Managing Jobs

Applies to:

This article applies to SAP R/3 (any version) and SAP B/W (any version). For more information, visit the EDW homepage.

Summary

This document talks about Job Maintenance and a wide range of tasks related to monitoring and managing jobs, including scheduling, rescheduling, and copying existing jobs, rescheduling and editing jobs and job steps, repeating a job, debugging an active job, reviewing information about a job, canceling a job's release status, canceling and deleting jobs, comparing the specifications of several jobs, checking the status of jobs, reviewing job logs, and releasing a job so it can run.

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Author Bio

Ishdeep Kohli is presently working with Patni Computers Systems Ltd. He has has got a working expreince of more than 3 years and worked extensively on SAP BW 3.5 and BI 7.0 and is mainly responsible for SAP BW/BI developments.
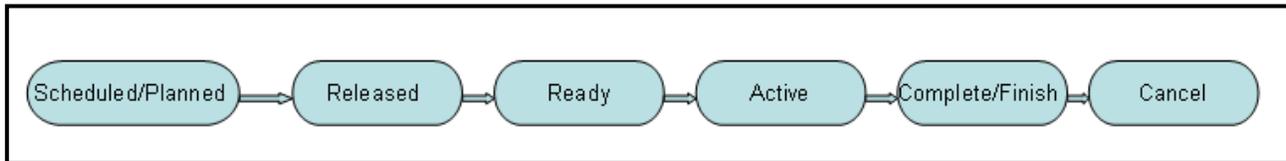
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Introduction

In SAP BW (any version) and SAP R/3 (any version) we can overview job using Tcode SM37. In the job overview screen there are many functions available which we can perform. We will see them one by one.

Sequence of Job Execution

A background job can have 6 different statuses and it executes in the following sequence:

Explanation of different Job status

Scheduled/Planned:

This indicates the Job is defined, but the start condition has not yet been defined. It will never run until released.

Released:

This indicates the job has been defined along with the start condition.

Note: Unless a start condition is not defined a job cannot be released.

Ready:

This indicates the job has reached/met its start condition and the job is in execution queue and is about to be executed depending upon availability of background work process and the job priority.

Active:

This indicates the job is being executed by a background work process.

Note: Active jobs cannot be modified or deleted

Finished:

This indicates the job has finished its execution, all steps that make up this job have completed successfully.

Canceled:

This indicates the job has terminated abnormally as mention in the job log. This can happen in two ways:

➢ An administrator intentionally terminates a job with
   Transaction SM37, Job→Cancel active job
➢ A job step contains a program that produces an error, such as:

  ▪ An E or A error message in an ABAP program
  ▪ A failure return code from an external SAPXPG program

Released/Susp (Suspended mode):

This is a special status. This status can only be set by running BTCTRNS1 in SE38 (or SA38). This is generally done when a system is undergoing Upgrade, maintenance, BASIS activity, etc. The status can be changed to Released state by running BTCTRNS2 in SE38.

Note: The jobs with status Scheduled/Planned, Released, or Ready can still be modified and below operations can still be performed on them

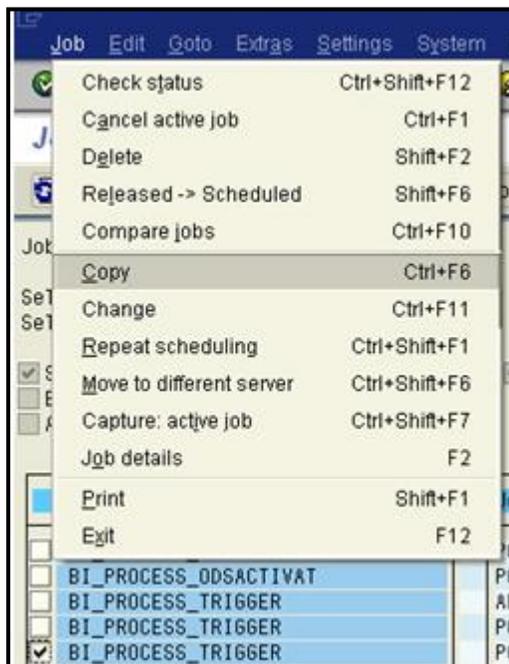- Unrelease
- Delete
- Prevent from running.

