

Scheduling of Process Chains at Custom Intervals Using Function Modules and Events



Applies to:

SAP NetWeaver BW 3. For more information, visit the [Business Intelligence homepage](#).

Summary

The objective of this article is to explain the business requirement of triggering the Process Chains on specific days of a week. This can be achieved using Events or SAP delivered functions in a Report Program.

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Introduction

The objective of this article is to explain how our business requirement of triggering the Process Chains on days specified by the Clients based on the requirements is met, using Events and SAP delivered functions in a Report Program.

This article presents you the different approaches we had implemented in achieving this task.

Business Scenario:

Data from R/3 system to our BW systems need to be refreshed on Specific days of a week.

We need to run the Process Chains on every Monday, Wednesday, Thursday and Friday.

We couldn't go out with any of the SAP delivered periodic scheduling options because of the customized requirement.

Background Information:

Following is a list of the functions used in customizing our data load scheduling.

- DATE_COMPUTE_DAY
- Creation of an Event.
- RSSM_EVENT_RAISE
- RSPC_CHAIN_START

About Function Module DATE_COMPUTE_DAY

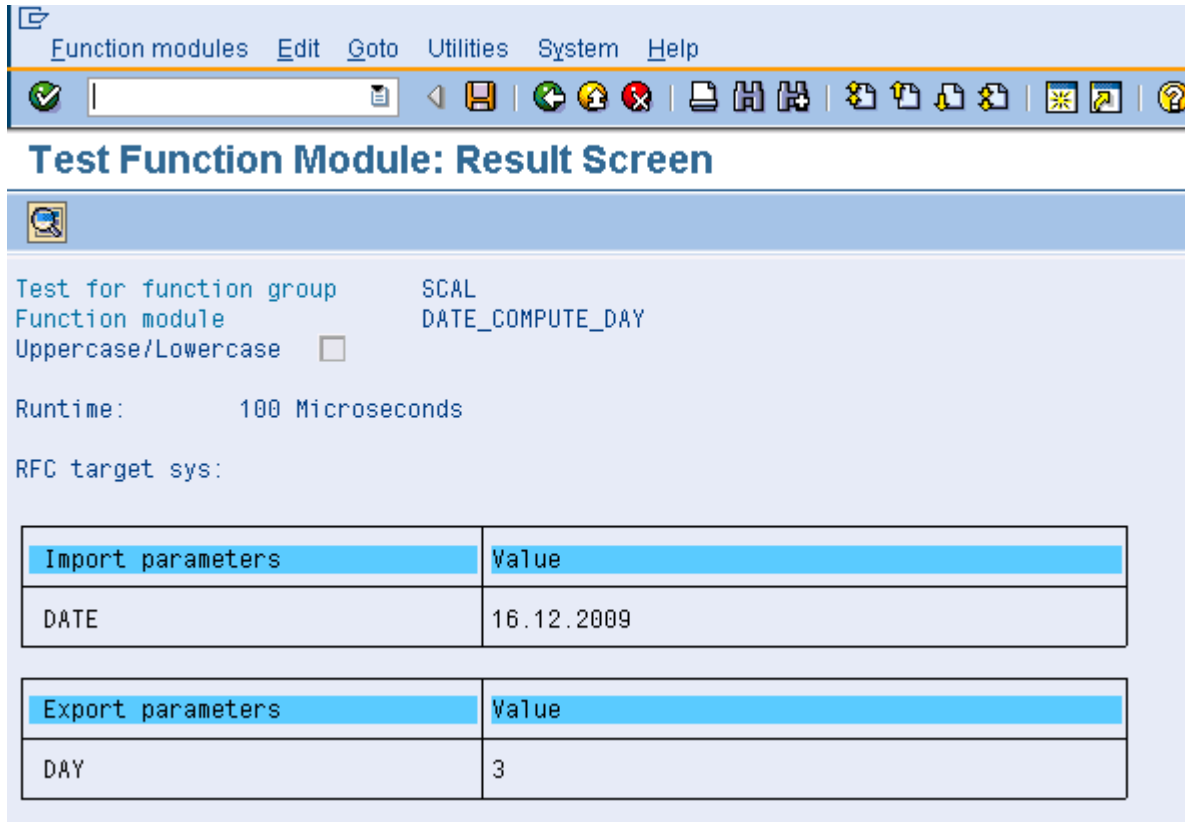
This function module has the import parameter DATE and Export Parameter DAY (gives the day count in a week i.e. 1 for Monday, 2 for Tuesday, 3 for Wednesday....and 7 for Sunday).

Example:

Input: 16.12.2009

Output: 3

Below is the output screen shot of the function module for your reference.



