HORIZONT

IWS/Audit

The Audit System for IWS for z/OS (aka TWS for z/OS)

What is IWS/Audit?

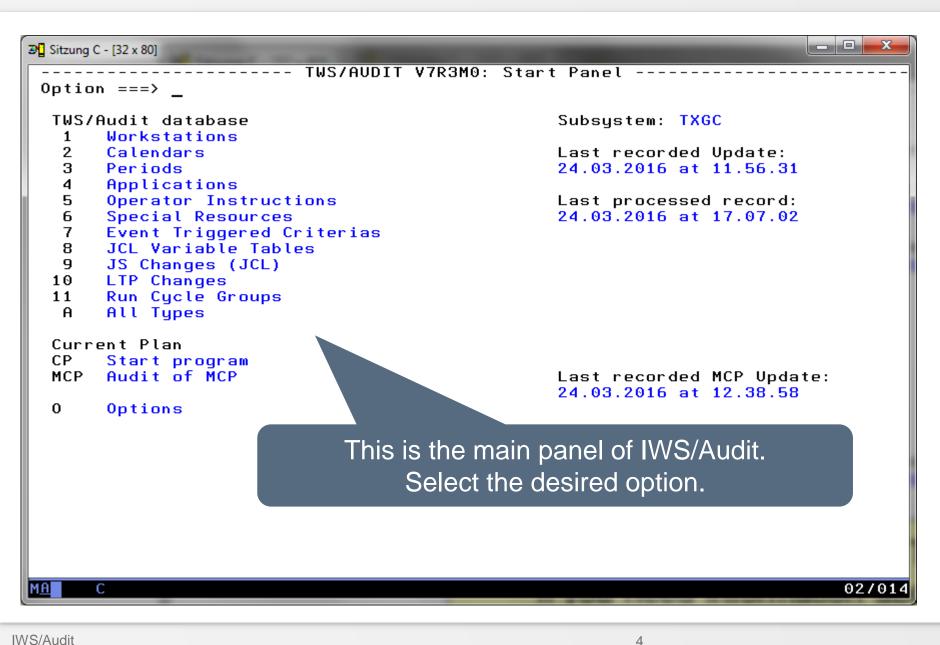
IWS/Audit is a change documentation system for IWS z/OS:

- IWS/Audit tracks and documents all user modifications made to
 - The definition database
 (WS, Calendar, Period, AD, OI, Specres, ETT, JCLVAR, RunCycle)
 - The LTP (long term plan)
 - The CP (current plan)
 - The JS file (JCL)
- IWS/Audit tracks and keep versions
- IWS/Audit allows to compare versions
- IWS/Audit allows to restore old versions

How does it work?

- IWS/Audit consists of
 - VSAM database
 - ISPF Dialog
 - Set of Batch Jobs for reporting, housekeeping and maintenance.
- IWS/Audit is reading the IWS job tracking log files (JT-Files and/or the daily EQQTROUT file)
- IWS/Audit detects what happened and writes the change information to the VSAM file.
- IWS/Audit automatically creates (old) versions of all IWSz definition objects and keeps them as long as you want
- The ISPF Dialog enables you to search for these changes (see next slides)

IWS/Audit - Main Panel



IWS/Audit - Applications

```
_ D X
೨ Sitzung C - [32 x 80]
                         Search Arguments for Applications
 Command ===>
 Name
                                  (A - Application G - Group)
 Type
 Jobname
                 ===>
                                              P - Pending)
 Status
                 ===>
 Description
                 ===>
 Owner ID
                 ===>
                               Option 4 offers the search panel for application descriptions,
 Owner Text
                 ===>
 Auth. Group
                 ===>
                                      e.g. search for changes on applications "HOR*"
 Group Def.
                 ===>
 Criterias for the Change Action
                                  (D - Delete I - Insert U - Update B - Browse)
 Action
                 ===>
 User
                 ===>
                                  (Hours) (Leave blank to specify dates)
 Interval
                 ===>
                                  (DD.MM.YYYY)
                                                 Time from
 Date from
                                                               ===>
                                                                           (HH.MM)
                 ===>
                                  (DD.MM.YYYY)
                                                                           (HH.MM)
 Date to
                 ===>
                                                  Time to
                                                               ===>
                                                                              05/026
```

