

Blohm Software

BatchControl

for R/3[®] 4.7 and ECC[®] 5.0/6.0 (unicode and non-unicode)

Functional Characteristics

Starting from Rel. 6.2.0

BatchControl:

The Comfortable Tool for Background Processing

- Planning
- Control
- Execution
- Monitoring
 Coupling of several R/3 Systems
 Central Supervision



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1 Problem

BatchControl is a batch job planning and control tool for SAP-R/3 Systems. It can be run at all hardware platforms and operating systems where SAP R/3 can be installed for successful operation.

A full job scheduling system is concerned based on the SAP R/3 Job Scheduling System from CCMS but completing it by essential possibilities such as a mainframe job scheduling system completes simple job starting.

BatchControl enables the user to realize all operational requirements in timing (first day of work per month, two days before the end of the month etc.) and, in case of dependencies, to take predecessor jobs into consideration as well as occurred interface files, milestones, events.

BatchControl completes R/3 job scheduling by detailed planning and monitoring operations which are not available for standard system and which are decisive for a job planning system. It produces automatic interfaces to other systems (such as host systems, other main frame applications and other non-SAP systems), and this also in planning.

BatchControl is completely operated from the SAP R/3 System, is incorporated in the SAP Standard World and uses this one as a basic element for processing.

BatchControl - like the entire R/3 System - is completely programmed within ABAP, uses SAP transparent tables and consequently is fully up-to-date as far as standard software development is concerned. Therefore it is easily perceivable by the SAP user and can be completed for its own applications.

BatchControl is an official SAP Partner Development. SAP has reserved an own naming space for *BatchControl*, so that no conflicts with SAP developments or customer developments are possible.

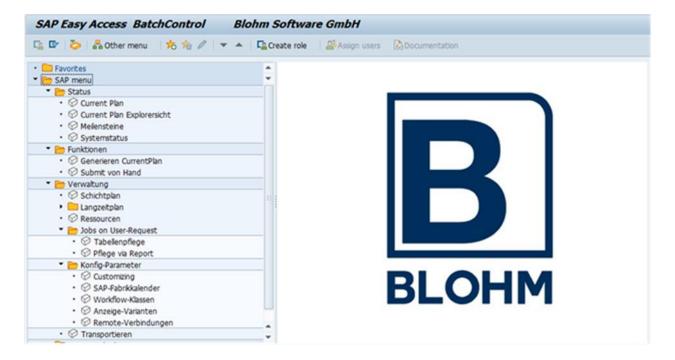
BatchControl enables complex job scheduling across all borders of systems.



System Design

2 Handling

As an initial requirement *BatchControl* disposes of its own menu introducing all *BatchControl* functions to the operator and ensuring an easy approach to the R/3 standard operations of CCMS.



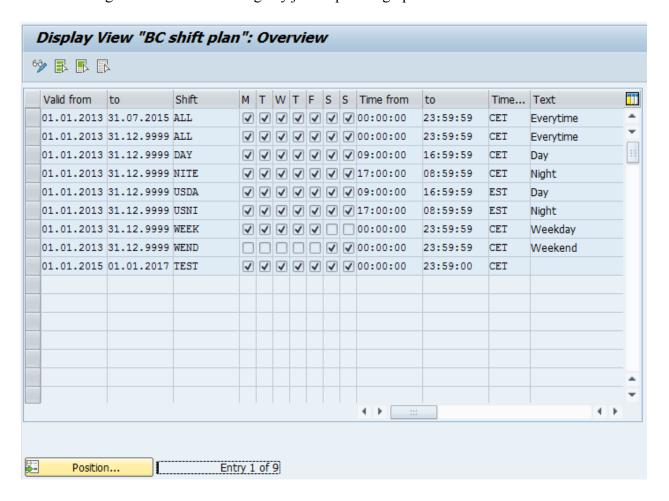
BatchControl uses its own authorization concept. Standard authorizations and profiles are provided. The maintenance of these profiles and the user master are tasks of the system manager.



3 Shift Schedule

BatchControl performs its duties in working shifts. The shift schedule is fixed by a transparent table and can be maintained via the menu 'Shift Plan'.

It describes the beginning and the end of a job planning shift for one validity period each. The shifts are a flexible control instrument as they allow to control batch processing by displacing entire working units without affecting any job dispatching operations.