The screenshot shows the 'Test Function Module: Result Screen' in SAP. The menu bar includes 'Function modules', 'Edit', 'Goto', 'Utilities', 'System', and 'Help'. The toolbar contains various icons for navigation and actions. The main content area displays the following information:

Test for function group: SCAL
 Function module: DATE_COMPUTE_DAY
 Uppercase/Lowercase:

Runtime: 100 Microseconds
 RFC target sys:

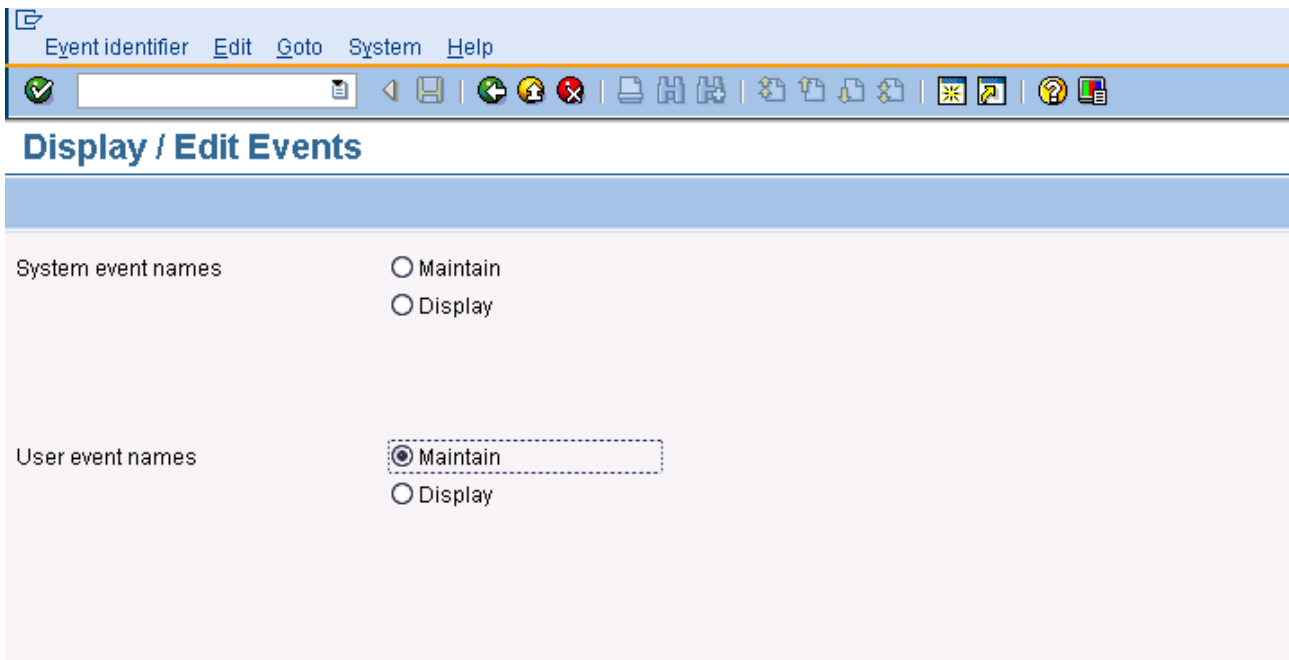
Import parameters	Value
DATE	16.12.2009

Export parameters	Value
DAY	3

Creating an Event

Go with Tcode SM62, Display/Edit Events.

Create an event under User event names by selecting and clicking on Maintain option.



The screenshot shows the 'Display / Edit Events' screen in SAP. The menu bar includes 'Event identifier', 'Edit', 'Goto', 'System', and 'Help'. The toolbar contains various icons for navigation and actions. The main content area displays the following options:

System event names: Maintain, Display

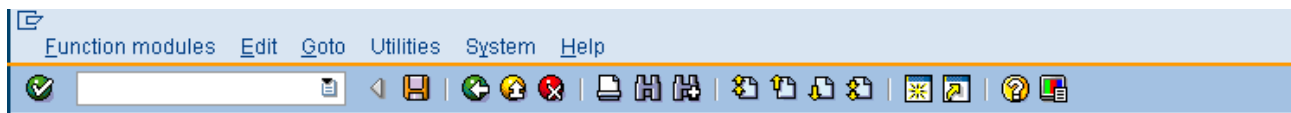
User event names: Maintain, Display

Create a new event. Enter Event Id and description and save it.

Event: ZPC_EVENT
 Description: Event to Triger ProcessChain on a Particular Date

About Function Module RSSM_EVENT_RAISE

Using this function module we can trigger an event (here ZPC_EVENT) which is created and maintained above.



Test Function Module: Initial Screen

Test for function group: RSSM
 Function module: RSSM_EVENT_RAISE
 Uppercase/Lowercase:

RFC target sys:

Import parameters	Value
I_EVENTID	ZPC_EVENT
I_EVENTPARAM	EVENTPARAM

Here we are using the event ZPC_EVENT created for triggering Process Chain.