IWS/Audit - Applications

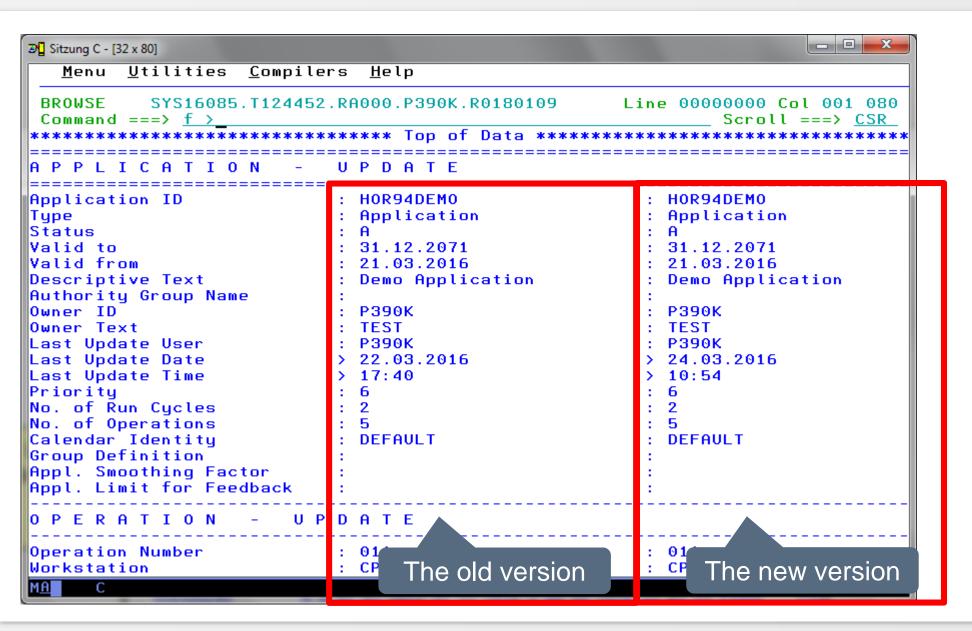
```
■ Sitzung C - [32 x 80]

 TWS/Audit: Applications
                                                                 001
                                                                     TO 024 OF 100
 Command ===>
                                                                 SCROLL ===> CSR
 Command: ALL SORT Report
       : S Select B Browse C Comp. O Comp. to TWS G Gen. Batchl.
          R Restore with TWS/BatchAD
                     T S Valid from Valid to
                                                 Date
   Application
                                                                       Userid
                                                                                0w>
                                                 25.03.2016 11.24.59 P390K
                                                                                BRI
   H0R1111
                         30.04.2012 31.12.2071
                                                 25.03.2016 11.24.52 P390K
   H0R1111
                         30.04.2012 31.12.2071
                                                                                BRI
   HOR94DEMO
                         21.03.2016 31.12.2071 U 24.03.2016 10.54.01 P390K
                                                                                P39
                        21.03.2016 31.12.2071
                                                 22.03.2016 17.40.50 P390K
   HOR94DEMO
                                                                                P39
                                                 21.03.2016 11.24.53
                                                                                P39
   HOR94DEMO
                                    31.12.2071
                                               В
                                    31.12.2071 I
                                                 21.03.2016 11.24.53 P390K
                                                                                P39
   HOR94DEMO
   HOR94DEMO
                        21.03.2016 31.12.2071
                                                 21.03.2016 11.21.44 P390K
                                                                                P39
   HOR75DAY
                         19.03.2016 31.12.2071 U
                                                 19.03.2016 13.59.06
                                                                                HOR
   HOR75DAY
                         19.03.2016 31.12.2071 U 19.03.2016 13.47.41 P390K
                                                                                HOR
   HOR30DAY
                    A A 15.06.2002 31.12.2071
                                                 19.03.2016 13.39.33 P390K
                                                                                HOR
                         01.01.2014 31.12.2071
                                                 19.03.2016 13.39.05 P390K
                                                                                HOR
   HOR20DAY
                         19.11.2004 31.12.2071 U 19.03.2016 13.38.31 P390K
   HOR70DAY
                                                                                HOR
                         01.01.2014 31.12.2071
                                                 19.03.2016 13.25.31 P390K
   HOR20DAY
                                                                                HOR
                                    31.12.2071
                                                 19.03.2016 13.24.38
                                                                                HOR
   HOR75DAY
   HOR75DAY
                                    31.12.2071 U
                                                 19.03.2016 13.22.54
                                                                                HOR
                     A A 19.03.2016 31.12.2071
   HOR
                                                 19.03.2016 13.20.48 P390K
                                                                                HOR
                                    31.12.2071
                                                  14.03.2016 08.39.50
                                                                                P39
                                 016 31.12.207
                                                  14.03.2016 08.39.50 P390K
                                                                                P39
   The result list shows the
                                 16 31.12.2
                                                  11.03.2016 18.40.04 P390K
                                                                                P39
                                                  25 02 2015 12 00 02
                                 116
                                    21 12
                                                                      P396K
                                                                                P39
     Application id, Type,
                                                                      P390K
                                         ... the Action (Insert,
                                                                      P390K
    Status, Valid from/to
                                 16
                                                                      P390
                                     Update, Browse, Delete) ...
                                                                            ... last update Date, Time, User ...
                                                                      P390
                                                                            UZ/015
```

