



HORIZONT

SmartJCL – The Complete JCL Solution

Preamble

This presentation gives a comprehensive overview of SmartJCL

At some slides this button can be used to jump to specific slides in this presentation.

e.g. jump to slide Agenda

Click on this symbol to jump to the overview slide

AGENDA

SmartJCL – The Complete JCL Solution

What is SmartJCL

JCL Validation

Reformat

Rules for Standards Check

Change Facility

REXX Interface

Remote Check

Scheduler Interfaces

ISPF Dialog

What is SmartJCL?

- It's more than a simple JCL checker. It offers many additional features that makes it a complete JCL management tool:
- SmartJCL validates JCL
 - Syntax
 - Utilities (like IDCAMS, Sort, etc.)
 - Program found / not found
 - Dataset allocation, Access authority check
- SmartJCL has many additional functions like
 - Reformat
 - Remote check
 - Standards Check, Change Facility, REXX interface
 - Scheduler interface (Control-M, IWS for z/OS)
- SmartJCL can be used as Edit Macro, in Batch, from ISPF or eclipse
- Integrated in ProcMan, it offers full JCL Change Management
 - Moves JCL through all stages, e.g. from Test to Integration to Production
 - Full history, e.g. a JCL containing all versions

JCL Validation – Edit Macro

```
Sitzung A
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          SYSH.TXGC.JOBLIB(DB2COB2T) - 01.12          Columns 00001 00072
Command ==> JCK          Scroll ==> PAGE

*****
000001 //DB2COB2T JOB , 'HORIZON', CLASS=H, MSGCLASS=A, MSGLEVEL=1
000002 //*%OPC SCAN
000003 //JOBLIB DD DISP=SHR,DSN=DSNB10.DBBG.SDSNEXIT
000004 // DD DISP=SHR,DSN=DSNB10.SDSNLOAD
000005 //DELETE EXEC PGM=IDCAMS
000006 //SYSPRINT DD SYSOUT=*
000007 //SYSIN DD *
000008 DEL P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
000009 SET MAXCC = 0
000010 /**
000011 //PH02CS04 EXEC PGM=IKJEFT01,DYNAMNBR=20,COND=(4,LT)
000012 //SYSTSPRT DD SYSOUT=*
000013 //SYSPRINT DD SYSOUT=*
000014 //SYSOUT DD SYSOUT=*
000015 //REPORT DD DSN=P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1,
000016 // DISP=(,CATLG),
000017 // SPACE=(TRK,(10,10),RLSE),
000018 // DCB=(DSORG=PS,RECFM=FB,BLKSIZE=23474)
000019 //SYSTSIN DD *
```

JCL Validation – DSN Catalog

The result:

```
File Edit Edit_Settings Menu Utili Help
VIEW      SYSH.TXGC.JOBLIB(DB2COB2T) - 01.12      Columns 00001 00072
Command ==>                                     Scroll ==> PAGE
***** Top of Data *****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00002, W=00000, I=00000, SUPPRESSED=00000
==MSG> LABEL MSG.NO. ERROR MESSAGE
==MSG> -----
==MSG> .HAAA JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG> DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
==MSG> .HAAB JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG> DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
000001 //DB2COB2T JOB , HORIZONT ,MSGCLASS=T,CLASS=A
000002 //        *
000003 //        DD DISP=SHR,DSN=DSNB10.DBBG.SDSNEXIT
000004 //        DD DISP=SHR,DSN=DSNB10.SDSNLOAD
000005 //        EXEC PGM=IDCAMS
000006 //SYSPRINT DD SYSOUT=*
000007 //SYSIN   DD *
.HAAA DEL P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
==MSG> JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG> DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
000009 SET MAXCC = 0
000010 /**
Mâ B 04/015
```

1. Summary

2. Labels to locate the error

3. Error message

JCL Validation – DSN Catalog

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT SYSH.TXGC.JOBLIB(DB2COB2) - 01.11 ERRORS
Command ==>
***** Top of Data *****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00001, W=00000, I=00001, SUPRESSED=
==MSG> LABEL MSG.NO. ERROR MESSAGE
==MSG> -----
==MSG> .HAAA JCK0220E STEP DOES NOT CONTAIN REQUIRED DD NAME SYSPRINT
000001 //DB2COB2 JOB , 'HORIZONT' , MSGCLASS=T, CLASS=A
000002 //JOBLIB DD DISP=SHR, DSN=DSN910.DB9G.SDSNEXIT
000003 DD DISP=SHR, DSN=DSN910.SDSNLOAD
000004 //DELETE EXEC PGM=IDCAMS
000005 //SYSIN DD *
000006 DEL SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT
.HAAA SET MAXCC = 0
==MSG> JCK0220E STEP DOES NOT CONTAIN REQUIRED DD NAME SYSPRINT
000008 //PH02CS04 EXEC PGM=IKJEFT01, DYNAMBR=20, COND=(4,LT)
000009 //SYSTSPRT DD SYSOUT=*
000010 //SYSPRINT DD SYSOUT=*
000011 //REPORT DD DSN=SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT,
000012 // DISP=(,CATLG) ,
000010 /**
Mâ B
```

But IDCAMS requires
SYSPRINT ...

Error fixed: The insert
IDCAMS step deletes
the DSN before its new
creation.

Yes, SmartJCL
would also verify
GDG processing

JCL Validation – PGM not found

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT SYSH.TXGC.JOBLIB(DB2COB2) - 01.11 ERRORS OCCURRED, RC=8
Command ==> Scroll ==> PAGE
***** Top of Data *****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00001, W=00000, I=00001, SUPRESSED=00000
==MSG> LABEL MSG.NO. ERROR MESSAGE
==MSG> -----
==MSG> .HAAA JCK0440E PROGRAM DSN8BC4 NOT FOUND ON SEARCH PATH
000012 //PH02CS04 EXEC PGM=IKJEFT01,DYNAMBR=20,COND=(4,LT)
000013 //SYSTSPRT DD SYSOUT=*
000014 //SYSPRINT DD SYSOUT=*
000015 //REPORT DD DSN=SYSH.XINFO.V3R6.DATA.DB2COB2.1
000016 // DISP=(,CATLG),
000017 // SPACE=(TRK,(10,10),RLSE),
000018 // DCB=(DSORG=PS,RECFM=FB)
000019 //SYSTIN DD *
000020 DSN SYSTEM(DB9G)
000021 RUN PROGEAM(DSN8BC4) PLAN(DSN8BH91) -
000022 LIB('DSN910.DB9G.RUNLIB.LOAD')
.HAAA END
==MSG> JCK0440E PROGRAM DSN8BC4 NOT FOUND ON SEARCH PATH
000010 /**
M B 04/015
```

Program names are not only taken from PGM= but also DB2 (and IMS) calls are recognized.