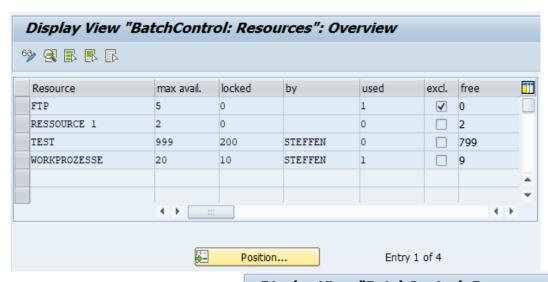


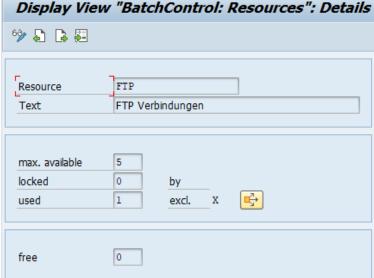


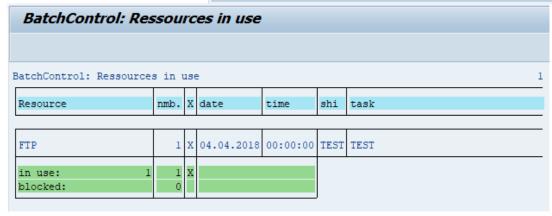
4 Resource Management

The resource management enables you to define jobs by considering resources which are available in a system.

You can define logical resources (printer, FTP or other connections, batch processes) which are checked and reserved for specific jobs as long as they are running.







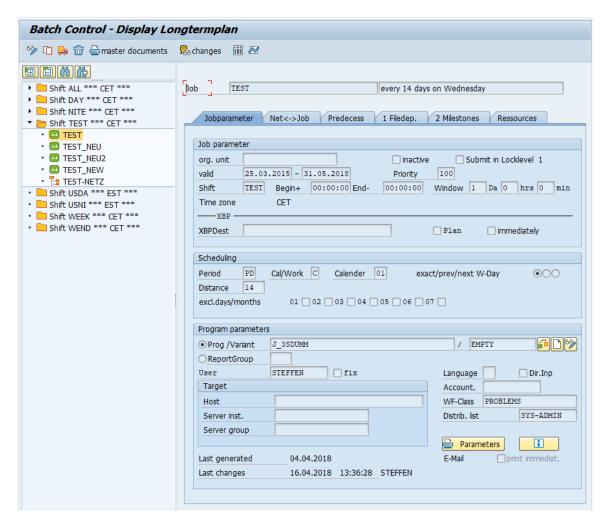


5 Task Timing – Long Term Schedule

BatchControl uses a long term schedule in order to plan the repeated batch tasks. This long term schedule describes how to execute which tasks within which timing and with which dependencies.

BatchControl uses a freely selectable factory calendar of the SAP System as a basic planning element.

All jobs defined with *BatchControl* are one step jobs only. This philosophy has been proved as an advantage in many job scheduling systems, because only this type of jobs has a clear restart logic.



There are two types of objects, which are defined in the Long Term Plan: jobs and nets.

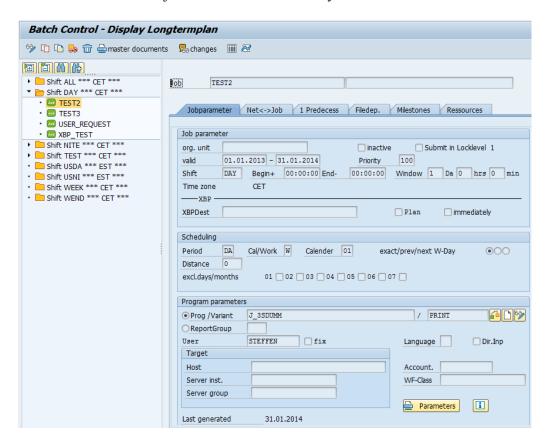
A **job** is one task to be processed in background. A job can be a single job and/or connected to a net.

A **net** can contain one or more jobs. It is defined like a job containing scheduling data, but no tasks (programs, selection sets). Nets are only a combination of jobs. Jobs or other nets can be dependent on nets.

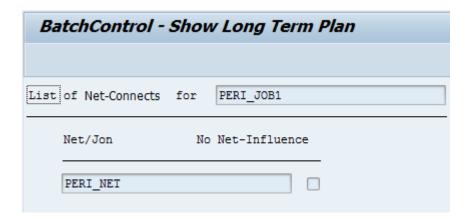


BatchControl enables the comfortable definition of jobs and nets. The user interface offers functions like copy a job, mass changes, documentation of jobs, job accounting and much more.

