



## Visual TOM SAP Guide

Version 6.6.1c

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## 1 PRINCIPLES

### 1.1 INTRODUCTION

The terminology employed in this manual is as follows:

- Task: generic term designating a job to be executed,
- Job: term designating the Visual TOM object for the execution of a task,
- JOB: term designating a job under SAP for the execution of a task.

The Visual TOM – SAP R/3 interface module communicates with the SAP software package, version R/3 or higher. It enables you to plan and schedule the following SAP tasks:

- The ABAP programs,
- VARIANTS,
- DYNAMIC VARIANTS,
- The BATCH-INPUTS.

The Visual TOM – SAP BW interface module communicates with the SAP software package, version R/3 or higher. It enables you to plan and schedule the following SAP tasks:

- CHAIN PROCESSES,
- INFO PACKAGES.

Sap Events may be used as constraints for SAP Jobs. These constraints are set with Visual TOM Resources.

### 1.2 PRE-REQUISITES

The Visual TOM SAP R/3 interface module is operational for all versions of Visual TOM. The Visual TOM SAP R/3 interface module operates with most SAP versions: v4.5, v4.6, v4.7, v6.10, v6.20, v6.40...

A specific connector is available for versions older than SAP version 4.5.

For BW, Java must be operational on the server hosting the Visual TOM Agent. The SAPJCO package must be available (Java Connector SAP) :

- With the template usage, JCO must be installed in [ABM\_BIN]/sapjco/native/[os.name]/[os.arch] directory (examples [os.name]/[os.arch] : Sunos/x86, Sunos/sparc, AIX/ppc64, HP-UX/PA-RISC, Linux/x86\_64).
- Without the template usage, JCO must be installed in « ABM\_BIN »

This module was developed in Java, and therefore you must have JRE Java on the machine where the Visual TOM Agent for SAP BW is installed. The java version must be the version recommended by SAP.

The Java UTILITIES must be available in the Visual TOM administrator "path".

Sap tasks names (ie: ABAP, PROCESS CHAIN...) must be composed exclusively with alphanumeric characters.

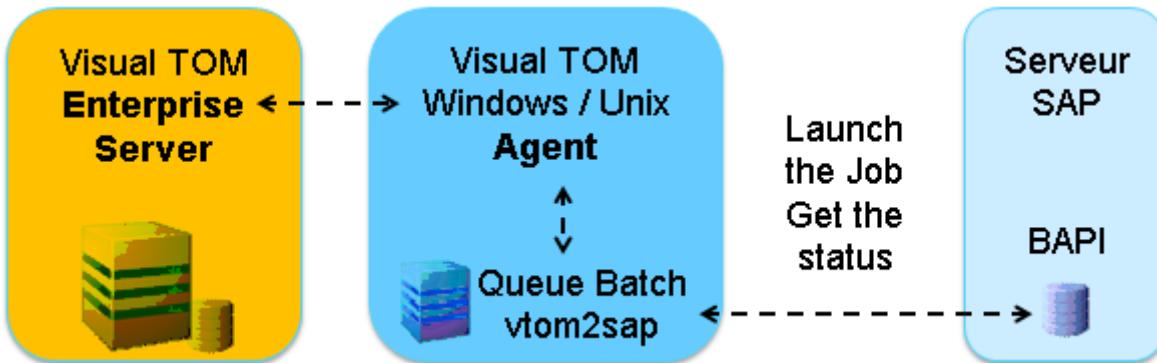


The visibility of application servers and job templates are subject to the contents of the license file.

The use of dynamic variants requires the availability of following bapi's : RS\_VARIANT\_CONTENTS\_255\_RFC and RS\_CHANGE\_CREATED\_VARI\_255\_RFC.

*Spool size is not limited to 255 characters (using BAPI\_XBP\_JOB\_SPOOLLIST\_READ\_20 bapi).*

### 1.3 DIAGRAM OF THE ARCHITECTURE



VTOM/SAP module operation architecture

### 1.4 OPERATION PRINCIPLES

You must install a Visual TOM Agent on the machine accommodating the SAP server.

To dialogue with the software package, a customised execution context (Batch Queue) and a specific module must be set up.

It is not necessary to change the SAP software package for interaction between Visual TOM and SAP.

The principle of creation, execution and launching of SAP tasks by Visual TOM is performed by the definition of a Visual TOM Job sending customised parameters to a VTOM/SAP communication module located on the machine hosting the Visual TOM Agent and the SAP server. An SAP JOB results from this.



For R3, the XBP features of the vtom2sap module use the table SAP TXMILOGRAW; it is therefore necessary to purge this table regularly.

2 executions of the same dynamic variant can not be running simultaneously.

## 2 R3 INSTALLATION

### 2.1 WINDOWS NT

#### 2.1.1 *Contents of the package*

The package directory contains the following file:

- Librfc32.dll
- vtom2sap.exe

Queue batch is installed by default.

#### 2.1.2 *Installing the package*

In the "[BDAEMON]" section of the "vtom.ini" file, change the "ABM\_QUEUES=" parameter by adding the Batch Queue for SAP:

```
ABM_QUEUES=/queue_wnt:20 /queue_vt2sapr3:n
```

The value "n" is the number of simultaneous jobs accepted by the Visual TOM Agent.

### 2.2 UNIX SYSTEM

#### 2.2.1 *Content of the package*

The package directory contains the following file:

- librccm dynamic library

#### 2.2.2 *Installing the package*

The "librccm" dynamic library must be copied into the directory "\$ABM\_BIN". The Visual TOM administrator account must have the execution rights to this library. Variable LD\_LIBRARY\_PATH must be checked.

## 2.3 PARAMETERING

Whatever the type of parametering, the log on and submission user is of the "DIALOG" type and must have the SAP\_ALL rights. After validation, the rights of this user may be restricted by the administrator according to the production strategy (e.g.: S\_BTCH\_ALL, S\_XMilog\_ADM).



Remark :

The declaration of the application server could be made directly from the interface with the main parameters below.

### 2.3.1 Parametering without LOGONGROUP

The file representing the Batch queue ("submit\_queue\_vt2sapr3.bat" or "tom\_submit.vt2sapr3") must be parametered as shown below:

- VT\_DEST=VHQ # destination, sap instance, 3 characters
- VT\_CLT=010 # log on authorisation
- VT\_USER=APITOM # Log on and submission user (in capital letters)
- VT\_PASS=xxx # Log on and submission user password
- VT\_LANG=FR # Language used by the log on and submission user
- VT\_MODE=R/3 # Fixed parameter
- VT\_HOST=bt72 # SAP machine (if no gateway exists to access sap, VT\_GWAY=bt72 is identical)
- VT\_SYS=00 # SAP system number, on 2 characters
- VT\_GWAY=bt72 # SAP gateway
- VT\_GSRVCE=sapgw00 # Fixed value "sapgw" with the SAP system number as suffix
- VT\_TRACE=OFF # Level of traces internal to the vtom2sap module



In SAP, the log on and submission user must be declared in capitals. Validation of the parametering can be carried out by executing a variant of ABAP "RSPARAM".



Remark :

To manage encryption of the password, the "VT\_CRYPT" environment variable must be set with value "1". This variable must be included in the batch queue.

### 2.3.2 Parametering with LOGONGROUP

#### A. Initial configuration file

To use the "LOGONGROUP", the file representing the batch Queue ("submit\_queue\_vt2sapr3.bat" or "tom\_submit.vt2sapr3") must be parametered as shown below:

- VT\_DEST=VHQ # destination, sap instance, 3 characters
- VT\_CLT=010 # log on authorisation
- VT\_USER=APITOM # Log on and submission user (in capital letters)
- VT\_PASS=xxx # Log on and submission user password
- VT\_LANG=FR # Language used by the log on and submission user
- VT\_MODE=R/3 # Fixed parameter
- VT\_HOST= # Do not complete
- VT\_SYS= # Do not complete
- VT\_GWAY= # Do not complete
- VT\_GSRVCE= # Do not complete
- SAP\_PROG=0 # 0: Use of the LOGONGROUP, otherwise 1.
- RFC\_INI=./saprfc.ini # File name containing the log on description.
- VT\_TRACE=OFF # Level of traces internal to the vtom2sap module



The file saprfc.ini must be positioned in the directory defined by the environment variable "ABM\_BIN". Please refer to SAP documentation in order to obtain a description of this file.

saprfc.ini sample :

DEST=xxxx ==> Sap instance name  
TYPE=B ==> connection type, static parameter  
MSHOST=xxxx ==> server hosting message server  
R3NAME=xxxx ==> Sap instance name  
GROUP=xxxx ==> connection group



Remark :

To manage encryption of the password, the "VT\_CRYPT" environment variable must be set with value "1". This variable must be included in the batch queue.

#### B. Additional configuration file

The file representing the log on description ("saprfc.ini") must be parametered as shown below:

- DEST=VHQ # Name of the SAP instance
- TYPE=B # Log on type, fixed parameter
- MSHOST=BT72 # Machine hosting the message server
- R3NAME=VHQ # Name of the SAP instance
- GROUP=GR # Log on group

### 2.3.3 Queue batch grouping mechanism

In order to reduce the number of Queue batch configurations, because of multiple instances and/or SAP clients needed to connect, for a unique Visual TOM Agent, the connection parameters are specified in an additional configuration file, which one is read by « vtom2sap » executable.

#### A. Queue batch configuration

Only the following parameters are necessary in queue batch file configuration :

- VT\_MODE=R/3
- VT\_TRACE=OFF
- VT\_EXTCOMPAGNY=ABSYSS
- VT\_EXTPRODUCT=VTOM
- VT\_INTERFACE=XBP
- VT\_VERSION=<1.0 | 2.0>

The other parameters are described in the additional configuration file, which name is indicated in the field “script” of the Visual TOM Job.

#### B. Additional configuration file

The connection parameters are described by file indicated in the field “script” of the Visual TOM Job, as below :

- [VTOM2SAP]
- VT\_DEST=VHQ # destination, sap instance, 3 characters
- VT\_CLT=010 # log on authorisation
- VT\_USER=APITOM # Log on and submission user (in capital letters)
- VT\_PASS=/vtom/abm/sapconfig
- # Absolute path of the configuration file containing passwords
- VT\_LANG=FR # Language used by the log on and submission user
- VT\_HOST=bt72 # SAP machine (if no gateway exists to access sap, VT\_GWAY=bt72 is identical)
- VT\_SYS=00 # SAP system number, on 2 characters
- VT\_GWAY=bt72 # SAP gateway
- VT\_GSRVCE=sapgw00 # value "sapgw" with the SAP system number as suffix

The parameter « VT\_PASS » indicates the absolute path of the configuration file containing passwords.



Remark :

To manage encryption of the password, the "VT\_CRYPT" environment variable must be set with value "1". This variable must be included in the batch queue.

### C. Password configuration file

The password configuration file which describes the connection must be specified as shown below:

- [VTOM2SAP]
- XXX.YYY.ZZZ=PW

where :

- XXX specifies the user (corresponds to VT\_USER parameter),
- YYY specifies the client (corresponds to VT\_CLT parameter),
- ZZZ specifies SAP instance (corresponds to VT\_DEST parameter),
- PW specifies associated password (corresponds to VT\_PASS parameter).

### D. Visual TOM Job description

The script indicates the name of the additional configuration file. The SAP Queue batch is linked to the Job. Other Job parameters are unchanged.

#### 2.3.4 Work-Process Management

To avoid the putting tasks in error status when the SAP queues are full, the parametering file "tom\_submit.vt2sapr3" must be parametered as shown below:

- VT\_WP\_RETRY=5 # Maximum number of attempts if SAP queue is full
- VT\_WP\_TEMPO=5 # Time in seconds between 2 attempts

This parametering applies to all types of task, whether the "LOGONGROUP" is used or not.

#### 2.3.5 Log file management

To avoid too large log files, the parametering file "tom\_submit.vt2sapr3" must be parametered as shown below:

- VT\_NB\_LINES\_LOG=1000 # Maximum number of lines

This parametering applies to all types of task, whether the "LOGONGROUP" is used or not.

#### 2.3.6 Implementation help

The main SAP transactions to be used are as follows:

- SM36 to request a JOB,
- SM37 to control the JOBS,
- SM21 to display the SAP system log,
- RZ15 to display the XBP feature log.

13:51:03	DIA	01	850	ABSYSS	EF2	BP_STEPLIST_EDITOR: Invalid step values (step 1) found. Reason:
13:51:03	DIA	01	850	ABSYSS	EF8	> User name absyss is invalid
13:51:03	DIA	01	850	ABSYSS	EFL	BP_JOB_EDITOR: Job VT-CSWC is invalid. Reason:
13:51:03	DIA	01	850	ABSYSS	EFT	> Step 1 contains illegal values

*Extract from the SAP system log*

## 3 BW INSTALLATION

### 3.1 WINDOWS NT

#### 3.1.1 *Contents of the package*

The package directory contains the following file:

- Librfc32.dll
- vtom2sap.exe

Queue batch is installed by default.

#### 3.1.2 *Installing the package*

In the "[BDAEMON]" section of the "vtom.ini" file, change the "ABM\_QUEUES=" parameter by adding the Batch Queue for BW:

ABM\_QUEUES=/queue\_wnt:20 /queue\_vt2sapbw:n

The value "n" is the number of simultaneous jobs accepted by the Visual TOM Agent.

Two libraries are to be updated if the dates of the system files older than those supplied:

- Copy library **librfc32.dll** under the directory C:\WINNT\SYSTEM32.
- Copy library **sapjcorfc.dll** under the directory C:\WINNT\SYSTEM32.

#### 3.1.3 *Parametering*

The file "submit\_queue\_vt2sapbw.bat" can be copied from the file "submit\_queue\_vt2sapr3.bat". It must contain the following parameters:

```
echo SAPCLIENT:030          > %ABM_BIN%\%TOM_JOB_ID%.var
echo USERID:absyss          >> %ABM_BIN%\%TOM_JOB_ID%.var
echo PASSWORD:absyss        >> %ABM_BIN%\%TOM_JOB_ID%.var
echo LANGUAGE:FR            >> %ABM_BIN%\%TOM_JOB_ID%.var
echo HOSTNAME:216.239.59.99  >> %ABM_BIN%\%TOM_JOB_ID%.var
echo SYSTEMNUMBER:00         >> %ABM_BIN%\%TOM_JOB_ID%.var
echo VT_TEMPO:30             >> %ABM_BIN%\%TOM_JOB_ID%.var
```

where

- SAPCLIENT also called authorisation, overloads the user (the user has variable rights and authorisations according to the log on authorisation),
- USERID defines the name of the log on user,
- PASSWORD: specifies the log on user's pass word,
- LANGUAGE means the log on user's language,
- HOSTNAME names the BW machine (enter the IP address),
- SYSTEMNUMBER corresponds to the SAP log on system, a server is identified by its system,
- VT\_TEMPO corresponds to the time between 2 job tests on the machine (not used).



Remark :

To manage encryption of the password, the "VT\_CRYPT" environment variable must be set with value "1". This variable must be included in the batch queue.

The script submission line is parametered as shown below:

```
java -jar .\vtom2sap.jar %ABM_BIN%\%TOM_JOB_ID%.var %arg%
```



Remark :

The declaration of the application server could be made directly from the interface with the main parameters above.

## 3.2 UNIX SYSTEM

### 3.2.1 Content of the package

The package directory contains the following file:

- librfccm

### 3.2.2 Installing the package

The " librfccm " dynamic library must be copied into the directory "\$ABM\_BIN". The Visual TOM administrator account must have the execution rights to this library. Variable LD\_LIBRARY\_PATH must be checked.

### 3.2.3 Parametering

The file "tom\_submit.vt2sapbw" must contain the following parameters:

```
echo SAPCLIENT:030      > $ABM_BIN/$TOM_JOB_ID.var  
echo USERID:absyss     >> $ABM_BIN/$TOM_JOB_ID.var  
echo PASSWORD:absyss   >> $ABM_BIN/$TOM_JOB_ID.var  
echo LANGUAGE:FR        >> $ABM_BIN/$TOM_JOB_ID.var  
echo HOSTNAME:216.239.59.99 >> $ABM_BIN/$TOM_JOB_ID.var  
echo SYSTEMNUMBER:00    >> $ABM_BIN/$TOM_JOB_ID.var  
echo VT_TEMPO:30        >> $ABM_BIN/$TOM_JOB_ID.var
```

where

- SAPCLIENT also called authorisation, overloads the user (the user has variable rights and authorisations according to the log on authorisation),
- USERID defines the name of the log on user,
- PASSWORD: specify the log on user's password,
- LANGUAGE means the log on user's language,
- HOSTNAME names the BW machine (enter the IP address),
- SYSTEMNUMBER corresponds to the SAP log on system, a server is identified by its system,
- VT\_TEMPO corresponds to the time between 2 job tests on the machine (not used).