JCL Validation - Utilities

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT          SYSH.TXGC.JOBLIB (DB2COB2) - 01.11          ERRORS OCCURRED, RC=8
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00001, W=00000, I=00001, SUPRESSED=00000
==MSG> LABEL  MSG.NO.  ERROR MESSAGE
==MSG> -----
==MSG> .HAAA  JCK0392W GDG BASE DATA SET SPECIFIED WITHOUT A GENERATION NUMBER
==MSG>                DSN = DATA:SMFTEMP
==MSG> .HAAA  JCK2204E SORT (LINE=00001): INVALID OPERAND IS FOUND (DIELDS)
000700 //SORTSMF EXEC PGM=SORT
.HAAA  //SORTIN  DD DSN=DATA.SMFTEMP, DISP=(SHR
==MSG> JCK0392W GDG BASE DATA SET SPECIFIED WIT
==MSG>                DSN = DATA.SMFTEMP
000900 //SORTOUT DD DSN=DATA.SMFDUMP(+1);
001000 //                DISP=(,CATLG),
001100 //                SPACE=(TRK,(500,250),RLSE)
001200 //SYSOUT  DD SYSOUT=*
001300 //SYSTN    DD *
.HAAA  SORT DIELDS=(11,4,CH,A,7,4,CH,A),EQUALS
==MSG> JCK2204E SORT (LINE=00001): INVALID OPERAND IS FOUND (DIELDS)
```

Besides IDCAMS, IEBGENER, IEBCOPY etc. SORT statements are checked.

SORT DIELDS=(11,4,CH,A,7,4,CH,A),EQUALS

JCL Reformat

Use the reformat function to change the JCL format quickly and easily to conform readable standards.

- Administrator specifies positions of keyword, value and continuation line individually for each JCL parameter according to your company needs.
- User invokes the function out of the ISPF editor with a simple line command.
- JCL is reformatted automatically according to your specifications.

JCL Reformat

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW      SYSH TXGC.JOBLIB(GDGJ1
Command ==> JREF_
Columns 00001 00072
Scroll ==> PAGE
***** Top of Data *****
000001 //GDGJ102# JOB CLASS=A,
000002 //          MSGCLASS=T
000003 /**
000004 /** HORIZONTAL TEST-JCL
000005 /**  READS      1 GDG
000006 /**  CREATES   2 NEW GDGS
000007 /**
000008 //STEP1      EXEC PGM=IEFBR14
000009 //GDG01I     DD  DSN=DATA.TST.GDGJ101.GDG01(0),DISP=SHR
000010 //GDG010     DD  DSN=DATA.TST.GDGJ102.GDG01(+1),
000011 //  DISP=(NEW,CATLG),UNIT=SYSDA,
000012 //  SPACE=(TRK,(1,1),RLSE),
000013 //          DCB=(DSORG=PS,RECFM=FB,LRECL=80)
000014 //GDG030     DD  SPACE=(TRK,(1,1),RLSE),
000015 //  DSN=DATA.TST.GDGJ103.GDG01(+1),LRECL=80,
000016 //  DISP=(NEW,CATLG),UNIT=SYSDA,
000017 //          DCB=(DSORG=PS,RECFM=FB)
000018 //
000019 /**
Mâ B 04/019
```

Type JREF...

Unformatted JCL is difficult to read.

JCL Reformat

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          SYSH.TXGC.JOBLIB(GDGJ102#) - 01.02          REFMT SUCCESSFUL, RC=0
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
000001 //GDGJ102# JOB CLASS=A,
000002 //          MSGCLASS=T
000003 /**
000004 /** HORIZONTAL TEST-JCL
000005 /**  READS      1 GDG
000006 /**  CREATES   2 NEW GDGS
000007 /**
000008 //STEP1      EXEC PGM=IEFBR14
000009 //GDG01I     DD  DSN=DATA.TST.GDGJ101.GDG01(0),
000010 //           DISP=SHR
000011 //GDG010     DD  DSN=DATA.TST.GDGJ102.GDG01(+1),
000012 //           DISP=(NEW,CATLG),
000013 //           UNIT=SYSDA,
000014 //           SPACE=(TRK,(1,1),RLSE),
000015 //           DCB=(DSORG=PS,RECFM=FB,LRECL=80)
000016 //GDG030     DD  DSN=DATA.TST.GDGJ103.GDG01(+1),
000017 //           DISP=(NEW,CATLG),
000018 //           UNIT=SYSDA,
000019 //           SPACE=(TRK,(1,1),RLSE),
```

... and get the reformatted JCL.

Mâ B 04/015

Rule Dialog – Standard Check

An ISPF dialog supports an “JCL Administrator” to specify rules according to site specific standards easily:

- Every site has individual rules, e.g.
 - “the first qualifier of new datasets in production must be PROD”
 - “UNIT WORK not allowed if program is SORT”
 - ...
- It is possible to use SmartJCL’s REXX interface and code such checks.
- The ISPF rule dialog simplifies that. No coding is needed to setup your own standard checks.

Rule Dialog – Standard Check

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----Standard Check: Modify Rule ----- ROW 1 TO 9 OF 9
Command ==> _____ Scroll ==> PAGE
Commands: AddC Add Condition AddE Add Exception AddA Add Action CANcel
LineCmds: I Insert M Modify D Delete Condition/Exception/Action

Rule name : HLQ
Description: HLQ of new DSN in prod must be DATA
-----
- Condition
- JOB.CLASS EQ 'P'
- DD.DISP.NORMAL EQ 'CATLG'

- Exception
- SUBSTR(DD,DSN,1,4) INLIST 'DATA,SYSH'

- Action
- MESSAGE LAST_JCL_STMT 'STD000SE'
***** Bottom of Data *****
```

Here we verify the DSN of new cataloged datasets, if the job run in class "P". If it's not okay, a message will be written and an appropriate RC will be set (that's defined in the member's messages).

