



HORIZONT

XINFO – Scheduler migration support

Preamble

This presentation shows how XINFO supports a project team during conversion from one scheduling system to another.

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

XINFO – Scheduler migration support

Review the relevant interfaces

Demonstrate some interesting aspects

Show several example queries

Scheduler Interfaces

Following scheduling systems are integrated in XINFO:

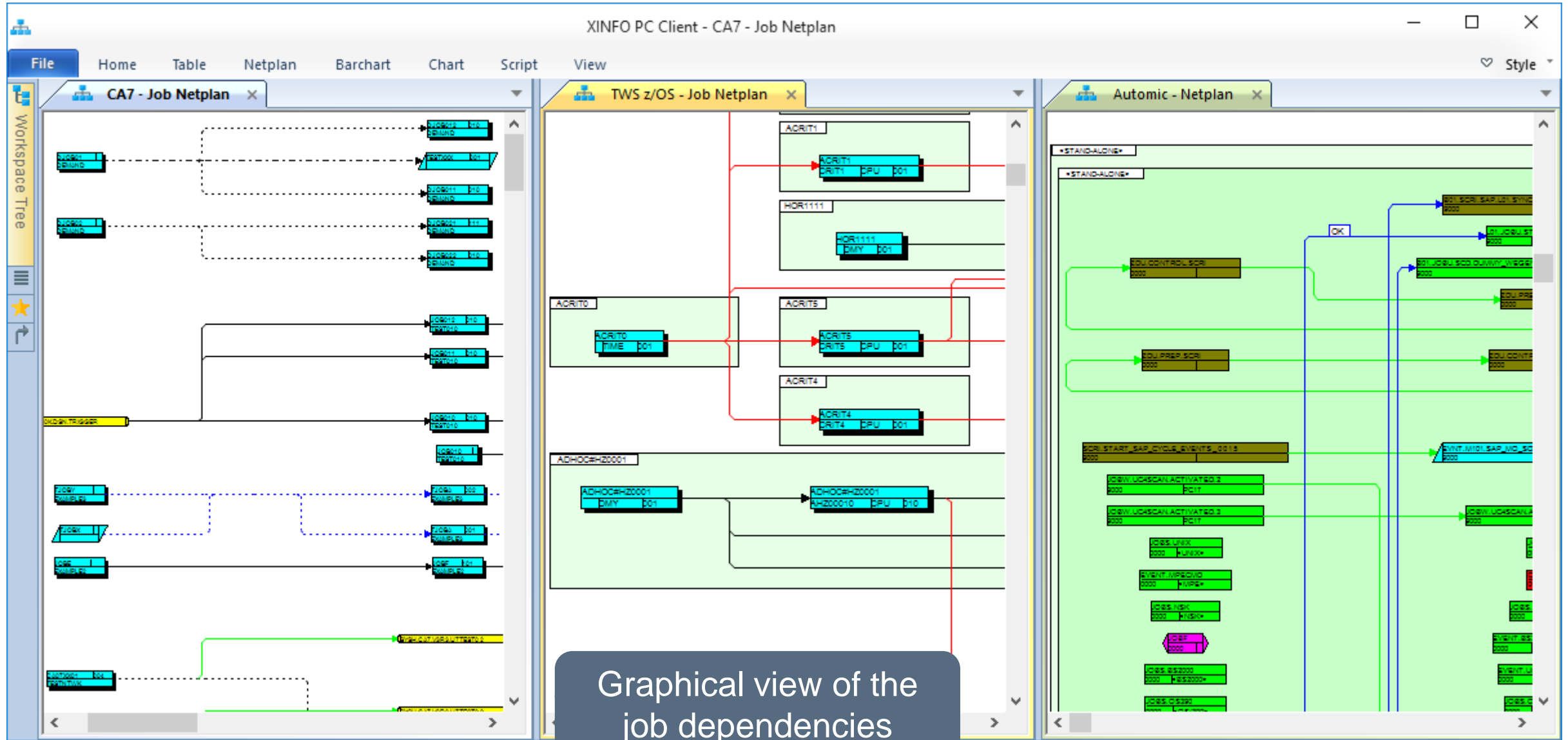
- A-Auto (Extension only for Japan)
- Automic (UC4)
- CA-7
- CA-Scheduler
- Control-M (z/OS and distributed)
- IWS (z/OS and IWS distributed)
- Streamworks
- Zeke

Resulting Data

The XINFO scanner reads job definitions, prepares the data (flags, timestamps, etc.) and groups it in logical parts:

- Job definitions, descriptions, options, etc.
- Scheduling parameters, rules, calendar, etc.
- Dependencies, predecessors, successors
- Resource usage
- Special functions like Recovery, JCL-Variable etc.

Scheduler flowcharts



Additional useful interfaces

XINFO provide more interfaces:

- JCL Scanner to find:
 - Special program calls
 - Scheduler utilities
 - Dataset usage
 - Scheduler specific JCL constructs
 - Scheduler variables
- SMF Scanner:
 - To check jobs last run, durations, etc.

Analysis of Complexity

Every conversion project will begin with an analysis and planning phase:

- Determine the quantity of defined and obsolete objects (jobs, schedules, calendars, resources, etc.).
- Which special features are being used and how often? (resource control, return code handling, dummy-jobs, variables, recovery, etc.).
- Find out manual interactions or dependencies.
- Which interfaces are installed and how do these work (ticket generation, system automation etc.).