IWS/Audit - Applications

```
№ Sitzung C - [32 x 80]
 TWS/Audit: Applications
                                                             ROW 001 TO 024 OF 100
 Command ===>
                                                                 SCROLL ===> CSR
 Command: ALL SORT Report
       : S Select B Browse C Comp. O Comp. to TWS G Gen. Batchl.
          R Restore with TWS/BatchAD
 L Application
                     T S Valid from Valid to
                                                A Date
                                                             Time
                                                                      Userid
                                                                                0w>
   H0R1111
                        30.04.2012 31.12.2071 D 25.03.2016 11.24.59 P390K
                                                                                BRI
   H0R1111
                    A A 30.04.2012 31.12.2071 U 25.03.2016 11.24.52 P390K
                                                                                BRI
   HOR94DEMO
                    A A 21.03.2016 31.12.2071 U 24.03.2016 10.54.01 P390K
                                                                                P39
                        21.03.2016 31.12.2071 U 22.03.2016 17.40.50 P390K
                                                                                P39
    LOR94DEMO
                                    31.12.2071 B 21.03.2016 11.24.53 P390K
                                                                                P39
       4DEMO
                     A A 21.03.2071
                                                                                P39
                                    31.12.2071
                                                 21.03.2016 11.24.53 P390K
                     A A 21.03.2071
   HOR
                    <u>A A 21.03.2016</u> 31.12.2071 I 21.03.2016 11.21.44 P390K
                                                                                P39
                                                                                HOR
                                     31.12.2071 U 19.03.2016 13.59.06 P390K
    Use line commands to e.g.
                                     B1.12.2071 U 19.03.2016 13.47.41 P390K
                                                                                HOR
                                                                                HOR
                                     B1.12.2071 U 19.03.2016 13.39.33 P390K
  Browse or Compare Versions,
                                                                                HOR
                                     81.12.2071 U 19.03.2016 13.39.05 P390K
                                     31.12.2071 U 19.03.2016 13.38.31 P390K
                                                                                HOR
    Select compares with the
                                     B1.12.2071 U 19.03.2016 13.25.31 P390K
                                                                                HOR
                                                                                HOR
                                               U 19.03.2016 13.24.38
         previous version
                                     B1.12.2071 U 19.03.2016 13.22.54 P390K
                                                                                HOR
                                     31.12.2071 I 19.03.2016 13.20.48 P390K
                                                                                HOR
                                    31.12.2071
                                               B 14.03.2016 08.39.50 P390K
                                                                                P39
   HURSSDEMU
                                    31.12.2071
                                                                                P39
   HOR95DEMO
                                               I 14.03.2016 08.39.50 P390K
   HOR95DEMO
                                                                                P39
                     A A 15.01.2016 31.12.2071 U 11.03.2016 18.40.04 P390K
                                                                                P39
   HOR95DEMO
                         15.01.2016 31.12.2071
                                               U 25.02.2016 13.00.02 P390K
                        01.07.2011 31.12.2071 B 05.02.2016 12.03.53 P390K
                                                                                P39
   HOR90DEMO
   HOR90DEMO
                     A A 01.07.2011 31.12.2071 I 05.02.2016 12.03.53 P390K
                                                                                P39
                    A A 15.01.2016 31.12.2071 B 16.01.2016 11.38.38 P390K
                                                                                P39
   HOR95DEMO
   HOR95DEMO
                    A A 15.01.2016 31.12.2071 I 16.01.2016 11.38.38 P390K
                                                                                P39
                                                                             12/002
```

