

Process Chains in SAP BI



Applies to:

SAP NetWeaver BW.

Summary

Detailed illustrated documentation on Process Chains in SAP BI

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1. Introduction

A process chain is a sequence of processes that wait in the background for an event. Some of these processes trigger a separate event that can start other processes in turn.

If you use Process chains, you can

- automate the complex schedules in BW with the help of the event-controlled processing,
- visualize the schedule by using network applications, and
- Centrally control and monitor the processes.

2. Process chains in SAP Business Intelligence

Previously in 3.x, we had used Event chains, automatism and process chains for automating processes, which had a lesser flexibility. In SAP BI 7.0, the existing automation functionalities are backward compatible, but now automations are not longer used for transformations & data transfer processes in SAP BI 7.0

Processes chains are necessary to support those processes which are sometimes complex & parallelization plus where branching for status-dependency is necessary. We can divide a process chain into several sub processes which enable us to administrate it better for sake of clarity & effective management.

2.1 Process Chain Views

In a processes chain, within a particular time slot all the respective time dependencies are bundled together, and they offer central controlling & monitoring of all processes steps defined in them. Process chain maintenance can be reached via Data Warehousing Workbench or via the transaction code: RSPC, which offers different views on process chains.

- Planning View: Using click, drag and drop, the process chain is designed at this stage. All the existing process chains and definition of process chains can be overviewed here and here in the planning view all the process chains are created & maintained.
- Checking View: The process chain is checked for errors. We can view this using the control Ctrl+F2 in RSPC, where the results from the testing (both syntactical and semantic) are defined in the plan view, so as and when some changes are made respective process chains are executed.
- Log View: The results of each run are monitored. In this log view, we have the details of the process chain selected on the plan view.

3. Usage of Process Chains

Process Chains are similar to flowcharts which are scheduled to be waited in background & triggered for an event (or for starting further other processes) by a process. Here we need to list all Info packages, DTPs that's necessary to load the data, which can be either a full load or delta load, following which these chains are scheduled (Viz. hourly, daily, monthly, etc, depending on business requirement). So, before creating process chains, we need to keep the process flow perfect (i.e. the links between BI objects like Info package, DSO, Cubes etc) in the BID system. This process chains can be used to automatically load attribute/hierarchy etc, wherein in procedure these are listed as application process.

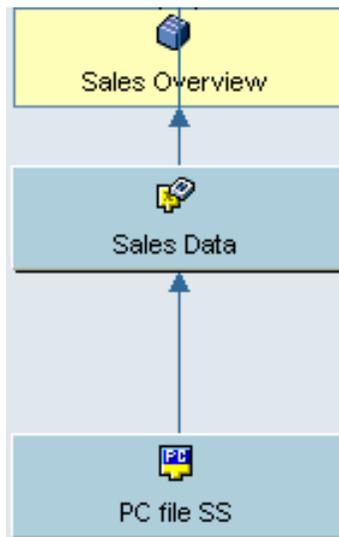
4. Real-time Illustrated operations on Process Chains:

We will be studying the following operations on Process Chains:

- Process Chain Creation
- Process Chain Monitoring

To study the aforementioned operations, we will be considering a data model having data flow from source system to InfoCube.

The Dataflow of the model being considered is as shown below:



DATA FLOW DISPLAY FOR 'Sales Overview' CUBE

The Data Model is as shown below.

Info Area for AD_COE	ZAD_IA
Sales Overview	ZAD_SALES
RSDS ZAD_SALES PC_FILE -> CUBE ZAD_SALES	07QYJZY81YGYI5OWC47VNDK773KKLL5L
Sales Data	ZAD_SALES
Info Package for Sales	ZPAK_D9P7YOF0H9SJ8XZEMNZ8QHGF
Data Transfer Processes	ZAD_SALES
ZAD_SALES / PC_FILE -> ZAD_SALES	DTP_D9P7YXHTOCD1BUBZTPCGRNC2F