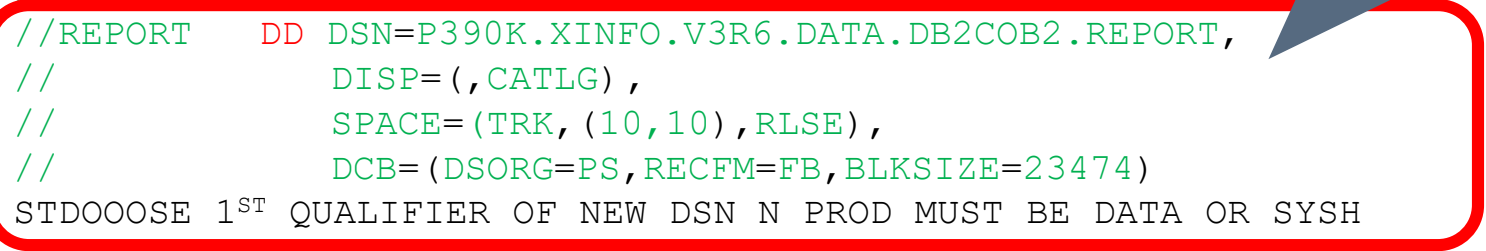
An ISPF "wizard" guides you step by step to generate the conditions and actions of the rule.

Rule Dialog – Standard Check

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help

EDIT          SYSH.TXGC.JOBLIB (DB2COB2) - 01.11          ERRORS OCCURRED, RC=8
Command ==> _____ Scroll ==> PAGE
***** Top of Data *****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00001, W=00000, I=00000, SUPRESSED=00000
==MSG> LABEL  MSG.NO.  ERROR MESSAGE
==MSG> -----
==MSG> .HAAA  STDOOSE 1ST QUALIFIER OF NEW DSN IN PROD MUST BE DATA OR SYSH
000005 //SYSPRINT DD SYSOUT=*
000006 //SYSIN DD *
000007 DEL P390K.XINFO.V3R6.DATA.DB2COB2.REPORT
000008 SET MAXCC = 0
000009 //PH02CS04 EXEC PGM=IKJEFT01, DYNAMBR=20, COND=(4,LT)
000010 //SYSTSPRT DD SYSOUT=*
000011 //SYSPRINT DD SYSOUT=*
000012 //REPORT DD DSN=P390K.XINFO.V3R6.DATA.DB2COB2.REPORT,
000013 //          DISP=(,CATLG) ,
000014 //          SPACE=(TRK,(10,10),RLSE) ,
.HAAA //          DCB=(DSORG=PS,RECFM=FB,BLKSIZE=23474)
==MSG> STDOOSE 1ST QUALIFIER OF NEW DSN N PROD MUST BE DATA OR SYSH
000015 //SYSTSIN DD *
```

The result of the new standard rule (DSN starts with P390K which is not allowed in prod).



Change Facility

In addition to the REXX Interface, SmartJCL has an integrated change facility. It enables you to implement automatic and/or mass changes easily.

Examples:

- **CHANGE PARM=DSN , VALUE=PROD* , NEWVAL=TEST***
- **DELETE PARM=UNIT**
- **DELETE JOB=ABC% , PGM=IDCAMS , PARM=UNIT , VALUE=TAPE4**

In case of more complex demands,
use the REXX Interface.

SRI – SmartJCL REXX Interface

SRI allows to access all JCL parameters out of your REXX programs.

- SRI provides access to all JCL statements for verification and modification by writing simple REXX code.
- SRI has functions to access JCL constructs easily, e.g. if qualifier (“dataset name”, FIRST)=“TEST”then ...
- SRI contains functions to delete, insert or modify all statements, even complete steps can be inserted automatically!
- SRI is a powerful tool to simplify JCL handling, e.g. to
 - Implement your own checks and setup a “JCL quality insurance system”.
 - To change JCL automatically.

REXX Interface

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW      SYSH.SMARTJCL.V3R1.SAMPLIB(SRIX0301)
Command ==>
000028    /* if stmtptr points to DD statement then
000029    if (SRISayStmtType(stmtptr) = 'DD') then
000030
000031    /* get the first parm of DD that stmtptr points to */
000032    parmptr = SRIGetParm(stmtptr, 0, 'FIRST');
000033    /* do for all parameters of the DD */
000034    do while (parmptr /= 0);
000035
000036    /* read name and value of the parameter that
000037    parmname = SRISayParmName(stmtptr, parmptr)
000038    parmvalue = SRISayParmValue(stmtptr, parmptr)
000039
000040    /* if name of the parameter = 'DSN' and it
000041    * DATA.DEMO or DATA.DEMO(...) then continue
000042    */
000043    if (parmname = 'DSN' &,
000044        SRIDsn(parmvalue) = 'DATA.DEMO') then do;
000045
000046    /* read member name */
000047    membername = SRIMember(parmvalue);
```

There are a lot of well documented examples which explain how the SRI functions are working.

Here we go through all statements, if it's a DD we go through all parameters, if it is DSN= we check the name and do something.

Remote Check

The Remote Check enables you to perform the JCL check on another system. Advantages are:

- Simplifies checking JCL from the test or development system against the production libraries on the production system.
- It avoids to transfer the JCL manually to the other (remote) system, logon to that system and check it locally at this system.
- SmartJCL remote check uses standard TCP/IP architecture
 - Simple TCP/IP protocol.
 - Easy to install, easy to use.
- It works like this:
 - The user creates or modifies JCL on the development system.
 - The user calls RCK macro with parameter SRV="target system".
 - SmartJCL transfers the JCL, runs the check remotely on the "target system" and sends back the resulting messages.

Scheduler Interfaces

```
Sitzung A
----- IBM WORKLOAD SCHEDULER FOR Z/OS -----
Option ==> _

Welcome to IBM Workload Scheduler for z/OS V9R3M0 (IWSz)
Connected to OPCC

Select one of the following options and press ENTER.

0 OPTIONS          - Define IWSz dialog user parameters and options
1 DATABASE         - Display or update IWSz data base information
2 LTP              - Long Term Plan query and update
3 DAILY PLANNING   - Produce daily plans, real and trial
4 WORK STATIONS    - Work station communication
5 MCP              - Modify the Current Plan
6 QCP              - Query the status of work in progress
7 OLD OPERATIONS   - Restart old operations from the DB2 repository

9 SERVICE FUNC     - Perform IWSz service functions
10 OPTIONAL FUNC   - Optional functions
X EXIT            - Exit from the IWSz dialog

Mâ A
```

IBM's IWS

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
----- (1)
OPTION ==>
USER P390K
DATE 24.08.18

2 JOB SCHEDULE DEF CTM Job Scheduling Definition
3 ACTIVE ENV. CTM Active Environment Display
4 COND/RES IOA Conditions/Resources Display
5 LOG IOA Log Display
6 UTILITIES IOA On-Line Utilities
7 MANUAL COND IOA Manual Conditions Display
8 CALENDAR DEF IOA Calendar Definition
IV VARIABLE DATABASE IOA Variable Database Definition Facility
C CMEM DEFINITION CTM Event Manager Rule Definition
A MISSION STATUS CTD Active Mission Status Display
M MISSION DEF CTD Prt/Bkp/Rst Mission Def
R REPORT DEF CTD Rept Decollating Mission Def
T RECIPIENT TREE CTD Recipient Tree Definition
U USER REPORTS CTD Reports - Status/Update/View
F PC PACKET STATUS CTD File Transfer to CTD/PC
DO OBJECTS CTD Objects Facility