The detailed view of a job / net can be reached by line selection on the overview screen.



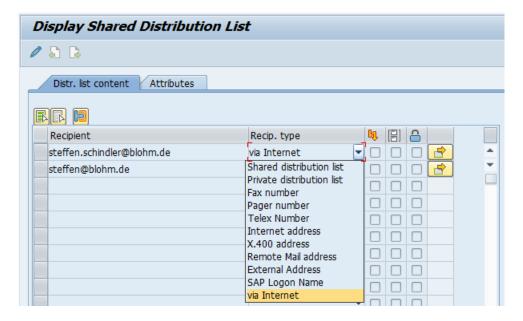
Various dependencies of jobs enable complex job chains:





5.1 Flexible Job Outputs

The job output requests may be sent the conventional way via print parameters. Additionally the requests may be sent via the so called spool list recipient to any distribution list consisting of e-mail addresses, fax numbers, SAP users, ... (SO15).

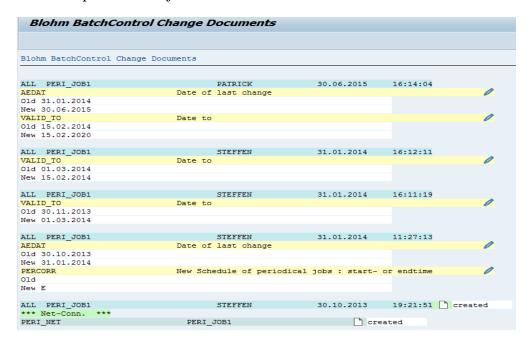


5.2 Job Documentation / Change Documentation

A detailed documentation can be stored with each job.

This documentation allows the responsible batch operator to clarify all necessary steps in case of problems with the job schedule.

During the maintenance of each job / net change documents are created. So it is easy to follow the development of the job schedule.





6 Job Timing

Timing essentially is done by in many variations:

- Indication in working days or calendar days
- Period: year, quarter, month, week, day, Monday and Wednesday, day periodical...
- Distance to period: i.e. 12th workday of a month, last day of a month,...
- Time window relating to beginning/end of the shift

Some Examples:

Period	Distance (selected day	Result of Planning	Result of Planning
	+- n days and	"W" = Working day	"C" = Calendar day
	repetition respectively daily	planning	planning
NT – Net		Job copies the schedule	
		data from its net	
DA - daily		daily	daily
DA - daily	80	daily every 80 minutes	daily every 80 minutes
PD – every x days	14	Every 14 days	Every 14 days
		(working days)	(calendar days)
WE - weekly first day	2	Wednesday	Wednesday
WL - weekly last day		Friday,	Sunday
		Easter: Thursday	
MO - monthly first day	3	for 12/2010: on Dec. 6th	for 12/2010: on Dec. 4th
ML - monthly last day	2-	for 12/2010: on Dec. 29th	for 12/2010: on Dec.29th
US – User Request	0	On Request	On Request
		(table J_3SRZU)	(table J_3SRZU)

Timing by shifts ensures:

- better planning of dependencies (predecessor job must run during the same shift)
- more flexible job timing.

Example:

A job that always must be started one hour before the end of the day shift will probably have to be terminated at 4 p.m. on Friday, but only at 6 p.m. on all other days because your day shift will end at 5 p.m. on Friday and two hours later on all other days of the week.

The job must be timed only once, the shift schedule will control the hours.



6.1 Jobs on User Request

The end user can request a job directly in dialog.

The batch administrator plans in advance, at which time in the night the jobs may run, if requested. The daily phone call is unnecessary.

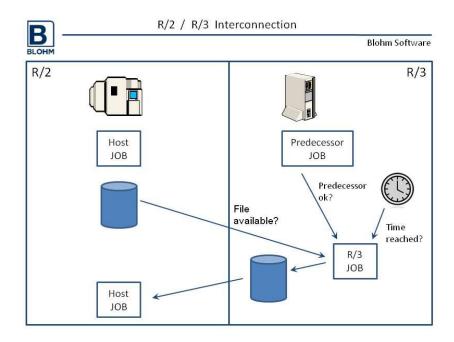
7 Job Dependencies and Job Reactions

It will be possible to indicate for the jobs what initial conditions must be fulfilled prior to job starting.