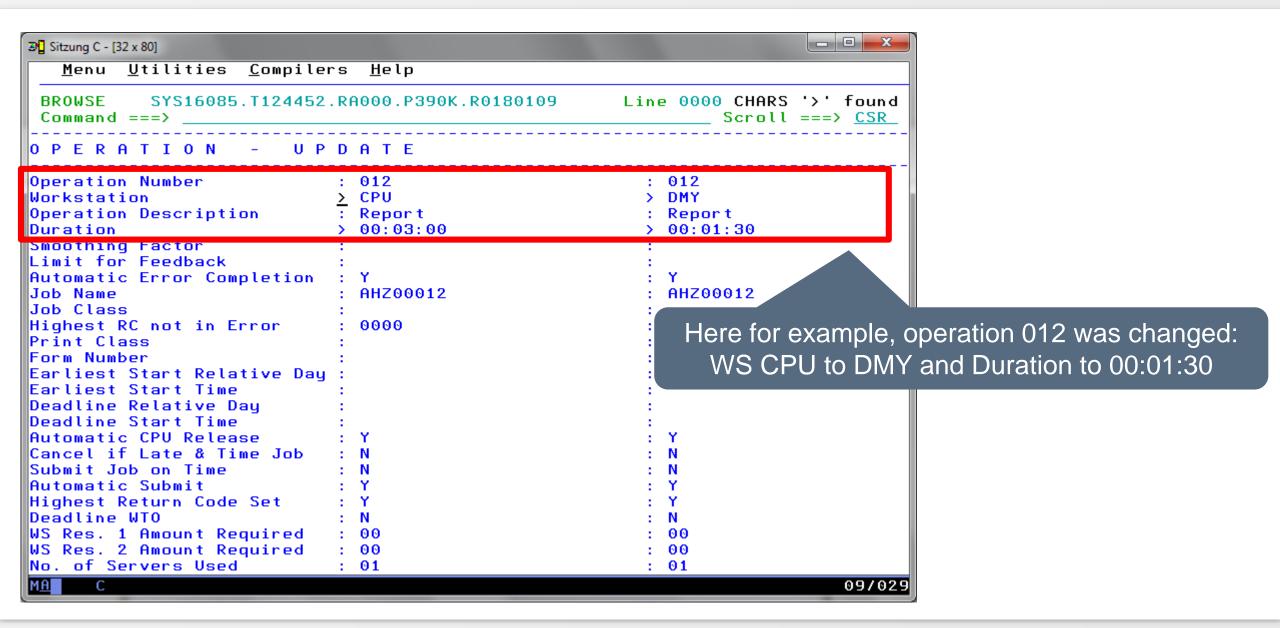
IWS/Audit – Applications, compare



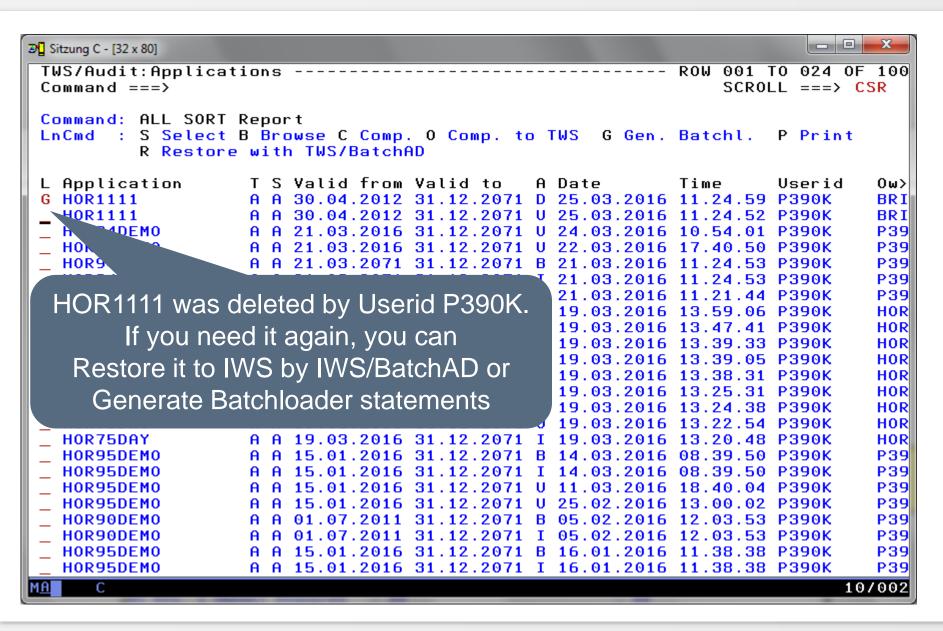
IWS/Audit – Applications, compare

<u>Menu Utilities Compi</u> BROWSE SYS16085.T1244 Command ===> <u>f ></u>	F > guides you to t	000000 6-1 004 006
APPLICATION -	U P D A T E	
Application ID Type Status Valid to Valid from Descriptive Text Authority Group Name Owner ID Owner Text Last Undate User Last Undate Date Last Update Time Priority No. of Run Cycles No. of Operations Calendar Identity Group Definition Appl. Smoothing Factor	: HOR94DEMO : Application : A : 31.12.2071 : 21.03.2016 : Demo Application : : P390K : TEST - P390K > 22.03.2016 > 17:40 : 6 : 2 : 5 : DEFAULT	: HOR94DEMO : Application : A : 31.12.2071 : 21.03.2016 : Demo Application : : P390K : TEST - P390K > 24.03.2016 > 10:54 : 6 : 2 : 5 : DEFAULT :
OPERATION - U Operation Number Workstation	P D A T E : 011 : CPU	: 011 : CPU

