

Utilization of Hostsystem's Cross Sysplex Manager in the Swisscom IT Services

GSE z/OS Expertenforum

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Thomas Ruh



Agenda

- Projects of consolidation
- Shared Dasd environment complex of problems
- What should be achieved with CSM ?
- General survey of CSM´s functionality
- Survey of the configuration of the data center in Berne
- Service Network for CSM
- Security in the Service Network
- Examples of application(s)
- Questions?

Projects of consolidations

- Migration of the datacenters of the banks in Weinfelden and St. Gallen to the data center in Berne
- More steps of migration: Development, Customization and Production within 6 months
- Shared Dasd was as well intensively used in the banking- as in the telecommunications-environment for the transfer handling of data
- Software Maintenance und ~ Testing shall be managed in one central sysplex in future

Shared Dasd

- Extensive implementation (IO-Gen-Limits, RACF)
- GRS-Restrictions (GRS-Star per Sysplex)
- Shared SMS-Pools, Shared ICF-Kataloge
- WLM-managed PAV-allocation (per Sysplex)

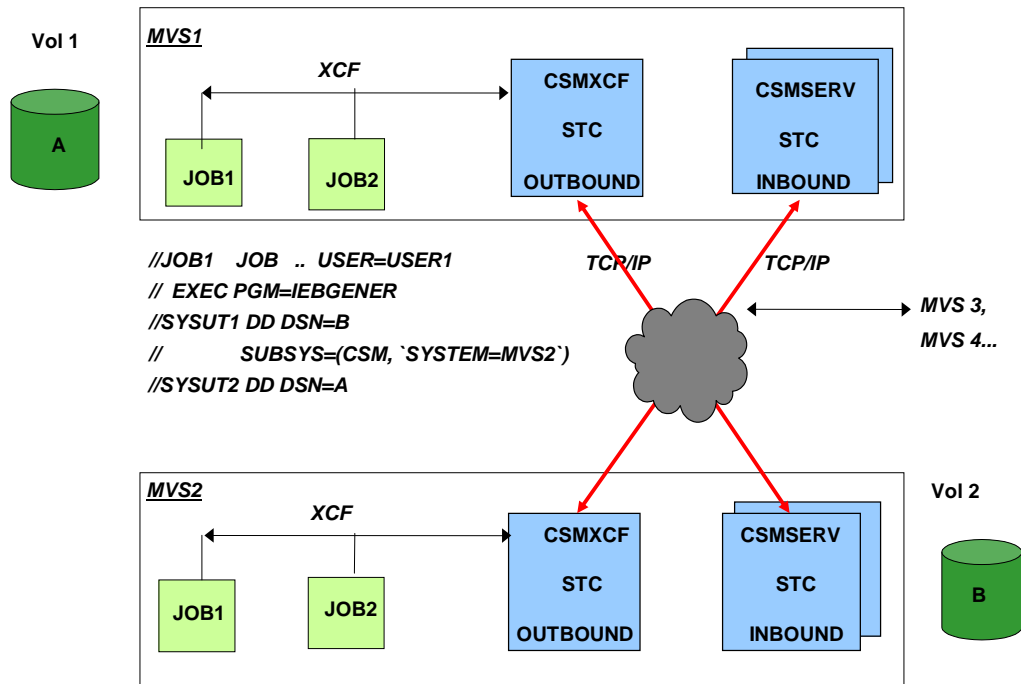
Frequent destruction of VTOC-Indices

- Save / Recovery Policies
- GDPS Hyperswap and Shared Dasd?

What shall be achieved with CSM ?