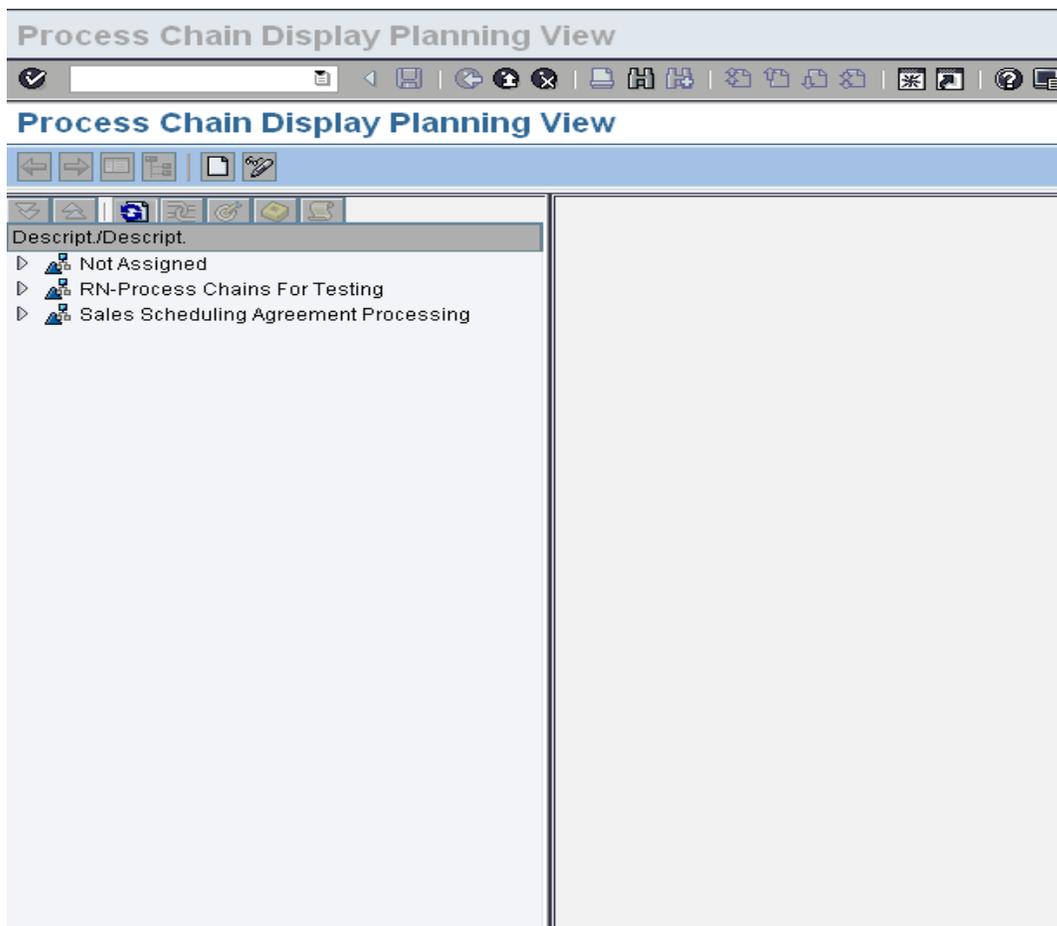
In this example we will create a process chain that will automate the Transaction Data (i.e Sales Data in this case) loading to InfoProvider (InfoCube in this case) from the source system (Flat file in this case).

4.1 Process Chain Creation

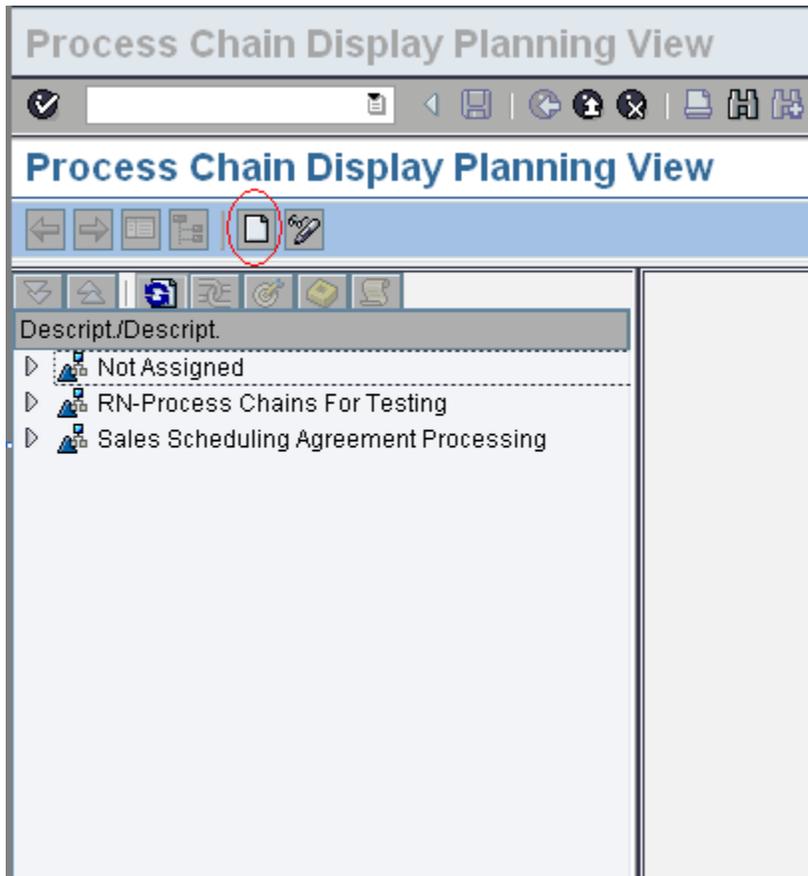
To create the required process chain, follow the below-mentioned steps:

Step 1: Go to transaction RSPC.

You will reach the following screen.



Step 2: Click on the Create  button Circled in Red in the image below.



You will get the following Pop-up that will require you to input the Technical name and description of the process chain to be created

After entering the values into the text fields, press on the  button to confirm.

Now we are on our way to create the Process Chain mentioned earlier.