IWS/Audit – Applications, find changes



IWS/Audit – Applications, restore to IWS

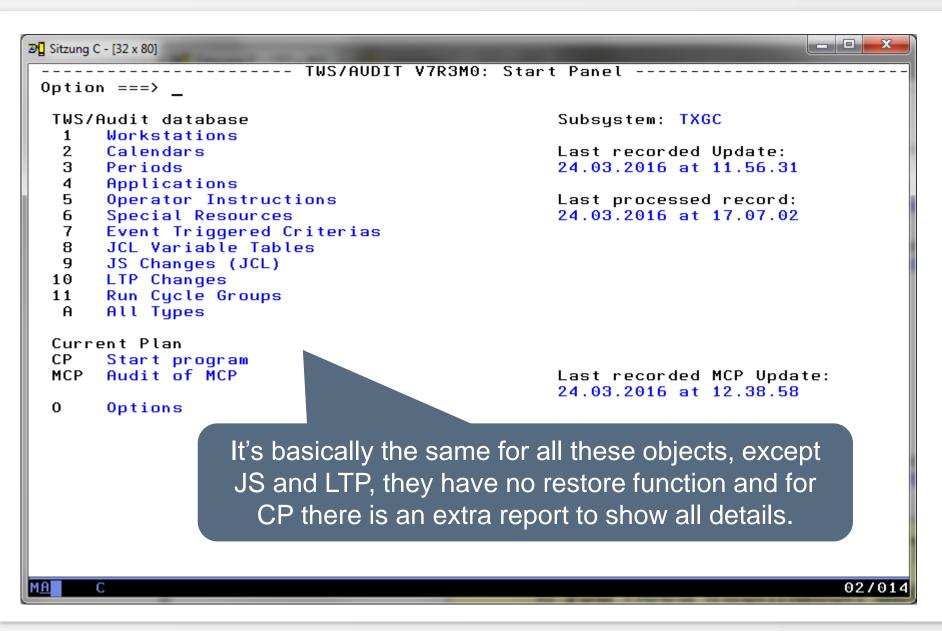


IWS/Audit – Applications, restore to IWS

```
_ D X
೨☐ Sitzung C - [32 x 80]
   File Edit
              Edit Settings
                             Menu Utilities
                                             Compilers
                                                         Test
                                                              Help
                                                           Columns 00001 00072
            P390K.SOW1.SPFTEMP1.CNTL
 EDIT
                                                              Scroll ===> CSR
 Command ===>
             000001 //P390KA
                  JOB , 'HORIZONT', MSGCLASS=T, CLASS=A,
 000002 //
             NOTIFY=&SYSUID
 000003 //*
 000004 //*
 000005 //S1
                  EXEC PGM=EQQYLTOP, REGION=2M
 000006 //STEPLIB
                  DD DISP=SHR,DSN=SYSH.TWS920.SEQQLMD0
 000007 //EQQMLIB
                  DD DISP=SHR,DSN=SYSH.TWS920.SEQQMSG0
 000008 //EQQDUMP
                  DD SYSOUT=*
 000009 //EQQMLOG
                  DD SYSOUT=*
 000010 //SYSPRINT
                  DD SYSOUT=*
 000011 //SYSUDUMP DD SYSOUT=*
 000012 //SYSIN
                  DD *
 000013 OPTIONS
         ACTION(ADD)
 000014
 000015
         SUBSYS(TXGC)
 000016
         CHECK(Y)
 000017
         ADID(EBCDIC)
 000018
         OWNER(EBCDIC)
 000019
         MSGLEVEL(2)
 000020
         DURUNIT(SECONDS)
 000021 ADSTART
                                                    Submit the generated Job
 000022
          ADID(HOR1111
 000023
         ADSTAT(A)
                                                      to load it back to IWS
 000024
         ADTYPE(A)
 000025
          ADVALFROM(120430)
 000026
         DESCR('asap demo
         OWNER('BRIAN
 000027
                                                                         04/015
```