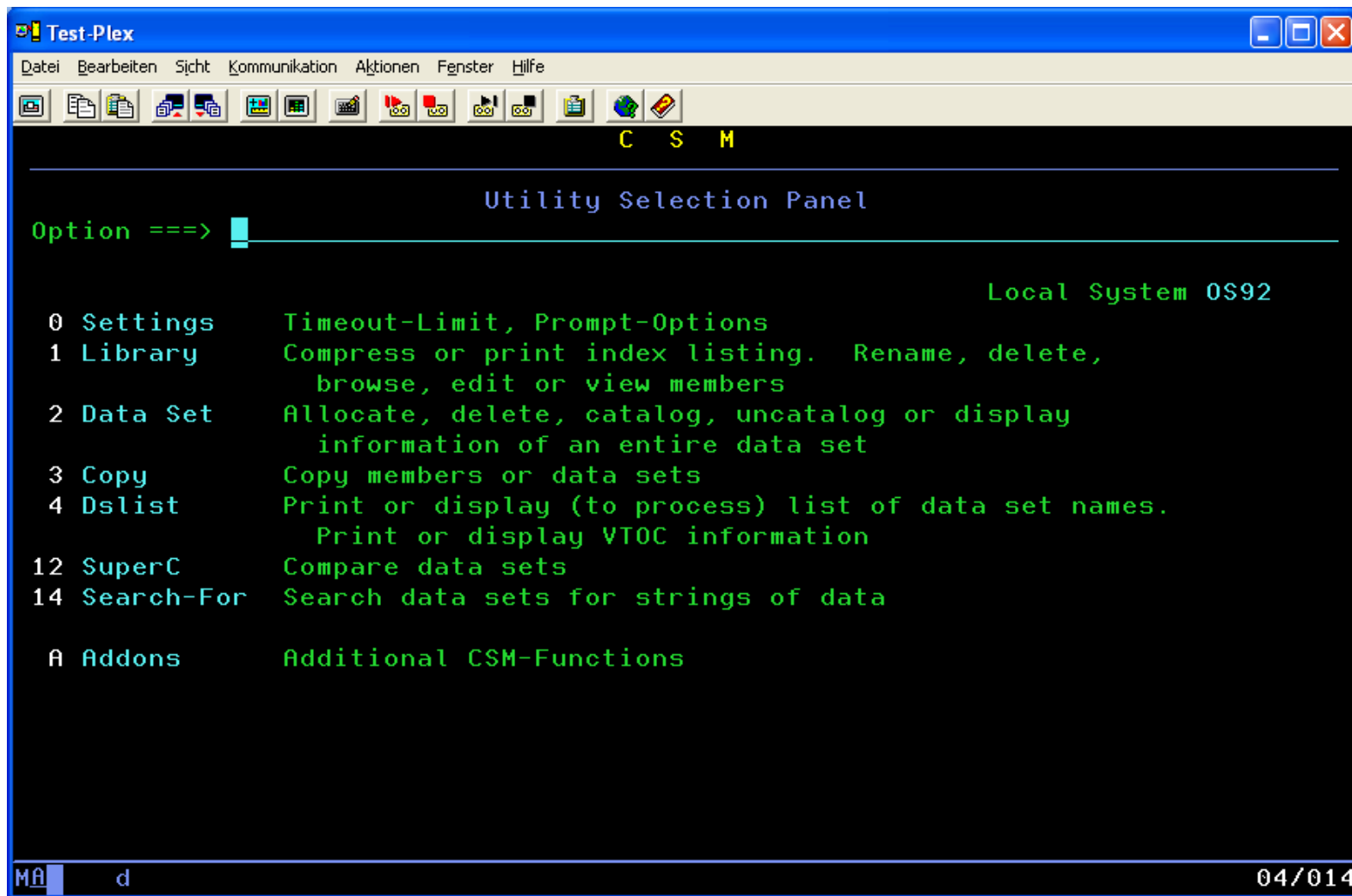
- Replacement of all defined Shared Dasd (ca. 1 TB)
- Central point for Software installation and distribution in the sysplex of each customer with CSM
- Simple and transparent transfer handling procedures, also for geografically remote sysplexes
- Central analysis and evaluation of statistical datas after the sucessful transfer though CSM Transfer (SMF, DCOLLECT, RMM, ...)
- Increasement of the security and integrity of data