Analyzing and Planning

These figures and information helps you to:

- Estimate the resources needed for the project.
- Check if there are any features that are not available in the new scheduler.
- Check what can be done by a conversion tool.
- Check what can be done or must be done manual.
- Planning the activities and generate a realistic project schedule.

Analyzing without XINFO?

- Standard utilities and scheduler reports are unsuitable to answer all queries.
- It takes a lot of manual work to get the needed information and present it in a useful layout.
- See some query examples in the following slides.

How many jobs have been defined?

```
Sitzung B
----- XINFO - IWS z/OS ----- ROW 001 TO 019 OF 023
Please choose ==> 3_ SCROLL ==> PAGE

Top: Info XINFO Admin Info, LIBS scanned JCL libs, TABLES XINFO data structure

0 - Options
1 - Application Data
2 - Run Cycles
3 - Operation Data
4 - Operation Times
5 - Dependencies
6 - Spec. Res./Oper.
7 - User Fields
8 - Run Cycles + Jobs
9 - Workstations
10 - Workst. Intervals
11 - Calendar
12 - Periods
13 - Operator Instr.
14 - Spec. Res. Def.
15 - EDWA Criteria
16 - JCL Variable Dep.
17 - JCL Variable Tables
18 - Run Cycle Groups

MA B
```

IWS z/OS (TWS) selection

How many jobs have been defined?

```
Sitzung B
----- Search Arguments IWS z/OS - Operation Data ----- ROW 001 TO 018 OF 068
Command ==> SCROLL ==> PAGE

Top : BATCH Build JCL OPT Options Reset Clear Panel SHOW Show SQL
      EditSQL Modify SQL before Execution

Jobname           ==> EQ
Application ID    ==> EQ B*
Status (A/P)     ==> EQ
Workstation       ==> EQ
Operation Number ==> EQ
Operation Desc.   ==> EQ
Valid To         ==> EQ DD.MM.YYYY
Duration         ==> EQ HH:MM:SS
Duration (Seconds) ==> EQ
No. int. Pred.   ==> EQ
No. ext. Pred.   ==> EQ
No. spec. Res.   ==> EQ
Error tracking     ==> EQ
Highest RC       ==> EQ
Deadline WTO     ==> EQ
Automatic Submit ==> EQ
Automatic CPU Rel. ==> EQ
Time Dependent   ==> EQ
```

Specify selection criteria if needed

How many jobs have been defined?

```
Sitzung B
----- IWS z/OS - Operation Data ----- ROW 001 TO 014 OF 417
Command ==> GROUP 2_ SCROLL ==> PAGE
Top : Legend SAVE SORT Find ST ge EXit
      ALL FIX SHOW EditSQL Inf resh
Bottom: ? List all Line Commands S Select DP Dependencies B Browse Job
         JU JCL+Proc J Job PJ PGM/PROC DS Dataset PC ProcParm SM SMF
         US SMF/DSN JT Job/Table JB Job/DBD A Appl. SU Succ. P Pred. ...

Jobname  Application ID  S WSID  ON Description          #Int #Ext No.S
-----
BAPOSCHLUUESSLHIS A XXAN 001                0    0
BPOI037A BAPOSCHLUUESSLHIS A BALA 010 'IDH-TICKER:          1    0
BPOI037B BAPOSCHLUUESSLHIS A BALA 015 'IDH-TICKER:          1    2
BPO381T  BAPOSCHLUUESSLHIS A BALA 017 'EMK:                 3    1
BPO054SC BAPOSCHLUUESSLHIS A BALA 018 'HISTO                1    0
BPO054SL BAPOSCHLUUESSLHIS A BALA 019 'LOAD                1    0
BPO0004U BAPOSCHLUUESSLHIS A BALA 020 'UNLOAD              1    0
BPO0004C BAPOSCHLUUESSLHIS A BALA 021 'HISTO                1    0
BPO0004L BAPOSCHLUUESSLHIS A BALA 022 'LOAD                1    0
BPO0006U BAPOSCHLUUESSLHIS A BALA 025 'UNLOAD              1    0
BPO0006C BAPOSCHLUUESSLHIS A BALA 026 'HISTO                1    0
BPO0006L BAPOSCHLUUESSLHIS A BALA 027 'LOAD                1    0
BPO0010U BAPOSCHLUUESSLHIS A BALA 030 'UNLOAD              1    0
BPO0010C BAPOSCHLUUESSLHIS A BALA 031 'HISTO                1    0
```

Use the GROUP function e.g. ...