Managing Jobs:

All the below functions/tasks can be performed from Tcode SM37

Step 1: Copy a Single Existing Job

Select a job which needs to be copied and follow the below steps

Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
BI_PROCESS_TRIGGER		Scheduled			0	0

Job which needs to be copied

Give the new job name as shown below
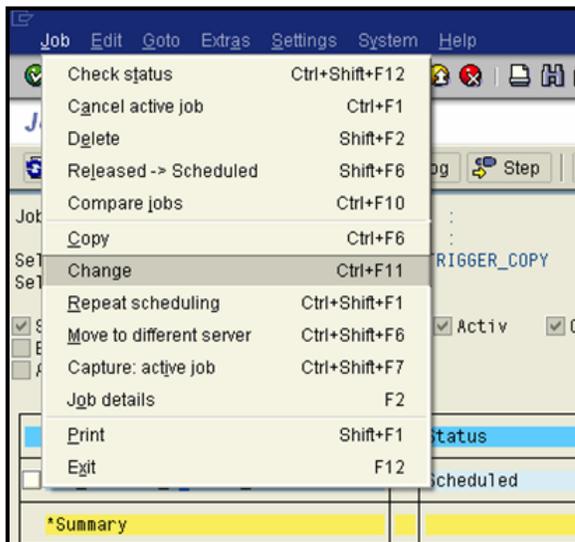
A new job is created with status Scheduled.

Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
☐ BI_PROCESS_TRIGGER_COPY		Scheduled			0	0
*Summary					0	0

The Copied job can be released by clicking on the Release button as indicated below.

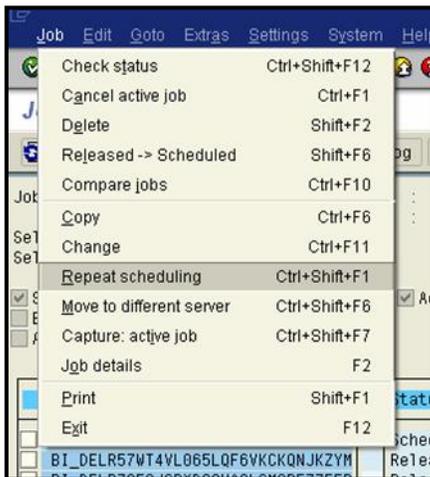## Step 2: Change

Job→Change

Following tasks can be performed

➢ Reschedule

➢ Change Job class

➢ Change Target server

➢ Edit Job steps

➢ Edit attributes of a single job and so on...

Step 3: Repeat Scheduling:

Job→ Repeat Scheduling

On Repeat scheduling a selected job, a new job is created.

Below is the job which needs to repeat

| Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
BI_PROCESS_INDEX		Complete	2010/10/22	20:46:34	20	0
*Summary					20	0

After repeating the above job a new job is created as highlighted in red colour which can be scheduled as per the requirement (Start Condition)

Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.
BI_PROCESS_INDEX		Released			0	0
BI_PROCESS_INDEX		Complete	2010/10/22	20:46:34	20	0
*Summary					20	0