I_EVENTID is the import parameter for which we are passing the event ID ZPC_EVENT and the EVENTPARAM for the import parameter I_EVENTPARAM.

This event is in turn used in the 'After Event' tab of the Start Variant Maintenance Screen of a Process Chain which needs to be triggered.

The screenshot shows the 'Start Time' configuration window. At the top, there are five tabs: 'Immediate', 'Date/Time', 'After job', 'After event', and 'At operation mode'. The 'After event' tab is active, displaying an 'Event' dropdown menu with 'ZPC_EVENT' selected and a lock icon to its right. Below it, the 'Parameter' field contains the text 'ZEVENTPARAM'. A 'Periodic job' checkbox is checked. At the bottom of the window, there are three buttons: 'Check' (with a green checkmark), 'Save' (with a floppy disk icon), and 'Cancel' (with a red X icon).

About Function Module RSPC_CHAIN_START

Have the import parameters

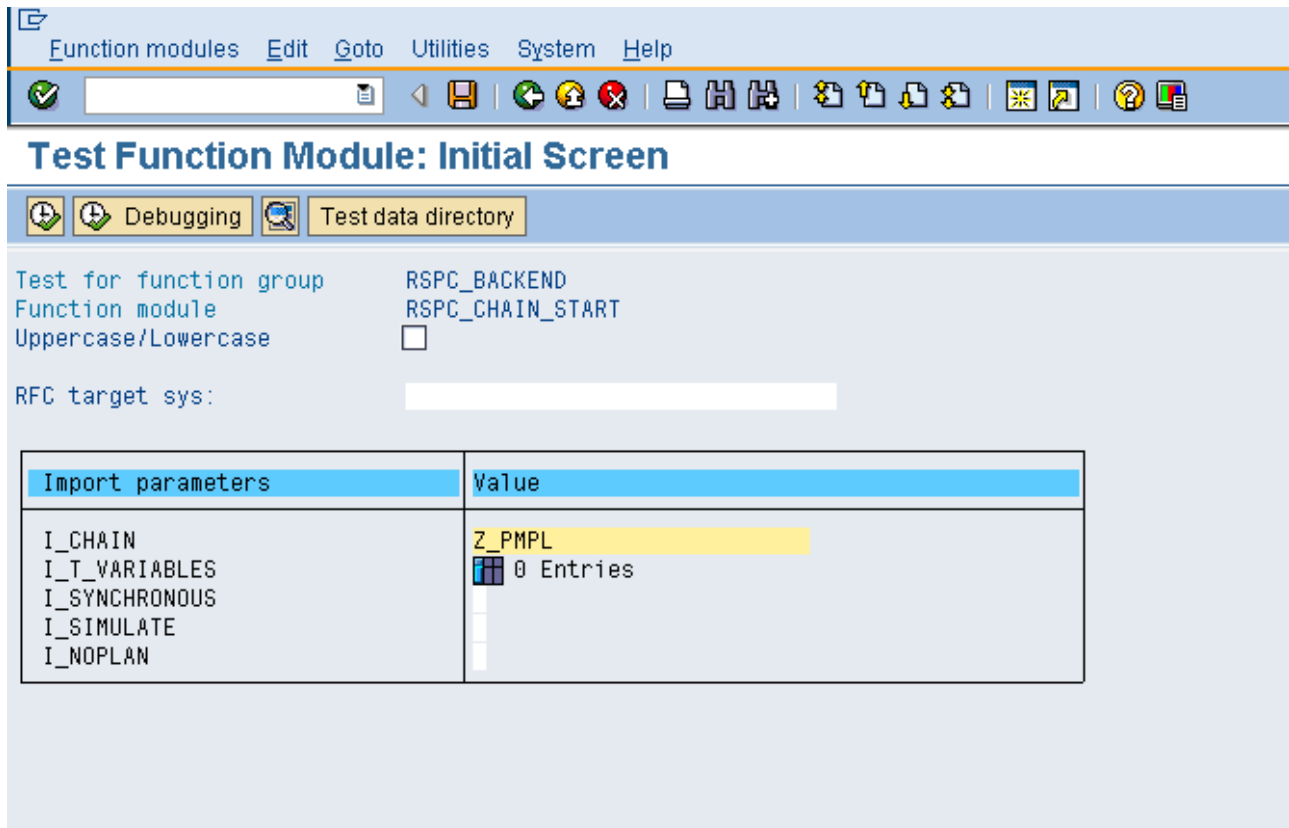
I_CHAIN (Process Chain)

I_T_VARIABLES (Process Chain Variables)

I_SYNCHRONOUS (Synchronous Execution of Processes)

I_SIMULATE (Simulation of Execution)

Here we are passing the technical name of Process chain which needs to be triggered.