Remark :

To manage encryption of the password, the "VT\_CRYPT" environment variable must be set with value "1". This variable must be included in the batch queue.

The script submission line is parametered as shown below:

```
java -jar ./vtom2sap.jar $ABM_BIN/$TOM_JOB_ID.var $argtot
```

On Itanium 64 bits, the script submission line is parametered as shown below:

```
java -d64 -jar ./vtom2sap.jar $ABM_BIN/$TOM_JOB_ID.var $argtot
```



Remark :

The declaration of the application server is made directly from the interface with the main parameters above.

## 4 R3 IMPLEMENTATION

### 4.1 INTRODUCTION

The Visual TOM – SAP R/3 interface module allows integration with the SAP R/3 software package.

It enables you to plan and schedule the following SAP tasks

- The ABAP programs (programs developed with the SAP ABAP language),
- VARIANTS, (ABAP program with variants or parameters),
- INPUT BATCHES (program generating the statuses).

### 4.2 PRINCIPLE FOR PARAMETERING JOBS UNDER VISUAL TOM

Whatever the task, implementation consists in creating a Visual TOM Job with specific parameters, depending on the type of feature desired.

In all cases, the use of one of these features must follow the following procedure:

- The "Script" field must contain the name of any script which must exist on the machine where the interface binary is installed with SAP.
- The "User" field must contain the name of a user known to the operating system where the Agent is located.
- The "Machine" field must contain the machine name where the Visual TOM Agent is installed.
- The "Batch Queue" field must contain the SAP batch queue configured in the installation phase.
- The parameters of the Visual TOM Job must contain the different properties of the SAP task (according to the feature chosen).
- An SAP/R3 task can be an ABAP program, a VARIANT or an INPUT BATCH.

The distinction in the use of features for an SAP type task is carried out by the implementation of a parameter under Visual TOM.



Remarks :

- Jobs can be declared in the GUI with the SAP R3 Job Template. Most used functions are implemented in this template.
- Application Server could be defined with GUI.
- Dynamic variant is operational with a unique step only. In all cases, a unique step by job is recommended.

### 4.3 THE MAIN FEATURES

#### 4.3.1 CREATSTARTWAITCHILD

##### Feature objectives

This command allows you to create, start and await the end of execution of an SAP JOB which triggers child processes. This command can be used for the ABAPs and VARIANTS which generate child JOBS.

A JOB under SAP results. For each JOB with 1 or several STEPS, it is possible to redefine the local printing parameters for each of the STEPS executed.



For this feature, XBP 2.0 must be operational. Maximum number of STEPS for a JOB is limited to 16.

## Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CRESTARTWAITCHILD
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [SAP server name]

Server on which the SAP JOB will be executed; the value "NONE" means that the choice of execution server is delegated to SAP. A specific value must be set as "server\_instance\_systemnumber", as known by the Application Server (eg londres\_NSP\_00).

- Parameter 4: [default printing parameters]

- PR12                   Printer name
  - N                   Immediate printing or Not (Y/N according to language)
  - N                   Release after printing or status deletion (Y/N according to language)
  - 5                   Copies
  - 65                   Lines
  - 80                   Columns

Parameter 4: [Optional parameters]

- /arch=n               Number of days archiving of the spool, between 1 and 9 days
  - /imp=HOSTPrinter name
  - /rcpt=RCPT Addressee
  - /auth=UserUser name
  - /lig=x               Lines
  - /col=y               Columns
  - /lang=FR             Script writing language
  - /armod               Archiving mode (1, 2 ou 3)
  - /sap\_object          Sap object type
  - /ar\_object Object archiving
  - /info               Information linked to object
  - /artext              Description of archiving request
  - /prttxt              Front page title
  - /mail=recipient:type    « Recipient » is a text, a mail address, an internal SAPOffice user or a SAP distribution list ; type is B for a SAP user ; P for a personal distribution list , C for a general distribution list, U for an internet address. For types B, C and P, the selected sending mode is « express ».
  - /numfils=n           Specifies the number of children processes that must be ended to consider the end of the Job. This parameter applies to ABAP and Variants only.
  - /namefils=N           Specifies the name of child process that must be ended to consider the end of the Job. This parameter applies to ABAP and Variants only, the name must not contain any space character.

The value "NONE" in parameter 4 means that there is no printing parametering. The maximum number of children is 30000.

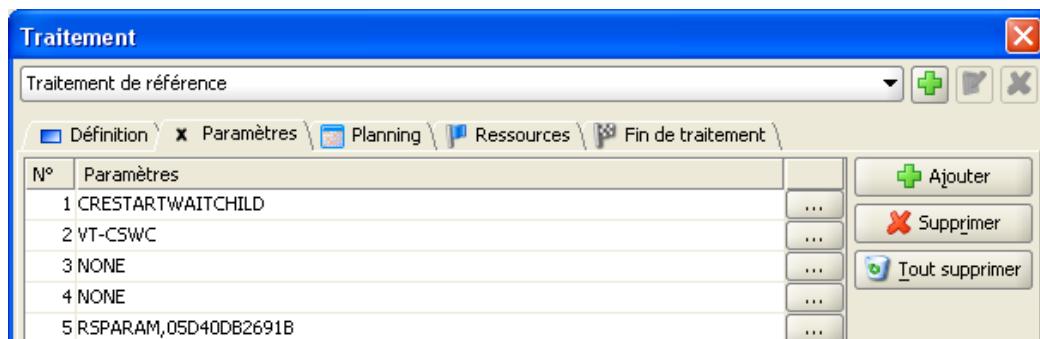
- Parameter 5: [ABAP name | ABAP name,VARIANT name | RSBDCSUB,BATCH-INPUT name] [/user=Name of the execution user]

Parameter 5: [Optional parameters]

- [step1] Redefine the optional parameters if different from default
- [step2] Redefine the optional parameters if different from default
- [step3] Redefine the optional parameters if different from default

To manage the execution under a different account logon account, specify on the step: / user = <user of soumission>.

To manage external steps, specify the option "/extstep=[server name]". The maximum length of the command is 128 characters and the maximum length of these parameters is 256 characters.



*Example of a Visual TOM Job for management of the child processes*

### Extract from the Visual TOM Job execution log

Start executing the script...

"Absyss test "

Tues. 10/11/2009

14:55

"CRESTARTWAITCHILD" "VT-CSWC" "NONE" "NONE" "RSPARAM,05D40DB2691B"

Vtom2sap - Visual TOM - June 2009 - SAP 4.5 - 4.7 / 6.10 - 6.40

```

Call bapi_xmi_logon, XBP interface
SESSIONID : 9B38312D0E544AF970E7D832
TYPE :
ID :
NUMBER : 000
MESSAGE :
LOG_NO :
LOG_MSG_NO : 000000
MESSAGE_V1 :
MESSAGE_V2 :

```

MESSAGE\_V3 :  
MESSAGE\_V4 :  
PARAMETER :  
ROW : 0  
FIELD :  
SYSTEM :  
No printer for this job

Call bapi\_xbp\_job\_open

VT\_VERSION = 2.0 JOBNAME: VT-CSWC  
JOBCOUNT : 14555201

Call bapi\_xbp\_\$job\_add\_abap\_step

STEP\_NUMBER : 1

Call bapi\_xbp\_\$job\_close

Call bapi\_xbp\_job\_start\_immediately  
JOB/NUM/SERVER: VT-CSWC / 14555201 /

JOB : VT-CSWC  
JOB COUNT : 14555201  
STEP NUMBER :  
JOB STATUS : R  
THE JOB IS ACTIVE  
JOB : VT-CSWC  
JOB COUNT : 14555201  
STEP NUMBER :  
JOB STATUS : F  
THE JOB IS FINISHED

SUMMARY of 1 JOBS:

JOB VT-CSWC / 14555201  
JOB OK  
tables  
JOB\_PROTOCOL : 3 lines  
LOG OF JOB VT-CSWC:  
Date Time ID No Message  
20091110 145552 00 516 Job started  
20091110 145552 00 550 Step 001 started (program RSPARAM, variant 05D40DB2691B, user ID ABSYSS)  
20091110 145553 00 517 Job finished

Call bapi\_xmi\_logoff

---

End of script execution  
Tues. 10/11/2009  
14:56

Exit 0 therefore clearing

#### 4.3.2 CRESTARTWAIT

##### Feature objectives

This command allows you to create, start and await the end of execution of an SAP JOB. This command can be used for ABAP, VARIANT, DYNAMIC VARIANT and BATCH INPUT.

For each JOB with 1 or several STEPS, it is possible to redefine the local printing parameters for each of the STEPS executed.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CRESTARTWAIT
- Parameter 2: [SAP JOB envelope name]
- Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.
- Parameter 3: [SAP server name]
- Server on which the SAP JOB will be executed; the value "NONE" means that the choice of execution server is delegated to SAP. A specific value must be set as "server\_instance\_systemnumber", as known by the Application Server (eg londres\_NSP\_00).
- Parameter 4: [default printing parameters]
  - PR12              Printer name
  - N                Immediate printing or Not (Y/N according to language)
  - N                Release after printing or status deletion (Y/N according to language)
  - 5                Copies
  - 65               Lines
  - 80               Columns

##### Parameter 4: [Optional parameters]

- /arch=n              Number of days archiving of the spool, between 1 and 9 days
- /imp=HOSTPrinter name
- /rcpt=RCPT Addressee
- /auth=UserUser name
- /lig=x               Lines
- /col=y               Columns
- /lang=FR             Script writing language
- /class=A             High priority for execution
- /armod               Archiving mode (1, 2 ou 3)
- /sap\_object          Sap object type
- /ar\_object          Object archiving
- /info                Information linked to object
- /artext              Description of archiving request
- /prttx               Front page title
- mail=recipient:type    « Recipient » is a text, a mail address, an internal SAPOffice user or a SAP distribution list ; type is B for a SAP user ; P for a personal distribution list , C for a general

distribution list, U for an internet address. For types B, C and P, the selected sending mode is « express ».

The value "NONE" in parameter 4 means that there is no printing parametering.



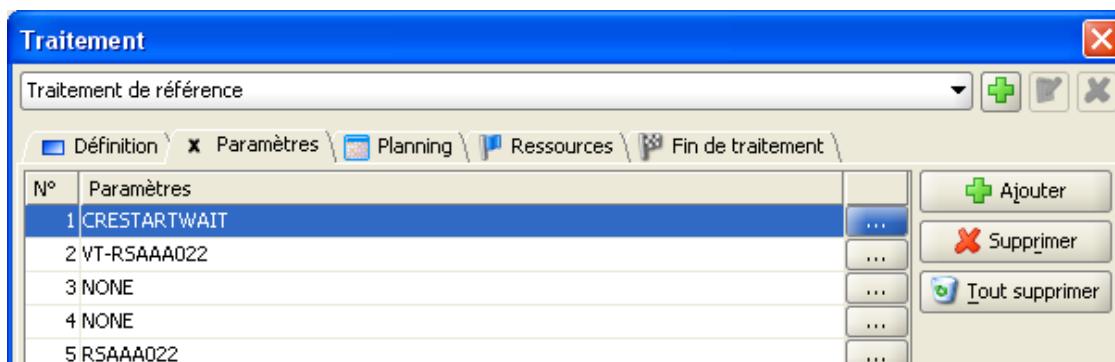
In order to manage priority class execution and dynamic variant, XBP 2.0 must be operational. To be executed, the variant must not be currently updated. The maximum length of the parameter for a dynamic variant is 255 characters.

- Parameter 5: [ABAP name | ABAP name,VARIANT name [/nV1=[parameter name] /pV1=[parameter value]] | RSBDCSUB,BATCH-INPUT name] [/user=Name of the execution user]

Parameter 5: [Optional parameters]

- [step1] Redefine the optional parameters if different from default
- [step2] Redefine the optional parameters if different from default
- [step3] Redefine the optional parameters if different from default

To manage external steps, specify the option "/extstep=[server name]". The maximum length of the command is 128 characters and the maximum length of these parameters is 256 characters.



*Simple parametering of a Job to execute an ABAP*

### Extract from the Visual TOM Job execution log

Execution script start...

"Absyss test "

Tues. 10/11/2009

14:33

"CRESTARTWAIT" "VT-CSW" "NONE" "NONE" "RSPARAM,05D40DB2691B"

Vtom2sap - Visual TOM - June 2009 - SAP 4.5 - 4.7 / 6.10 - 6.40

Call bapi\_xmi\_logon, XBP interface

SESSIONID : 9B38312D0E544AF96BA5D7B2

TYPE :

ID :

NUMBER : 000

MESSAGE :

LOG\_NO :

LOG\_MSG\_NO : 000000

MESSAGE\_V1 :

MESSAGE\_V2 :

MESSAGE\_V3 :

MESSAGE\_V4 :

PARAMETER :

ROW : 0

FIELD :

SYSTEM :

No printer for this job

Call bapi\_xbp\_job\_open

VT\_VERSION = 2.0 JOBNAME: VT-CSW

JOBCOUNT : 14332601

Call bapi\_xbp\_\$job\_add\_abap\_step

STEP\_NUMBER : 1

Call bapi\_xbp\_\$job\_close

Call bapi\_xbp\_job\_start\_immediately

JOB/NUM/SERVER: VT-CSW / 14332601 /

JOB : VT-CSW

JOB COUNT : 14332601

STEP NUMBER :

JOB STATUS : R

THE JOB IS ACTIVE

JOB : VT-CSW

JOB COUNT : 14332601

STEP NUMBER :

JOB STATUS : F

THE JOB IS FINISHED

Call bapi\_xbp\_job\_joblog\_read

tables

JOB\_PROTOCOL : 3 lines

LOG OF JOB VT-CSW:

Date Time ID No Message

20091110 143327 00 516 Job started

20091110 143327 00 550 Step 001 started (program RSPARAM, variant 05D40DB2691B, user ID ABSYSS)

20091110 143328 00 517 Job finished

Call bapi\_xmi\_logoff

---

End of script execution

Tues. 10/11/2009

14:33

Exit 0 therefore clearing

#### **4.3.3 CRESTARTASAPWAITCHILD**

This command allows you to create, start and await the end of execution of an SAP JOB which triggers child processes. This command can be used for the ABAPs and VARIANTS which generate child JOBS.

A JOB under SAP results. For each JOB with 1 or several STEPS, it is possible to redefine the local printing parameters for each of the STEPS executed.

The maximum number of children is 30000.

#### **4.3.4 CRESTARTASAPWAIT**

##### **Feature objectives**

This command allows you to create, start and await the end of execution of an SAP JOB. This command can be used for ABAP, VARIANT, and BATCH INPUT.

This command is built from CRESTARTWAIT command, uses the “start\_asap” BAPI which adds the requested tasks in SAP background batch queues.

##### **Implementation**

Implementation is the same as the CRESTARTWAIT feature.

#### **4.3.5 CPYSTARTWAIT**

##### **Feature objectives**

This feature uses an SAP JOB template to create and submit a copy of this JOB under SAP.



**For this feature, XBP 2.0 must be operational. This function inhibits the maximum number of STEPS.**

##### **Implementation**

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CPYSTARTWAIT
- Parameter 2: [original JOB name]

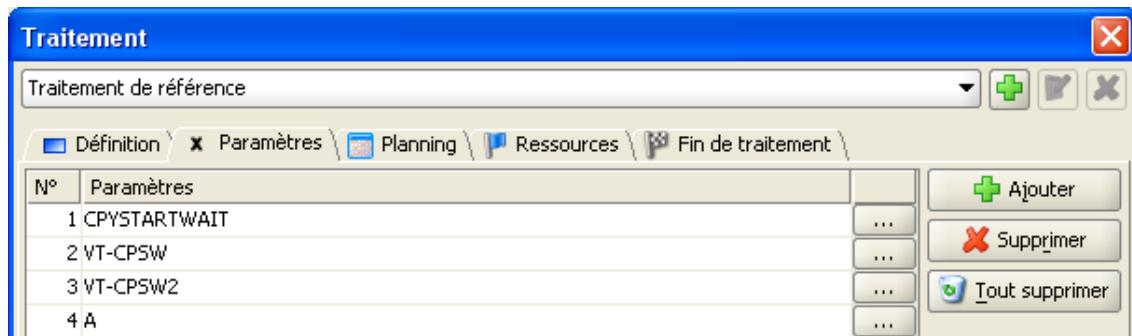
Corresponds to the JOB template to be copied.

- Parameter 3: [destination JOB name]

Corresponds to the new JOB copied.

- Parameter 4: [Class priority]

Corresponds to the class level (CLASS A/CLASS B/CLASS C).



*Simple parameterizing of a Job to copy a JOB*



Remark :

The SAP Job to copy must be in "scheduled" status in SM37.