Step 4: Capture: active job*:*

To debug an active job

Job→Capture: active job
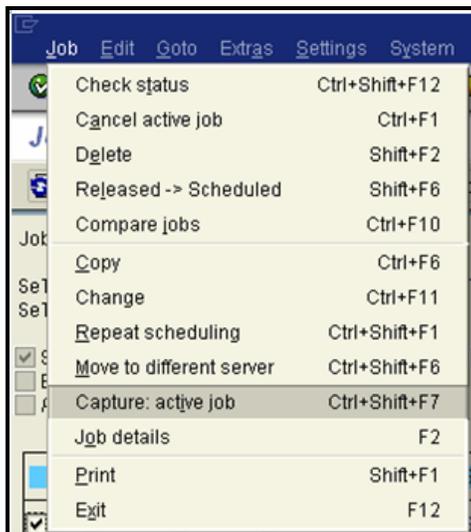
> ➢ Only a single selection is allowed
> ➢ This can be used to Pause and analyze an active job which is in the middle of executing an ABAP program. An ABAP debugger window is opened, showing the ABAP program code at the point at which it is being executed. The code can now be analyzed. You exit the debugger by choosing *Debugging* → *Continue*.
> The ABAP program (the job) then continues to execute from the point at which it was stopped. You cannot use this function on external programs.
> ➢ If an active job seems to be running incorrectly (e.g., running for an excessively long time), you can interrupt and analyze it in debugging mode in a background process, and then either release it again or stop it altogether.
> You will be able to capture a background job only if you are logged on to the SAP server on which the job is running. To find server information in the *Job Overview,* select and mark the job, then choose *Job→Job details*
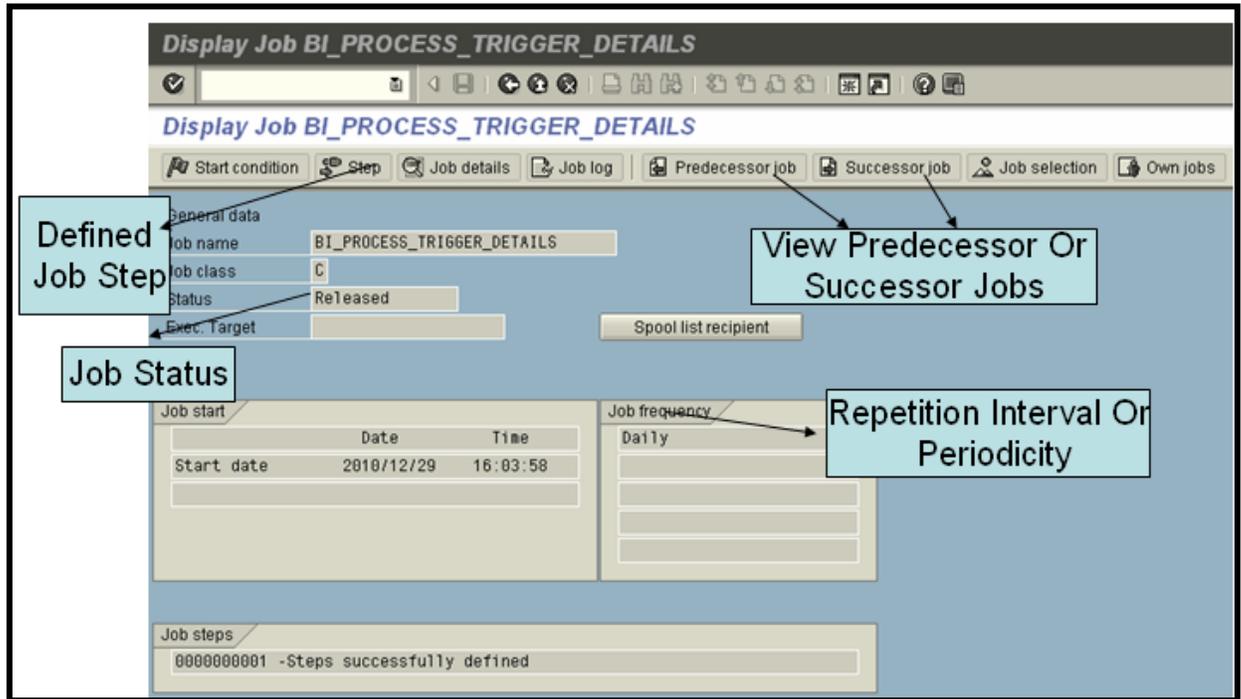
Step 5: Job details:

To review information about a job
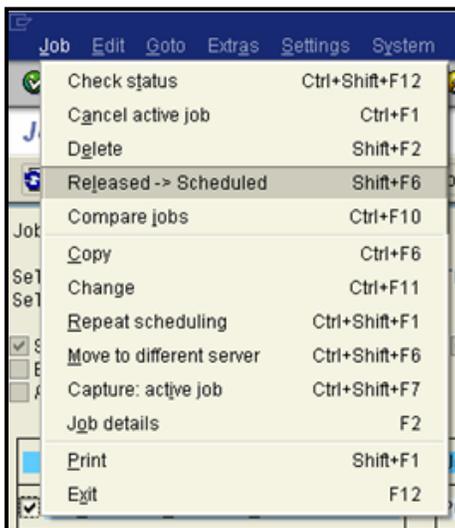
Go to Job→☐Job details
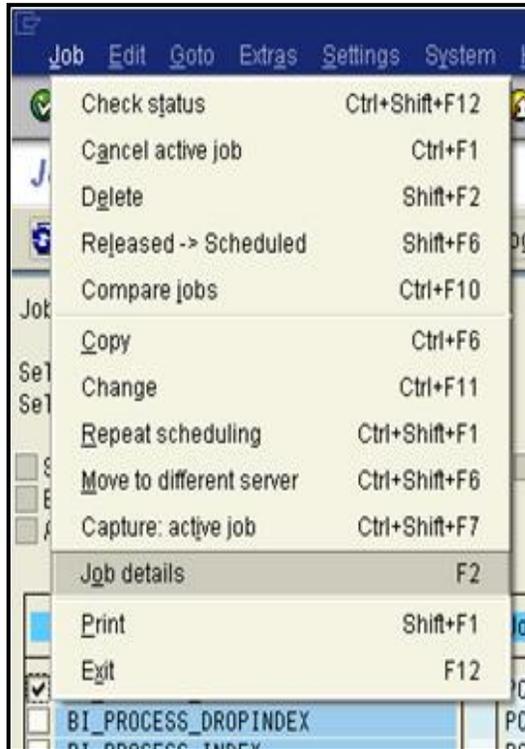
Job Details Include:

Displays all data belonging to a given job, such as the start date, steps, spool lists generated by steps, etc.The job detail information also shows on which host and in which work process the job was executed

Step 6: Released→Scheduled:

To cancel a job's "Released" status

Job→ Release -> Scheduled

This function is used to cancel the "Released" status of a job i.e. the job will not execute/run

Below Job is in Released state

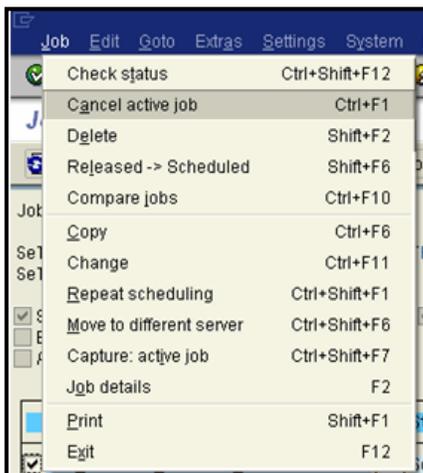| Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
☑ BI_PROCESS_TRIGGER_RELEASED->SCH		Released			0	0
*Summary					0	0

To cancel the release, goto Job→Release -> Scheduled, as can be seen from below screen the status is changed to Scheduled. Scheduled job will never run until released.

Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
BI_PROCESS_TRIGGER_RELEASED->SCH		Scheduled			0	0
*Summary					0	0

Step 7: Cancel Active Job:

Immediately terminates an active job

Job→ Cancel active job

Job Edit Goto Extras Settings System	
Check status	Ctrl+Shift+F12
Cancel active job	Ctrl+F1
Delete	Shift+F2
Released -> Scheduled	Shift+F6
Compare jobs	Ctrl+F10
Copy	Ctrl+F6
Change	Ctrl+F11
Repeat scheduling	Ctrl+Shift+F1
Move to different server	Ctrl+Shift+F6
Capture: active job	Ctrl+Shift+F7
Job details	F2
Print	Shift+F1
Exit	F12

Only Job with status "Active" can be cancelled. This function only cancels a job from running but keep the job definition available

Step 8: Delete:

To delete a job entirely

Job→ Delete

| Job Edit Goto Extras Settings System	
Check status	Ctrl+Shift+F12
Cancel active job	Ctrl+F1
Delete	Shift+F2
Released -> Scheduled	Shift+F6
Compare jobs	Ctrl+F10
Copy	Ctrl+F6
Change	Ctrl+F11
Repeat scheduling	Ctrl+Shift+F1
Move to different server	Ctrl+Shift+F6
Capture: active job	Ctrl+Shift+F7
Job details	F2
Print	Shift+F1
Exit	F12

Only Jobs having status Scheduled/Planned, Released can be deleted.

Step 9: Compare jobs:
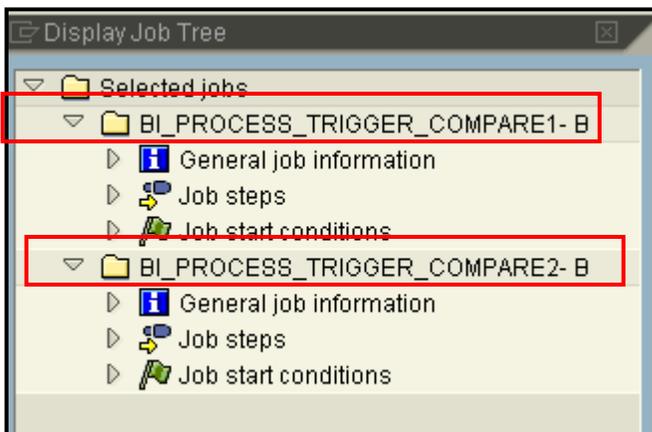
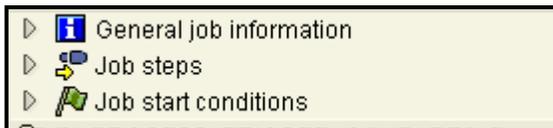To compare the specifications of more than one job

Job→Compare Jobs
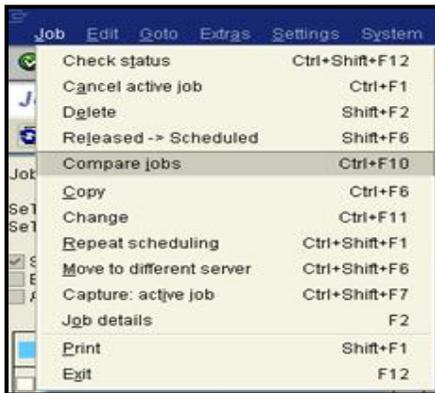
Select the jobs which need to be compared as shown below ('n' no. of jobs can be compared with each other):

Go to Job→Compare Jobs, below screen appears from where you can compare the selected jobs.
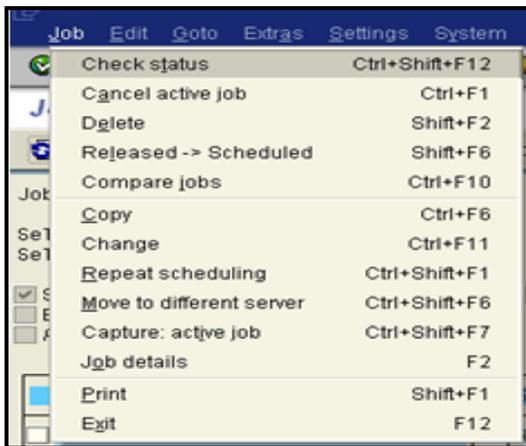

The jobs can be compared based on the below parameters:

Step 10: Check Status:

Check the status of jobs

Job→Check status

This allows you to check whether the status of a job as shown in the list is the same as the real status of the job. There is a database table that contains the status information of the jobs.