One condition can be:

- Reaching of "time window" for the start
- completion of another job / net (successful or only finished or aborted (recovery jobs)
- Existence of a control file and a specific file respectively
- Existence of milestones (set manually or automatically by a job)
- The processing of a Batch Input Session

Thanks to file existence examination in particular interfaces can be processed in a very elegant way. A job will only start after data supply by the partner system as well.





Thus coupling with other job control systems (such as Host: OPCA or similar) can easily be effected.

If you are a customer of *FileControl*, too, the connection to FTP and RJE Operation will be quite simple. *FileControl* will always accept the file arriving from Host or another system, enter it in the catalogue and automatically establish a control file for starting the processing job.

7.1 Milestones - Events

Milestones offer very comfortable opportunities to link job processes across all borders of shifts, clients and R/3 Systems.

Setting a milestone raises an event.

Jobs may be dependent on the existence of a milestone.

Milestones can be set by a user (manually) or by a job.

Jobs can set a milestone in the own client, in other clients or even in other R/3 systems.



7.2 Workflow Class - Alarm System

BatchControl is able to react to each status change of a job by the definition of workflow classes.

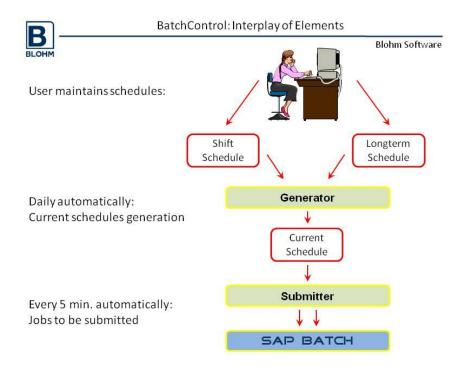
This enables *BatchControl* i.e. to send an express mail, create a system log entry, or call an external alarm system i.e. by modem.

This is an open interface and the customer is able to connect his own system, only by some lines of code.



8 Current Schedule: Generating - Submitting

From the longterm schedule and the current schedule the "generator" periodically (daily, for instance) generates a current schedule. The current schedule serves as the basic element for daily batch business. It includes all the jobs to be executed on a given day during one shift.



Apart from the information contained in the longterm schedule the current schedule also includes a status allowing to exactly read the state of the job (waits, has started, is completed and okay, interrupted etc.).

The current schedule enables the user to affect further planning and timing work either manually or by means of ABAP.

A submitter running intermittently in minute cycles transmits jobs that fulfill the dependencies and that are next to being processed, to the SAP job control and thus starts them.



9 Comfortable Handling - State of Work

A very comfortable central overview allows to obtain all necessary functions from one single view and to treat all problems respectively.

Thus by only pressing a button the following operations are possible from this central indication:

Spool: Indications "Spool-Output" of the job (for SAP five dialog steps, here 1)

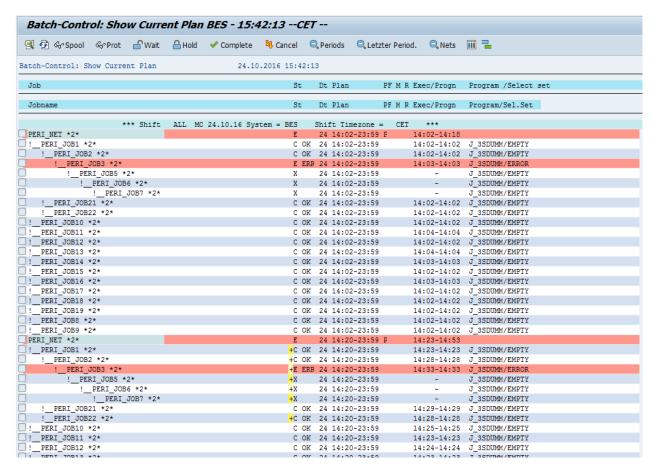
Prot: Indication of the job run-time log

Wait: Restart of interrupted jobs

Hold: Temporary holding of complete job streams / Nets

Complete: Completion of interrupted/unnecessary jobs
 Nets / Periods Show hidden jobs of a net or periodical jobs

DoubleClick Maintenance of job characteristics, dependencies, hour ans.)

