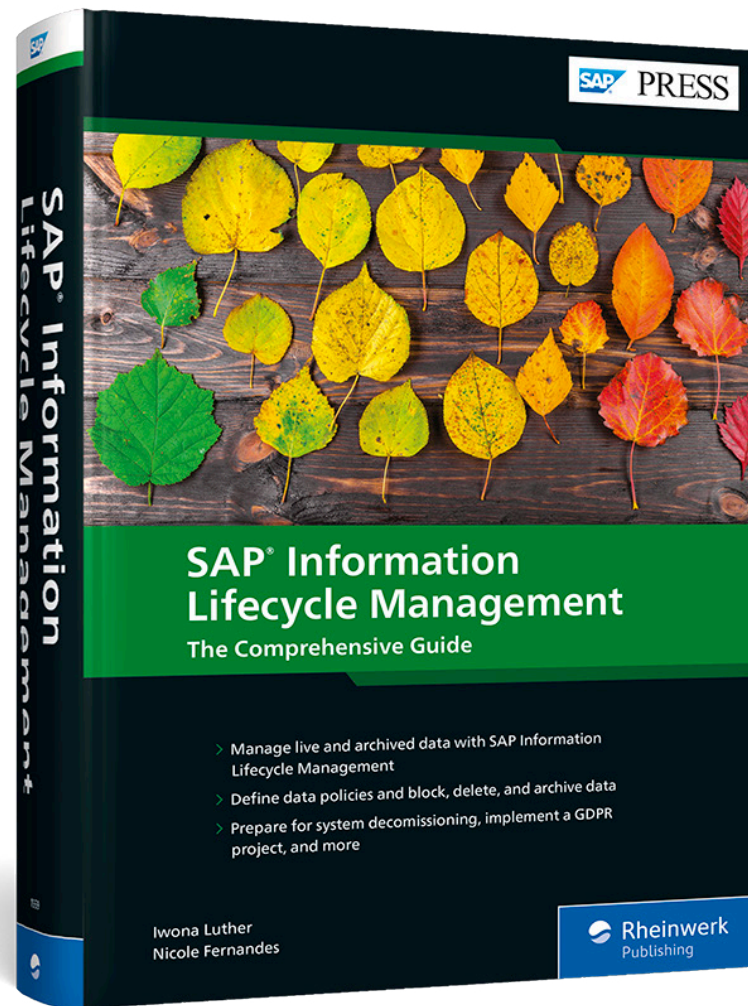
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