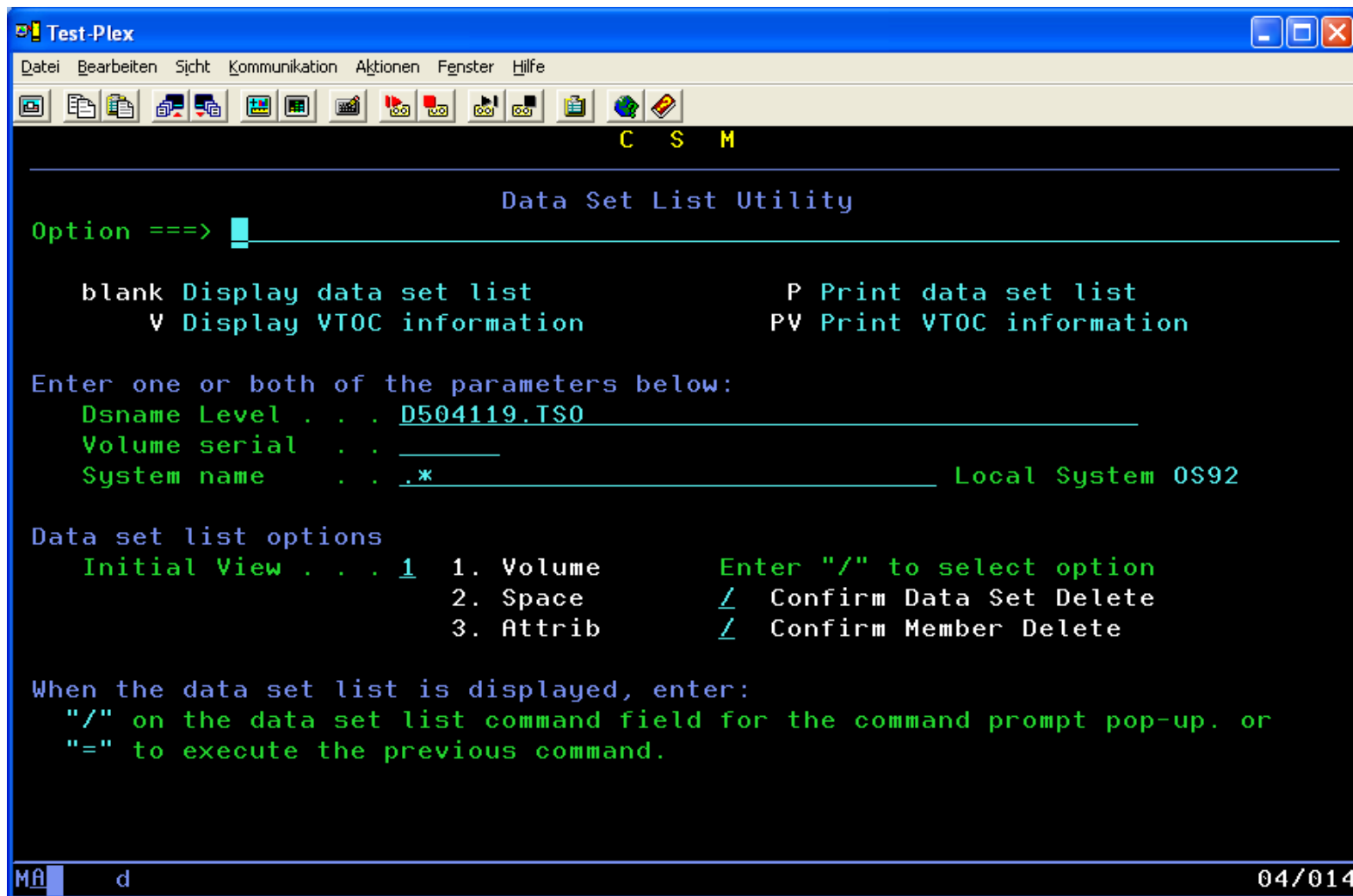
Survey of CSM's functionality



Survey of CSM's functionality

- ISPF: Look & Feel like ISPF Menu 3
- Batch: SUBSYS-Parameter in the DD-Statement for sequentiell data
- Batch: Utility CSMUTIL supports IEBCOPY, IDCAMS und ADRDSSU, consequently all kinds of formats of data
- Remote processing of Tape Files
- REXX: Interfaces CSMEXEC and CSMASQL





```
Test-Plex
Datei Bearbeiten Sicht Kommunikation Aktionen Fenster Hilfe
C S M
Data Set List Utility
Option ==>
blank Display data set list          P Print data set list
  V Display VTOC information          PV Print VTOC information
Enter one or both of the parameters below:
Dsname Level . . . D504119.TS0
Volume serial . . .
System name . . . .* Local System OS92
Data set list options
Initial View . . . 1
1. Volume          Enter "/" to select option
2. Space           / Confirm Data Set Delete
3. Attrib          / Confirm Member Delete
When the data set list is displayed, enter:
"/" on the data set list command field for the command prompt pop-up. or
"=" to execute the previous command.
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```

Test-Plex

File Edit View Communication Actions Window Help

C S M Sysplex Overview

Sysplex Display Col 1 Row 1 to 10 of 10

Local System Name: OS92

Command ==> Scroll ==> CSR

Enter S to select a Sysplex

Cm	System	Sysplex	Message
—	4	OSPLX01	Lpar: OS01 OS02 OS03 OS04
—	4	OSSPLX01	Lpar: OS02 OS03 OS01 OS04
—	2	OSPLX71	Lpar: OS71 OS72
—	2	OSSPLX71	Lpar: OS71 OS72
—	3	OSPLX91	Lpar: OS91 OS92 OS94
—	3	OSSPLX91	Lpar: OS91 OS92 OS94
—	1	AKSPLX3	Lpar: AKT1
—	1	AKSPLX2	Lpar: AKT2
—	1	SBSPLXB	Lpar: SB12
—	2	SASPLXA	Lpar: SA11 SA21

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```

Test-Plex
Datei Bearbeiten Sicht Kommunikation Aktionen Fenster Hilfe
C S M
Data Set List Utility
Option ==> █

blank Display data set list          P Print data set list
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Enter one or both of the parameters below:
Dsname Level . . . D504119.TS0
Volume serial . . .
System name . . . OSSPLX01          Local System OS92

Data set list options
Initial View . . . 1 1. Volume      Enter "/" to select option
                  2. Space         / Confirm Data Set Delete
                  3. Attrib        / Confirm Member Delete

When the data set list is displayed, enter:
"/" on the data set list command field for the command prompt pop-up. or
"=" to execute the previous command.

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Test-Plex

Datei Bearbeiten Sicht Kommunikation Aktionen Fenster Hilfe

C S M Dslist Utility

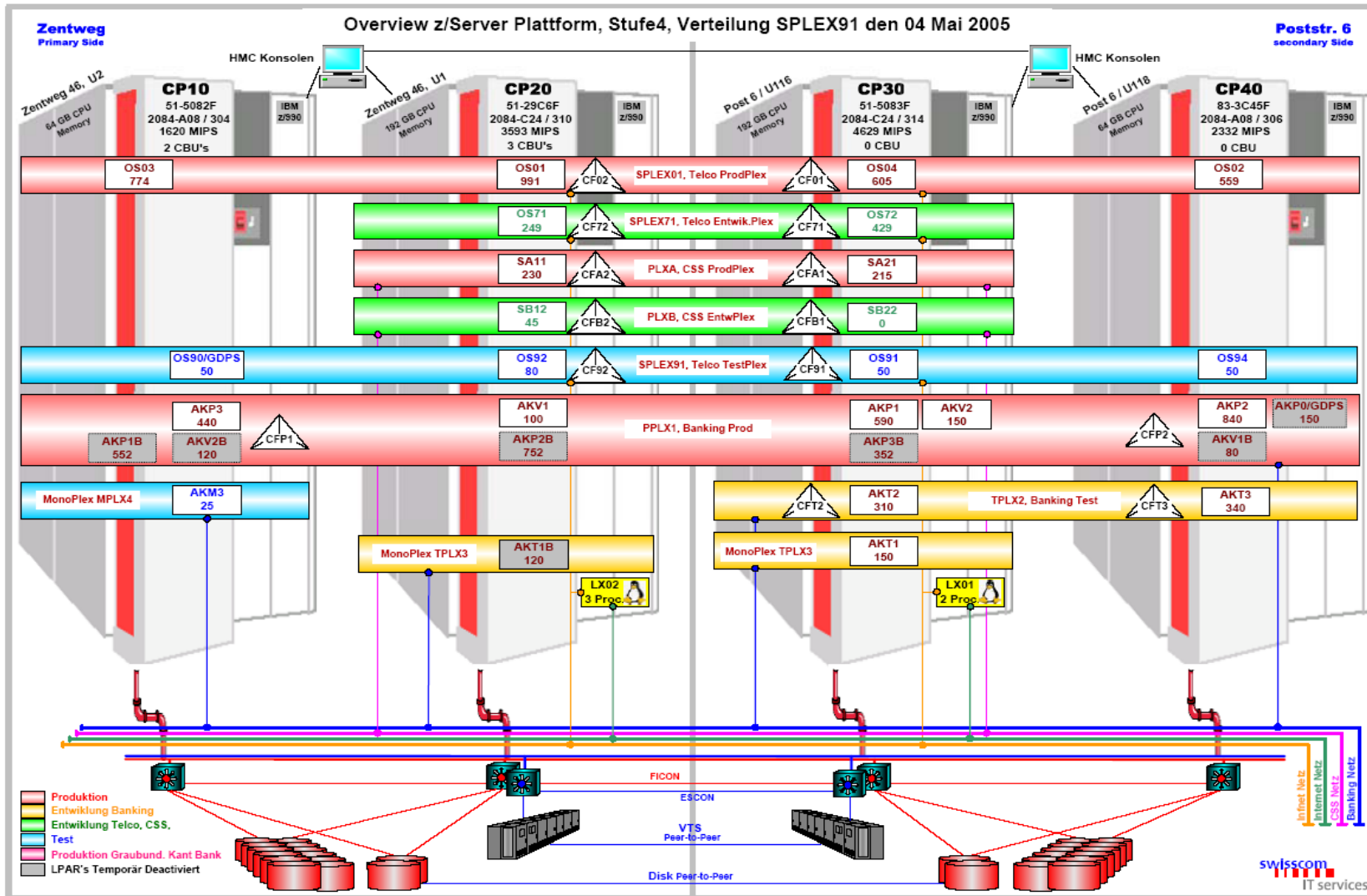
Dataset Display System: OSSPLX01 Col 1 Row 1 to 6 of 6
 Local System Name : OS92
 Command ==> Scroll ==> CSR

Data Sets Matching: D504119.TSO

Command	Data_Set_Name	Message	Volume
	D504119.TSO.CLIST		USPP04
	D504119.TSO.CNTL		USPP04
	D504119.TSO.EXEC		USPP02
	D504119.TSO.ISPPROF		USPP09
	D504119.TSO.LOAD		USPP07
	D504119.TSO.TABLES		USPP05