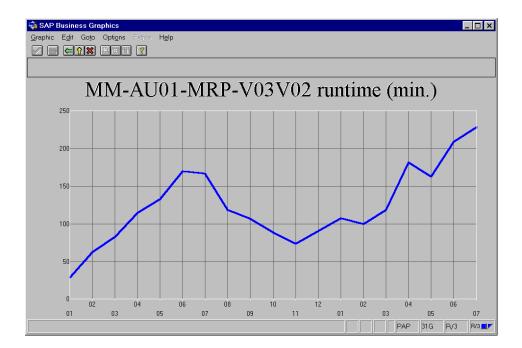


- Jobs that are interrupted or held are shown by an especially colored display.
- A structured tree diagram shows the dependencies at a first glance.
- You are very flexible to react by possibilities to change times for a block of jobs.
- Information like job status, planned processing time, executing time is shown.
- There is shown the probable run time of a job, based on the run time statistics.



10 Information

BatchControl collects **run time statistic information** for each job, which enables a creation of a run time forecast for each planning period. The run time statistic shows the trend of the job processing at any state:



Display Variants offer many possibilities to influence the display of lists and reports of *BatchControl*.

The right part of the list (after the job identification) is programmable.

So one client perhaps wants to list user name and planning times, another client shows only the program name.

This user exit, which must be realized by an ABAP programmer, makes it possible.

A graphical display of the schedule completes the comfortable operation.



11 Batch Input

Unfortunately it is possible to start sessions in a batch "without waiting" only, when using the SAP standard system. This will mean that the session start is affected and the executing batch job will end whereas the session(s) are still active.

If your application depends on the "processed" session because further sessions or a selection for an interface is to be started at the end of a session only, there will be no solution offered by the standard system.

BatchControl, however, allows processing of sessions and starting subsequent jobs only at the end of session processing.

12 Remote Connections

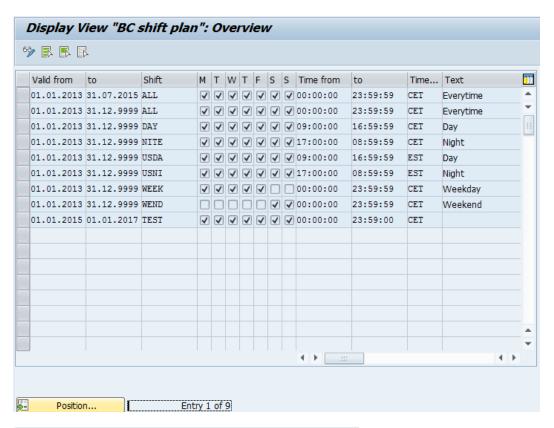
BatchControl is designed to enable monitoring of several R/3 systems where **BatchControl** is installed from one system. **BatchControl** is also designed to enable setting of milestones to other systems and thus influencing job processes in other systems.

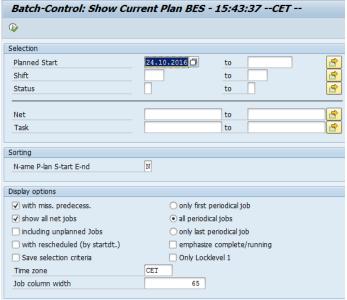


13 Maintenance of Management of Time Zones in Multinational Installations

Since Rel. 4.6C several time zones are supported by the SAP system. BatchControl also supports time zones. The jobs will be scheduled based on the specific time zone, in which *BatchControl* has been installed.

Now it is possible to allocate a specific time zone to every shift. Otherwise *BatchControl* assumes that the shift is using the same time zone as the system.







14 Installation

We offer you the possibility of testing the system free of charge for a period of 30 days.

You will require an R/3 System Rel.4.7, ECC 5.0 or ECC 6.0 (unicode or non-unicode) or higher.

We supply you with an EXE- or ZIP file.

The self-extracting archive creates files for the SAP Transport Utility TP.

Together with the installation you will receive the respective installation and user's manuals.

There are two possibilities for installation and activation:

1. You do the installation on your own.

In this case we deliver the CD and relevant documentation.

You should be familiar with R/3trans and SAP Job administration and capable to implement simple adaptations to your R/3 environment based on the instructions in the accompanying manual.

2. We provide a consultant for a day (fee required).

We install the system, train you thoroughly in the handling of the program and set-up the first jobs together.

If you also decided to test *FileControl* it would be advisable to order and to install the bundle as "one set" as the two components complete each other in an excellent way and tightly interlock.

Are there still any questions to be answered? Please do not hesitate to contact us by phone, Fax or email.