#### 4.3.6 CPYREFSTARTWAIT

##### Feature objectives

This feature uses an SAP JOB template to create and submit a copy of this JOB under SAP, taking into account a JOB identifier.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CPYREFSTARTWAIT
- Parameter 2: [original JOB name]

Correspond au JOB template to be copied.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.

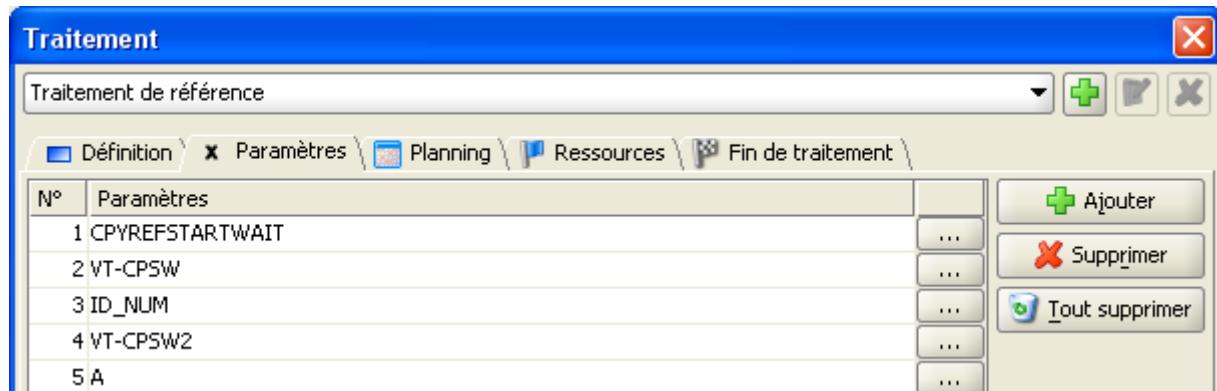
- Parameter 4: [destination JOB name]

Corresponds to the new JOB copied.

- Parameter 5: [Class priority]

Corresponds to the class level (CLASS A/CLASS B/CLASS C).

The status of the original Job must be "Scheduled". The user of the original JOB must be the same as the user that executes the destination JOB.



*Simple parametering of a Job to copy a JOB*

**Extract from the Visual TOM Job execution log**

Start executing the script...

"Absyss test "

Tues. 17/11/2009

17:07

---

-----  
"CPYREFSTARTWAIT" "VT-CSW" "14332601" "VT-CPRSW" "A"

-----

-----

Vtom2sap - Visual TOM - November 2009 - SAP 4.5 - 4.7 / 6.10 - 6.40

Call bapi\_xmi\_logon, XBP interface  
SESSIONID : 9B38312D0C584B02CA3DDFFA

TYPE :

ID :

NUMBER : 000

MESSAGE :

LOG\_NO :

LOG\_MSG\_NO : 000000

MESSAGE\_V1 :

MESSAGE\_V2 :

MESSAGE\_V3 :

MESSAGE\_V4 :

PARAMETER :

ROW : 0

FIELD :

SYSTEM :

Call bapi\_xbp\_job\_select  
tables  
SELECTED\_JOBS : 1 lines

JOBNAME : VT-CSW

JOBCOUNT : 14332601

SELECTED\_JOBS : 1 of 1 lines

Call bapi\_xbp\_job\_copy  
TARGET\_JOBNAME : VT-CPRSW  
TARGET\_JOBCOUNT : 17072601

Call bapi\_xbp\_job\_start\_immediately  
JOB/NUM: VT-CPRSW / 17072601

JOB : VT-CPRSW  
JOB COUNT : 17072601  
STEP NUMBER :

JOB STATUS : R

THE JOB IS ACTIVE

JOB : VT-CPRSW

JOB COUNT : 17072601

STEP NUMBER :

JOB STATUS : F

THE JOB IS FINISHED

Call bapi\_xbp\_job\_joblog\_read

tables

JOB\_PROTOCOL : 3 lines

LOG OF JOB VT-CPRSW:

Date Time ID No Message

20091117 170726 00 516 Job started

20091117 170726 00 550 Step 001 started (program RSPARAM, variant 05D40DB2691B, user ID ABSYSS)

20091117 170727 00 517 Job finished

Call bapi\_xmi\_logoff

---

Script execution end

Tues. 17/11/2009

17:07

Exit 0 therefore clearing

#### 4.3.7 USERSTARTWAIT

##### Feature objectives

This command selects and starts one or several SAP JOBS, and is synchronised on the ending of the last. If one of them is in error status, the Visual TOM Job is considered to be in error. The selection is performed according to the principle of use of the transaction SM37.

##### Implementation

The JOB search is carried out according to several implicit criteria:

- If the JOB found has the "SCHEDULED", it is started, otherwise nothing happens.
- The authorisation of the user who created the JOB must be the same as the one used for the log on (indicated in the Batch Queue)

If several jobs with the same name are found, the first one found is launched.

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: USERSTARTWAIT
- Parameter 2: [user name]
- Parameter 3: [Date]

Lower limit of the search filter on the date, in the format YYYYDDMM.

- Parameter 4: [Date]

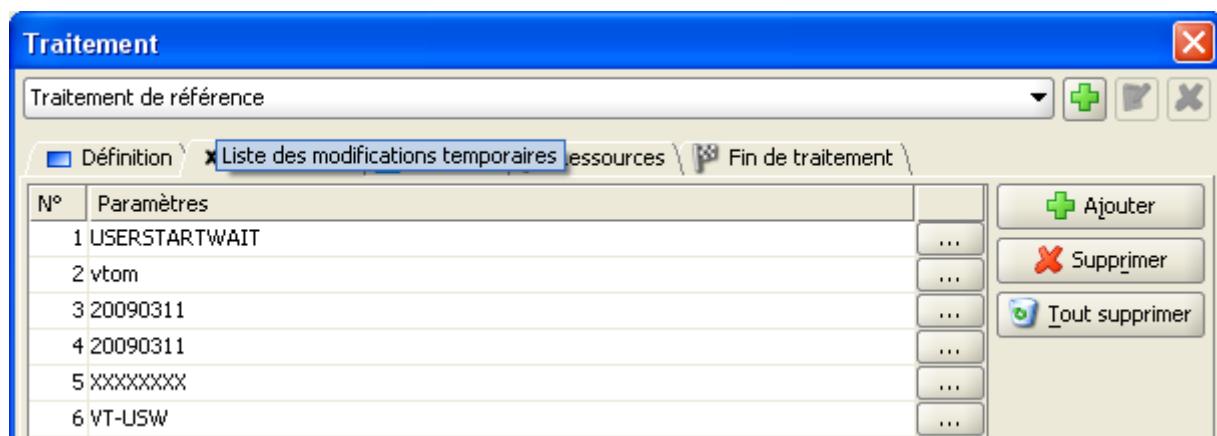
Upper limit of the search filter on the date, in the format YYYYDDMM.

- Parameter 5: [Type of JOB]

Type of JOB in 8 characters corresponding to the SM37 transaction data entry screen.

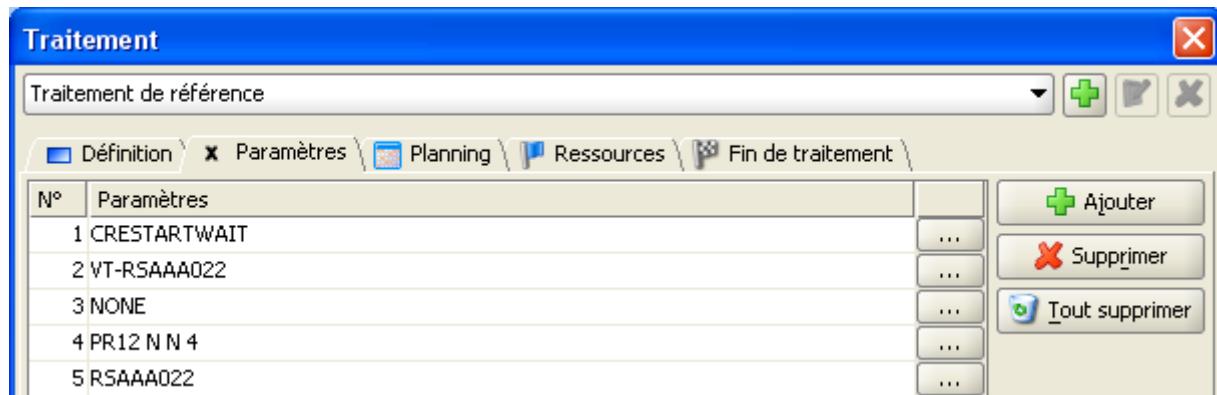
- Parameter 6: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36 for the user specified in the specified interval. This name can be chosen freely and the number of characters is limited by SAP.



*Example of a Visual TOM Job for selection and execution*

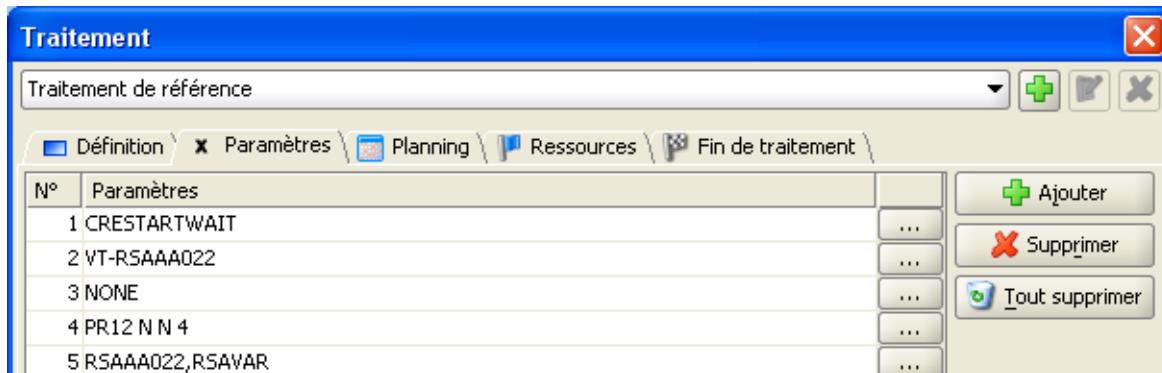
#### 4.3.8 Example of the parametering of an ABAP



*Example of a Visual TOM Job to execute an ABAP*

The fifth parameter is the name of the ABAP program.

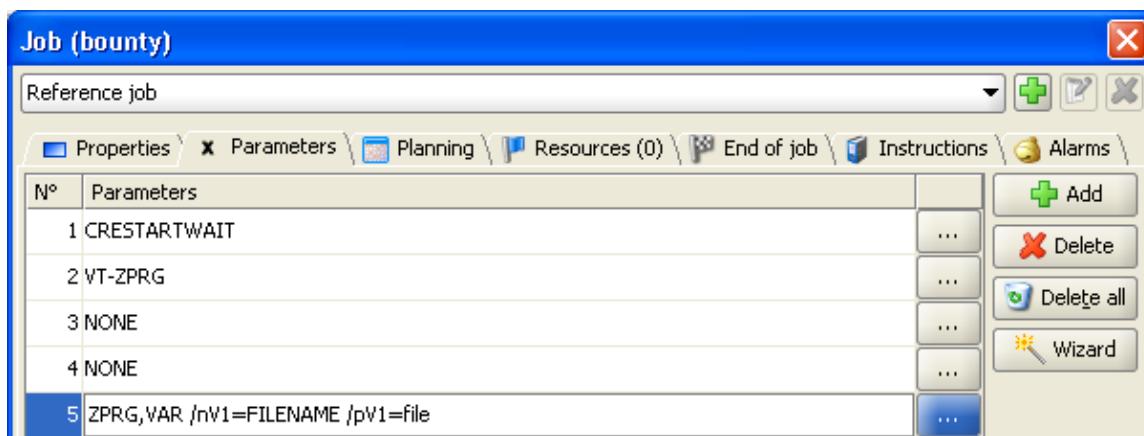
#### 4.3.9 Example of the parametering of a VARIANT



*Example of a Visual TOM Job to execute a VARIANT*

The fifth parameter is the name of the ABAP program, followed by the name of the VARIANT. These two names are separated by a comma.

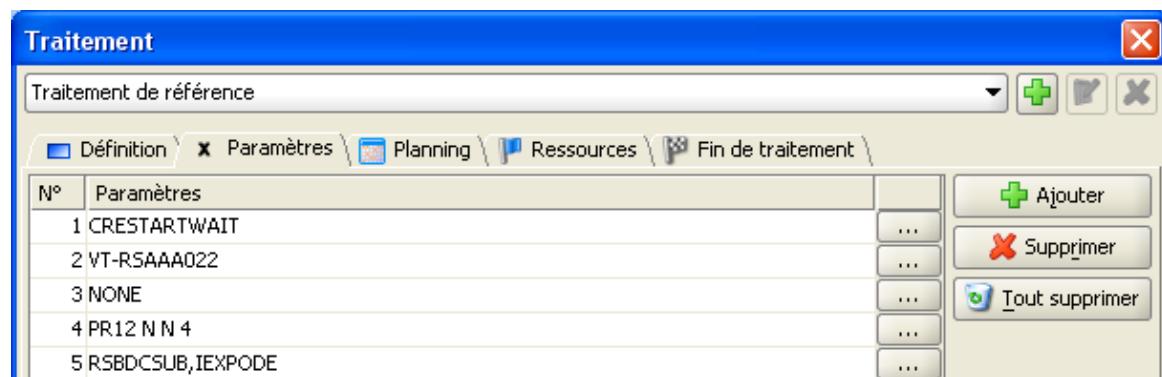
#### 4.3.10 Example of the parametering of a DYNAMIC VARIANT



*Example of a Visual TOM Job to execute a DYNAMIC VARIANT*

The fifth parameter is the name of the ABAP program, followed by the name of the VARIANT and its parameter name and value name. For each new parameter, numeric index must be increased (i.e /nameVar2=XXX /paramVar2=YYY).

#### 4.3.11 Example of the parametering of an INPUT BATCH



*Example of a Visual TOM Job to execute an INPUT BATCH*

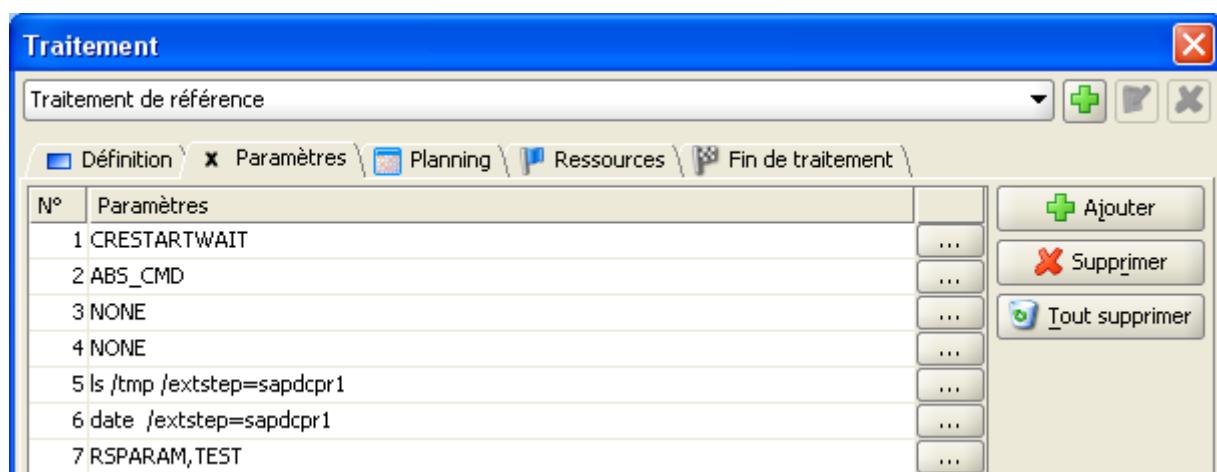
The fifth parameter is the name of the ABAP program that executes the INPUT BATCH, followed by the name of the INPUT BATCH to be executed. These two names are separated by a comma.



When the status is computed according to SM35 transaction instead of SM37, the « SM35STATUT » parameter must be declared in « vtom.ini » file (value equals 1).

The function modules « bdc\_protocol\_select\_qid » and « catt\_batch\_input\_finished » must be operational in remote mode (settings from SE37).

