A smarter way to manage and configure your IMS systems

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IMS **Tools**

for z/OS

The way forward (our agenda today…)

Confronting the fear of change

The issue of **complexity**

The **scale** of the problem

Upgrades and the need for change

Automatic discovery of IMS topologies

What's in my IMS **topology**?

What **IMS systems** are there?

What **IMS Connect** systems?

Which **CSL members**?

What **PROCLIB data sets**?

Parameter editing for an IMSplex

What PROCLIB members are **active**?

How can I **check syntax** of parameters?

How can I **avoid syntax mistakes** in the first place?

There are so many parameters, **what do they all do**?

How can we **track change**?

What can we do if we need to **revert**?

Enterprise-wide management

How can we **view** and **compare** values across systems?

Can we use **IMS commands** to simplify the process?

Can we easily **reveal differences** in configurations?

Can we **export the data** for offline analysis?

The fear of changing an IMS system

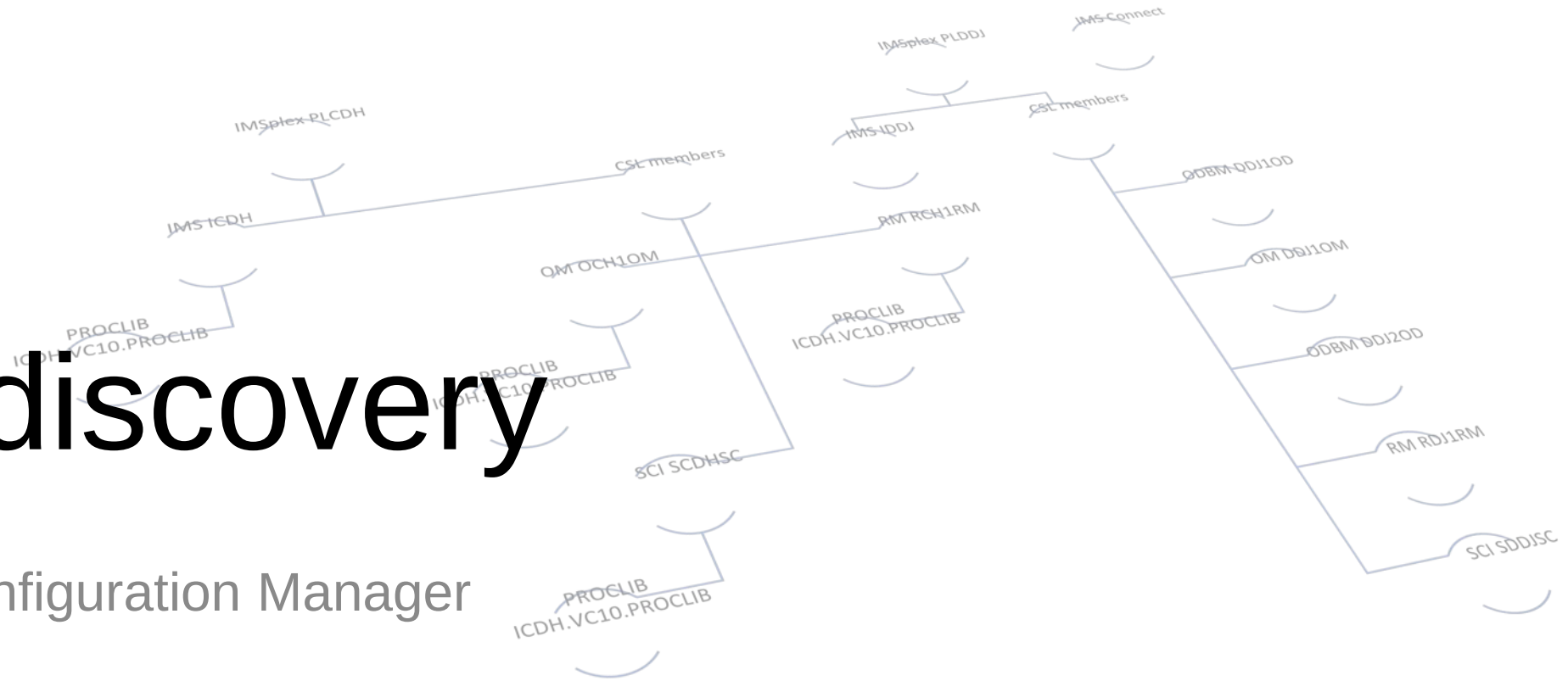
- 35 unique IMS PROCLIB data set members (IMS V15)
- 850+ parameters and sub-parameters
- 50+ new or changed parameters in each release of IMS
- Numerous interdependencies, but it we don't change, we may miss out on valuable performance improvements and upgrades..