COMMANDS: X - EXIT, HELP, INFO, SET OR CHOOSE A MENU OPTION

Mâ B 04/015
```

BMC's CTM

Skip Scheduler interfaces

One of the major benefits of SmartJCL is the integrated interface to IWS:

- SmartJCL will simulate variable substitution (important if you use IWS variable in e.g. DSN etc.).
- Optional display IWS info in JCL (e.g. Application id, Predecessors, Successors and Special Resources).
- Select jobs to be checked from AD or CP by Application id, Owner Id, Input Arrival etc.
- Check JCL in production sequence and simulate catalog actions.
- Several simulation modes allow to check the complete production in advance (and fix errors in advance).

IWS Interface – Edit Macro

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          SYSH TXGC JOBLIB(DB2COB2T) - 01.12
Command ==> OSJ JCK
*****
==MSG> MESSAGE SUMMARY AND COUNTS: E=00002, W=
==MSG> LABEL MSG.NO. ERROR MESSAGE
==MSG> -----
==MSG> .HAAA JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG>                DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
==MSG> .HAAB JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG>                DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
000001 //DB2COB2T JOB , 'HORIZONTAL',MSGCLASS=T,CLASS=A
000002 //*%OPC SCAN
000003 //JOB LIB DD DISP=SHR,DSN=DSNB10.DBBG.SDS
000004 // DD DISP=SHR,DSN=DSNB10.SDSNLOAD
000005 //DELETE EXEC PGM=IDCAMS
000006 //SYSPRINT DD SYSOUT=*
000007 //SYSIN DD *
.HAAA DEL P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
==MSG> JCK0295E INVALID CHARACTER "&" IN DATA SET NAME,
==MSG>                DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1
000009 SET MAXCC = 0
000010 //*

Mâ B 04/022
```

Use macro OSJ and JCK to first resolve the variable and then call the check.

If you use IWS variable e.g. in a DSN, it leads to an error message.

JCK0295E INVALID CHARACTER "&" IN DATA SET NAME, DSN: P390K.XINFO.V3R6.DATA.DB2COB2.REPORT.D&OYMD1

IWS Interface – Edit Macro

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW
Comma
*****
00000
00000
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00001
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00001
00001
00001
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00001
00001
00001

----- TWS/SimJCL Operation List ----- Row 1 to 1 of 1
Command ==> _____ Scroll ==> _____

Select line with S to start Simulation
Enter Command SP to specify additional Parameters

Current Plan End Date      : 20180824   Time      : 0600
                           YYYYMMDD     HHMM
Simulation Date           ==> 20180823   Time ==> _____

for origin AD enter Input Arrival Date and Time below
Input Arrival Date        ==> 20180823   Time ==> _____

Application ID  Jobname  Input Arrival  OpNo  WsId  Origin
                Date      Time
-----
 XINF0DB2DEMO  DB2C0B2  20180823 0600  010  CPU  CP
***** Bottom of data *****
```

SmartJCL searches in the CP and AD for the job. You can choose which one should be the input and if it is AD you can enter a simulation date in the future.

IWS Interface – Edit Macro

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
BROWSE      SYSH13076.T122551.RA000.P390K.R0198945      CHECK SUCCESSFUL, RC=0
COMMAND ==> _____      Scroll ==> PAGE
***** Top of Data *****
OSJM215I  JCL-VARIABLE SUBSTITUTION SUCCESSFULLY
***** JCL PREPARED BYSMARTJCL/SIMJCL*****
//DB2COB2T JOB , 'HORIZONT',MSGCLASS=T,Class=A
//*%OPC SCAN
//JOBLIB   DD DISP=SHR,DSN=DSN910.DB9G.SDSNEXIT
//         DD DISP=SHR,DSN=DSN910.SDSNLOAD
//DELETE   EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
DEL SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT.D130816
SET MAXCC = 0
//PH02CS04 EXEC PGM=IKJEFT01,DYNAMBR=20,COND=(4,LT)
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSOUT   DD SYSOUT=*
//REPORT   DD DSN=SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT.D130B16,
//         DISP=(,CATLG) ,
Mâ B 04/015
```

The variable are resolved,
no errors anymore.

IWS Interface – ISPF + Batch

```
Sitzung B
----- IWS/SimJCL Start Panel -----
Command ===> 1_
1st Step - SELECT: First you must select operations to be checked
1  AD      - Create list out of the AD (Application Description)
2  CP      - Create list out of the CP (Current Plan)
3  FORECAST - Create list for any day in the future

2nd Step - SIMULATE: Select a method to substitute IWS variables
4  TWS     - IWS simulation by using a production IWS controller
5  HORIZONT - HORIZONT's own simulation without IWS controller
6  COMBINED - HORIZONT's own simulation and subsequent IWS simulation
              (if needed, depending on the type of JCL variables)

3rd Step - CHECK: Now you can start the JCL check
7  CHECK   - Start JCL check based on selected simulation method

Other options:
C  CLONE   - Simulation using a cloned controller

Mâ B 02/016
```

e.g. select from AD

The ISPF dialog is mainly used to generate batch jobs and consists of three parts: Selection, Simulation, JCL Check.

IWS Interface – Select from AD

```
Sitzung B
----- IWS/SimJCL Application Description -----
Command ==>

top : RESET restore default values

Selection
Application id ==> _____ leave blank for more selection criteria
Valid from    ==> _____ Optional. Format YYYYDD
to            ==> _____ Optional. Format YYYYDD

IWS-Parameters
Release       ==> G   B V8R3, C V8R5/5M1, E V8R6, F V9R1, G V9R2, H V9R3
AD-DSN       ==> SYSH.TXGC.AD

Output file
Joblist      ==> P392E.SMARTJCL.TWS.JOBLIST

Submit       ==> E   S submit job, E edit before submit

Mâ B 13/036
```

The result will be a list of job names in a file.