Steps to Trigger the Process Chain on required days:

Procedure 1:

Here we are going to use the function **DATE_COMPUTE_DAY** and **RSSM_EVENT_RAISE** in our Report Program.

Create a Report Program of type Executable in Tcode SE37 (here Z_PC is the Report Program).

Below is the Source Code:

Source Code:

ABAP Editor: Display Report Z_PC

```

*&-----*
*&
*&
*&-----*

REPORT z_pc.
DATA: DAY_P LIKE SCAL-INDICATOR.

DATA: eventid LIKE tbtctjob-eventid.
DATA: eventparm LIKE tbtctjob-eventparm.
DATA: dt1 TYPE sy-datum.
**We defined this event in SM62.
eventid = 'ZPC_EVENT'.
**This We will set directly in Process Chain.
eventparm = 'ZEVENTPARAM'.
*dt1 = sy-datum.
dt1 = sy-datum - 1.

CALL FUNCTION 'DATE_COMPUTE_DAY'
  EXPORTING
    date      = dt1
  IMPORTING
    DAY       = DAY_P
  .

CASE DAY_P.
  WHEN 1 OR 3 OR 5.

    CALL FUNCTION 'RSSM_EVENT_RAISE'
      EXPORTING
        i_eventid      = eventid
        i_eventparm    = eventparm
      EXCEPTIONS
        bad_eventid    = 1
        eventid_does_not_exist = 2
        eventid_missing = 3
        raise_failed   = 4
        OTHERS         = 5.

    IF sy-subrc <> 0.
      MESSAGE ID sy-msgid TYPE sy-msgty NUMBER sy-msgno
        WITH sy-msgv1 sy-msgv2 sy-msgv3 sy-msgv4.
    ENDIF.
    write:'triggered'.

  WHEN OTHERS.
    EXIT.
ENDCASE.

```

Now we need to include this Variant in the Process Chain(Z_PMPL) which need to be triggered as explained earlier.

The screenshot shows the 'Start Time' configuration window. At the top, there are tabs for 'Clipboard', 'Font', and 'Paragraph'. Below these are several buttons: 'Immediate', 'Date/Time', 'After job', 'After event' (highlighted with a red box), and 'At operation mode'. Below the buttons are three main sections: 'Date/Time', 'After job', and 'After event'. The 'After event' section is expanded, showing 'Event' set to 'ZPC_EVENT' and 'Parameter' set to 'ZEVENTPARAM', both highlighted with a red box. Below this, the 'Periodic job' checkbox is checked and highlighted with a red box. At the bottom, there are three buttons: 'Check' (with a green checkmark), 'Save' (with a floppy disk icon), and 'Cancel' (with a red X icon).

We then need to activate and schedule the Process Chain.

In order to trigger the process chain on required days, we need to schedule this Report program Z_PC in back ground to be executed at required time on daily basis.

Procedure 2:

Here we are going to use the function **DATE_COMPUTE_DAY** and **RSPC_CHAIN_START** in our Report Program.

Create a Report Program of type Executable in Tcode SE37 (here Z_PC1 is the Report Program).

Call the function **RSPC_CHAIN_START**, we need to pass the Technical name of Process chain(ZPC_PMPL) to be executed for the import parameter i_chain.

Below is the Source Code:

```

*&-----*
*& Report  Z_PC1
*&
*&-----*
*&
*&
*&-----*

REPORT  Z_PC1.

DATA: DAY_P LIKE  SCAL-INDICATOR.

DATA: dt1 TYPE sy-datum.
dt1 = sy-datum.

CALL FUNCTION 'DATE_COMPUTE_DAY'
  EXPORTING
    date      = dt1
  IMPORTING
    DAY       = DAY_P.
CASE DAY_P.
  WHEN 1 OR 3 OR 4 OR 5.

    CALL FUNCTION 'RSPC_CHAIN_START'
      EXPORTING
        i_chain      = 'ZPC_PMPL'
        I_T_VARIABLES = 'X'.
        I_SYNCHRONOUS = 'X'.
        I_SIMULATE    =
        I_NOPLAN      =
        IMPORTING
        E_LOGID       =

    write:'triggered'.

  WHEN OTHERS.
    EXIT.
ENDCASE.

```

It throws a pop up to enter the server details on manual execution...on scheduling in background we will not get the pop up.

In order to trigger the process chain on required days, we need to schedule this Report program Z_PC1 in back ground to be executed at required time on daily basis.

Related Content

Taken most of the inputs from **sap help** in preparing this Article.

<https://forums.sdn.sap.com/thread.jspa?threadID=664741>

http://www.sdn.sap.com/irj/scn/advancedsearch?query=RSPC_CHAIN_START

For more information, visit the [Business Intelligence homepage](#).

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