After seconds, get the result

XINFO Group Function

```
Sitzung B
----- Group Values ----- ROW 001 TO 014 OF 028
Command ==> STAT 1_          SCROLL ==> PAGE

Top   : Legend  SAVE  SORT  Find  STAT  LIBS  BATCH  Arrange  EXit
        ALL F   SHOW  EditSQL Info Tables Group REFresh
Bottom: > Exp   List all Line Commands S Select DP Dependencies A Appl.
        d. R Run Cycles JH Job-Hist. LT LTP SR Spec.Res.
        OI OpInstr. EC EDWA-Crit. CP Cur.Plan ...

Number Application ID
---
   8 B
---
 178 BAPOSCHLUUESSLHIS
---
   56 BAPOSCHLUUESSLH02
---
   2 BD139LATEMSGTEC
---
   1 BD139LATEMSGTEC1
---
   3 BETASTOPSTART
---
  10 BGM1007A
---
  10 BGM1010A
---
  10 BGM1011A
---
  10 BGT1045A
---
   5 BGT2000A
---
   3 BGT3000A
---
   4 BGT3003A
---
   8 BJB2222222222222222

MA B
```

The statistic function

... and how many jobs every application contains

... to get the number of applications ...

XINFO Statistic Function

```
Sitzung B
----- Group Values ----- ROW 001 TO 014 OF 028
Command Statistics for Number CROLL ==> PAGE
Command ==> _
Top
Bottom
Num
Average          :          14.89
Sum              :          417.00
Maximum         :          178.00
Minimum         :           1.00
No. of val. Values :          28.00

2 BD139LATEMSGTEC
1 BD139LATEMSGTEC1
3 BETASTOPSTART
10 BGM1007A
10 BGM1010A
10 BGM1011A
10 BGT1045A
5 BGT2000A
3 BGT3000A
4 BGT3003A
8 BJB2222222222222222
```

... gives you:

- average jobs/appl.
- sum
- max.
- min.
- number of values

Analyze Scheduling Options

```
Sitzung B
----- XINFO - Control-M ----- ROW 001 TO 013 OF 013
Please choose ==> 2_ SCROLL ==> PAGE

Top: Info XINFO Admin Info, LIBS scanned JCL libs, TABLES XINFO data structure

0 - Options
1 - Job Definitions
2 - Scheduling
3 - Resources
4 - IN-/OUT-Conditions
5 - ON PGMST / Steps
6 - SET Variables
7 - SHOUT
8 - Job Script/JCL
9 - IOALOG
10 - Job History
11 - Average Job Duration
12 - Forecast
```

Control-M selection

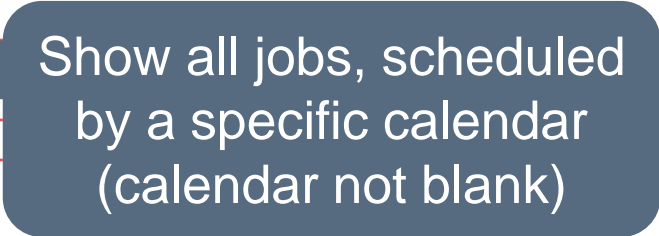
Analyze Scheduling Options

```
Sitzung B
----- Search Arguments Control-M Scheduling ----- ROW 001 TO 018 OF 022
Command ==> SCROLL ==> PAGE

Top : BATCH Build JCL OPT Options Reset Clear Panel SHOW Show SQL
      EditSQL Modify SQL before Execution

MEMNAME/Filename  ==> EQ _____
Jobname           (d) ==> EQ _____
User Daily        (d) ==> EQ _____
Month Days        ==> EQ _____
Month Calendar    ==> NB _____
Week Days         ==> EQ _____
Week Calendar     ==> EQ _____
Relation Days-Wdays ==> EQ _____
Months           ==> EQ _____
Confirm. Calendar ==> EQ _____
Shift            ==> EQ _____
Dates            (z) ==> EQ _____
Retroactive       ==> EQ _____
Maxwait/Keep Active ==> EQ _____
Schedule RBC      ==> EQ _____
RBC Number        (z) ==> EQ _____
RBC Relationship  ==> EQ _____
Type (Job/Table) ==> EQ _____

MA B
```



Analyze Scheduling Options

```
Sitzung B
----- Control-M Scheduling ----- ROW 001 TO 006 OF 006
Command ==> GROUP 5_ SCROLL ==> PAGE

Top : Legend SAVE SORT Find STAT LIBS BATCH Arrange EXit
      ALL FIX SHOW EditSQL Info Tables Group REFresh
Bottom: ? List all Line Commands S Select B Browse Job JU JCL+Proc J Job
        PJ PGM/PROC DS Dataset PC ProcParm SM SMF US SMF/DSN JT Job/Table
        JB Job/DBD M3 CTM-Resources M4 CTM-Conditions M5 CTM-ON ...

MEMNAME/Filename DS-Jobname User-Daily Month-Days Month-Calendar Week-Days W
-- JOBG0X ALL WEEKDAYS
-- JOBG02 ALL WEEKDAYS
-- JOBG03 ALL WEEKDAYS
-- JOBG05 ALL DEFAULT
-- JOBG05 ALL DEFAULT
-- START ALLDAYS
***** BOTTOM OF DATA *****

MA B
```

Analyze Scheduling Options

```
Sitzung B
----- Group Values ----- ROW 001 TO 003 OF 003
Command ==> _                SCROLL ==> PAGE

Top   : Legend  SAVE  SORT  Find  STAT  LIBS  BATCH  Arrange  EXit
        ALL  FIX  SHOW  EditSQL  Info  Tables  Group  REFresh
Bottom: > Expand ? List all Line Commands S Select

Number Month-Calendar
-----
1 ALLDAYS
2 DEFAULT
3 WEEKDAYS
***** BOTTOM OF DATA *****
```