IWS/Audit - Main Panel

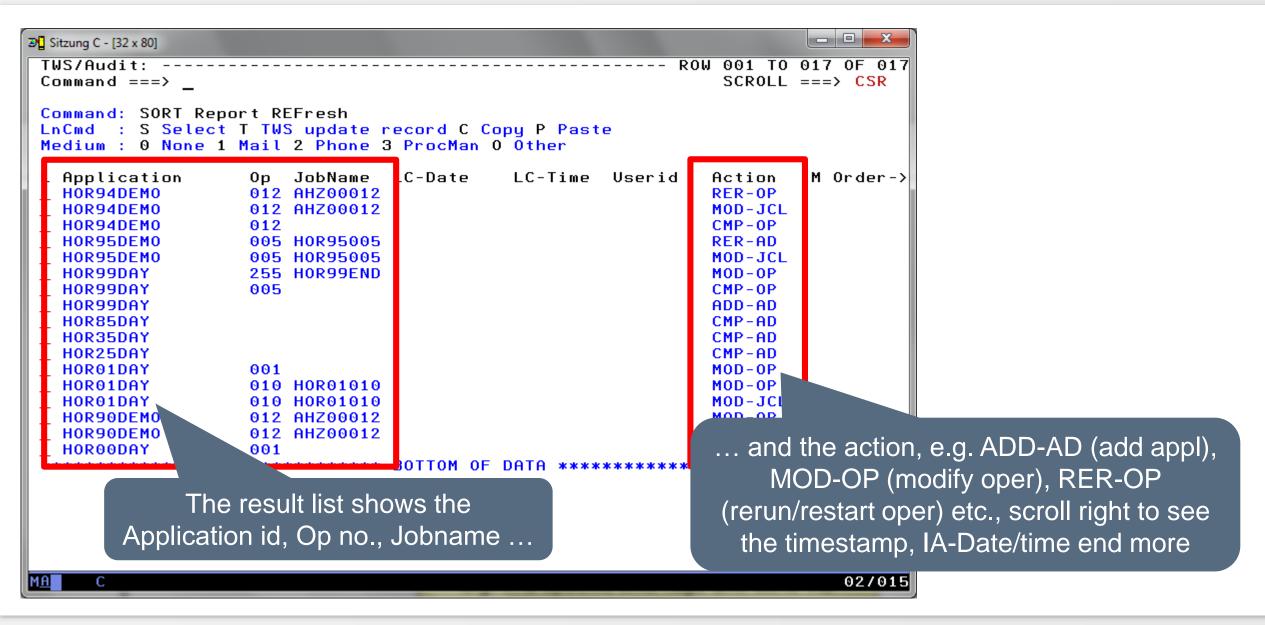
IWS/Audit



IWS/Audit - MCP

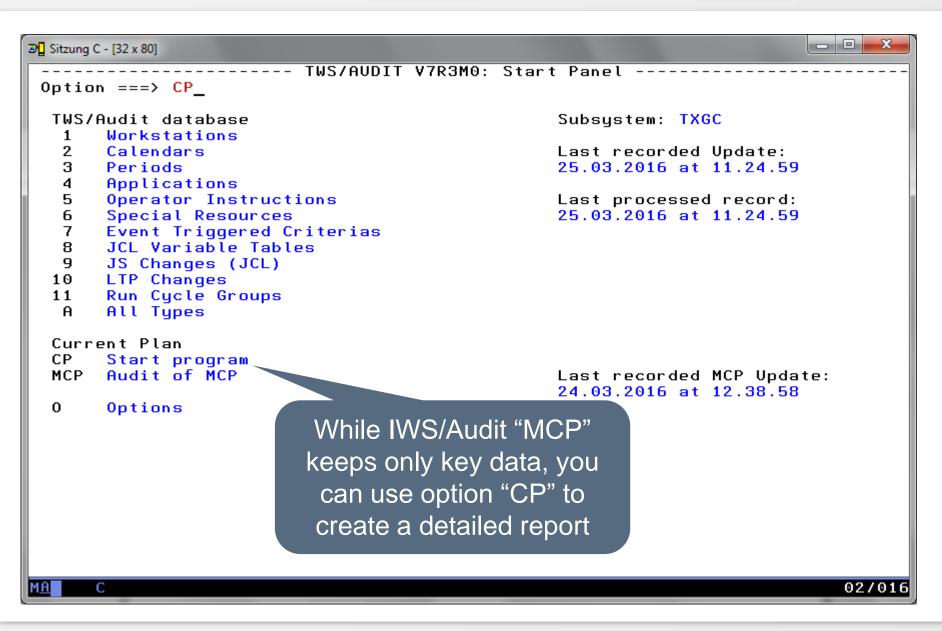
```
- - X
೨☐ Sitzung A - [32 x 80]
                              Search Arguments for MCP
 Command ===>
 Occurrence
                 ===> H*
 Oper. Number
 Workstation
                 ===>
 Jobname
                 ===>
 Group
                 ===>
 Action
                 ===>
 Modified via
                                 (A:Auto-Rec. D:Dialog E:ETT P:PIF 0:OPSTAT)
                 ===>
 User
                 ===>
                                 (EB: equal blank)
 Medium
                 ===>
 Order-Person
                 ===>
 Text-Lines
                                 (Number of Free-Text lines)
                 ===>
                                 (Hours) (Leave blank to specify dates)
 Interval
                ===>
                                                 Time from
 Date from
                ===> 24.03.2015 (DD.MM.YYYY)
                                                                          (HH.MM)
 Date to
                ===> 25.03.2016 (DD.MM.YYYY)
                                                 Time to
                                                                          (HH.MM)
                                                               ===>
                                      MCP allows to search for manual changes
                                                (Modifications) in the CP,
                                       e.g. in a specific time rage and done via
                                       Dialog, or PIF or other special functions.
                                                                             02/015
```