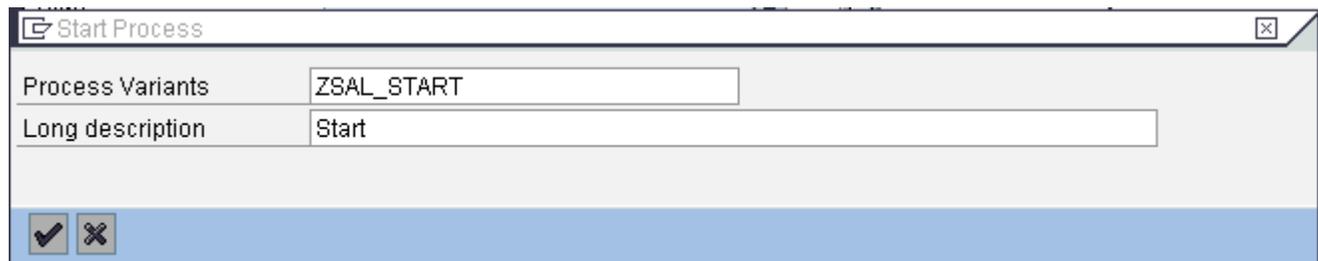
Step 3: After confirming the process chain name and description in the previous step, you will get the following screen which asks you to insert a start process.

A special type of process is the Start process. Every chain must have one. Again, a Start process without a variant is worthless. The variant provides information about when to start

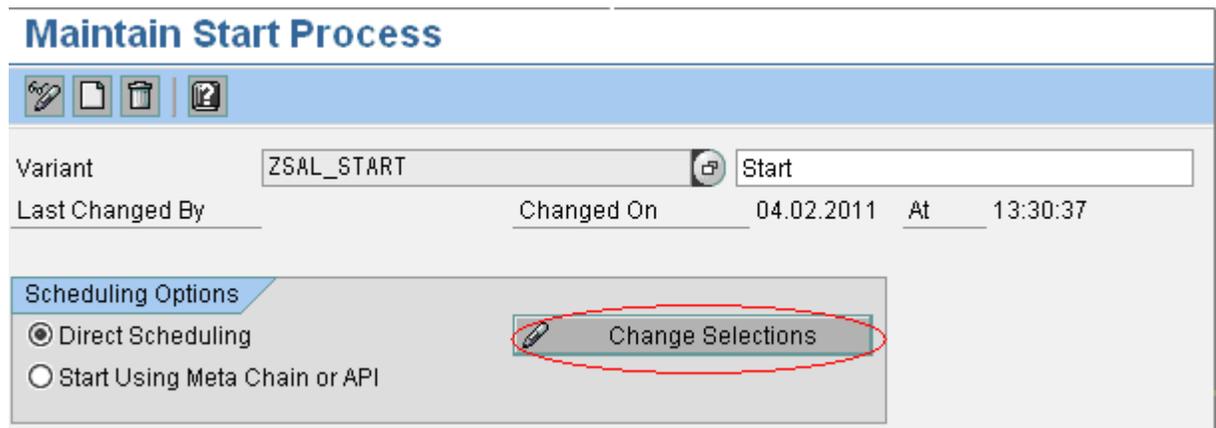


A start process is the first block of a process chain. It allows you to schedule the process chain according to the requirement and also triggers the start of a Process Chain.

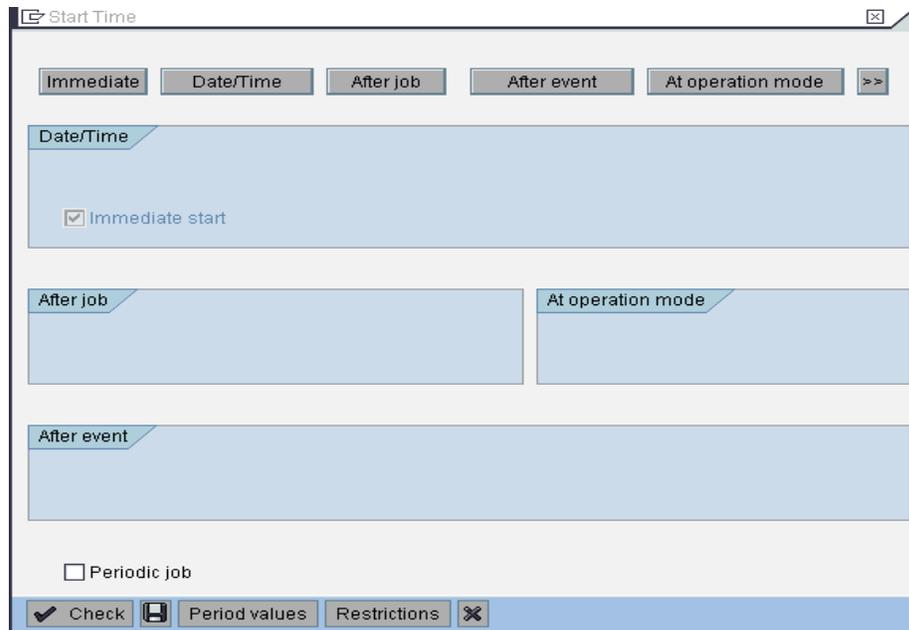
Click on Create and enter the name of the process variant & long description for the same.