***** End of Data Set list *****

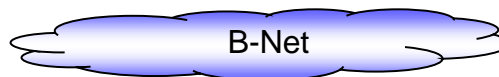
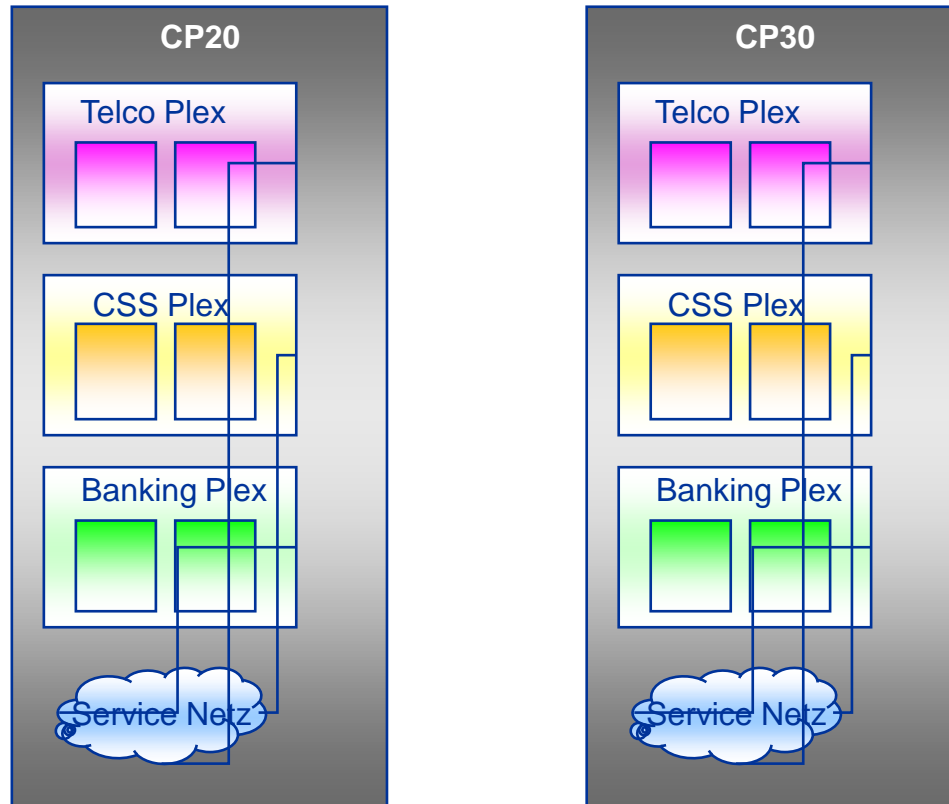
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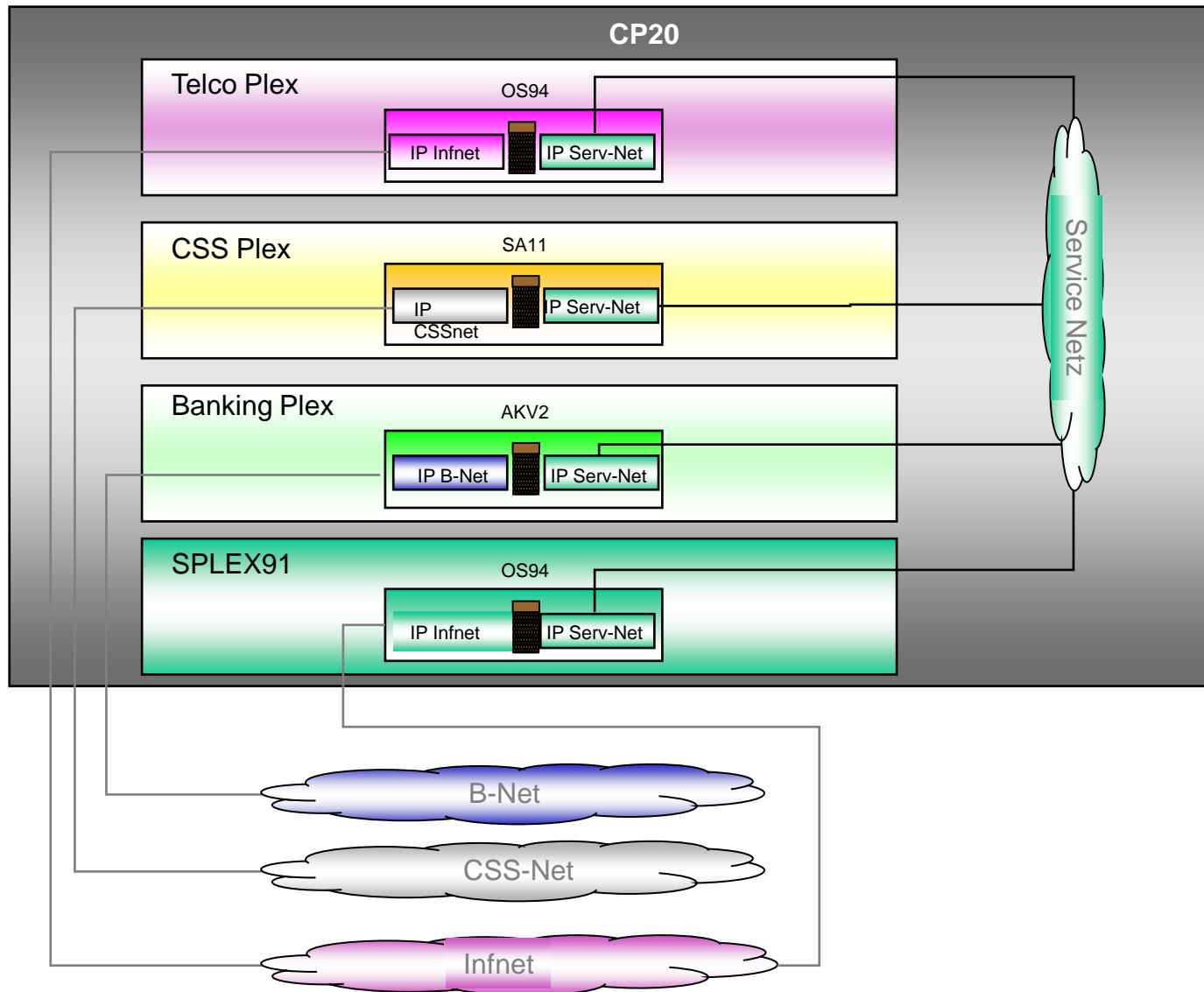


Service Network

- Hypersocket Net in the server CP20 und CP30
- Each participating LPAR has ist own IP-Stack with restrictive chosen definitions of the PORT
- EZB.STACKACCESS controls the access to the Stack

Service Netz





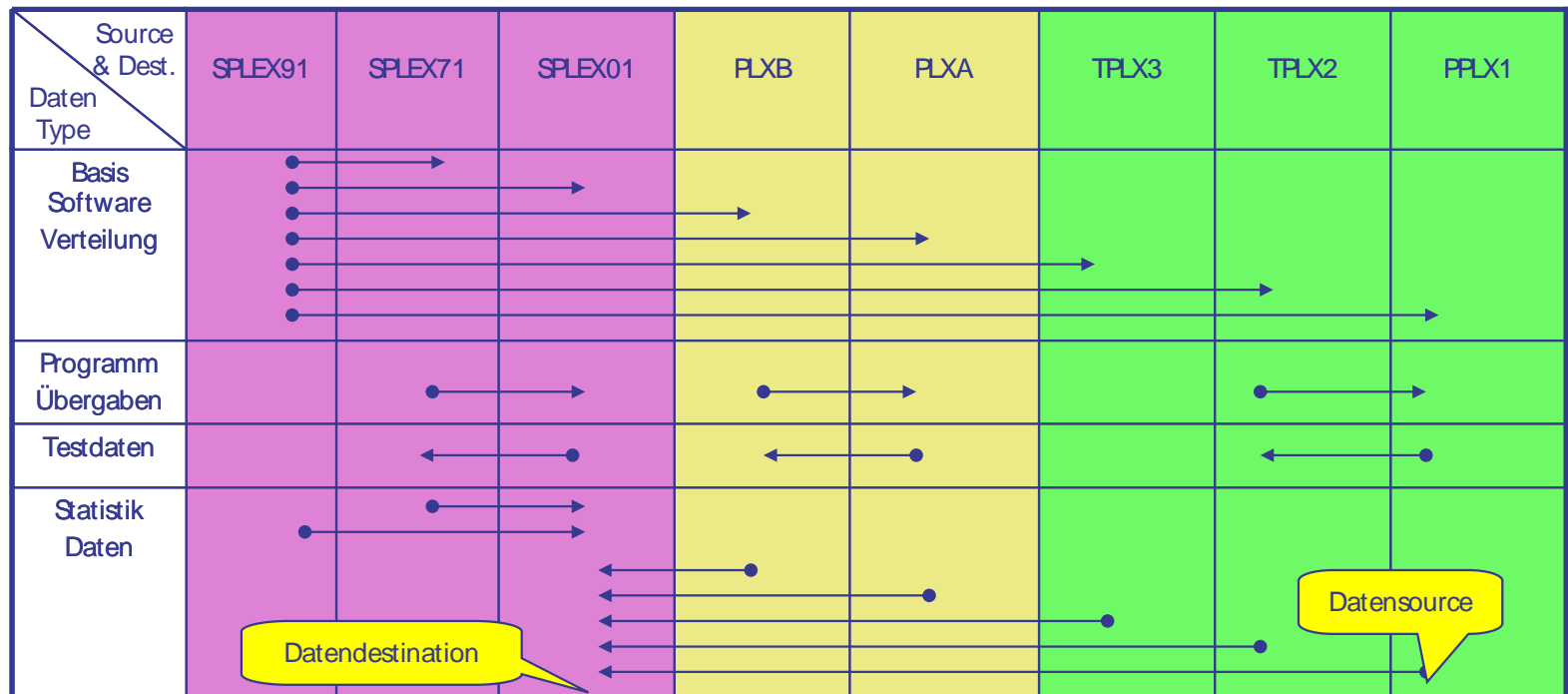
Service Network Security

- Connections in the Service Network are only valid between the defined LPAR's
- Only the defined Services and Ports are active in the Service Network (Port 7777 for CSM)
- Selective Authorisation of Access through SERVAUTH Class and EZB.STACKACCESS

Security in the Service Network

- RACF Facility Classes control the use of CSM
- SUBSYS.CSM.SYSALL
- SUBSYS.CSM.LS.sysname
- SUBSYS.CSM.RR.rmtsys
- SUBSYS.CSM.LR.sysname
- SUBSYS.CSM.RS.rmtsys

Data flow in the Service Network



Example 1: BMC-Unload to P2P-VTS