Situations sometimes occur (for example, a problem in the connection to the database) that prevent the background processing runtime system from entering the current status of a job in the appropriate database table. This will cause a discrepancy between the real status of a job and the status that was entered in the database.

Step 11: Move to different server:

Name of the host system on which you want to process a background job.

Job→ Move to different server
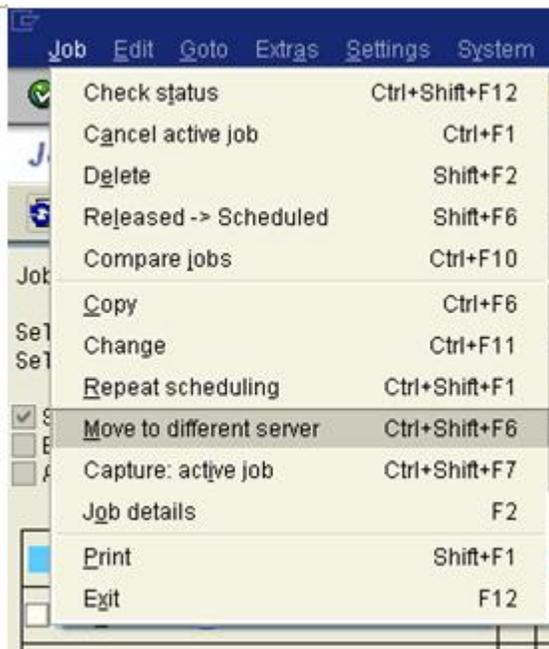
Scenario where this function can be used- a printer which is necessary for processing your request and it can only be reached by a certain host system.

Select a job which needs to be moved

Job	Ln	Status	Start date	Start time	Duration(sec.)	Delay (sec.)
☐ BI_PROCESS_INDEX		Released			0	0
*Summary					0	0

Then go to Job→ Move to different server and give the name of the host server

Move Job(s) to Another Target System ⊠

New TargetServer   sapb31_B31_00

✔ Move   ✖
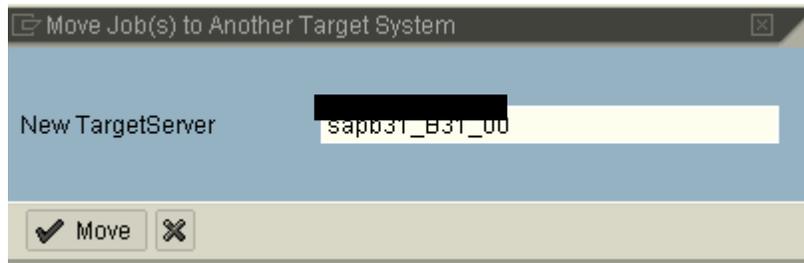
On success you get the status message as follows

⊘ Job BI_PROCESS_INDEX was moved

Note: For an ABAP job step, the background processing system looks for an instance on the target system. For an external job step, the name is used directly as the target system for running the external program or command.

Step 12: Job Log:

This contains information about any problems (if any) which occurred in the job at runtime, such as whether an ABAP program was terminated or an external program could not be started. This also contains a list of all messages which were output either by ABAP programs with the MESSAGE statement or by external programs.

Related Content

http://forums.sdn.sap.com/thread.jspa?messageID=9531444

For more information, visit the EDW homepage.

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