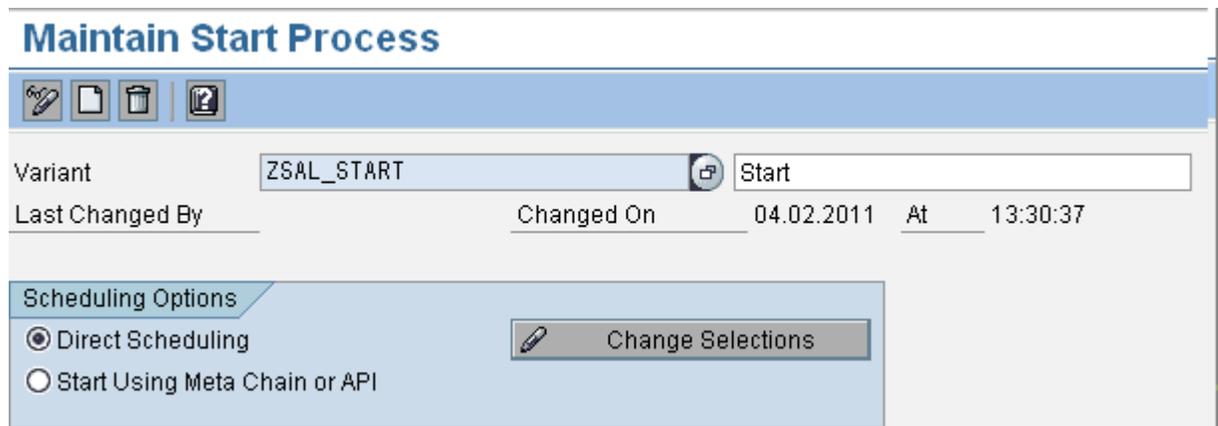
Step 4: Now once done, click on command button "Change Selections"



In start time panel there are lists of options like immediate / Date-Time / after Job / after Event etc. We need to choose the appropriate scheduling the process chain requires. For demo purpose, we have chosen Immediate as the option & click on Save.