```
//BMCUNLD EXEC BMCADU,                               <= Job runs in the Prod-Plex
//          MSGLVL='0',DPRF='DB0B',BPRF='P',
//          UTPROC='NEW/RESTART',
//          SYSTEM='DB0B'
//UNLOAD.SYSINBMC DD *
  SELECT * FROM P0GZ.TABART
//*-----
//* UNLOAD PROD DATA
//*-----
//SYSRC DD DSN=GZP.RET.DP0GZABO.SABART.DATA(+1),
//          DISP=(NEW,CATLG,CATLG),
//          UNIT=P2PVTS,RETPD=365                       <= PEER TO PEER VTS Prod-Plex
//*-----
//* LOAD TABLE CONTROL STATEMENTS
//*-----
//SYSCNTL DD DSN=GZP.T5GZ.TABART.LCARD,                <= Disk-File Prod-Plex
//          DISP=(MOD,CATLG,CATLG),
//          SPACE=(CYL,(1,1),RLSE),
//          UNIT=SYSDA
```

Example 1: BMC-Load from P2P-VTS

```
//BMCLOAD EXEC BMCAMU, <= Job runs in the Cust-Plex
//      DPRF='DB0Q',
//      UTPROC='NEW/RESTART',
//      DYN='Y',
//      BPRF='E',
//      SIZE='80M',
//      RESUME='NRPL',
//      DISCARD='1',
//      D2LQ='POGZ',
//      D3LQ='TABART',
//      ORDER='YES',
//      DB2SYS='DB0Q'
//*-----
//* LOAD DATA
//*-----
//LOADDYN.SYSREC DD DSN=GZP.RET.DP0GZABO.SABART.DATA(0), <= PEER TO PEER VTS Prod-Plex
//      DISP=SHR, SUBSYS=(CSM, 'SYSTEM=OSSPLX01')
//LOADDYN.SYSINBMC DD DSN=GZP.T5GZ.TABART.LCARD, <= Disk-File Prod-Plex
//      DISP=SHR, SUBSYS=(CSM, 'SYSTEM=OSSPLX01')
```

Example 2: DSS Dump / Restore