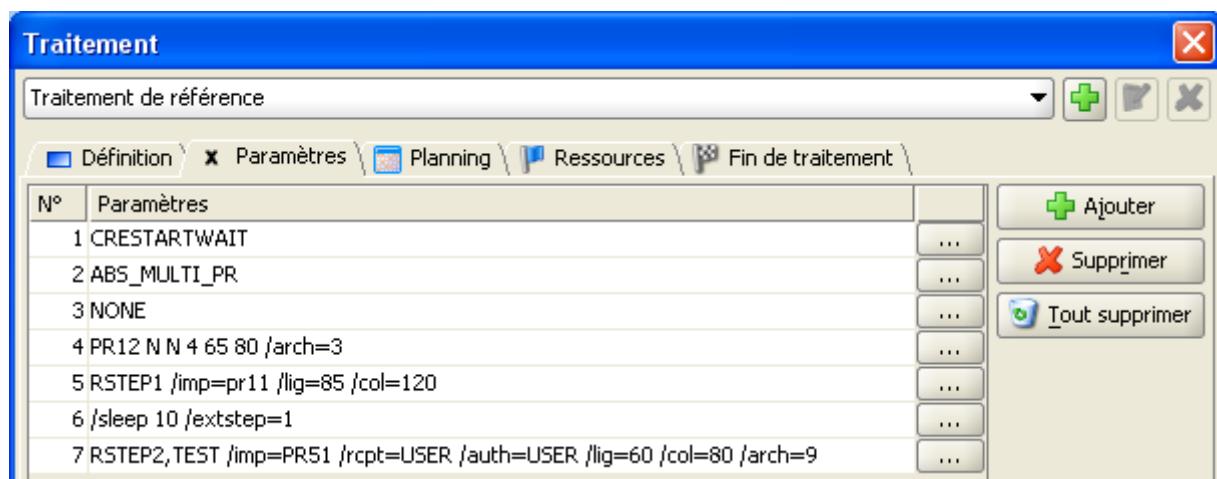
#### 4.3.12 Example of the parametering of an ABAP with insertion of an EXTERNAL STEP



*Example of a Visual TOM Job to execute an EXTERNAL STEP*

The fifth and sixth parameters are EXTERNAL STEPS. The last parameter indicates the name of the ABAP program with its VARIANT.

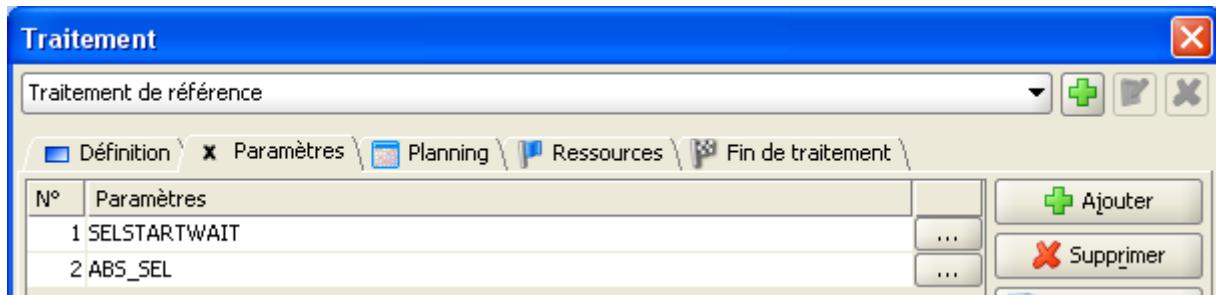
#### 4.3.13 Example of the parametering of multiple printing



*Example of a Visual TOM Job to execute multiple printing*

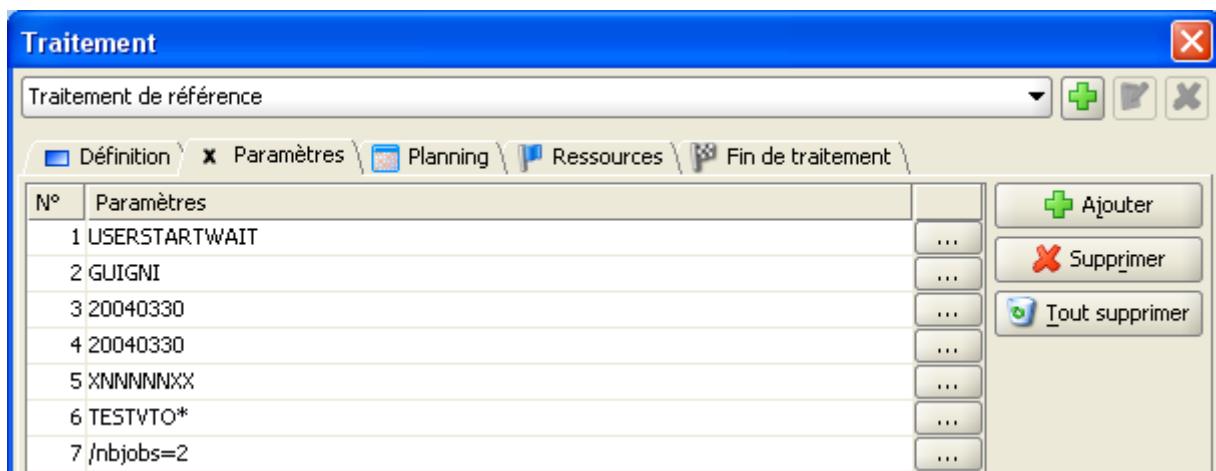
The fourth parameter indicates the default parameters applied to all steps. The fifth and seventh parameters overload these parameters by indicating the ABAP name (RSTEP1 or RSTEP2).

#### 4.3.14 Example of the parametering to intercept a task



*Example 1 of Visual TOM Job to intercept an SAP task*

The second parameter indicates the task to be intercepted.



*Example 2 of Visual TOM Job to intercept an SAP task*

The second parameter indicates the user name.

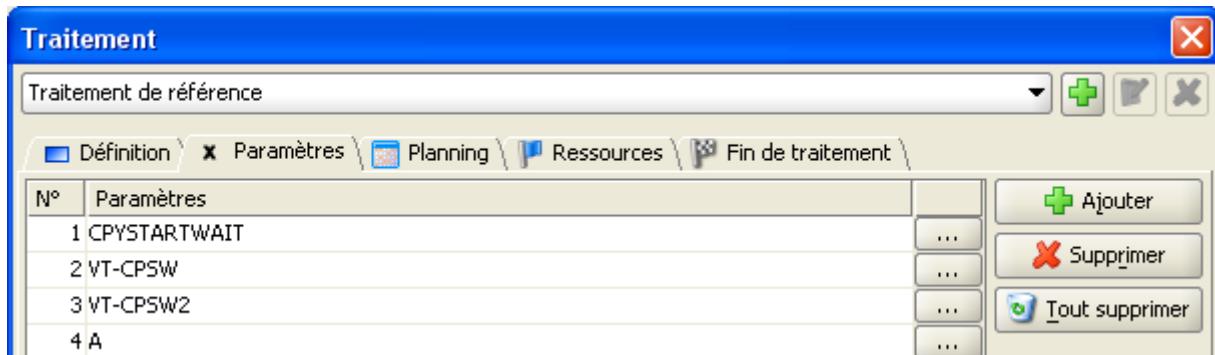
The third parameter indicates the search start date; the fourth parameter indicates the end of the search.

The fifth parameter indicates the selection as it appears in SM36.

The sixth parameter indicates the name of the JOB, possibly with additional joker characters.

The seventh parameter indicates the maximum number of JOBS to be executed.

#### 4.3.15 Example of the parametering for priority class management



*Example of a Visual TOM Job for priority execution*

Priority management is defined in parameter 4 (A, B or C).

## 4.4 THE SECONDARY FEATURES

### 4.4.1 SELSTARTWAIT

#### Feature objectives

This command starts an existing SAP JOB (which can be created in advance using the CREJOB feature) and awaits the end of execution of this JOB.

#### Implementation

The JOB search is carried out according to several implicit criteria:

- If the JOB found has the "SCHEDULED" status, it is started, otherwise we do nothing.
- The authorisation of the user who created the JOB must be the same as the one used for the log on (indicated in the Batch Queue)

If several jobs with the same name are found, the first one found is launched.

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: SELSTARTWAIT
- Parameter 2: [SAP JOB envelope name]

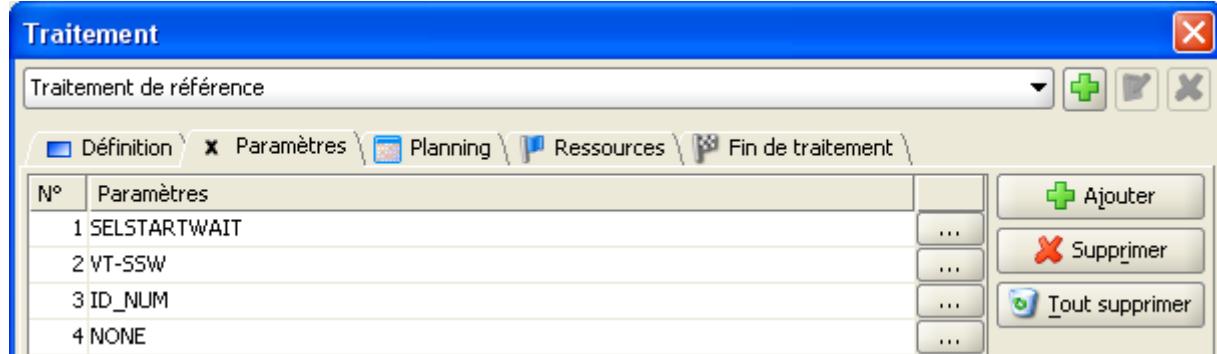
Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.

- Parameter 4: [SAP server name]

Server on which the SAP JOB will be executed; the value "NONE" means that the choice of execution server is delegated to SAP. A specific value must be set as "server\_instance\_systemnumber", as known by the Application Server (eg londres\_NSP\_00).



*Example of a Visual TOM Job for selection and execution*

#### 4.4.2 STARTWAIT

##### Feature objectives

This command starts an SAP JOB and awaits the end of its execution.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: STARTWAIT
- Parameter 2: [SAP JOB envelope name]

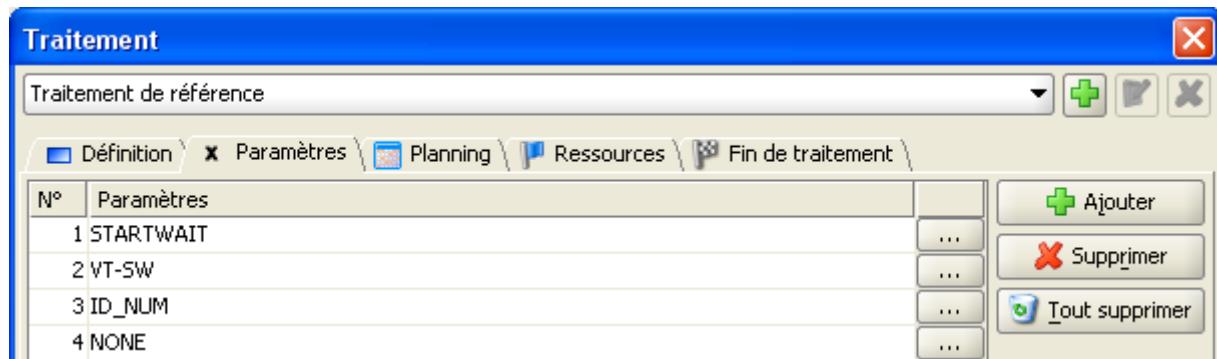
Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.

- Parameter 3: [SAP server name]

Server on which the SAP JOB will be executed; the value "NONE" means that the choice of execution server is delegated to SAP. A specific value must be set as "server\_instance\_systemnumber", as known by the Application Server (eg londres\_NSP\_00).



*Example of a Visual TOM Job to start a JOB and wait for its end*

#### 4.4.3 MODSTEP

##### Feature objectives

This command allows you to change a step of an SAP JOB.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: MODSTEP
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

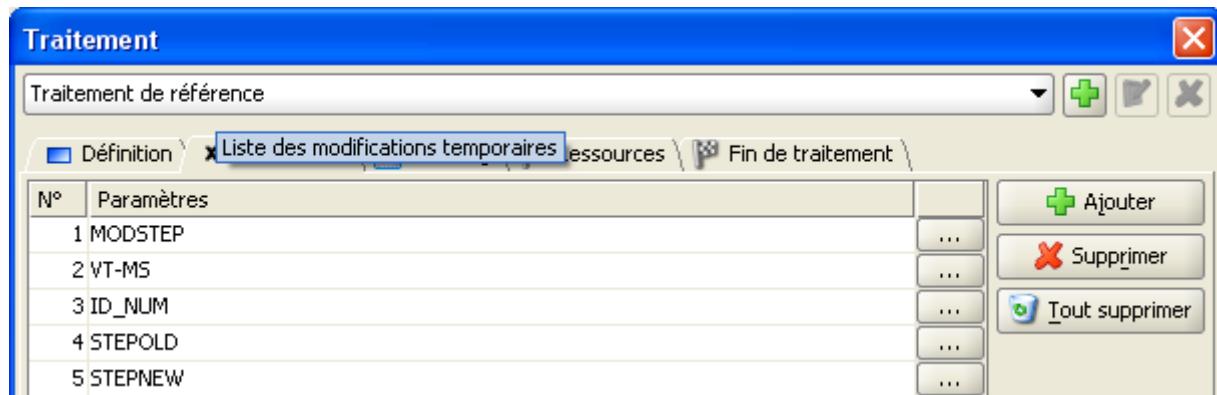
Single internal identifier (ID) of the SAP JOB.

- Parameter 4: [STEP to change]

Name of the step to be modified

- Parameter 5: [Replacement STEP]

Name of the replacement step



*Example of a Visual TOM Job to change a STEP*

#### 4.4.4 DEL

##### Feature objectives

This command allows you to delete an SAP JOB whose status is not started or ended. At the end, the JOB is no longer shown in SM37.

##### Implementation

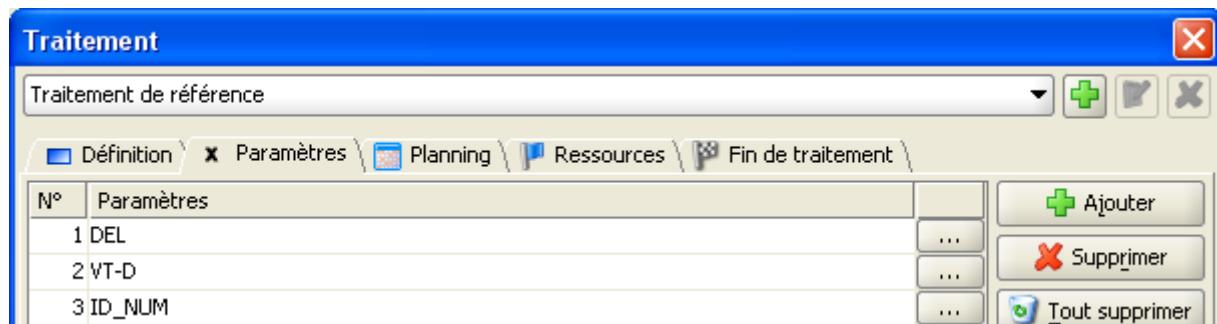
The following parameters must be defined for the Visual TOM Job:

- Parameter 1: DEL
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.



*Example of a Visual TOM Job to delete a JOB*

#### 4.4.5 STARTIMM

##### Feature objectives

This command allows you to start an SAP JOB immediately.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: STARTIMM
- Parameter 2: [SAP JOB envelope name]

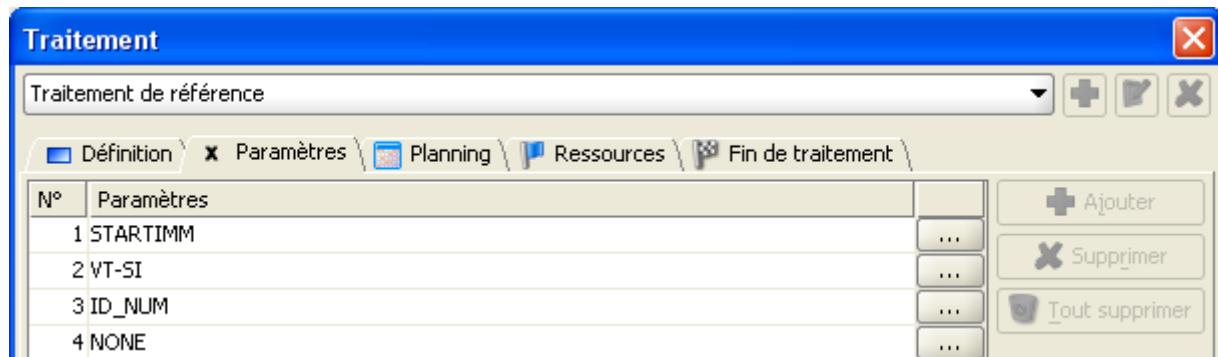
Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.