The top row displays the name of variant, details like last changed by etc

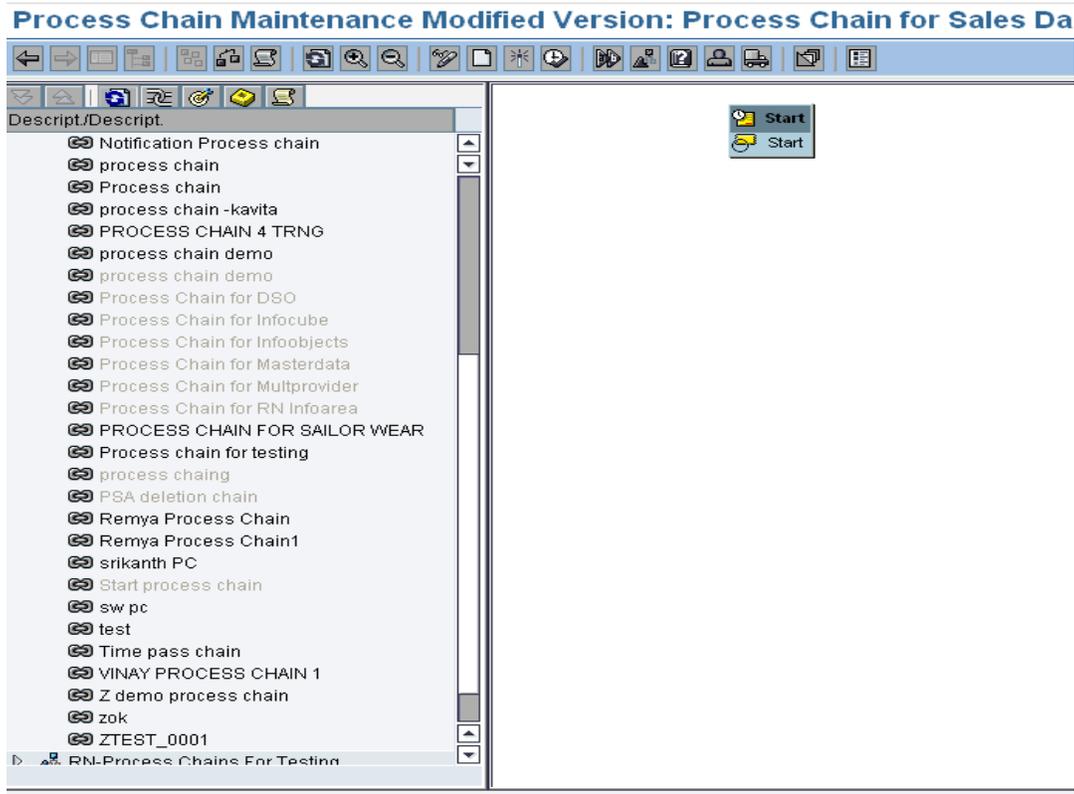


There are 2 options

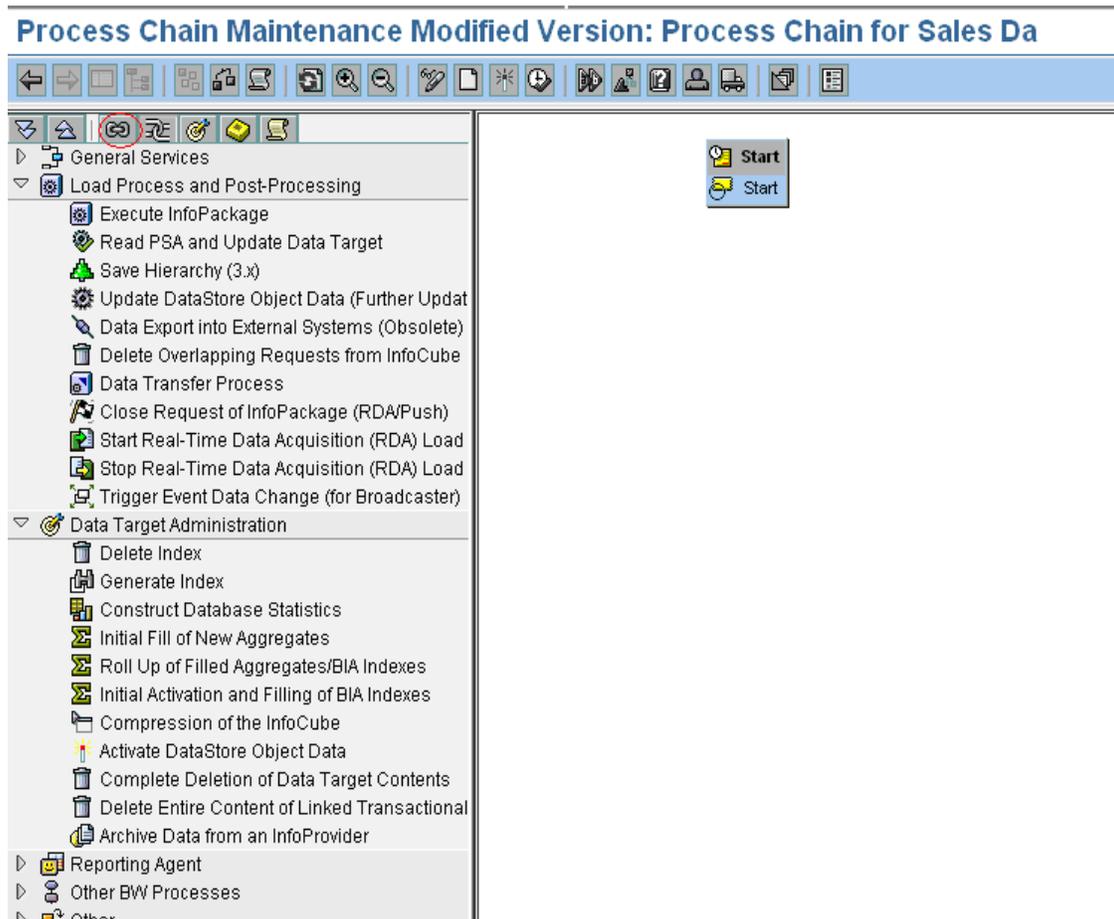
1. Direct Scheduling: The job will be scheduled when the process chain is activated
2. Start using Meta Chain or API: No triggers are scheduled. The start of the process chain will be done via FM, RSPC_API_CHAIN_START or with another process chains.

In our example, we are processing single process chain, so we have chosen “Direct Scheduling”
Enter name of start process for the particular trigger; each process type is very generic. Here, each process needs a variant, which tells us the process exactly which objects to work on.

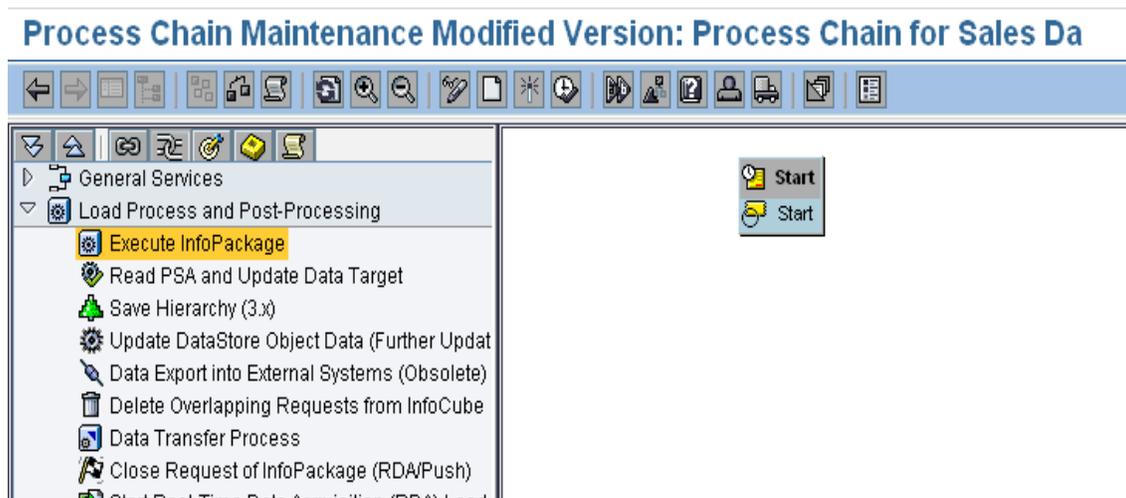
Step 5: Now save and go to the process chain window. The process block of start variant is created.