Grouped by
calendar name

Analyze Scheduling Options

```
Sitzung B
----- Search Arguments Control-M Scheduling ----- ROW 001 TO 018 OF 022
Command ==> SCROLL ==> PAGE

Top : BATCH Build JCL OPT Options Reset Clear Panel SHOW Show SQL
      EditSQL Modify SQL before Execution

MEMNAME/Filename  ==> EQ _____
Jobname           (d) ==> EQ _____
User Daily        (d) ==> EQ _____
Month Days        ==> EQ _____
Month Calendar    ==> EQ _____
Week Days         ==> EQ _____
Week Calendar     ==> EQ _____
Relation Days-Wdays ==> EQ ____
Months            ==> EQ _____
Confirm. Calendar ==> EQ _____
Shift             ==> EQ ____
Dates             (z) ==> EQ _____
Retroactive       ==> EQ _____
Maxwait/Keep Active ==> GT 2_
Schedule RBC      ==> EQ _____
RBC Number        (z) ==> EQ _____
RBC Relationship  ==> EQ ____
Type (Job/Table)  ==> EQ ____
```

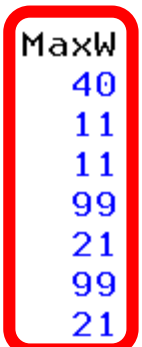
Jobs with maxwait > 2

Analyze Scheduling Options

```
Sitzung B
----- Control-M Scheduling ----- ROW 001 TO 007 OF 007
Command ==> _ SCROLL ==> PAGE

Top   : Legend SAVE SORT Find STAT LIBS BATCH Arrange Exit
        ALL FIX SHOW EditSQL Info Tables Group REFresh
Bottom: ? List all Line Commands S Select B Browse Job JU JCL+Proc J Job
        PJ PGM/PROC DS Dataset PC ProcParm SM SMF US SMF/DSN JT Job/Table
        JB Job/DBD M3 CTM-Resources M4 CTM-Conditions M5 CTM-ON ...

MEMNAME/Filename  Dates Re MaxW Schedule-RBC CurNum R T Control-M Schedule-L
--- SMRTZ2J1       N    40          1 0 J ZOS-V80  SYSH.IOA80
--- SMRTZ2J2       Y    11          1 0 J ZOS-V80  SYSH.IOA80
--- SMRTZ2J2       Y    11          1 0 J ZOS-V80  SYSH.IOA80
--- c:\temp\sleep.bat N    99          A J PC24-V80
--- mem           Y    21          0 J PC24-V80
--- c:\temp\sleep.bat N    99          A J PC31-V90
--- mem           Y    21          0 J PC31-V90
***** BOTTOM OF DATA *****
```




Look for “dummy-jobs”

```
Sitzung B
----- XINFO - CA7 ----- ROW 001 TO 010 OF 010
Please choose ==> 1_          SCROLL ==> PAGE

Top: Info XINFO Admin Info, LIBS scanned JCL libs, TABLES XINFO data structure

0 - Options
1 - Job Information
2 - Schedule Definition
3 - Job Triggering
4 - Requirements/Pred.
5 - Job/Program
6 - Job/DD
7 - Virtual Resources
8 - Prose
9 - Scheduled Overrides
```




CA-7 selection

Look for "dummy-jobs"

```
Sitzung A
----- Search Arguments CA7 - Job Information ----- ROW 001 TO 018 OF 059
Command ==> SCROLL ==> PAGE

Top : BATCH Build JCL OPT Options Reset Clear Panel SHOW Show SQL
      EditSQL Modify SQL before Execution

Jobname      ==> EQ _____
System       ==> EQ _____
Jobnet       ==> EQ _____
Owner        ==> EQ _____
UID          ==> EQ _____
JCL-ID       ==> EQ _____
JCL-Library  ==> EQ _____
JCL-Member   ==> EQ _____
Load Step to be exe ==> EQ _____
Exec         ==> EQ N
Keep JCL in PRRN/Q ==> EQ -
Job HOLD in REQQ ==> EQ -
JCL override req. ==> EQ -
Use Override-Lib ==> EQ -
Manual verification ==> EQ -
Maint only   ==> EQ -
Schd. Res. required ==> EQ -
Comp. trig. other ==> EQ -
```



Look for “dummy-jobs”

```
Sitzung A
----- CA7 - Job Information ----- ROW 001 TO 014 OF 062
Command ==> _

Top   : Legend  SAVE  SORT  Find  STAT  LIBS  BATCH
        ALL  FIX  SHOW  EditSQL  Info  Tables  Group
Bottom: ? List all Line Commands S Select  B Browse Job  JU JCL+Proc  J Job
        PJ PGM/PROC  DS Dataset  PC ProcParm  SM SMF  US SMF/DSN  JT Job/Table
        JB Job/DBD  7G Trg  7T TrgBy  7R Req  7C Succ  7S SCHED  7D 7DD ...

Jobname  System  Jobnet  Owner  UID  JID  JCL-Library  JCL-Memb  L  E  J  H  O  u
-----
$SORM01P SCORE  $SORM000 P390K  000 000  $SORM01P  Y  N  N  N  N  N
A300     IMD2           HORIZONT 000 000  A300     Y  N  N  N  N  N
BM50     BHFT           000 200  BM50     Y  N  N  N  N  N
BM60     BHFT           000 200  BM60     Y  N  N  N  N  N
BT15     BHFT           000 200  BT15     Y  N  N  N  N  N
BT20     BHFT           000 200  BT20     Y  N  N  N  N  N
BT30     BHFT           000 200  BT30     Y  N  N  N  N  N
BT40     BHFT           000 200  BT40     Y  N  N  N  N  N
BT50     BHFT           000 200  BT50     Y  N  N  N  N  N
B300     IMD2           HORIZONT 000 000  B300     Y  N  N  N  N  N
C300     IMD2           HORIZONT 000 000  C300     Y  N  N  N  N  N
DOKM0255 BHF           000 200  DOKM0255 Y  N  N  N  N  N
DOKM0268 BHF           000 200  DOKM0268 Y  N  N  N  N  N
DOKM0269 BHF           000 200  DOKM0269 Y  N  N  N  N  N
```