And we are just talking about one system…

…and most of us have more than one!

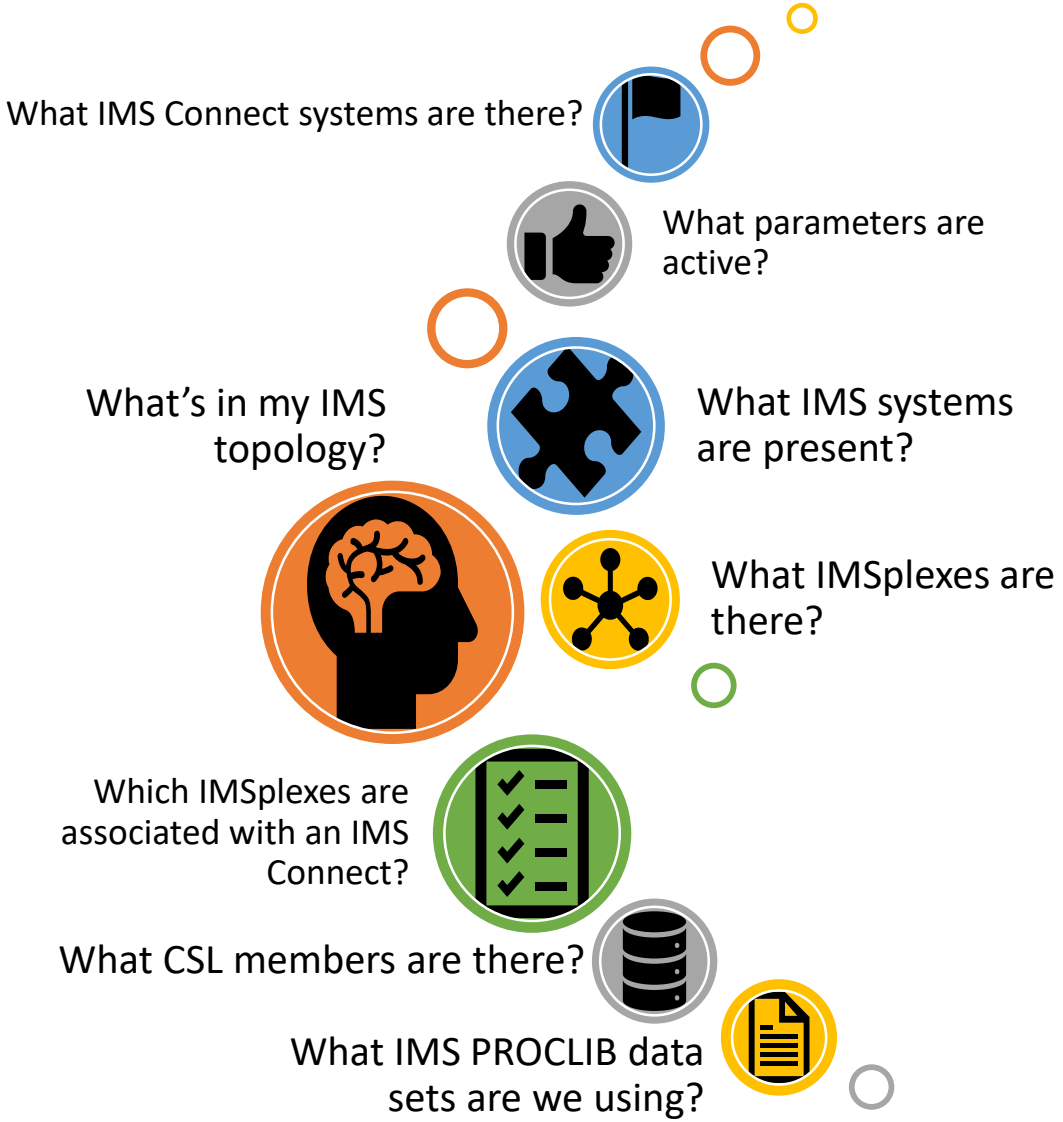
Autodiscovery

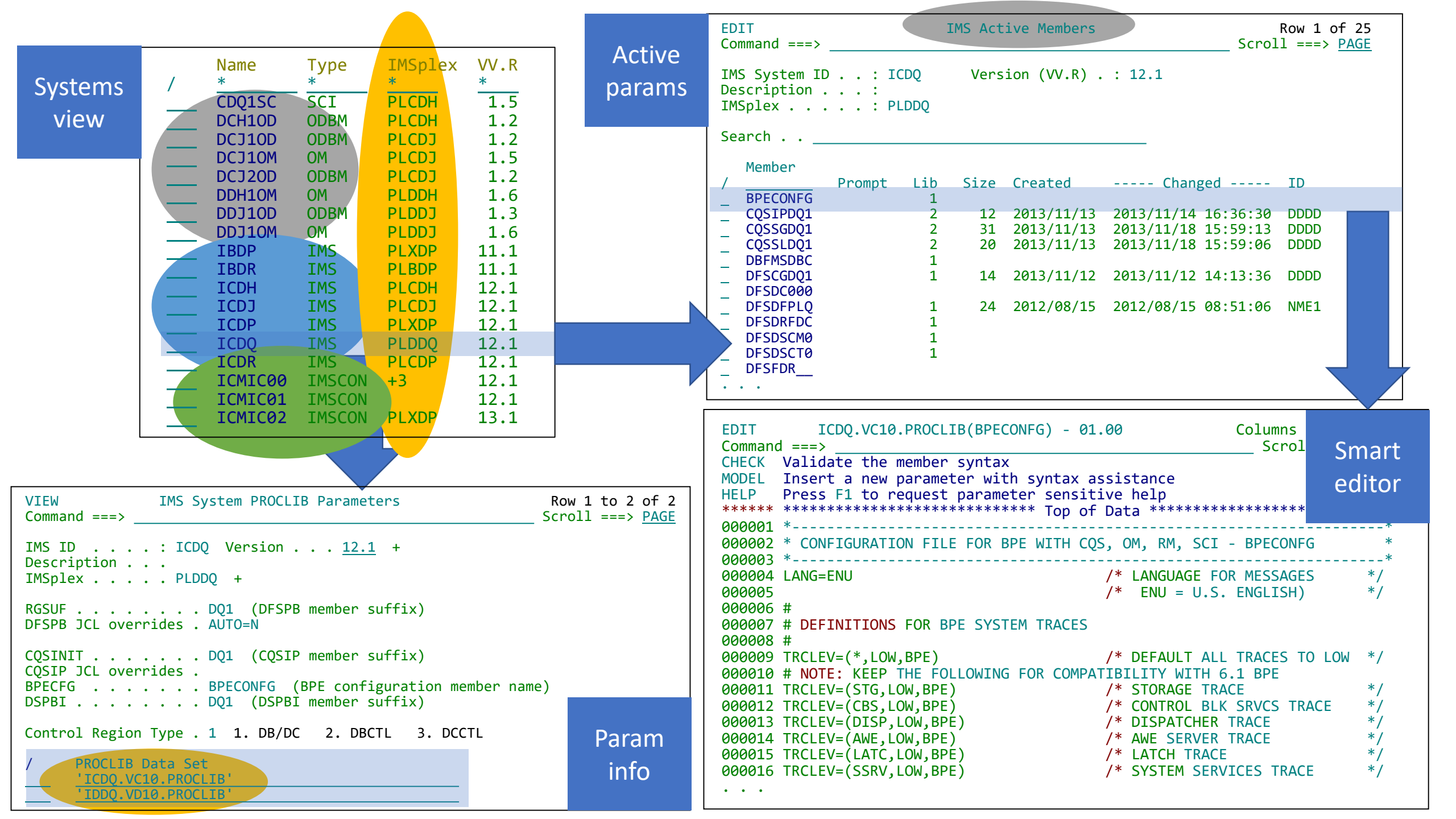
with IMS Configuration Manager