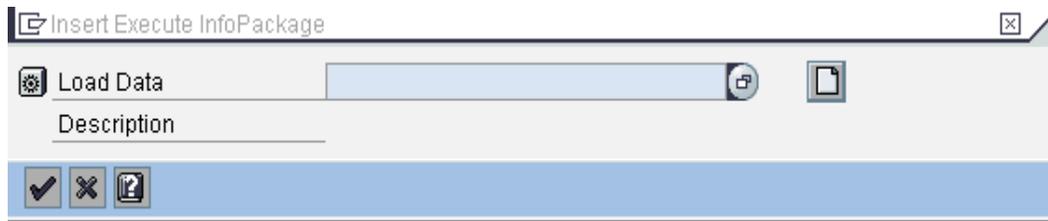
Step 6: to create other process blocks, click on the process Types icon **Circled in Red** in the image below



Step 7: Drag and drop the InfoPackage to create a process chain block which loads data from Source system to PSA

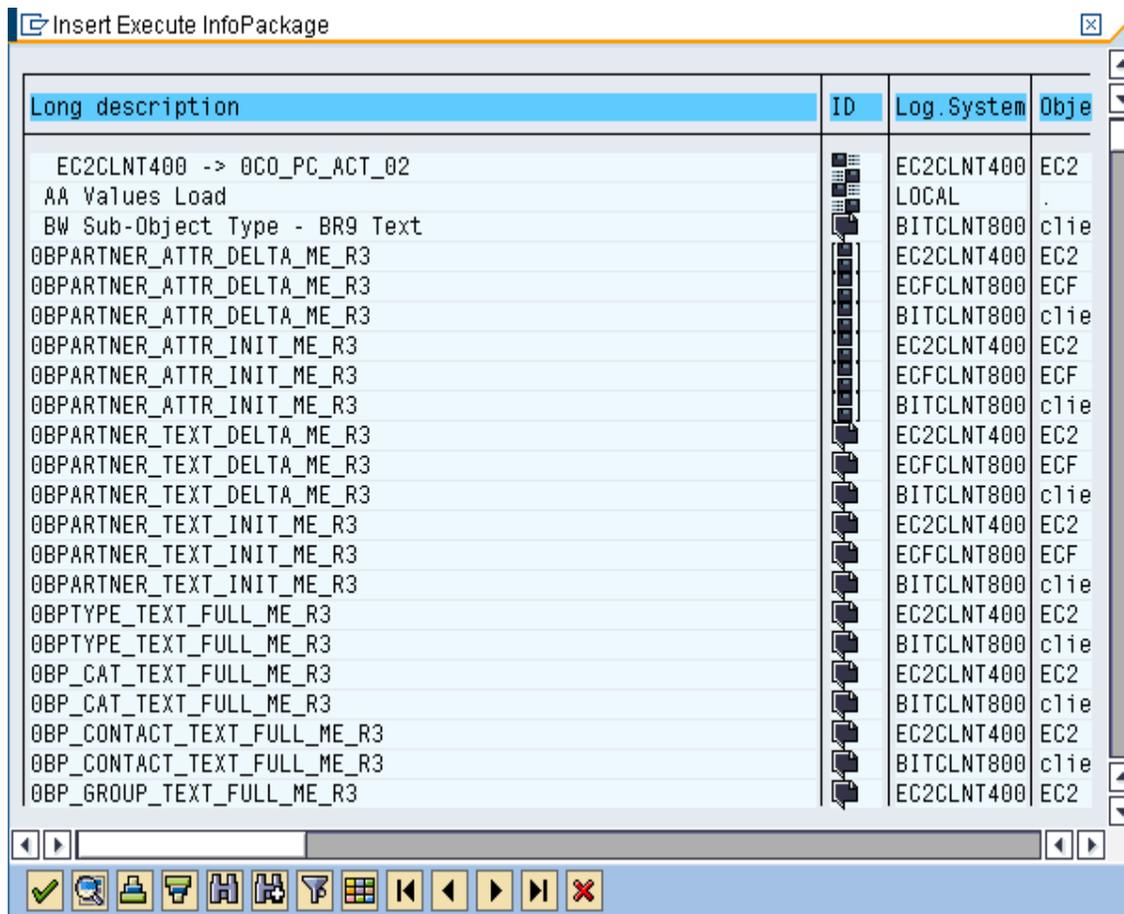


You will get the following pop-up.