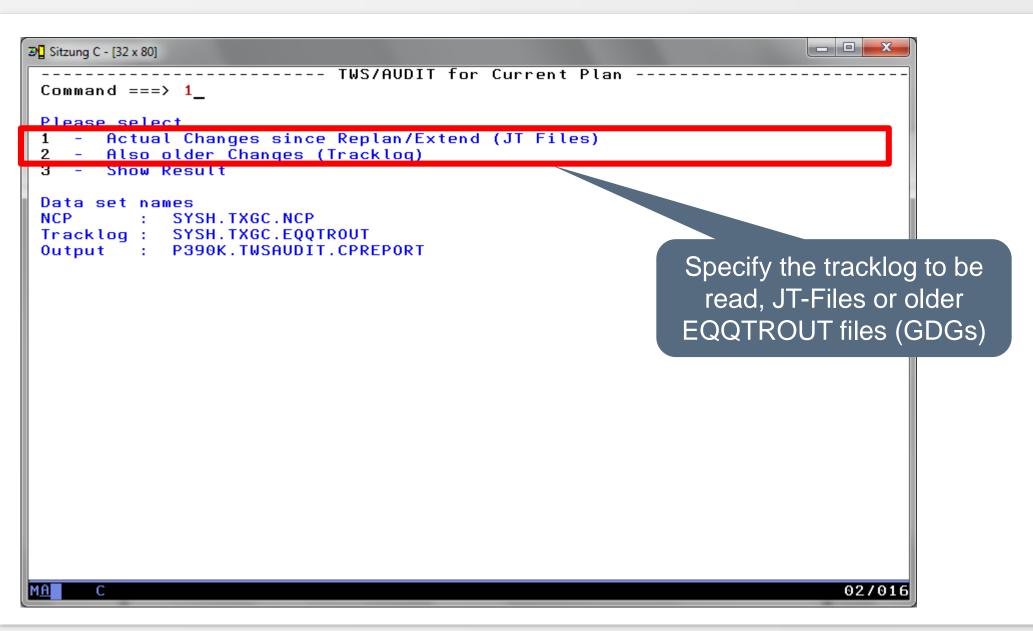
IWS/Audit - MCP



IWS/Audit - MCP

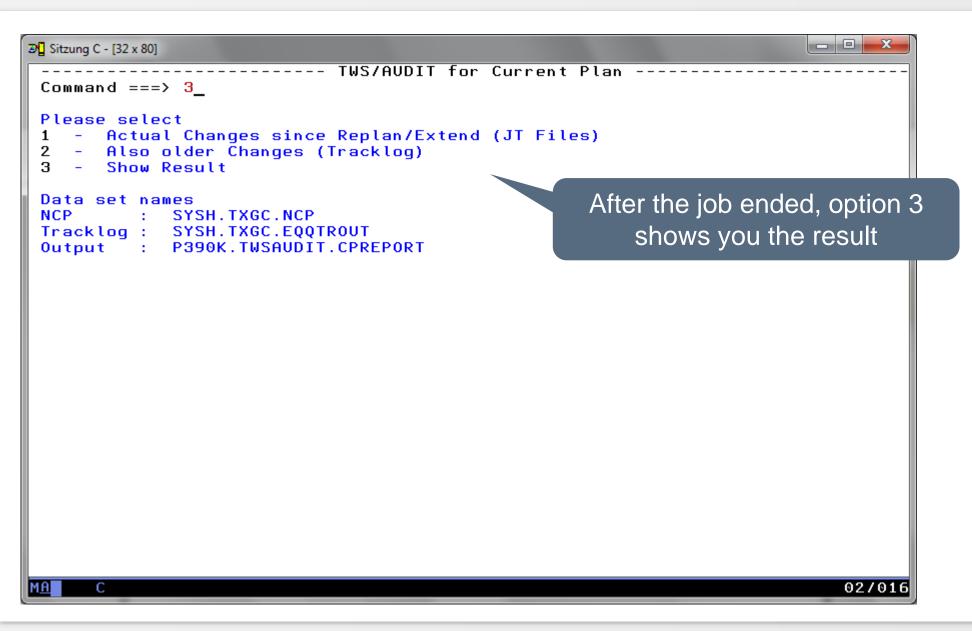
```
_ D X
೨ Sitzung C - [32 x 80]
   Menu Utilities Compilers Help
 BROWSE
           SYS16085.T124452.RA000.P390K.R0180109
                                                     Line 00000000 Col 001 080
 Command ===>
                    *********** Top of Data ******
            BROWSE
Application Name
                            : HOR94DEMO
Occ Input Arrival Date
                            : 24.03.2016
Occ Input Arrival Time
                            : 06:00
Operation Number
                            : 12
                                                          Linecommand T shows the
Jobname
                            : AHZ00012
Workstation
                            : CPU
                                                            IWS update record, in
Last Update User
                            : P390K
Last Update Date
                            : 24.03.2016
                                                           case of "Modify-JCL" also
Last Update Time
                            : 10:53
Updating Function
                            : MCP
                                                           the JCL, stored in the JS
Operation Status
                            : Saved
Number of JCL Lines
                                                               (compare with "S")
Number of Variables
∭J C L
      TEXT
||//AHZ00012 JOB CLASS=A,MSGCLASS=T,REGION=5M,NOTIFY=P390K
//* TESTJOB VON SYSH.TXGC.JOBLIB
1//*>OPC SCAN
//* OADID
             = HOR94DEMO
//* OYMD1
             = 160324 \text{ OHHMM} = 0600
//* 0J0BNAME = AHZ00012
                                                                         04/015
```