- Parameter 4: [SAP server name]

Server on which the SAP JOB will be executed; the value "NONE" means that the choice of execution server is delegated to SAP. A specific value must be set as "server\_instance\_systemnumber", as known by the Application Server (eg londres\_NSP\_00).



*Example of a Visual TOM Job for immediate start-up of a JOB*

#### 4.4.6 READLOG

##### Feature objectives

This command allows you to read an SAP JOB's log.

##### Implementation

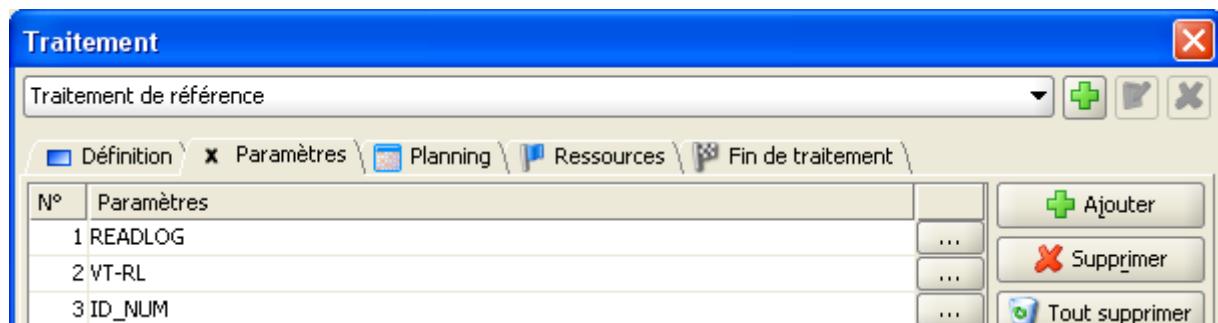
The following parameters must be defined for the Visual TOM Job:

- Parameter 1: READLOG
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.



*Example of a Visual TOM Job to read the log*

#### 4.4.7 SELJOB

##### Feature objectives

This command displays the results of a selection in SM37 in the Visual TOM Job log.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: SELJOB
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [Date]

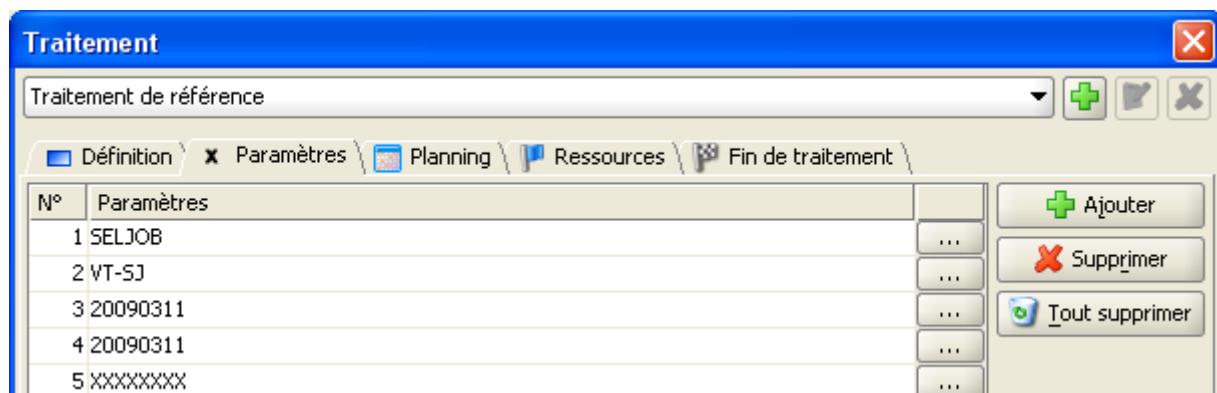
Lower limit of the search filter on the date, in the format YYYYMMDD.

- Parameter 4: [Date]

Upper limit of the search filter on the date, in the format YYYYMMDD.

- Parameter 5: [Type of JOB]

Type of JOB on 8 characters corresponding to the SM37 transaction data entry screen.



*Example of a Visual TOM Job for display of a selection in SM37*

#### 4.4.8 READVAR

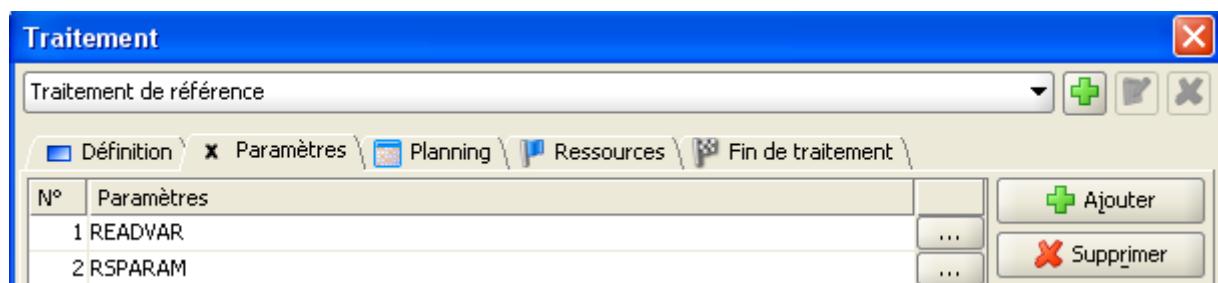
##### Feature objectives

This command displays the variants of ABAP in the Visual TOM Job log.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: READVAR
- Parameter 2: [ABAP program name]



*Example of a Visual TOM Job to search for VARIANTS*

##### Extract from the Visual TOM Job execution log

Script execution start...

Mon. 09/11/2009

10:29

---

----  
"READVAR" "RSPARAM"  
----

-----  
Vtom2sap - June 2006 - SAP 4.5 - 4.7 / 6.10 - 6.40

Call bapi\_xmi\_logon, XBP interface

SESSIONID : 9B38312D0E544AF7E0ECA813

TYPE :

ID :

NUMBER : 000

MESSAGE :

LOG\_NO :

LOG\_MSG\_NO : 000000

MESSAGE\_V1 :

MESSAGE\_V2 :

MESSAGE\_V3 :

MESSAGE\_V4 :

PARAMETER :

ROW : 0

FIELD :

SYSTEM :

Call bapi\_xbp\_variant\_info\_get

tables  
ABAP\_VARIANT\_TABLE : 27 lines  
REPORT : RSPARAM  
VARIANT : 05D40DB2691B  
ABAP\_VARIANT\_TABLE : 1 of 27 lines  
REPORT : RSPARAM  
VARIANT : 0C79CABCAE95  
ABAP\_VARIANT\_TABLE : 2 of 27 lines  
REPORT : RSPARAM  
VARIANT : 1A32A913956A  
ABAP\_VARIANT\_TABLE : 3 of 27 lines  
REPORT : RSPARAM  
VARIANT : 1DD2DA436225  
ABAP\_VARIANT\_TABLE : 4 of 27 lines  
REPORT : RSPARAM  
VARIANT : 1E73AAF3EF82  
ABAP\_VARIANT\_TABLE : 5 of 27 lines  
REPORT : RSPARAM  
VARIANT : 1FF3426DF67E  
ABAP\_VARIANT\_TABLE : 6 of 27 lines  
REPORT : RSPARAM  
VARIANT : 23A08103A545  
ABAP\_VARIANT\_TABLE : 7 of 27 lines

#### 4.4.9 SHOWLOG

##### Feature objectives

This command displays the content of calls to the XMI module (TXMILOGRAW) in the Visual TOM Job log.

##### Implementation

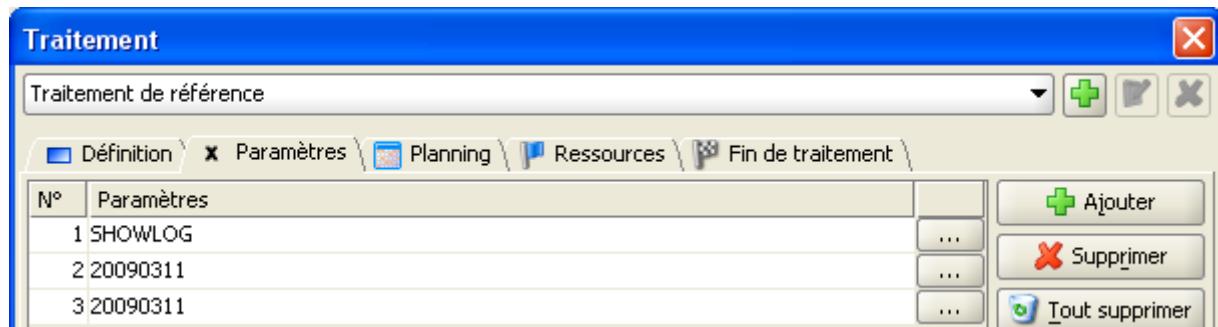
The following parameters must be defined for the Visual TOM Job:

- Parameter 1: SHOWLOG
- Parameter 2: [Date]

Lower limit of the search filter on the date, in the format YYYYDDMM.

- Parameter 3: [Date]

Upper limit of the search filter on the date, in the format YYYYDDMM.



*Example of a Visual TOM Job to display calls to the XMI module*

#### 4.4.10 CANCEL

##### Feature objectives

This command interrupts a JOB whose execution is running.

##### Implementation

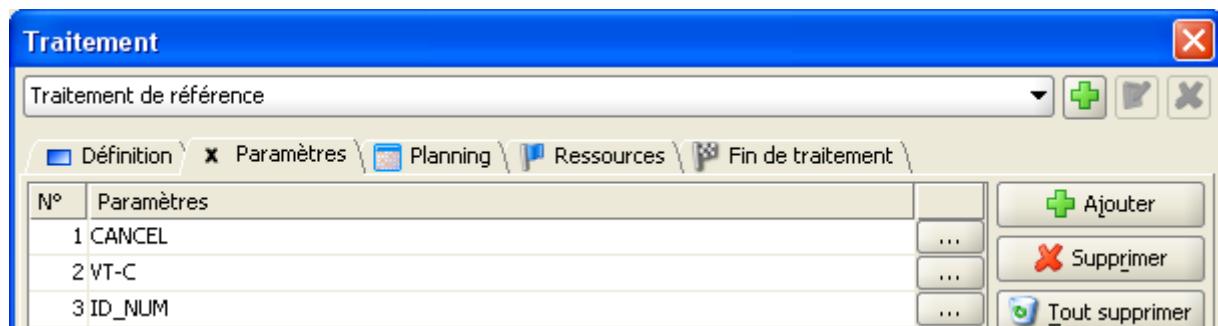
The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CANCEL
- Parameter 2: [SAP JOB envelope name]

Corresponds to "JOBNAME" under the transaction sm36. This name can be chosen freely and the number of characters is limited by SAP.

- Parameter 3: [numerical identifier]

Single internal identifier (ID) of the SAP JOB.



*Example of a Visual TOM Job to interrupt a JOB*

#### 4.4.11 CREATEINTERCEPT

##### Feature objectives

This command sets JOB interception criterias in table : TBCICPT1. All JOBS corresponding to these criterias are held by SAP.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: CREATEINTERCEPT
- Parameter 2: X

This parameter adds a criteria in SAP table.

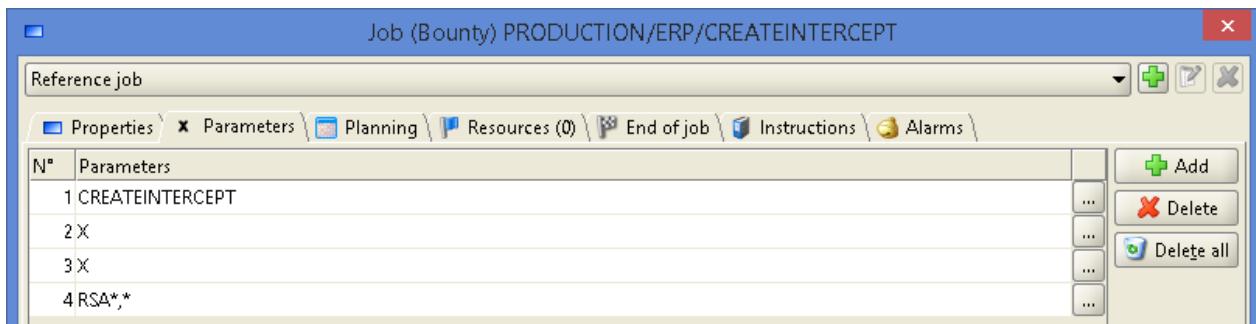
- Parameter 3: X

This parameter allows to visualize the table content in Visual TOM Job log file

- Parameter 4 : [JOB(s) to hold, SAP user name]

Name of JOBS to hold, and name of user. The « \* » character is accepted at the end of each string. The strings must be separated by a coma.

NB : This action is available in SAP GUI (SE16 transaction).



*Example of a Visual TOM Job to declare interception criteria*

#### 4.4.12 SELECTSTARTINTERCEPT

##### Feature objectives

This command intercepts one or more held JOBS, and releases those JOBS for execution. The Visual TOM Job is not synchronized with end of released SAP JOBS.

##### Implementation

The following parameters must be defined for the Visual TOM Job:

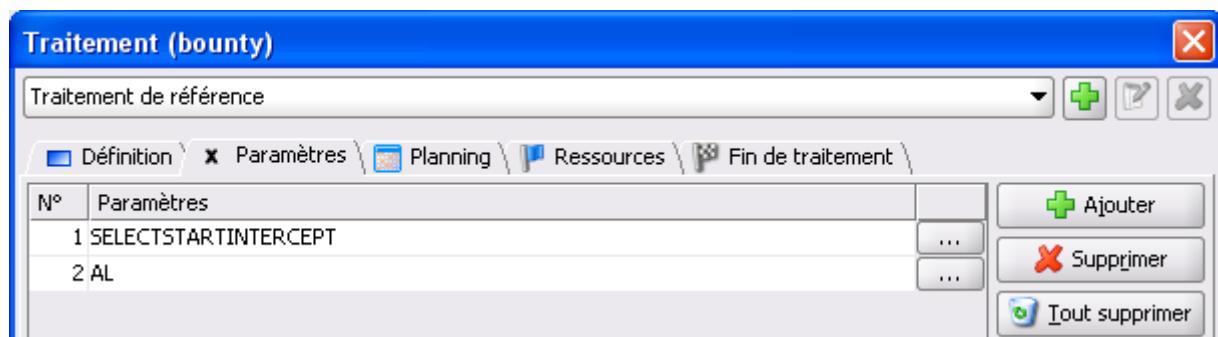
- Parameter 1: SELECTSTARTINTERCEPT
- Parameter 2: AL

This parameter is mandatory, and must be set with this value.

- Parameter 3: [client name]

This parameter is optional and allows to filter the indicated client held JOBS

NB : Visual TOM Job log execution indicates the list of released JOBS.



*Example of a Visual TOM Job to release all held SAP JOBS*

#### 4.5 APPLICATION SERVER AND JOB TEMPLATE

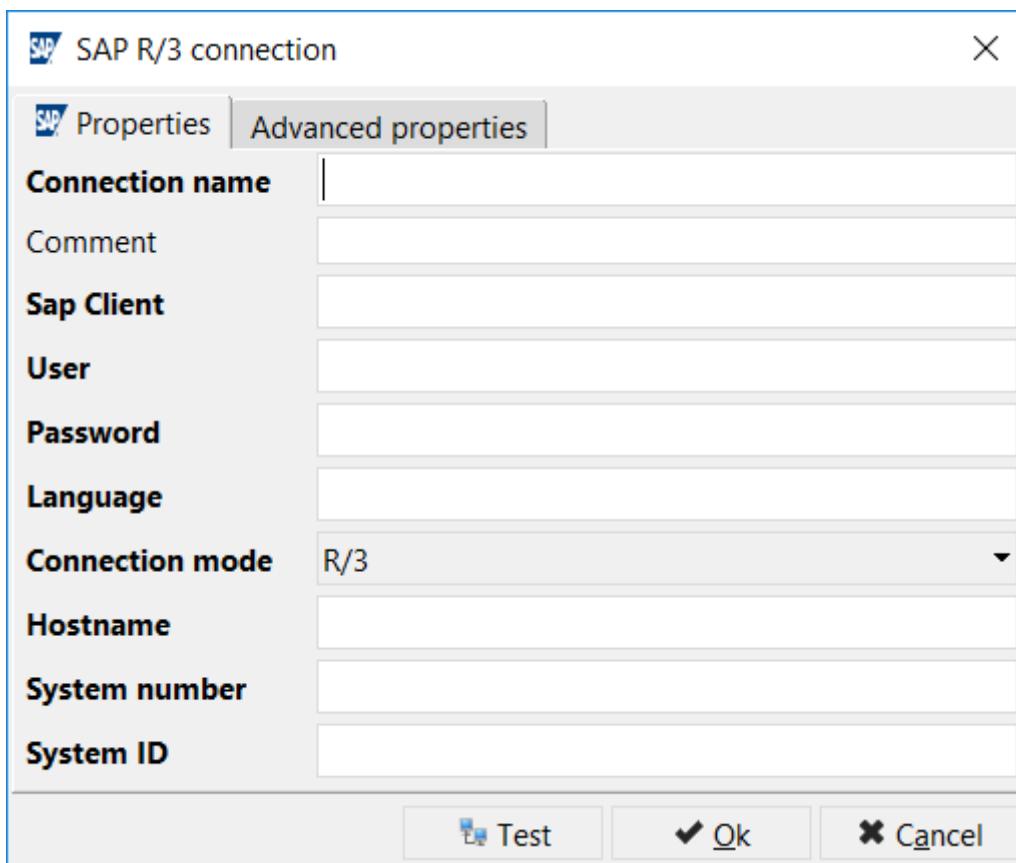
##### 4.5.1 Declaration

Declaration of an Application Server and use of a Job template are available directly from GUI, according to license file.