IWS Interface – Select from AD


```
Sitzung B
----- APPLICATION DESCRIPTION SELECTION -----
Command ==>

top:  APP to edit the application list

Application id  ==> _____
Jobname        ==> _____
Owner id       ==> _____
Priority        ==> _____
Authority group id ==> _____
Valid from - to ==> _____ - _____
Calendar id    ==> _____
Workstation    ==> _____
Group definition ==> _____

Note: Wildcards * and % are allowed in all selection fields!
Used defaults: TYPE=A (Application), STATUS=A (active), Op auto submit=Y

1 - 9
YYMMDD
```



Additional selection criteria

IWS Interface – Select from CP

```
Sitzung B
----- IWS/SimJCL Current Plan ----- Enter required field
Command ==>

top : RESET restore default values

Selection
Application id ==> _____ leave blank for more selection criteria

IWS-Parameters
Subsystem ==> TXGC
Release ==> G B V8R3, C V8R5/5M1, E V8R6, F V9R1, G V9R2, H V9R3
MSG-LIB ==> SYSH.TXDC.X40JJUPM

Output file
Joblist ==> P392E.SMARTJCL.TWS.JOBLIST

Submit ==> E S submit job, E edit before submit

Mâ B 12/043
```

The result will be a list of job names in a file.

IWS Interface – Select from CP

```
Sitzung B
----- CURRENT PLAN SELECTION -----
Command ==>

top: APP to edit the application list

Application      ==> _____
Jobname          ==> _____
Operation id     ==> _____
Workstation      ==> _____
Input arrival from ==> 130317 0600      YYMMDD HHMM
                  to      ==> 130318 0559      YYMMDD HHMM
Planned start from ==> _____      YYMMDD HHMM
                  to      ==> _____      YYMMDD HHMM
Actual start from ==> _____      YYMMDD HHMM
                  to      ==> _____      YYMMDD HHMM
Owner id         ==> _____
Authority group id ==> _____
Group definition ==> _____
Priority         ==> _____      1 - 9
Application status ==> _____      W S C D E U
Operation status  ==> _____      A R * S I C E W U D
On critical path  ==> _____      Y N F

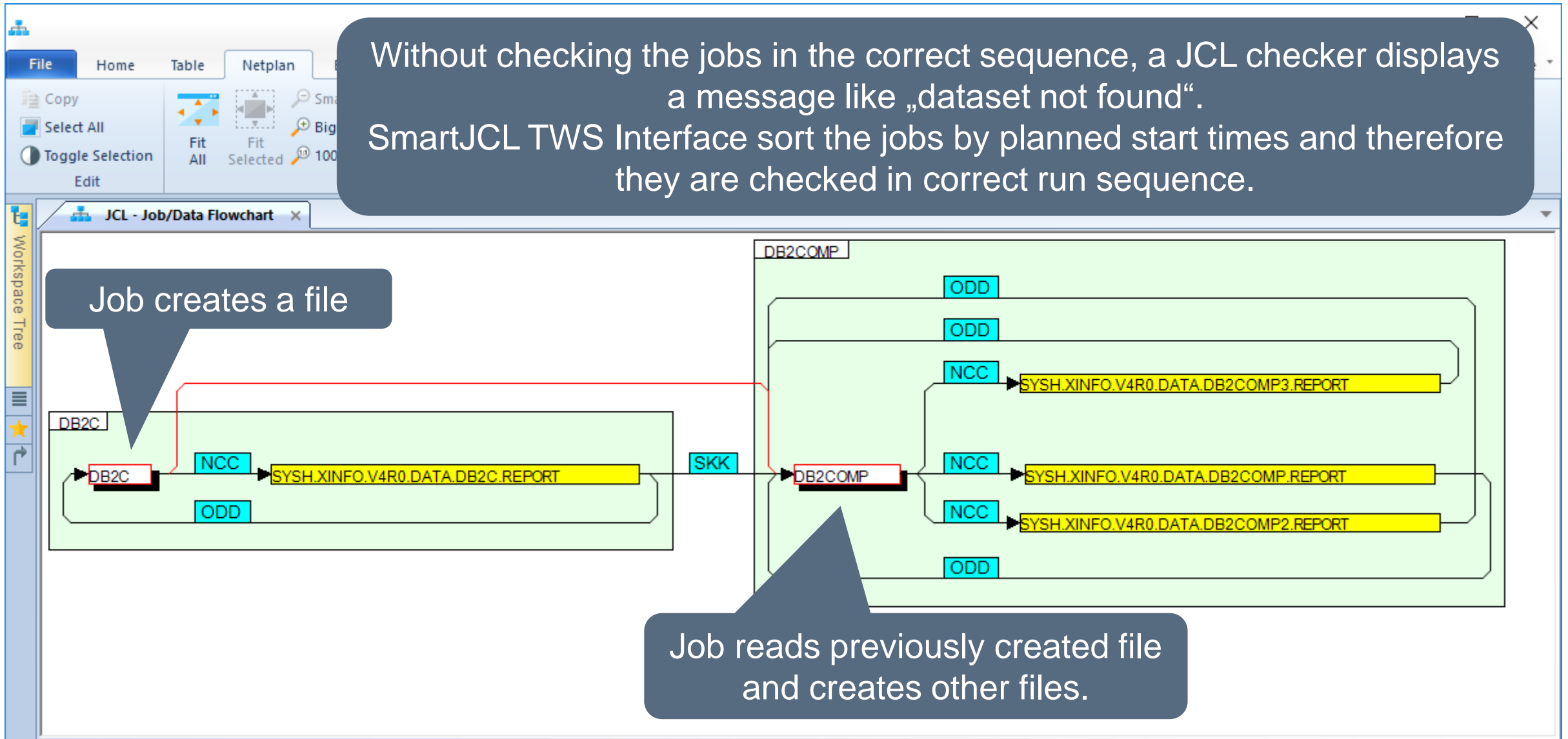
Note: Wildcards * and % are allowed in all input fields!

Mâ B 12/032
```

Additional selection criteria

Checking Jobs in Production Sequence

Without checking the jobs in the correct sequence, a JCL checker displays a message like „dataset not found“.
SmartJCL TWS Interface sort the jobs by planned start times and therefore they are checked in correct run sequence.



IWS Interface - Forecast

```
Sitzung B
----- IWS/SimJCL F
Command ==>
top : RESET restore default values
Selection
  Application id ==> _____ leave b_____ for more selection criteria
  Database      ==> F          L Existing Long Term Plan, F Forecast
Forecast Period
  From-To      ==> 130317 0600 - 130318 0559  YYMMDD HHMM
IWS Parameters
  Release      ==> G    B V8R3, C V8R5/5M1, E V8R6, F V9R1, G V9R2, H V9R3
  IWS Subsys   ==> TXGC                                     (E2E only)
  Scriptlib    ==> SYSH.TXGC.SCRPTLIB                       (E2E only)
  Parmlib      ==> _____                               (E2E only)
  Topology     ==> _____ Topology parameter member    (E2E only)
  AD VSAM      ==> SYSH.TXGC.AD                               _____
  WS VSAM      ==> SYSH.TXGC.WS                               _____
  RD VSAM      ==> SYSH.TXGC.RD                               _____
  SI VSAM      ==> SYSH.TXGC.SI                               _____
  LT VSAM      ==> SYSH.TXGC.LT                               _____
  CX VSAM      ==> SYSH.TXGC.CX                               _____
Output
  Joblist     ==> P390K.SMARTJCL.TWS.JOBLIST_____
  Submit      ==> E    S submit job, E edit before submit

Mâ B 22/051
```

The forecast creates a trial plan for any date in the future.