In IWS it would result in a job on a “dummy-WS”,
in Control-M a job with Memlib = DUMMY,...



Check dependencies

```
Sitzung B
----- TMS z/OS - Dependenc
Command ==> BATCH_
                    You can generate a job to
                    run the query in Batch
                    5 TO 588 OF 999
                    ROLL ==> PAGE

Top   : Legend SAVE SORT Find STAT LIBS BATCH Arrange Exit
        ALL FIX SHOW EditSQL Info Tables Group REFresh
Bottom: ? List all Line Commands S Select DP Dependencies B Browse Job
        JU JCL+Proc J Job PJ PGM/PROC DS Dataset PC ProcParm SM SMF
        US SMF/DSN JT Job/Table JB Job/DBD A Appl. 0 Oper ...

Application ID  S WSID  ON Jobname  Pred.Application WSID  ON Jobname  X Pr
---
GROUPSUCC      A DMY   001          TESTADEP05PL          000          A  A
GROUPSUCC      A WAIT  010 JOB1       GROUPSUCC             DMY   001          N
GROUPSUCC      A WAIT  010 JOB1       MEMOFGROUP3           000          A  A
GROUPSUCC      A DMY   255          GROUPSUCC             WAIT  010 JOB1       N
HOR10DAYX      P DMY   001          HOR00DAY              DMY   001 -NOTFND- Y  A
HOR10DAYX      P CPU   005 HOR10005     HOR10DAYX             DMY   001          N
HOR10DAYX      P CPU   006 HOR10006     HOR10DAYX             DMY   001          N
HOR10DAYX      P CPU   007 HOR10007     HOR10DAYX             DMY   001          N
HOR10DAYX      P CPU   010 HOR10010     HOR10DAYX             CPU   005 HOR10005     N
HOR10DAYX      P CPU   010 HOR10010     APPLNOTTHERE         CPU   100 -NOTFND- Y  A
HOR10DAYX      P CPU   011 HOR10011     HOR10DAYX             CPU   010 HOR10010     N
HOR10DAYX      P CPU   012 HOR10012     HOR10DAYX             CPU   011 HOR10011     N
HOR10DAYX      P CPU   013 HOR10013     HOR10DAYX             CPU   012 HOR10012     N
HOR10DAYX      P CPU   013 HOR10013     HOR10DAYX             CPU   015 HOR10015     N

M A B
```

You can generate a job to run the query in Batch

BATCH_

Analysis in Batch

```
Sitzung B
----- Generate JCL -----
Command ==>

Enter the name of the dataset which should contain the results
DSN      ==> TEST_
EDIT JCL ==> YES
SUBMIT   ==> NO
Details  ==> 3 (1/2/3) : 1: Only Data
                        2: With Headers
                        3: With Headers and used SQL

Specify space for a new dataset
GENERIC UNIT    ==>
LRECL           ==> 255
RECFM           ==> FB      (FB,FBA,VB,VBA)
SPACE UNITS     ==> TRKS   (BLKS,TRKS,CYLS)
PRIMARY QUANTITY ==> 10    (in above units)
SECONDARY QUANTITY ==> 50   (in above units)

Jobcard
==> //P392EX JOB (ACCOUNT),'HORIZONTAL',MSGCLASS=T,CLASS=A,
==> // NOTIFY=&SYSUID
==> //*
==> /*
```

Specify output DSN

Analysis in Batch

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT          P392E.SPFTEMP1.CNTL          Columns 00001 00072
Command ==> SUB          Scroll ==> PAGE
000001 //P392EX JOB (ACCOUNT $=A,
000002 //  NOTIFY=&SYSUID
000003 //*
000004 //*
- - - - - 21 Line(s) not Displayed
000026 //PARMIN DD *
000027 RAWDATA=N
000028 ONLYDATA=N
000029 SEPARATOR=" "
000030 USEDSPL=Y
000031 DB2SSID=DBC
000032 PLAN=XXRDLG41
000033 DB2CLOCA=
000034 LRECL=255
000035 //WTDEFI DD DSN=P390A.XXR.TST41.DEFGLB,
000036 // DISP=SHR
000037 //WTRESO DD DSN=P392E.TEST,
000038 // SPACE=(TRK,(10,50),RLSE),
000039 // DCB=(BLKSIZE=0,DSORG=PS,RECFM=FB,LRECL=255),
000040 // DISP=(,CATLG)
MA B
```

Run and/or save the job

Analysis in Batch