Execution behavior (queue batch) is installed during Visual TOM Agent installation.

While creating a file, GUI offers to associate the queue batch to the current Environment, if this action was not realized yet.

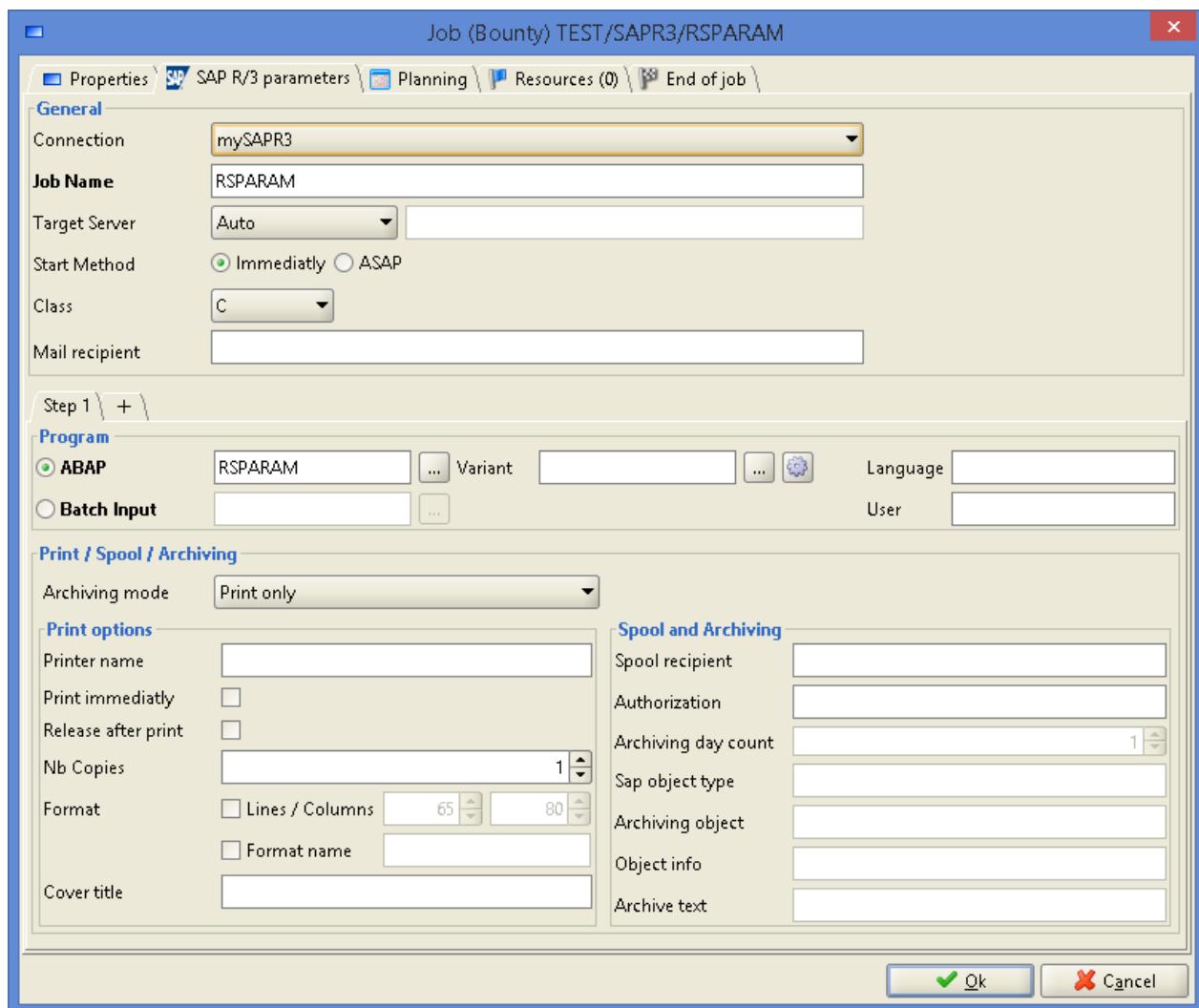
A button allows to validate the connection.

*Application Server characteristics*

Remark :

Advanced properties are set by default :

- XBP version must be in phase with the one used on the target server.
- Parameters « external company », « external product » et « external username » are used for the connector identification, and displayed in RZ15.
- Connection mode allows to use message server (logongroup, MS value).



*Job based on SAP R3 template*



#### Remark :

When the Job is running or in difficulties, the Job contextual menu displayed in monitoring mode offers to stop the SAP task : the end of the Visual TOM Job is conditioned by the end of the SAP task. This action is not available for occurred Job created from a multi-agent submit unit. JCO must be installed in « [dir\_install]/visual/plugins/sapjco » in order to perform the action.



The Maximum number of STEPS is limited to 16; this limit is fixed by the maximum number of characters (1024) sent to SAP server. The maximum number of children is 30000.

Correspondance between a job defined with a template and another one without template :

Template field	Parameter
Archiving mode	/armod
• print only	• 1
• archiving only	• 2
• print and archiving	• 3
Format name	/paart
Cover title	/prtct
Spool recipient	/rcpt
Authorization	/auth
Mail recipient	/mail
Archiving day count	/arch
Sap object type	/sap_object
Archiving object	/ar_object
Object info	/info
Request description	/arctext

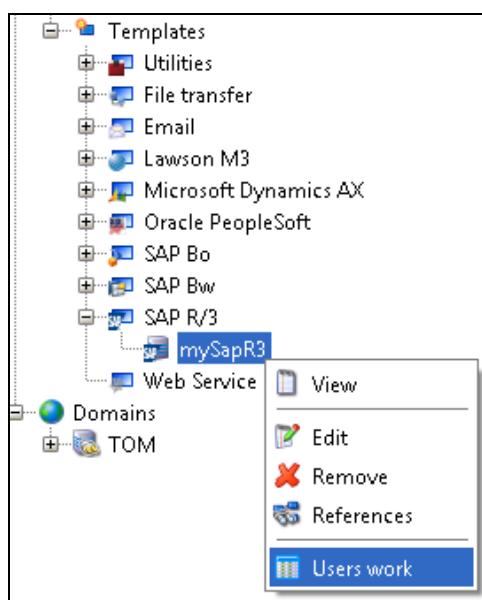


Remark :

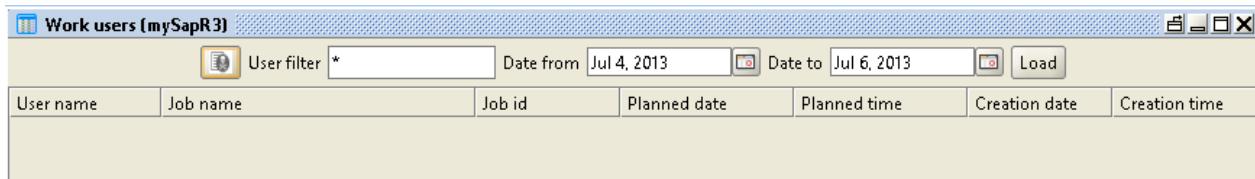
- Multi-steps Jobs are managed with the add/update step tab.
- Cover title property is limited to 68 characters.

#### 4.5.2 Jobs visible with SAP SM37

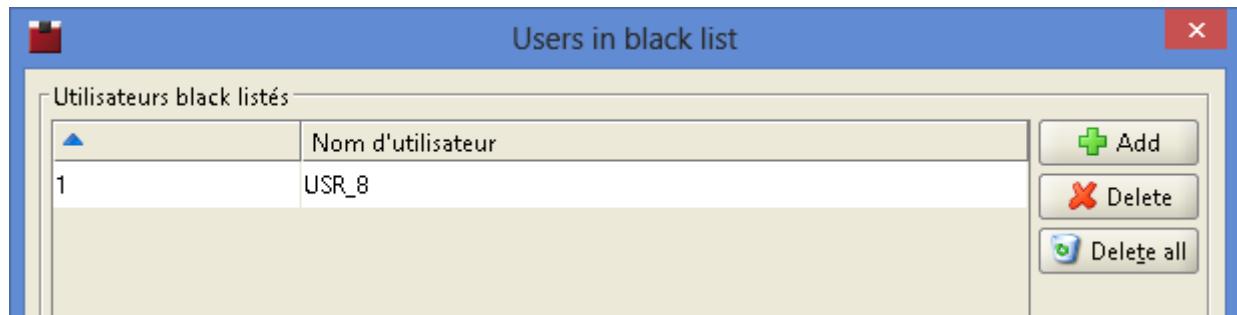
Jobs are visible with Visual TOM GUI for a set of users, using or not a blacklist, for a range of dates.



Access to the list of jobs in SAP



*Visibility of scheduled jobs*



*Users declared in blacklist*

## 5 BW IMPLEMENTATION

### 5.1 INTRODUCTION

The Visual TOM – SAP BW interface module allows integration with the SAP BW software package.

It enables you to plan and schedule the following SAP tasks:

- CHAIN PROCESSES.
- The INFO PACKAGES.



Remark :

The number of children jobs must not exceed 250.

### 5.2 PRINCIPLE FOR PARAMETERING JOBS UNDER VISUAL TOM

The implementation consists in creating a Visual TOM Job with specific parameters.

In all cases, the parametering of the job must follow the following procedure:

- The "Script" field must contain the name of any script which must exist on the machine where the interface binary is installed with SAP.
- The "User" field must contain the name of a user known to the operating system where the Agent is located.
- The "Machine" field must contain the machine name where the Visual TOM Agent is installed.
- The "Batch Queue" field must contain the SAP batch queue configured in the installation phase.
- The parameters of the Visual TOM Job must contain the different properties of the SAP task.

The distinction in the use of features for an SAP type task is carried out by the implementation of a parameter under Visual TOM.



Remarks :

- Jobs can be declared in the GUI with the SAP BW Job Template.
- Application Server could be defined with GUI.

## 5.3 PCSTARTWAIT

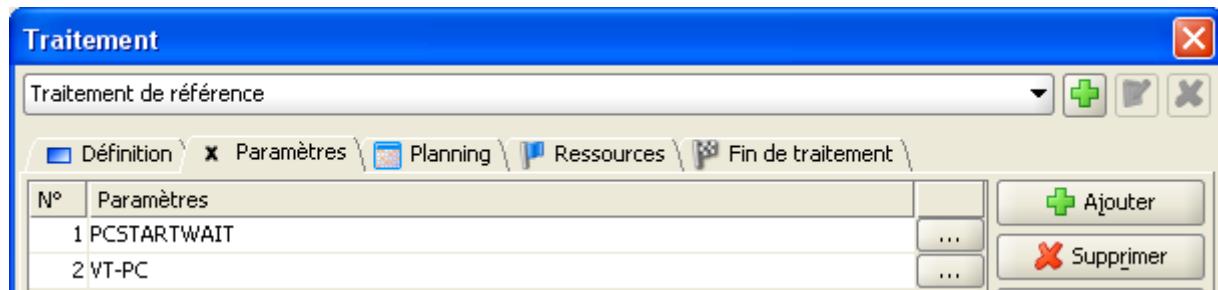
### Feature objectives

This command starts a PROCESS CHAIN and awaits the end of its execution. The end of execution is synchronised on all steps.

### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: PCSTARTWAIT
- Parameter 2: [PROCESS CHAIN name]



*Example of a Visual TOM Job to execute a PROCESS CHAIN*

## 5.4 PCSTARTWAITLOGSD

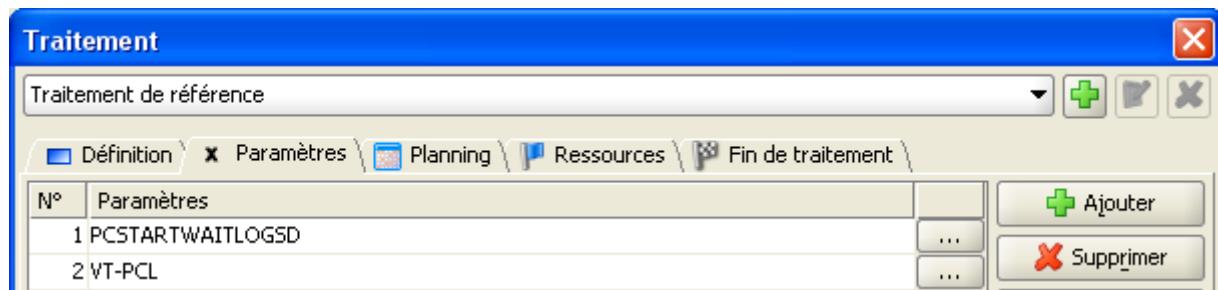
### Feature objectives

This command starts a PROCESS CHAIN, awaits the end of its execution, and recovers the global log and the detailed log of the different steps. The end of execution is synchronised on all steps.

### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: PCSTARTWAITLOGSD
- Parameter 2: [PROCESS CHAIN name]



*Example of a Visual TOM Job to execute a PROCESS CHAIN with LOGS*

## 5.5 IPAKSTART

### Feature objectives

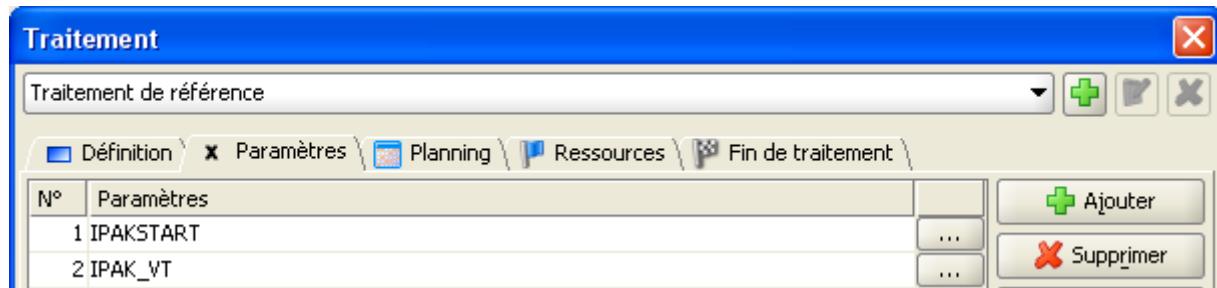
This command starts an Info Package. By default, the name of the envelope in SM37 is generated automatically by SAP.

### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: IPAKSTART
- Parameter 2: [InfoPackage name]
- Parameter 3: [JOB envelope name]

This parameter is optional, by default it is managed automatically by SAP.



*Example of a Visual TOM Job for start-up of an InfoPackage*

## 5.6 IPAKSTARTWAIT

### Feature objectives

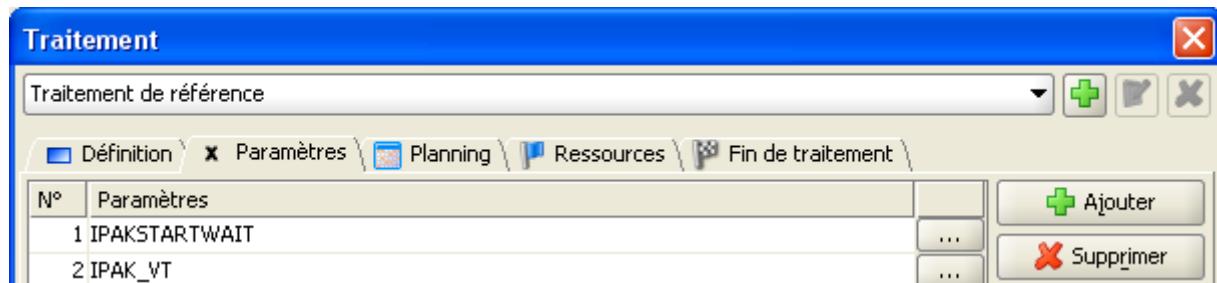
This command starts an Info Package and is synchronised on its ending. By default, the name of the envelope in SM37 is generated automatically by SAP.