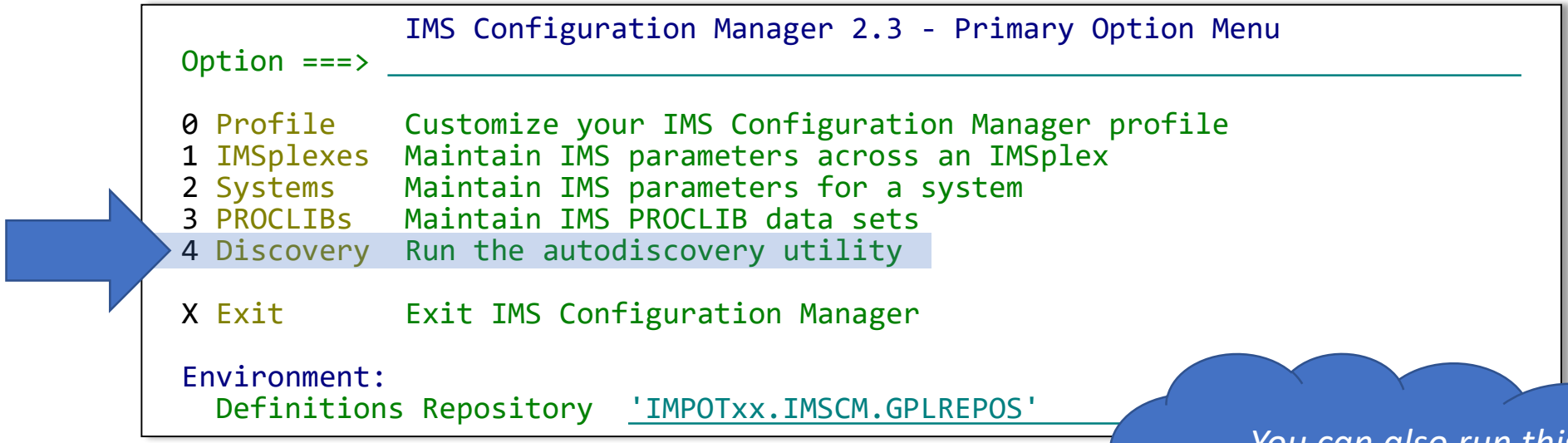
Autodiscovery with IMS Configuration Manager