```
Sitzung B
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW P392E.TEST Columns 00001 00072
Command ==> Scroll ==> PAGE
*****
000001 DB2 - Output generated with
000002 Date : 28.08.2018
000003 Time : 10:42:32
000004 SQL Command Used for this Output :
000005 SELECT "ADRID", "ADRSTAT", "ADRWSID", "ADROPNO", "ADROPJN", "ADROPEAD",
000006 "ADREP_WSID", "ADREP_OPNO", "ADROPEJN", "ADRDEPEXT", "ADROPLTP",
000007 "ADROPETR", "ADROPEDE", "ADRPREDSTAT", "ADRPREDVALTO",
000008 "ADRPREDVALFROM", "ADRT0", "ADRSUCCVALFROM", "ADROPCOID",
000009 "ADROPCODESC", "ADROPCOCOUNT", "ADROPCOSIMPNO", "ADROPCORULET",
000010 "ADROPSCPRETYP", "ADROPSCPRELOG", "ADROPSCVALRC",
000011 "ADROPSCVALRC2", "ADROPSCVALST", "ADROPSCSTEP", "ADROPSCPSTEP",
000012 "OPCSUBSYS", "ADRXCSEL", "ADRXMAN", "ADROPEXTIVLFWHEN",
000013 "ADROPEXTIVLFDAY", "ADROPEXTIVLFFHH", "ADROPEXTIVLFFMM",
000014 "ADROPEXTIVLFFHHH", "ADROPEXTIVLTFWHEN", "ADROPEXTIVLTFDAY",
000015 "ADROPEXTIVLTFHH", "ADROPEXTIVLTFMM", "ADROPEXTIVLTFHHH",
000016 "ADROPDEPTYPE", "ADROPDIVLTYPE"
000017 FROM XXR41."XXRTDEP"
000018 WHERE ("ADRID" LIKE '%')
000019 FOR FETCH ONLY
```

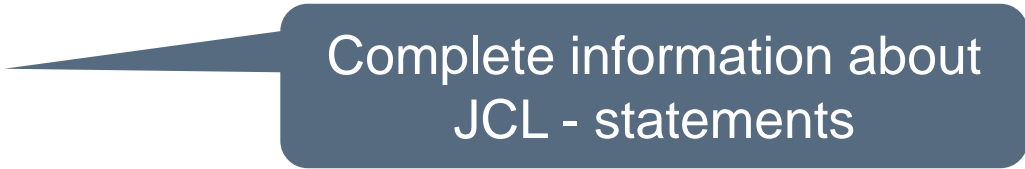
And use the result for further processing ...

Find scheduling commands in JCL

```
Sitzung B
----- XINFO - JCL ----- ROW 001 TO 019 OF 023
Please choose ==> 6_          SCROLL ==> PAGE

Top: Info XINFO Admin Info, LIBS scanned JCL libs, TABLES XINFO data structure

 0 - Options
 1 - JOB Statements
 2 - JES Statements
 3 - EXEC Statements
 4 - EXPORTed JCL Symbols
 5 - DSN
 6 - SYSIN Content
 7 - SYSOUT+OUTPUT
 8 - OUTPUT Statements
 9 - Jobs with OPC Variables
10 - JCLLIB-Statements
11 - Symbols and Proc. ParmS
12 - Comment Cards
13 - Scanned Libraries
14 - Control-M Variables
15 - SUBSYS
16 - IF Statements
17 - HFS (PATH)
18 - SET JCL Variables
```



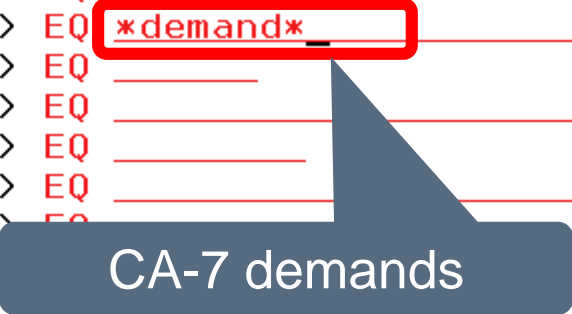
Complete information about JCL - statements

Find scheduling commands in JCL

```
Sitzung B
----- Search Arguments JCL - SYSIN Content ----- ROW 001 TO 010 OF 010
Command ==> SCROLL ==> PAGE

Top : BATCH Build JCL OPT Options Reset Clear Panel SHOW Show SQL
      EditSQL Modify SQL before Execution

Jobname      ==> EQ _____
Stepnumber   ==> EQ _____
Programname  ==> EQ _____
DD Name      ==> EQ _____
Line         ==> EQ *demand* _____
Line number  ==> EQ _____
SYSIN-DSN    ==> EQ _____
SYSIN-Member ==> EQ _____
JCL-Lib      ==> EQ _____
Member       ==> EQ _____
-----
```

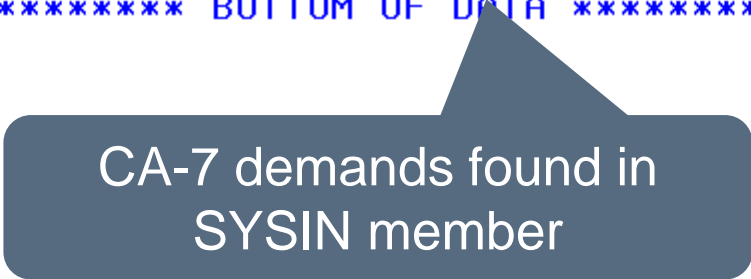


Find scheduling commands in JCL