IWS Interface - Forecast

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          P392E.SMARTJCL.TWS.JOBLIST          Columns 00001 00072
Command ==>          Scroll ==> CSR
***** Top of Data *****
000001 ACRIT0          TIME001
000002 ACRIT1          CPU 001CRIT1
000003 ACRIT2          CPU 001CRIT2
000004 ACRIT3          CPU 001CRIT3
000005 ACRIT4          CPU 001CRIT4
000006 ACRIT5          CPU 001CRIT5
000007 ACRIT6          CPU 001CRIT6
000008 ACRIT7          CPU 001CRIT7
000009 ACRIT99         CPU 001CRIT
000010 ADHOC#HZ0001    DMY 001
000011 ADHOC#HZ0001    CPU 010AHZ00010
000012 ADHOC#HZ0001    CPU 011AHZ00011
000013 ADHOC#HZ0001    CPU 012AHZ00012
000014 ADHOC#HZ0001    DMY 255
000015 ADHOC#HZ0002    DMY 001
000016 ADHOC#HZ0002    CPU 010AHZ0002
000017 ADHOC#HZ0002    DMY 255
000018 ADHOC#HZ0003    DMY 001
000019 ADHOC#HZ0003    CPU 010AHZ0003
Mâ B 04/015
```

As always, the result will be a list of job names in a file.

IWS Interface – Simulation in Batch

```
Sitzung B
----- IWS/SimJCL Simulation -----
Command ==>

Specify filenames and simulation time, then press
or specify JOBLIB to edit private joblibs.

Files
Joblist (Input)    ==> P392E.SMARTJCL.TWS.JOBLIST
private Joblibs   ==> _____ optional
JCL (Output)      ==> P392E.SMARTJCL.TWS.JCLOUT

Simulation
Variable Table    ==> _____
Arrival           ==> 130316 0600 YYMMDD HHMM
Start             ==> 130316 2000 YYMMDD HHMM
                  ==> U      A Use times for all jobs
                  U Use times only for jobs where the input
                  arrival or planned start time is unknown

                  ==> Y      Y , N Sort jobs by Planned start time
                  ==> E      S submit job, E edit before submit

21/027
```

Input is the list of jobs.

If the select job did run and the joblist file has been created, the simulation can be started.

21/027

IWS Interface – Simulation in Batch

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          P390K.SMARTJCL.TWS.JCLOUT          Columns 000001
COMMAND ==>          Scroll ==> PAGE
000202 00***** JOB: DB2COB2T  ADID: XINFODB2DEMOT  OPNO: 010
000203 20//DB2COB2T JOB , 'HORIZONTAL' , MSGCLASS=T, CLASS=A
000204 20//*/OPC SCAN
000205 20//JOBLIB DD DISP=SHR,DSN=DSN910.DB9G.SDSNEXIT
000206 20// DD DISP=SHR,DSN=DSN910.SDSNLOAD
000207 20//DELETE EXEC PGM=IDCAMS
000208 20//SYSPRINT DD SYSOUT=*
000209 20 DEL SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT.D130816
000210 20 SET MAXCC = 0
000211 20//*
000212 20//PH02CS04 EXEC PGM=IKJEFT01, DYNAMNBR=20, COND=(4,LT)
000213 20//SYSTSPRT DD SYSOUT=*
000214 20//SYSPRINT DD SYSOUT=*
000215 20//REPORT DD DSN=SYSH.XINFO.V3R6.DATA.DB2COB2.REPORT.D130816,
000216 20// DISP=(,CATLG),
000217 20// SPACE=(TRK,(10,10),RLSE),
000218 20// DCB=(DSORG=PS,RECFM=FB,BLKSIZE=23474)
000219 20//SYSIN DD*
```

MA B 04/015

The output file contains JCL of all jobs, sorted by planned start, all variable are resolved.

IWS Interface – JCL Check in Batch

```
Sitzung B
----- IWS/SimJCL Start Panel -----
Command ==> 7_

1st Step - SELECT: First you must select operations to be checked
1  AD          - Create list out of the AD (Application Description)
2  CP          - Create list out of the CP (Current Plan)
3  FORECAST    - Create list for any day in the future

2nd Step - SIMULATE: Select a method to substitute IWS variables
4  TWS         - IWS simulation by using a production IWS controller
5  HORIZONT    - HORIZONT's own simulation without IWS controller
6  COMBINED    - HORIZONT's own simulation and subsequent IWS simulation
                  (if needed, depending on the type of JCL variables)

3rd Step - CHECK: Now you can start the JCL check
7  CHECK       - Start JCL check based on selected simulation method

Other options:
C  CLONE       - Simulation using a cloned controller

Mâ  B 02/016
```

IWS Interface – JCL Check in Batch

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help

EDIT          P392E.S0W1.SPFTEMP1.CNTL          Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001 //P390X  JOB (ACCOUNT),HORIZONT,
000002 //      MSGCLASS=T,NOTIFY=&SYSUID
000003 //*****
000004 //* SMARTJCL CHECK - CREATED FROM SKELETON JCKS
000005 //*****
000006 //JCLCHECK EXEC PGM=JCKIPS,REGION=512M
000007 //STEPLIB  DD  DISP=SHR,DSN=SYSH.SMARTJCL.V3R3.LOAD
000008 //JCKJCLI  DD  DISP=SHR,DSN=P392E.SMARTJCL.TWS.JCLOUT
000009 //SYSIN     DD  DISP=SHR,DSN=SYSH.SMARTJCL.V3R3.PARM(JCKKPARM)
000010 //JCKDTLO  DD  SYSOUT=* LRECL=80 TO 88, DEPENDS ON PARAMETERS
000011 //JCKSUMO  DD  SYSOUT=* LRECL=178
000012 //JCKMIGO  DD  SYSOUT=* LRECL=80
000013 //SYSPRINT DD  SYSOUT=*
000014 //SYSOUT   DD  SYSOUT=*
000015 //CEEDUMP  DD  SYSOUT=*
000016 //* THIS FILE IS ONLY USED FOR THE REXX INTERFACE
000017 //SYSTSPRT DD  SYSOUT=*
***** ***** Bottom of Data *****
Mâ B 04/015
```

Now you can start the JCL check of all previously selected and simulated jobs.

IWS Interface – JCL Check in Batch