### Implementation

The following parameters must be defined for the Visual TOM Job:

- Parameter 1: IPAKSTARTWAIT
- Parameter 2: [InfoPackage name]
- Parameter 3: [JOB envelope name]

This parameter is optional. By default it is managed automatically by SAP.



*Example of a Visual TOM Job to execute and synchronise on InfoPackage*

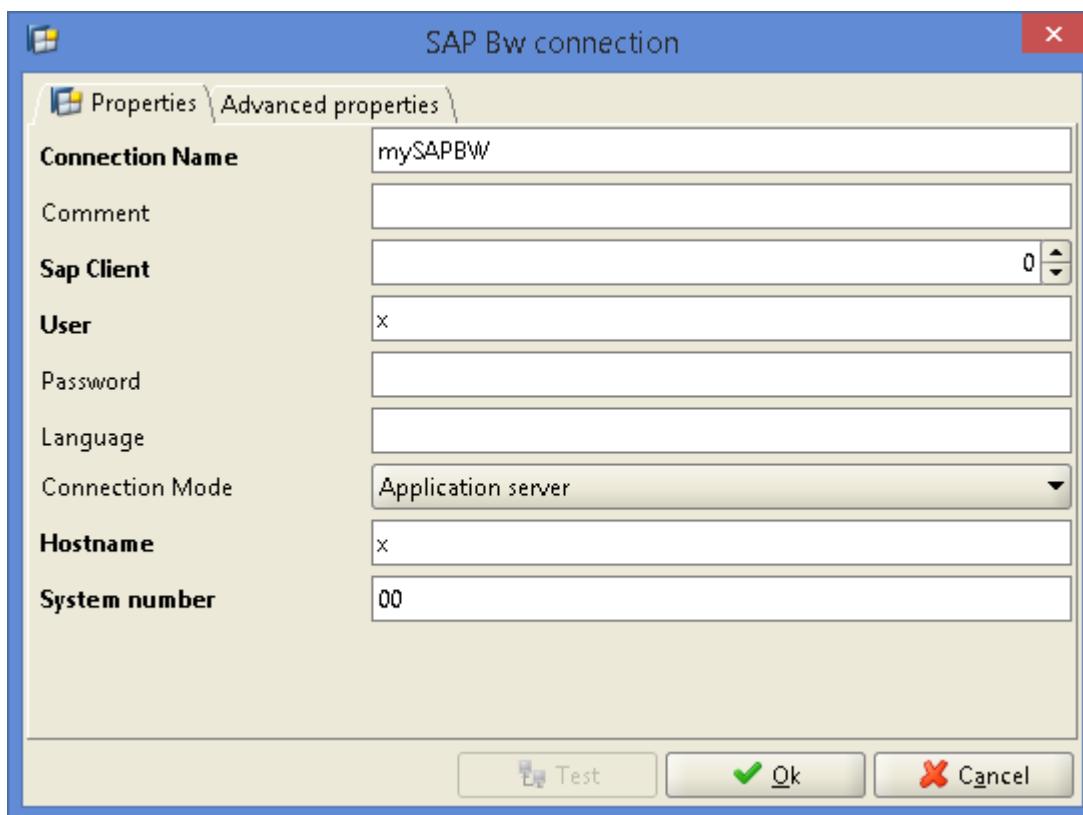
## 5.7 APPLICATION SERVER AND JOB TEMPLATE

Declaration of an Application Server and use of a Job template are available directly from GUI, according to license file.

Execution behavior (queue batch) is installed during Visual TOM Agent installation.

While creating a file, GUI offers to associate the queue batch to the current Environment, if this action was not realized yet.

A button allows to validate the connection.

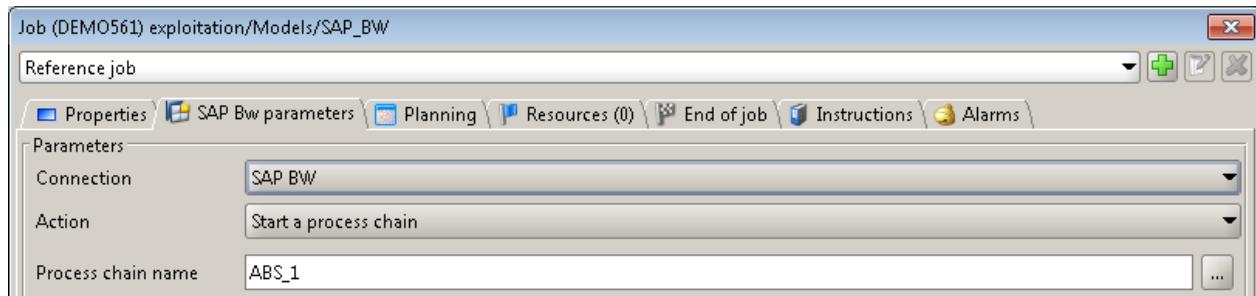


*Application Server characteristics*



### Remarks :

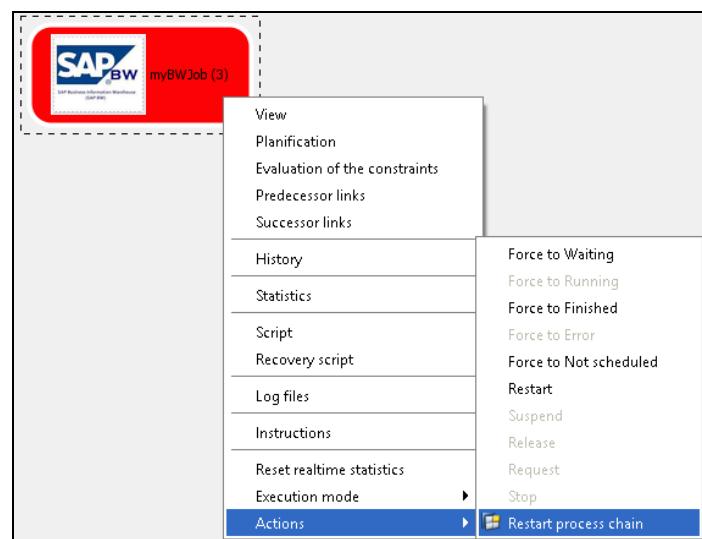
- Connection mode indicates if Logon group is used.
- The following advanced properties are set by default :
  - XBP version must be in phase with the one used on the target server.
  - Parameters « external company », « external product » et « external username » are used for the connector identification, and displayed in RZ15.



*Job based on SAP BW template*

When job status is “in error”, it is possible to restart it with its contextual menu.

This action opens a window containing a list of identifiers related to the Process Chain, for selection. Connection with SAP BW must be operational.



*Restart a BW Job “in error”*

## 6 BO INSTALLATION

### 6.1 WINDOWS NT

#### 6.1.1 *Contents of the package*

The package contains the following files:

- submit\_queue\_vt2sapbo.bat (Batch Queue template),
- vtom2bo.jar (communication program with BO and IHM plugin),
- vtom2bo-sdk31.jar (communication program with BO and IHM plugin),
- vtom2bo -sdk41.jar (communication program with BO and IHM plugin),
- VtomXvision2SapBo.jar (GUI template),
- VtomXvision2SapBo-sdk31.jar (GUI template),
- VtomXvision2SapBo-sdk41.jar (GUI template).

#### 6.1.2 *Installing the package*

By default, the package is installed.

The 4 first files are installed in the directory specified by the environment variable %ABM\_BIN% (implicitly "C:\vtom\ABMbin"). The 3 last files are installed with GUI.



SDK must be copied in « %TOM\_HOME%\visual\plugins » and « %TOM\_HOME%\abm\bin » directories. SDK is available on SAP BO installation.

In the "[BDAEMON]" section of the "vtom.ini" file, change the "ABM\_QUEUES=" parameter by adding the Batch Queue for BO:

ABM\_QUEUES=/queue\_wnt:20 /queue\_vt2sapbo:n

The value "n" is the number of simultaneous jobs accepted by the Visual TOM Agent.



Release version required is Visual TOM 5.7.4, or higher.



Remark :

The declaration of the application server is made directly from the GUI with the main parameters below.

The script submission line is parametered as shown below:

```
java -jar .\vtom2bo.jar %*
```

## 6.2 UNIX SYSTEM

### 6.2.1 Contents of the package

The package contains the following files:

- tom\_submit.bo (Batch Queue template),
- vtom2bo.jar (communication program with BO and IHM plugin),
- vtom2bo-sdk31.jar (communication program with BO and IHM plugin),
- vtom2bo -sdk41.jar (communication program with BO and IHM plugin),
- VtomXvision2SapBo.jar (GUI template),
- VtomXvision2SapBo-sdk31.jar (GUI template),
- VtomXvision2SapBo-sdk41.jar (GUI template).

### 6.2.2 Installing the package

By default, the package is installed.

The « « tom\_submit.vt2sapbo » file is installed in \$TOM\_ADMIN directory. Visual TOM administrator account must have the rights to execute it. The queue batch must be configured by Visual TOM administrator

Files « vtom2bo.jar », « vtom2bo-sdk31.jar » et « vtom2bo-sdk41.jar » are installed in \$ABM\_BIN directory. Visual TOM administrator account must have the rights to execute these files.



**SDK must be copied in « \$TOM\_HOME/visual/plugins » and « \$TOM\_HOME/abm/bin » directories. SDK is available on SAP BO installation.**



Files « VtomXvision2SapBo.jar », « VtomXvision2SapBo-sdk31.jar » and « VtomXvision2SapBo-sdk41.jar » are installed with GUI.



**Release version required is Visual TOM 5.7.4, or higher.**

Remark :

The declaration of the application server is made directly from the GUI with the main parameters below.

The script submission line is parametered as shown below:

```
java -jar .\vtom2bo.jar %*
```

## 7 BO IMPLEMENTATION

### 7.1 FEATURES

The Visual TOM – SAP BO interface module allows integration with the SAP BO software package.

It enables you to plan and schedule the following reports :

- Webi (Web Intelligence):
  - with output formats:
    - BO 3.1 : Webi, MS-Excel, PDF, Html,
    - BO 4.x : Webi, MS-Excel, PDF,
  - with destination:
    - BI mailbox,
    - Ssmtp,
    - File system,
    - FTP,
- Deski (Desktop Intelligence):
  - with output formats:
    - BO 3.1 : Deski, Excel, PDF, Html, Rich Text, Raw Text,
  - with destination:
    - BI mailbox,
    - Ssmtp,
    - File system,
    - FTP,
- CR (Crystal Report):
  - with output formats:
    - Crystal Report, Word , Excel, PDF, Html, Rich Text, Raw Text.
  - with destination:
    - BI mailbox,
    - Ssmtp,
    - File system,
    - Ftp.

### 7.2 PRINCIPLE FOR PARAMETERING JOBS UNDER VISUAL TOM

Whatever the task, implementation consists in creating a Visual TOM Job with specific parameters, depending on the type of feature desired.

In all cases, the use of one of these features must follow the following procedure:

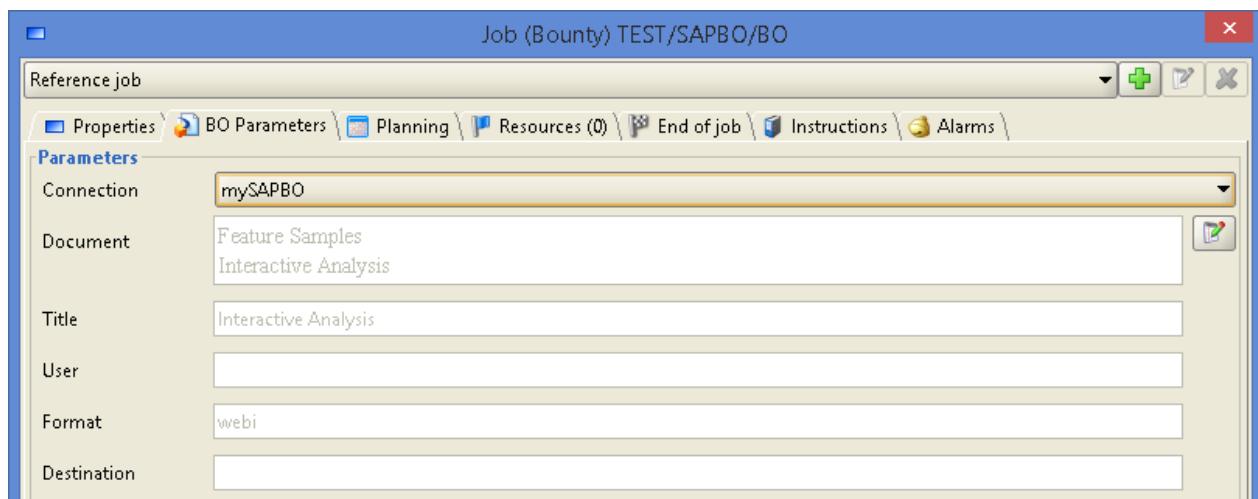
- The "User" field must contain the name of a user known to the operating system where the Agent is located.
- The "Machine" field must contain the machine name where the Visual TOM Agent is installed.
- The "Batch Queue" field must contain the SAP BO batch queue configured in the installation phase.
- The parameters of the Visual TOM Job must contain the different properties of the SAP BO task.

Declaration of Application Server and use of BO Job Template are available with GUI according to license file.



#### Description of a BO connection

Accessing to BO data is available from the button located to the right in the window below. The activation of this button displays BO's explorer.



#### Description of a BO Job

## 7.3 EXPLORER

### 7.3.1 Objectives

Explorer is used to generate parameters of Visual TOM Job. A connection to BO server is done when launching the explorer, in order to retrieve lists (reports, users, groups...).

Concepts and terminology used in explorer are ones of BO. Refer to BO documentation for further information.

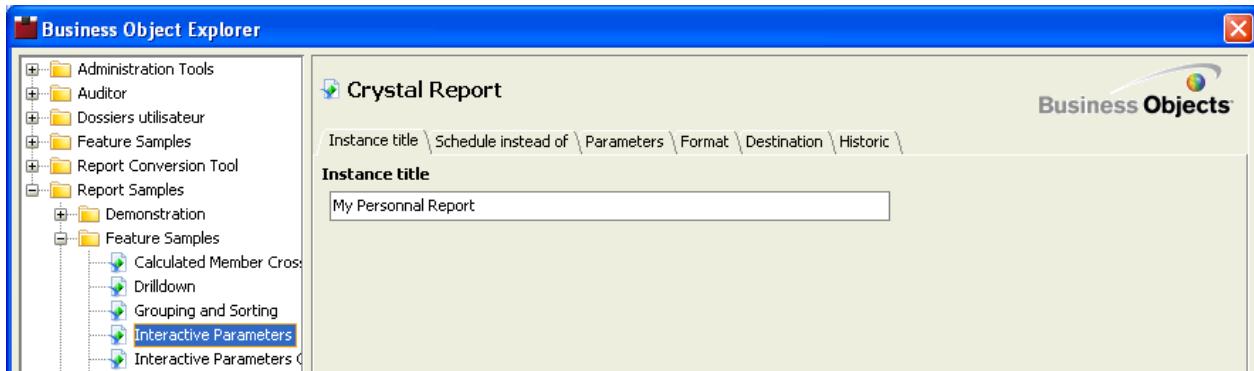


Using the wizard requires a connection with BO server. It must be operational.

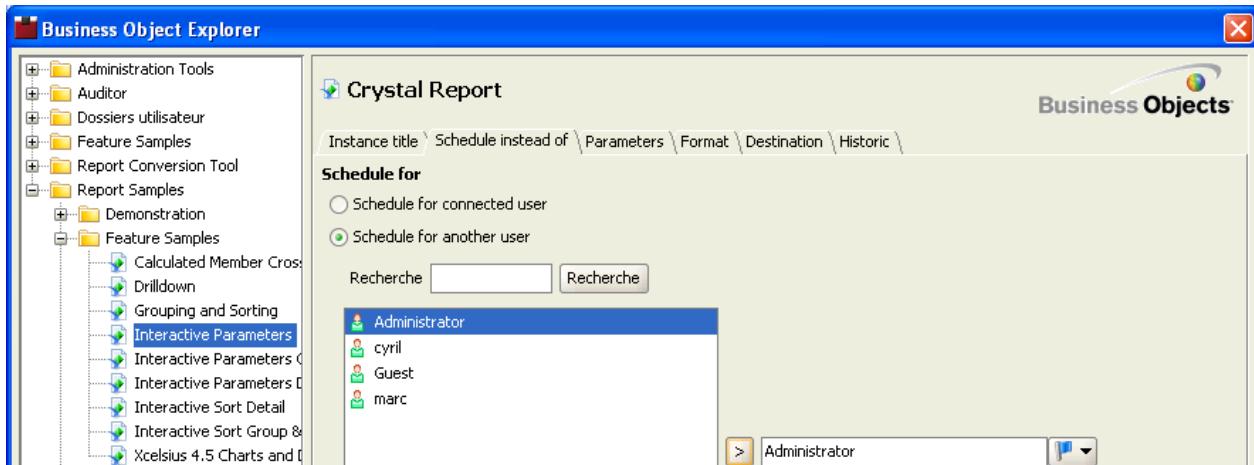
### 7.3.2 Explorer use

In order to validate properties of the Job, select a report on the left hand of the explorer, and validate its attributes using the 4 tabs available in the right hand of the explorer.