```
Sitzung B
----- JCL - SYSIN Content ----- ROW 001 TO 006 OF 006
Command ==> _ SCROLL ==> PAGE

Top   : Legend SAVE SORT Find STAT LIBS BATCH Arrange EXit
        ALL FIX SHOW EditSQL Info Tables Group REFresh
Bottom: ? List all Line Commands S Select DP Dependencies B Browse Job
        JU JCL+Proc J Job PJ PGM/PROC DS Dataset PC ProcParm SM SMF
        US SMF/DSN JT Job/Table JB Job/DBD O Oper SU Succ. P Pred. ...

Jobname  SNr Program DDName Line# Line SYSIN
-----
#BIGONE  117 IEFBR14 SYSIN   153 DEMAND,JOB=SS055541,SCHID=99 P390A
#BIGONE  117 IEFBR14 SYSIN   163 DEMAND,JOB=SS055541,SCHID=99,TIME=+5 P390A
#BIGONE  117 IEFBR14 SYSIN   170 DEMAND,JOB=SS055541,SCHID=99 P390A
P0123CLP  19          SYSIN     1 DEMAND,JOB=SS055541,SCHID=99 P390A
P0123CLP  20          SYSIN     1 DEMAND,JOB=SS055541,SCHID=99,TIME=+5 P390A
P0123CLP  21          SYSIN     1 DEMAND,JOB=SS055541,SCHID=99 P390A
***** BOTTOM OF DATA *****
```



CA-7 demands found in
SYSIN member

Job run history in SMF

```
Sitzung B
----- SMF - Job Information ----- ROW 001 TO 014 OF 802
Command ==> _
Top : Legend SAVE SORT Find STAT LIBS BATCH Arrange
      ALL FIX SHOW EditSQL Info Tables Group REFres
Bottom: ? List all Line Commands S Select DP Dependencies B
        JU JCL+Proc SM SMF US SMF/DSN J Job PJ PGM/PROC
        PC ProcParm SI SYSIN JS JES-Stmt. JC CmtCard JL JCLERR

Jobname  Jesname  Owner    Syst RC      Start-Time          End-Time
-----
TWHCTRCP JOB11921  TWHC     SOW1 CC 0004 2018-08-16-05.00.58.84 2018-08-16-05.
TWHCCMPE JOB11920  TWHC     SOW1 CC 0006 2018-08-16-05.00.56.59 2018-08-16-05.
TWICEXCP JOB11917  TWIC     SOW1          2018-08-16-05.00.32.71 2018-08-16-05.
TWGCXCP  JOB11916  TWGC     SOW1 CC 0004 2018-08-16-05.00.24.65 2018-08-16-05.
TWHCEXCP JOB11915  TWHC     SOW1 CC 0004 2018-08-16-05.00.22.85 2018-08-16-05.
PTPCXCP  JOB11914  PM30     SOW1          2018-08-16-05.00.22.83 2018-08-16-05.
EQQSMLOG STC11913  START1   SOW1          2018-08-16-05.00.14.42 2018-08-16-05.
TZICEXLP JOB11912  START1   SOW1 CC 0004 2018-08-16-05.00.14.60 2018-08-16-05.
TWFCEXLP JOB11911  TWFC     SOW1 CC 0004 2018-08-16-05.00.12.82 2018-08-16-05.
TWICEXLP JOB11910  TWIC     SOW1 CC 0004 2018-08-16-05.00.13.03 2018-08-16-05.
TWGCXLP  JOB11909  TWGC     SOW1 CC 0004 2018-08-16-05.00.12.66 2018-08-16-05.
TWHCEXLP JOB11908  TWHC     SOW1 CC 0004 2018-08-16-05.00.10.64 2018-08-16-05.
PTPCXLP  JOB11907  PM30     SOW1 CC 0004 2018-08-16-05.00.06.29 2018-08-16-05.
TZICDMP  JOB11906  START1   SOW1 CC 0004 2018-08-16-05.00.02.23 2018-08-16-05.
M&A B
```

The SMF scanner provides information of job start/end/duration etc. It can be collected over a longer period of time.

Job run history in SMF