```
Sitzung B
File Edit Edit_Settings Menu Utiliti
Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY P390KX          JOB02145  DS
COMMAND INPUT ==>
***** TOP OF DATA *****
JCKIPS - CHECK JCL
HORIZONT GMBH, MUNICH, 2012, ALL RIGHTS RESERVED
COMPILED WITH IBM ENTERPRISE PLI V3R5 AT 11.SEP.12
*****
JCKIPS STARTED FOR USER P390K          AT 2013-03-17, 13:18:18
*****
MSG.NO.  MESSAGE TEXT
-----
***** JOB: DB2COB2  ADID: XINFODB2DEMO  OPNO: 010 WSID:
JCK0440E PROGRAM DSN8BC4  NOT FOUND ON SEARCH PATH
***** JOB: DB2P112  ADID: XINFODB2DEMO  OPNO: 015 WSID:
JCK0080I PROCEDURE XJRJUNC  WAS EXPANDED FROM DSN:SYSH.XINFO.V3R5.P
***** JOB: DB2COMP  ADID: XINFODB2DEMO  OPNO: 020 WSID:
JCK0080I PROCEDURE XJRJUNC  WAS EXPANDED FROM DSN:SYSH.XINFO.V3R5.P
***** JOB: DB2COMP  ADID: XINFODB2DEMO  OPNO: 020 WSID: CPU
JCK0080I PROCEDURE XJRJUNC  WAS EXPANDED FROM DSN:SYSH.XINFO.V3R5.PROCLIB
JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"
JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"
MA  B 04/015
```

The result is (optional) a detailed list of the JCL and its errors and a summary which contains all messages (including the standard check).

You may use the "migrated info" to recall required datasets automatically in advance.

JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"
JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"

Control-M Interface

Besides TWS SmartJCL also supports Control-M. It enables you to:

- Simulate Control-M variable substitution (AUTO-Edit Function).
- Select the jobs to be checked by Table, Group, Application etc.

Skip CTM interface

Control-M ISPF Dialog

----- CTM/SimJCL Startpanel -----

Command ===>

Select one of the following options and press ENTER

- 1 JOBLIST - Select jobs for simulation
- 2 SIMULATE - Start JCL simulation based on previous selection
- 3 CHECK - Start JCL check based on previous simulation
- 4 CHECK - Start JCL check without simulation
- 5 REFORMAT - Start JCL reformat (pre release)

Note: Options 3, 4, 5 are only available, if a JCL checker is installed, for example SmartJCL

Control-M Interface
Mainpanel

Control-M ISPF Dialog

```
----- CTM/SimJCL - Create Joblist -----  
Command ===>  
  
top : RESET restore default values, JC change jobcards  
Selection  
  Table          ===> _____  
  Application    ===> _____  
  Group          ===> _____  
  Jobname        ===> _____  
  Owner          ===> _____  
  
Schedule Library  
  DSN            ===> DATA.CTM.MAN.SCHEDULE _____  
  
Output files  
  Joblist        ===> P390G.MJV.SELJOBS _____  
  Variablelist   ===> P390G.MJV.SETVAR _____  
  
Submit          ===> S      S submit job, E edit before submit
```

Select Jobs by using
Control-M fields.

Control-M ISPF Dialog

```
----- CTM/SimJCL - Simulate -----  
Command ==>  
  
JCL LIBRARY MODE  
For simulation of private members enter Y: N (Y or N)  
  
SCHEDULING LIBRARY MODE  
For simulation of the jobs unloaded from the SCHEDULE LIBRARY.  
Files  
  Joblist (Input)      ==> P390G.MJV.SELJOBS _____  
  JCL      (Output)   ==> P390G.MJV.JCLOUT _____  
  CONTROL-M GLOBAL LIBRARY ==> P390A.MSJ.QM.HELPLIB _____  
  
Simulation (optional parameters)  
  GROUP      ==> _____  
  $SIGN      ==> _____  
  WDATE      ==> _____ DDMMYY  
  ODATE      ==> _____ DDMMYY  
  
Parameters  
  Submit     ==> S          S submit job, E edit
```

Specify desired date

Control-M Variables

```
File      Edit      Confirm  Menu      Utilities  Compilers  Test      Help
-----
EDIT      P390P.TEST.CNTL(SIMJCL01) - 01.04
COMMAND  ===>
*****  ***** Top of Data *****
000001 //SIMJCL01 JOB 'HORIZONT',MSGCLASS=T,NOTIFY=&SYSUID
000002 //*%OPC SCAN
000003 //*****
000004 //DELETE EXEC PGM=IEFBR14
000005 //DD1 DD DSN=P390A.%%GROUP..%%NO,DISP=SHR
000006 //*****
000007 //ALLOC EXEC PGM=IEFBR14,COND=(4,LT)
000008 //DD1 DD DSN=P390A.%%JOBNAME..LIST%%NO,
000009 // DISP=(,CATLG),SPACE=(CYL,(2,
000010 //*****
000011 //WRITER EXEC PGM=REPORT01,COND=(4,LT)
000012 //OUT1 DD DISP=SHR,DSN=P390A.%%JOBNAME..LIST%%NO
000013 //IN1 DD DISP=SHR,DSN=P390A.%%JOBNAME
*****  ***** Bottom of Data *****
```

Variable ...

Variable ...

Variable ...

Variable ...

Control-M Variables

```
File      Edit      Confirm  Menu      Utilities  Compilers  Test      Help
-----
EDIT      P390P.TEST.CNTL(SIMJCL01) - 01.04
COMMAND ===>
*****  ***** Top of Data *****
000001 //SIMJCL01 JOB 'HORIZONT',MSGCLAS
000002 //*%OPC SCAN
000003 //*****
000004 //DELETE EXEC PGM=IEFBR14
000005 //DD1      DD DSN=P390A.%%GROUP..%S,DISP=SHR
000006 //*****
000007 //ALLOC   EXEC PGM=IEFBR14,COND=(4,LT)
000008 //DD1      DD DSN=P390A.%%JOBNAME..LIST%%NO,
000009 //          DISP=(,CATLG),SPACE=(CYL,(2,5),RLSE),
.HAAA //          DISP=(,CATLG),SPACE=(CYL,(2,5),RLSE)
==MSG> JCK0316E - INVALID DATA SET NAME FORMAT
000009 //*****
000010 //WRITER   EXEC PGM=REPORT01,COND=(4,LT)
.HAAI //OUT1      DD DISP=SHR,DSN=P390A.%%JOBNAME
```

... must be substituted
before simulation.

==MSG> JCK0316E - INVALID DATA SET NAME FORMAT

Control-M Variables