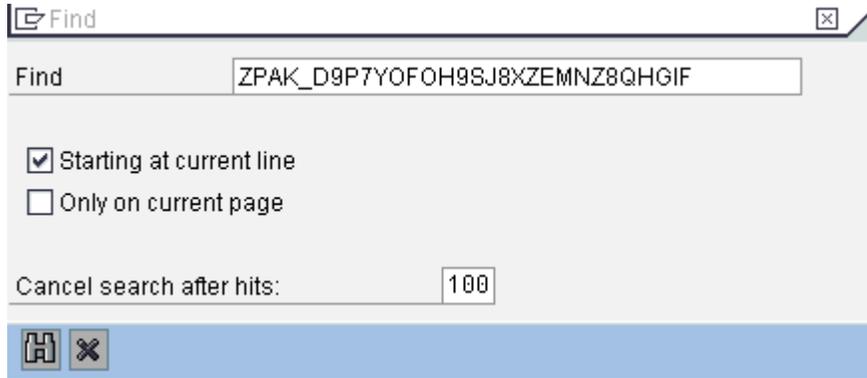
Do a search help (F4) in the load data field.

It lists out the InfoPackages which are available in the system.

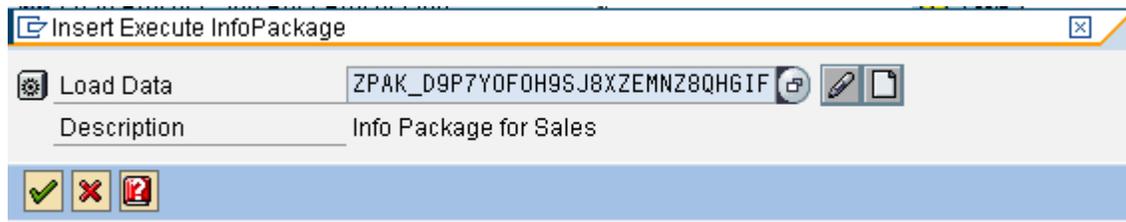


Find your Info package from the list. Use search option to check the technical name.

In our example, the technical name of Info package is ZPAK_D9P7YOF0H9SJ8XZEMNZ8QHGF.



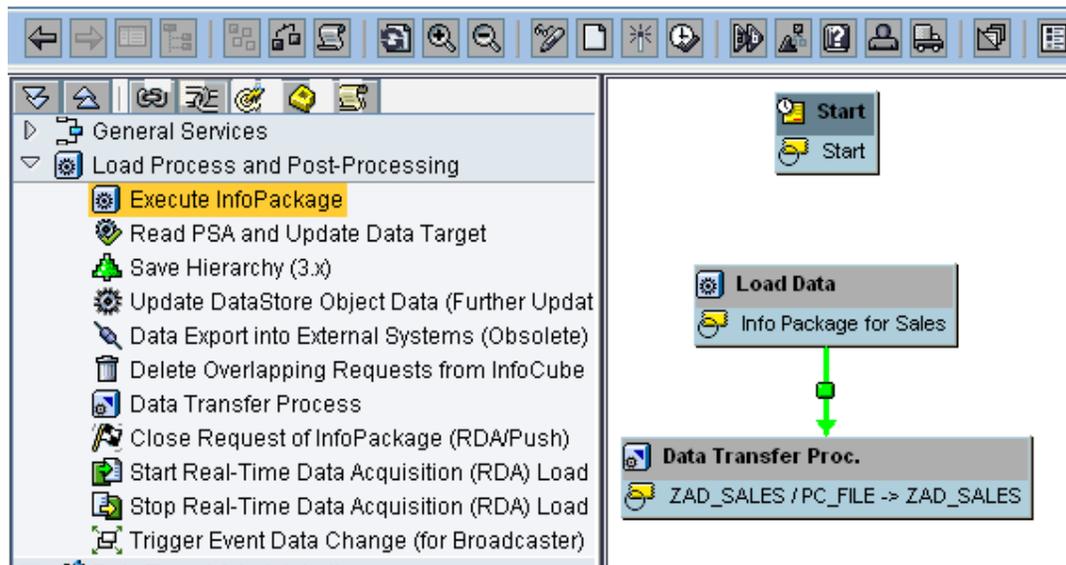
Keep cursor on your InfoPackage and press Enter.



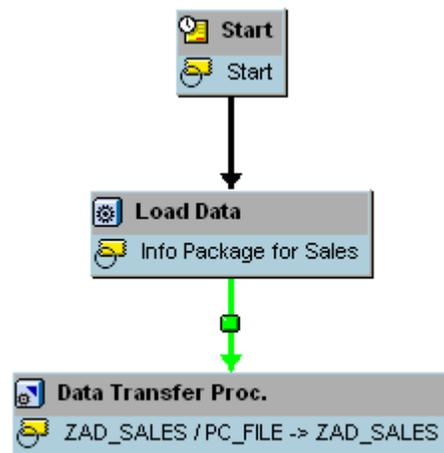
Click on the continue button.