What was once laborious now takes seconds…



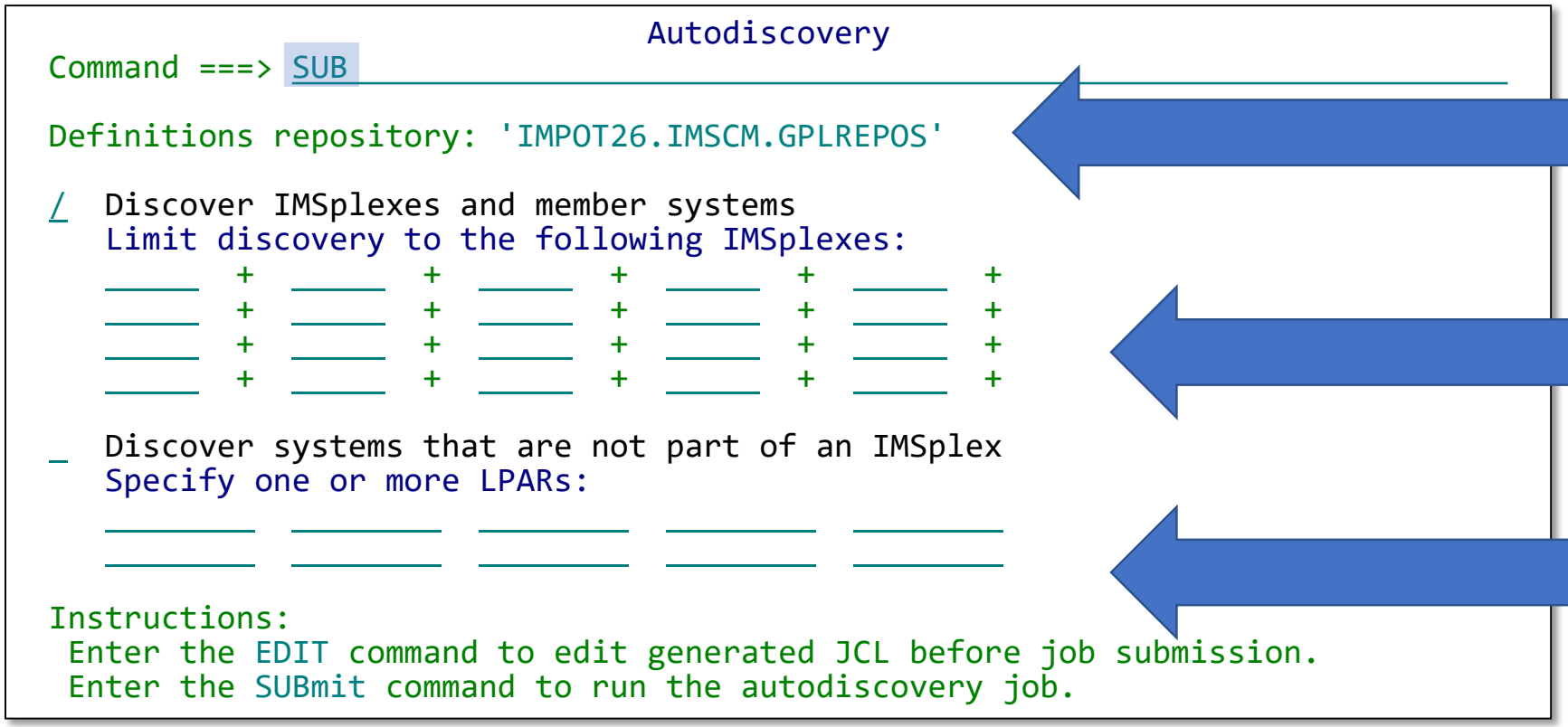

Systems view
Active params
Smart editor
Param info
Name Type IMSplex VV.R
CDQ1SC SCI PLCDH 1.5
DCH1OD ODBM PLCDH 1.2
DCJ1OD ODBM PLCDJ 1.2
DCJ1OM OM PLCDJ 1.5
DCJ2OD ODBM PLCDJ 1.2
DDH1OM OM PLDDH 1.6
DDJ1OD ODBM PLDDJ 1.3
DDJ1OM OM PLDDJ 1.6
IBDP IMS PLXDP 11.1
IBDR IMS PLBDP 11.1
ICDH IMS PLCDH 12.1
ICDJ IMS PLCDJ 12.1
ICDP IMS PLXDP 12.1
ICDQ IMS PLDDQ 12.1
ICDR IMS PLCDP 12.1
ICMIC00 IMSCON +3 12.1
ICMIC01 IMSCON 12.1
ICMIC02 IMSCON PLXDP 13.1
EDIT IMS Active Members Row 1 of 25
Command ===> Scroll ===> PAGE
IMS System ID . . : ICDQ Version (VV.R) . : 12.1
Description . . . :
IMSplex . . . . . : PLDDQ
Search . .
Member
/ Prompt Lib Size Created ----- Changed ----- ID
BPECONFG 1
CQSIPDQ1 2 12 2013/11/13 2013/11/14 16:36:30 DDDD
CQSSGDQ1 2 31 2013/11/13 2013/11/18 15:59:13 DDDD
CQSSLDQ1 2 20 2013/11/13 2013/11/18 15:59:06 DDDD
DBFMSDBC 1
DFSCGDQ1 1 14 2013/11/12 2013/11/12 14:13:36 DDDD
DFSDC000
DFSDFPLQ 1 24 2012/08/15 2012/08/15 08:51:06 NME1
DFSDRFDC 1
DFSDSCM0 1
DFSDSCT0 1
DFSFDR
VIEW IMS System PROCLIB Parameters Row 1 to 2 of 2
Command ===> Scroll ===> PAGE
IMS ID . . . . : ICDQ Version . . . 12.1 +
Description . . .
IMSplex . . . . . PLDDQ +
RGSUF . . . . . DQ1 (DFSPB member suffix)
DFSPB JCL overrides . AUTO=N
CQSINIT . . . . . DQ1 (CQSIP member suffix)
CQSIP JCL overrides .
BPECFG . . . . . BPECONFG (BPE configuration member name)
DSPBI . . . . . DQ1 (DSPBI member suffix)
Control Region Type . 1 1. DB/DC 2. DBCTL 3. DCCTL
/ PROCLIB Data Set
'ICDQ.VC10.PROCLIB'
'IDDQ.VD10.PROCLIB'
EDIT ICDQ.VC10.PROCLIB(BPECONFG) - 01.00 Columns
Command ===> Scrol
CHECK Validate the member syntax
MODEL Insert a new parameter with syntax assistance
HELP Press F1 to request parameter sensitive help