```
File      Edit      Confirm  Menu      Utilities  Compilers  Test      Help
-----
EDIT      P390P.TEST.CNTL(SIMJCL01) - 01.04
COMMAND ==>
***** Top of Data *****
000001 //SIMJCL01 JOB 'HORIZONT',MSGCLASS=T,NO...
=NOTE= --SIMJCL01 JOB 'HORIZONT',MSGCLASS=T,NO
000002 //*%OPC SCAN
000003 //*****
000004 //DELETE EXEC PGM=IEFBR14
000005 //DD1 DD DSN=P390A.TEST.LIST10,DISP=SHR
000006 //*****
000007 //ALLOC EXEC PGM=IEFBR14,COND=(4,LT)
000008 //DD1 DD DSN=P390A.SIMJCL01.LIST10,
000009 // DISP=(,CATLG),SPACE=(CYL,(2,5),RLSE),
000010 //*****
000011 //WRITER EXEC PGM=REPORT01,COND=(4,LT)
000012 //OUT1 DD DISP=SHR,DSN=P390A.SIMJCL01.LIST10
```

... in order to perform a correct validation.

000007 //ALLOC EXEC PGM=IEFBR14,COND=(4,LT)
000008 //DD1 DD DSN=P390A.SIMJCL01.LIST10,
000009 // DISP=(,CATLG),SPACE=(CYL,(2,5),RLSE),

JCL Validation – ISPF

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
----- SmartJCL Check ----- Row 1 to 2 of 2
Command ==> _____ Scroll ==> PAGE

Commands: BAT Create batch job, FORE run in foreground
LineCmds: S Select, I Insert, D Delete, X Delete selection
Continue with ENTER back with END or CANCEL

L Joblib
----- Sel. Members
S SYSH.TXDC.JOBLIB 0
SYSH.XINFO.V3R6.CNTL 0
***** Bottom of data *****

Mâ B 04/015
```

Define and select a joblib to select the job member.

There is an extra ISPF dialog to run JCL checks for a set of jobs in batch or foreground.

JCL Validation – ISPF

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
----- SmartJCL Check Member Selection -----
Command ===> _____ Scroll ===> CSR

Commands: JCK Check member Del Delete all selections
LineCmds: S or 1,2,3... Select member B Browse member E Edit member
          X Delete selection
Finish with END or CANCEL

Joblib   : SYSH.TXDC.JOBLIB

-----
Name      Prompt      Size  Created      Changed      ID
-----
CRIT7
CSEDLYD1
1 DB2C      1. MEMBER    35  2005/09/21  2013/03/17  13:34:17  P390K
3 DB2COB2   2. MEMBER    31  2004/01/19  2013/03/16  11:35:33  P390K
DB2COB2T
2 DB2COMP   3. MEMBER    60  2004/01/28  2013/03/17  08:59:26  P390K
DB2PL11
DB2PL12
DB2RUNS   311  2010/07/30  2010/07/30  13:50:06  P390K
DCPJ02    11  2012/06/28  2012/06/28  11:52:52  P390K
PT02      7  2012/06/28  2012/06/28  11:54:11  P390K

-----
04/015
```

Select the member and their sequence by entering a number.

JCL Validation – ISPF

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
----- SmartJCL Check ----- Row 1 to 2 of 2
Command ==> FORE Scroll ==> PAGE
Commands: BAT Create batch job, FORE run in foreground
LineCmds: S Select, I Insert, D Delete, X Delete selection
Continue with ENTER, Check with END or CANCEL

L Joblib
----- Sel. Members
SYSH.TXDC.JOBLIB 3
SYSH.XINFO.V3R6.CNTL 0
***** bottom of data *****
```

Command BAT would generate a job to run the check in batch, command FORE run it in foreground.

Mâ B 04/015

JCL Validation – ISPF

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
----- SmartJCL Check ----- Row 1 to 2 of 2
Command ==> FORE SmartJCL Check in Foreground Scroll ==>PAGE
Command ==> 1
Comma JCKIPS started : 18 Mar 2013, 14:37:15
LineC JCKIPS ended : 18 Mar 2013, 14:37:18
Conti JCKIPS RC : 4
L Job Members checked : 3
- - -
- SYS Members with informations : 2
- SYS Members with warnings : 1
-**** Members with errors : 0

To display the output of the foreground check use the following
options:

1 Browse summary (messages only)
2 Browse details (JCL with included messages)
3 Browse sysprint
4 Browse migrated datasets
*****

Mâ B 15
```

The check is done, choose one of the reports, e.g. the summary.

JCL Validation – ISPF

```
Sitzung B
Menu Utilities Compilers Help
BROWSE      P390K.SmartJCL.JCKSUMO          Line 00000000 Col 001 080
COMMAND INPUT ==>                          Scroll ==> PAGE
***** Top of Data *****
JCKIPS - CHECK JCL
HORIZONT GMBH, MUNICH, 2012, ALL RIGHTS RESERVED
COMPILED WITH IBM ENTERPRISE PLI V3R5 AT 11.SEP.12 22.37.18
*****
JCKIPS STARTED FOR USER P390K      AT 2013-03-17, 13:39:43:786
*****
MSG.NO.  MESSAGE TEXT
-----
JCK0080I PROCEDURE XJRJUNC  WAS EXPANDED FROM DSN:SYSH.XINFO.V3R5.PROCLIB
STD0006W CLASS for production must be P or A
JCK0080I PROCEDURE XJRJUNC  WAS EXPANDED FROM DSN:SYSH.XINFO.V3R5.PROCLIB
JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"
JCK0540I DATASET IS MIGRATED DSN = "SYSH.XINFO.V3R5.DATA.DB2COB2.REPORT"
*****
SEQUENTIAL INPUT FROM JCKJCLI:
JOBS READ:                                0
JOBS WITH INFORMATIONS:                   0
JOBS WITH WARNINGS:                       0
JOBS WITH ERRORS:                         0
MEMBER INPUT FROM JUPJI001 to JUPI999:
MEMBERS READ:                             3

Mâ  B
```

The summary shows all messages, including your own standard check messages.

Thanks for your attention! Do you have any questions?

The logo for 'HORIZONT' features the word in a bold, sans-serif font. The letter 'O' is highlighted in red, while the other letters are in dark grey. The background is light grey with a red curved shape on the left and several faint, semi-transparent geometric shapes (squares and a triangle) scattered around the text.

HORIZONT

Please feel free to visit us in Munich or send an email to
info@horizont-it.com