In case of parameter not set in job properties, execution of job will produce an error.



*Instance name parameterizing*

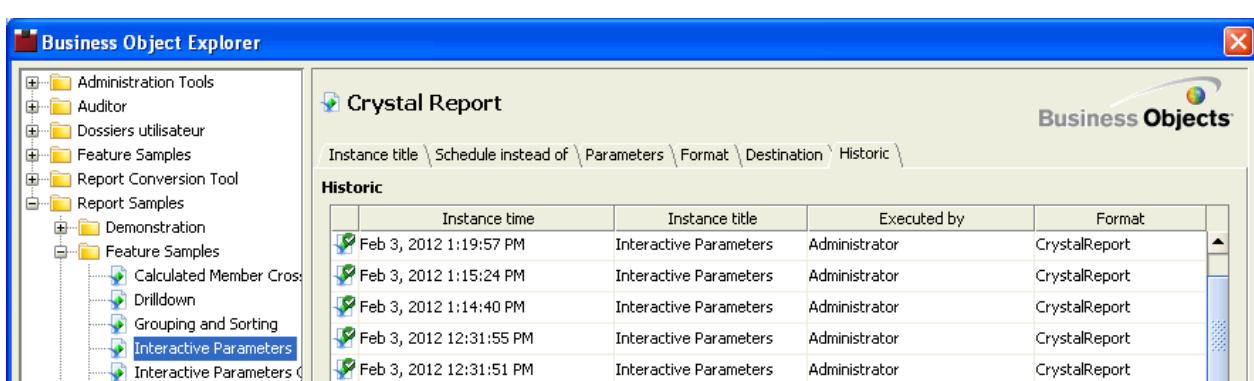
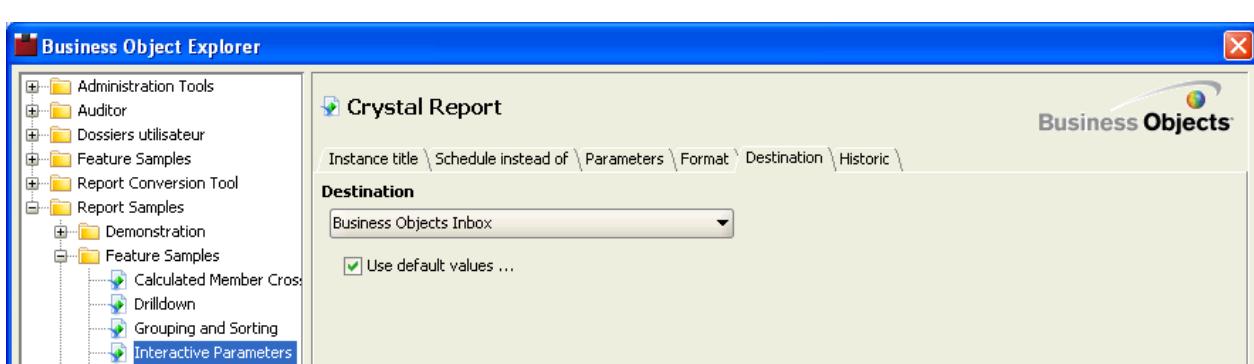
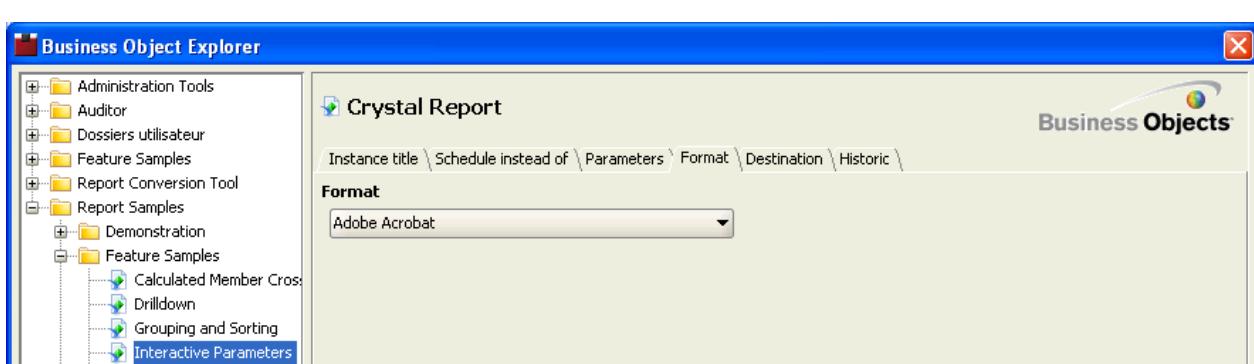
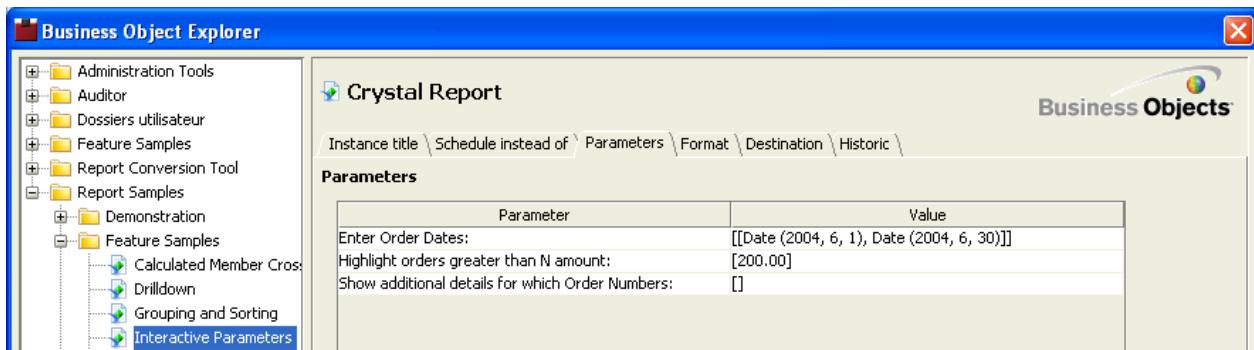


*Recipient parameterizing*



Remark :

Use of a Resource is taken in account in a prompt value.



**Historic of executions**



Remark :

If a mail action is defined, the message content must not contain any carriage return (a unique line is mandatory).

## 8 DS INSTALLATION

Visual TOM SAP DS package, usually compliant, may require an on-site adaptation according to the SAP DS service pack.

### 8.1 WINDOWS NT

#### 8.1.1 *Contents of the package*

The package directory contains the following files:

- submit\_queue\_vt2sapds.bat (Batch Queue template),
- vtom2sapds.jar (communication program with DS and IHM plugin),
- VtomXvision2SapDs.jar (GUI template).

#### 8.1.2 *Installing the package*

These 2 first files should be copied in the directory specified by the environment variable %ABM\_BIN% (implicitly "C:\vtom\ABM\bin"). The last file is automatically installed with GUI.

In the "[BDAEMON]" section of the "vtom.ini" file, change the "ABM\_QUEUES=" parameter by adding the Batch Queue for DS:

ABM\_QUEUES=/queue\_wnt:20 /queue\_vt2sapds:n

The value "n" is the number of simultaneous jobs accepted by the Visual TOM Agent.



Release version required is Visual TOM 5.6.4a or higher.



Remark :

The declaration of the application server is made directly from the GUI.

The script submission line is parametered as shown below:

```
java -jar .\vtom2sapds.jar %*
```

## 8.2 UNIX SYSTEM

### 8.2.1 Contents of the package

The package directory contains the following files:

- tom\_submit.ds (Batch Queue template),
- vtom2sapds.jar (communication program with DS and IHM plugin),
- VtomXvision2SapDs.jar (GUI template).

### 8.2.2 Installing the package

The “vtom2sapds.jar” file should be copied in the directory specified by the environment variable \$ABM\_BIN. Visual TOM administrator account must have the rights to execute it.

The queue batch must be configured by Visual TOM administrator. Visual TOM administrator account must have the rights to execute it. The queue batch must be configured by Visual TOM administrator.

The last file is automatically installed with GUI.



Release version required is Visual TOM 5.6.4a or higher.



Remark :

The declaration of the application server is made directly from the GUI.

The script submission line is parametered as shown below:

```
java -jar .\vtom2sapds.jar %*
```

## 9 DS IMPLEMENTATION

### 9.1 INTRODUCTION

The Visual TOM – SAP DS interface allows integration with the SAP Data Services software package.

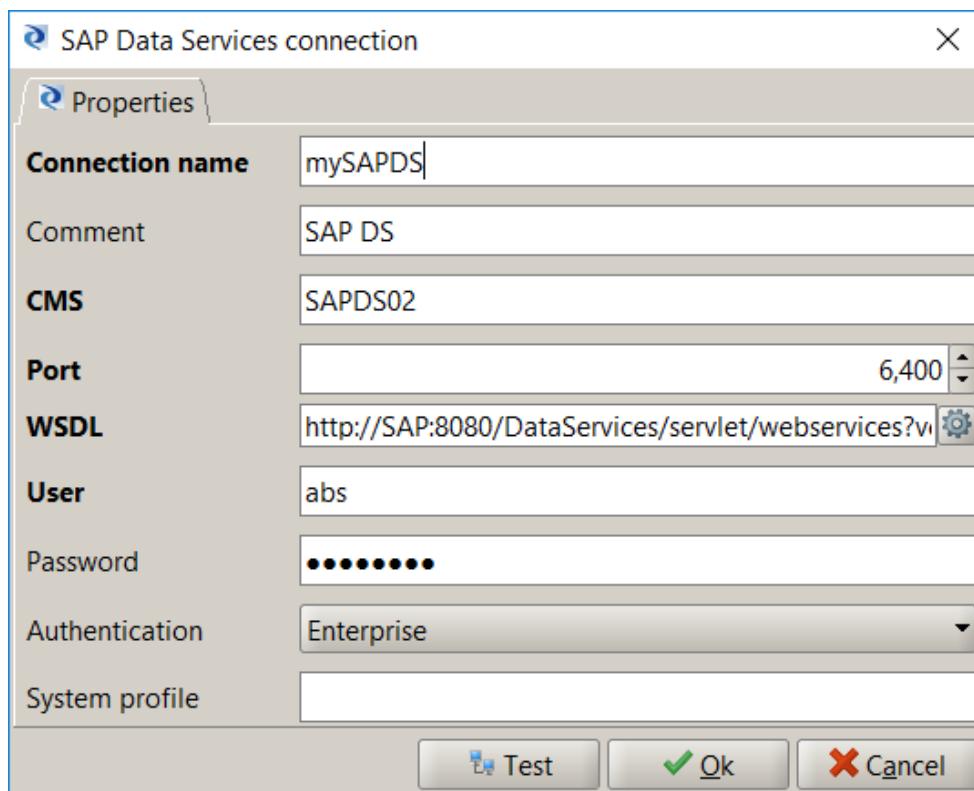
### 9.2 PRINCIPLE FOR PARAMETERING JOBS UNDER VISUAL TOM

The implementation consists in creating a Visual TOM Job with specific parameters.

In all cases, the use must follow the following procedure:

- The "User" field must contain the name of a user known to the operating system where the Agent is located.
- The "Machine" field must contain the machine name where the Visual TOM Agent is installed.
- The "Batch Queue" field must contain the SAP DS batch queue configured in the installation phase.
- The parameters of the Visual TOM Job must contain the different properties of the SAP DS task.

Declaration of Application Server and use of DS Job Template are available with GUI according to license file.



*Description of a DS connection*



Remark:

- If the SAP DS system profile is not set, the default SAP DS system profile is used.
- If SAP DS Server is not reachable, an automatic mechanism of 30 retries every 30 seconds is carried out.

Accessing to DS data is available from the button located to the right in the window below. The activation of this button displays DS's explorer.

Job (Antipodes) OPERATIONS/ERP/SAPDSJob

Properties Sap Data Services parameters Planning Resources (0) Contexts End of job

**Parameters**

**Connection**: mySAPDS

**Repository name**:

**Job name**:

**Job server**:

**Server group**:

**Status polling interval**: 60

**Ignore warnings**:

Run options Trace options Global variables Substitution parameters

System profile used to run the job: Use default profile defined in the connection

Sampling rate: 5

Enable auditing: No

Disable validation statistics collection: No

Enable recovery: No

Job server or group of servers:

Distribution level: Job

Description of a DS Job

## 9.3 EXPLORER

### 9.3.1 Objective

Explorer is used to list the batches of SAP DS.

A good understanding of SAP DS is needed. Refer to DS documentation for further information.

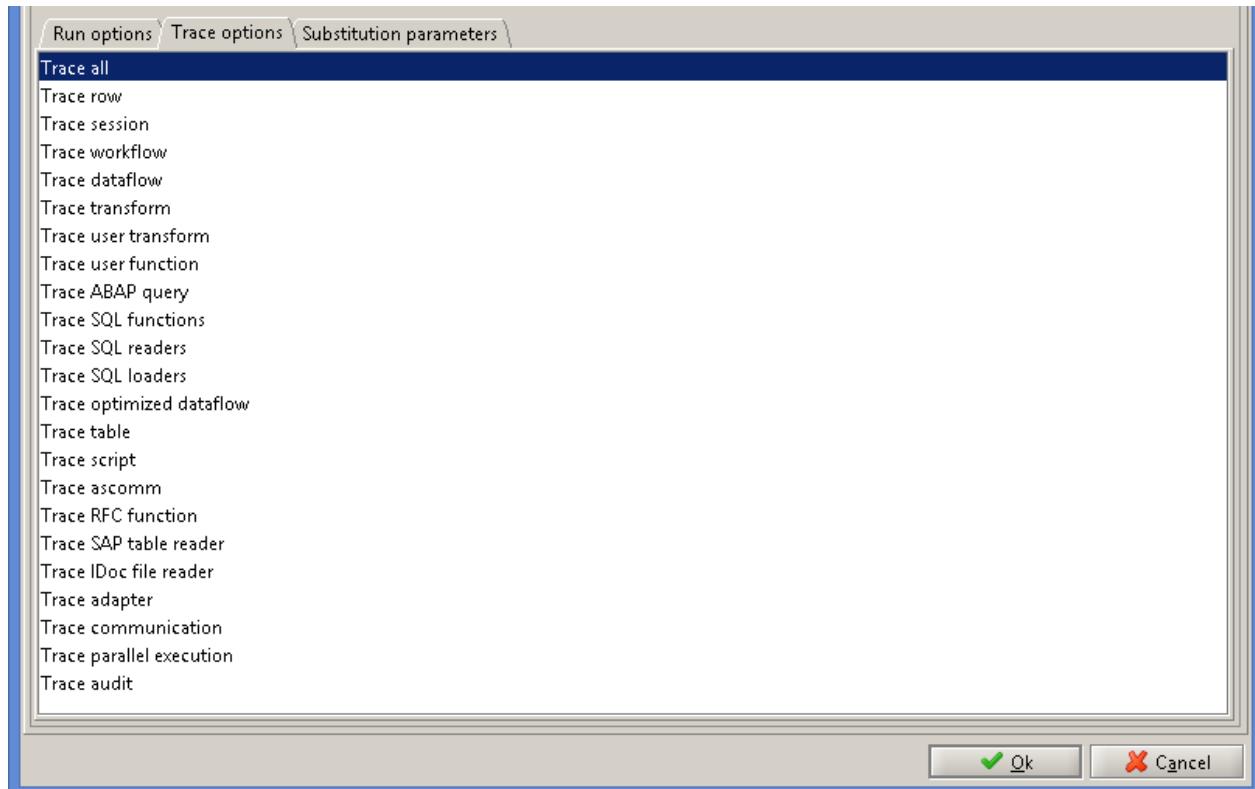


Using the wizard requires a connection with DS server. It must be operational.

### 9.3.2 Job settings

In order to validate properties of the Job, select a batch and use following tabs : "run options", "trace options" and "substitution parameters". The repository name and the name of the batch are mandatory. The name of the Server and the Group of Servers are optional and exclusive.

In case of parameter not set in job properties, execution of job will produce an error.



*Trace options*



Remark :

Use of a Resource is taken in account in the value of a variable which is declared in “substitution parameters” tab.



[www.absyss.com](http://www.absyss.com)