```
//LOGDUMP EXEC PGM=ADRSSU,REGION=32M                <= Dump runs in the Test-Plex
//SYSPRINT DD SYSOUT=*
//DUMPOUT DD DISP=(NEW,PASS),AVGREC=M,SPACE=(1,(16,8),RLSE)
//FILTER DD *
      INCLUDE(CIMS.PROD.***)
//SYSIN DD *
      DUMP DATASET(FILTERDD(FILTER)) -
      OUTDDNAME(DUMPOUT) COMPRESS ADMIN -
      WAIT(2,2) CANCELERROR

/*
//LOGREST EXEC PGM=CSMUTIL,PARM='CSM,ADRSSU'        <= Restore runs in the Prod-Plex
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD DSN=*.LOGDUMP.DUMPOUT,DISP=(OLD,DELETE)
//RMTUT1 DD SUBSYS=(CSM,'SYSTEM=OSSPLX01'),
//      DISP=(NEW,DELETE),AVGREC=M,SPACE=(1,(16,8),RLSE)
//SYSIN DD *
      RESTORE INDDNAME(RMTUT1) -
      DATASET(INCLUDE(**)) -
      ADMIN IMPORT CATALOG NSC NMC
      RENUNC(CIMP) REPLACEU -
      WAIT(2,2) CANCELERROR

/*
```

What did we actually achieve with CSM?

- Approx. half of the Shared Dasd environment is already discharged (and we are still working on it!)
- The Software installationen is now centrally managed in a single test- and installationplex ... rethinking has taken place!
- Simple and transparent handling procedures are realized in the local Hypersocket-Network.
- Statistical data will largely be generated with CSM directly in the processing remote-system (SMF, DCOLLECT, ...)
- The security and integrity of data has been increased significantly

Questions?