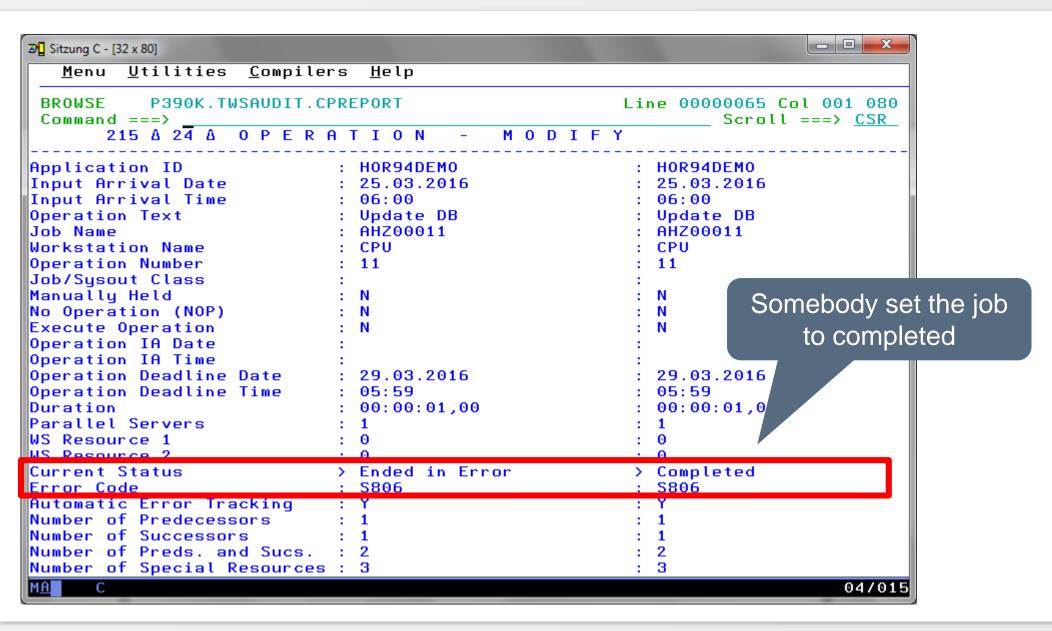


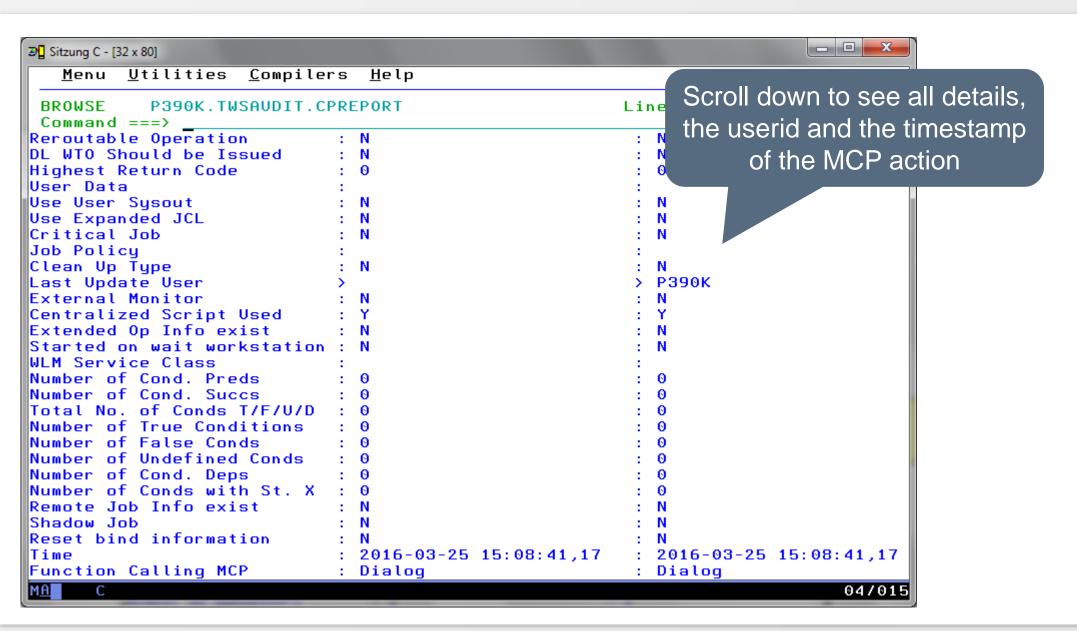


```
_ D X
೨ Sitzung C - [32 x 80]
 ------ TWS/AUDIT for CP: Specify Parameters for Actual Changes --
 Command ===>
 Jobname
                ===>
 Occurrence
 User ID
 Owner ID
                ===>
 Search for status or open interval changes on workstations:
 Workstation
 Search string
                ===>
                                 (Hours) (Leave blank to specify dates)
 Interval
                ===> 1
 Date from
                                 (DD.MM.YYYY)
                                                Time from
                                                                         (HH.MM)
                                                              ===>
 Date to
                ===>
                                 (DD.MM.YYYY)
                                                Time to
                                                              ===>
                                                                         (HH.MM)
 Modified via
                ===> D
                                 (A: Auto-Rec. D: Dialog E: ETT P: PIF,
                                  does not work for changes on special resources)
     For example: List all jobs
        that where changed
     manually (=Dialog) in the
              last hour
                                                                            16/024
```

```
_ D X
೨☐ Sitzung C - [32 x 80]
                                 TWS/AUDIT for CP
 Command ===>
 Specify Output DSN (quotes are allowed)
                                                        Generate and submit the job,
 Output DSN ===> 'P390K.TWSAUDIT.CPREPORT'
 Generic UNIT ===>
                                                        the report will be stored in a file
 Specify Temporary VSAM DSN (quotes are allowed)
 VSAM Cluster ===> 'P390K.TWSAUDIT.NCP'
 Num. of cyl. ===> 20
   Jobcards
 ===> //P390KA
                JOB ,'HORIZONT',MSGCLASS=T,CLASS=A,
            NOTIFY=&SYSUID
 ===> //
 ===> //*
 ===> //*
 Submit/Edit Job ===> E S to submit Job, E to edit Job
                                                                           02/015
```







IWS/Audit - Summary

A brief summary of IWS/Audit functions:

- IWS/Audit documents all changes made to definition database of IWSz, to the LTP, the CP and to the JS file
- IWS/Audit tracks all versions
- IWS/Audit allows searching and comparing of all versions
- IWS/Audit allows to restore old versions of application description, workstations, special resources etc.

Thanks for your attention! Do you have any questions?

HORIZONT

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