```
Sitzung A
File Edit Edit_Settings Menu Utili
VIEW      P392E.S0W1.SPFTEMP1.CNTL
Command ==>
***** Top of Data *****
000001 SELECT  "SMFJOBNAME", "SMFJESNAME", "SMFJOBOWNER", "SMFJOBSID",
000002         "SMFJOBRC", "SMFSTARTTS", "SMFENDTS", "SMFDURATION",
000003         "SMFJOBACCNT", "SMFJOBCLASS", "SMFJOBCLASSLONG", "SMFWORKTYPE",
000004         "SMFSUBMIT", "SMFTCPU", "SMFEXCP", "SMFTWAIT", "SMFWAITENQ",
000005         "SMFWAITDEV", "SMFSTORB16", "SMFSTORB16SYS", "SMFSTORA16",
000006         "SMFSTORA16SYS", "SMFSCHEDENV", "SMFSERVCLASS", "SMFCSUSRVU",
000007         "SMFSRBSRVU", "SMFIOSRVU", "SMFTCPUZAAP", "SMFTCPUZIIP"
000008 FROM  XXR40."XXRVSMJ"
000009 WHERE ("SMFJOBNAME" LIKE 'XXR%')
000010 AND ("SMFSTARTTS" < '2018-01-01-00.00.00.000000')
000011 ORDER BY "SMFJOBNAME", "SMFSUBMIT" DESC
000012 FOR FETCH ONLY
000013 FETCH FIRST 9999 ROWS ONLY
***** Bot*****
```

Sometimes you need information based on two XINFO tables, e.g.: all jobs=XXR* that did not run since 1.1.2007

You can create your own SQL, suing sub-select, join etc. and execute it in SPUFI or batch.

Use XINFO in Batch

Run frequently used queries and process the result in your own REXX programs.

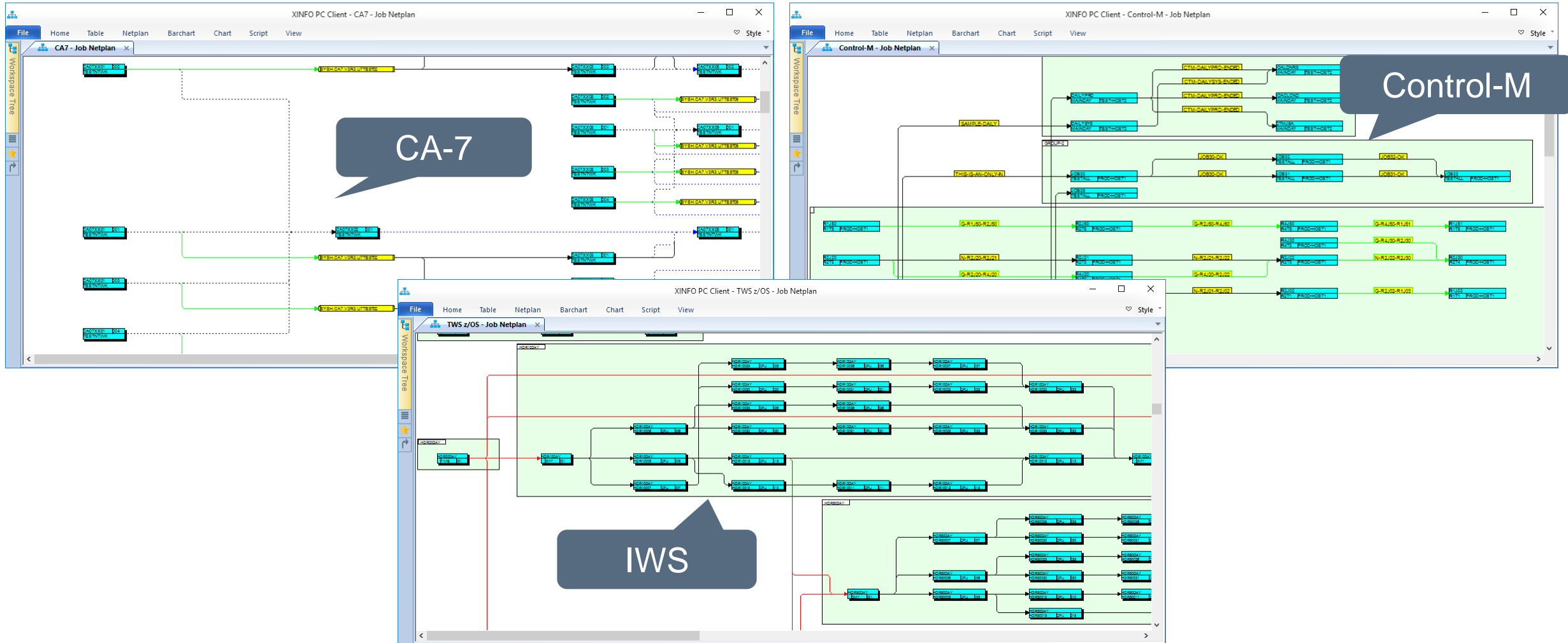
- Create “to do” lists.
- Compare dependencies between the old and new scheduler definitions.
- Generate new job definitions.
- Check site specific scheduling rules and naming conventions.

Use XINFO in Batch

Check site specific scheduling rules and conventions, e.g.:

- Not allowed options (highest RC>8, maxwait=99 etc.)
- Wrong priority
- Missing restart documentation (OI, Prose, Doc-mem, ...)
- Resource missing or wrong
- Predecessor job not found
- Dummy start/end operation exist or not
- Member=jobname, correct jcllib etc.

Graphic flowchart



Visualize and compare the dependencies of critical job streams, e.g. together with application developers

Summary

- XINFO is not a conversion tool, but it helps you to:
- Analyze the complexity
- Check the conversion results
- Give required information to anybody
- Create your own conversion routines, based on XINFO data
- Suggestion: Install two XINFO:
 - One for actual information, daily refreshed
 - One with the frozen status before conversion (Scheduler, JCL and SMF information).

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 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