Step 8: The process blocks for InfoPackage and the associated DTP process block is automatically assigned by the SAP system.

Process Chain Maintenance Modified Version: Process Chain

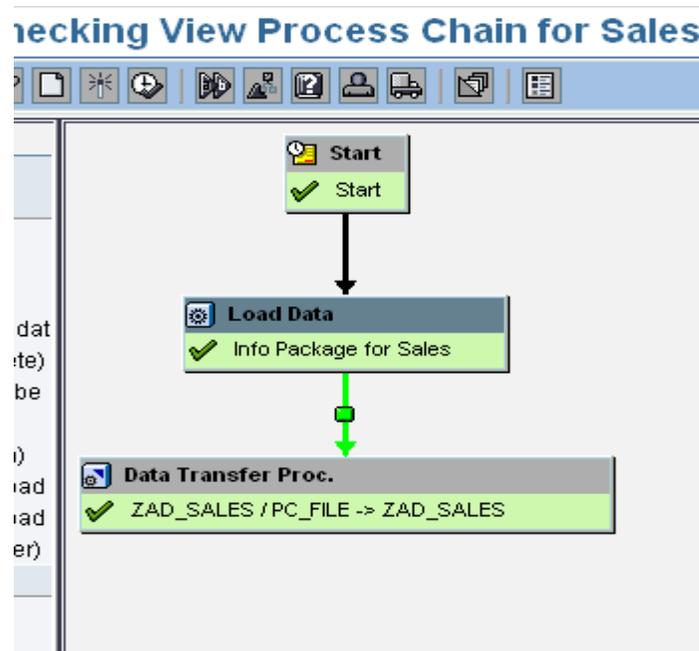


Step 9: Now link the start variant with the InfoPackage process block.

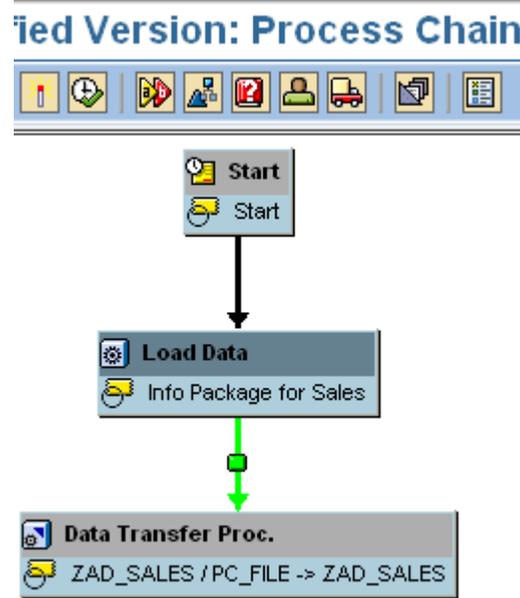


The process chain to load data from source system to Data Target has been created.

Step 10: After following the usual process of Save & Check, your Process chain should look like the following screenshot with all blocks marked as green.



Now activate the process chain.



4.2 Process chain Monitoring

For monitoring the process chain, click on the Log View in RSPC

The screenshot shows the 'Process Chain Display Active Version: Process Chain for Sales Data Lo' interface. It features a toolbar at the top and a list of process chains on the left. The 'Log View' icon in the toolbar is highlighted with a red circle. The main area on the right displays the same process chain diagram as shown in the previous image.

Process Chain List:

- FlatFileLoad
- For test purpose
- ghgjk
- kavita process chain
- new pc
- Notification Process chain
- process chain
- Process chain
- process chain -kavita
- PROCESS CHAIN 4 TRNG
- process chain demo

You will get the following pop-out.



Since our scheduling for process chain was given as 'immediate' in start variant, we require the log only for today.

Check the Today Radio Button and press Continue.

You will see the log of all the process chains which are executed today.

As we can see in the screenshot of the log below, in our case, there has been a failed execution (circled in red)

and two successful execution (circled in green)

Process Chain Display Log View Process Chain for Sales Data Loading 04

Descript./Date/Time	Log ID	Chain
Process Chain for Sale		
04.02.2011		
15:06:23	CREATED BITDEV02	ZSALES
15:13:18	D9T5WWIQ9RGD3A...	ZSALES
15:49:40	LAST_SAVED BITD...	ZSALES
15:49:40	LAST_ACTIVATED B...	ZSALES
15:49:41	D9T64KR5AWOH4...	ZSALES
15:53:39	D9T65FH9YKRHE2...	ZSALES


```

graph TD
    Start1[Start] --> Start2[Start]
    Start2 --> LoadData[Load Data  
Info Package for Sales]
    LoadData --> DataTransferProc[Data Transfer Proc.  
ZAD_SALES / PC_FILE -> ZAD_SALES]
    
```

Related Content

http://help.sap.com/saphelp_nw04/helpdata/en/8f/c08b3baaa59649e10000000a11402f/content.htm

http://help.sap.com/saphelp_nw04/helpdata/en/67/13843b74f7be0fe10000000a114084/content.htm

<http://forums.sdn.sap.com/thread.jspa?threadID=831964>

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