****** ********** Top of Data **********
000001 *----------*
000002 * CONFIGURATION FILE FOR BPE WITH CQS, OM, RM, SCI - BPECONFG *
000003 *----------*
000004 LANG=ENU /* LANGUAGE FOR MESSAGES */
000005 /* ENU = U.S. ENGLISH) */
000006 #
000007 # DEFINITIONS FOR BPE SYSTEM TRACES
000008 #
000009 TRCLEV=(*,LOW,BPE) /* DEFAULT ALL TRACES TO LOW */
000010 # NOTE: KEEP THE FOLLOWING FOR COMPATIBILITY WITH 6.1 BPE
000011 TRCLEV=(STG,LOW,BPE) /* STORAGE TRACE */
000012 TRCLEV=(CBS,LOW,BPE) /* CONTROL BLK SRVCS TRACE */
000013 TRCLEV=(DISP,LOW,BPE) /* DISPATCHER TRACE */
000014 TRCLEV=(AWE,LOW,BPE) /* AWE SERVER TRACE */
000015 TRCLEV=(LATC,LOW,BPE) /* LATCH TRACE */
000016 TRCLEV=(SSRV,LOW,BPE) /* SYSTEM SERVICES TRACE */

Running autodiscovery (ISPF method)



*You can also run this in **batch** or as part of the **Common Service Library** server startup…*

Running autodiscovery (ISPF method)



Discovery result stored here

Limit your scan to one or more IMSplexes

Scan for systems outside of an IMSplex

Autodiscovery batch

```
VIEW       IMPOTxx.IMSCM.JCL(DISCOVRY) - 01.00            Columns 00001 00072
Command ===> _____________________________________________ Scroll ===> PAGE
****** ***************************** Top of Data ******************************
000001 //DSCVRYxx JOB ,'CSL Server',CLASS=X,MSGCLASS=X,MSGLEVEL=(1,1),
000002 //         NOTIFY=&SYSUID
000003 /*JOBPARM SYSAFF=FTSD
000004 //*
000005 //*  IMS Configuration Manager - System Auto-discovery
000006 //*
000007 //GPLUTIL  EXEC PGM=GPLUTIL
000008 //STEPLIB  DD  DISP=SHR,DSN=<GPL.SGPLLINK>
000009 //         DD  DISP=SHR,DSN=<IMS.SDFSRESL>
000010 //SYSIN    DD  *
000011 *
000012 DISCOVER MBRTYPE(ALL)  +
000013          TO(REPOSITORY,GPLREPOS)
000014 /*
000015 //GPLREPOS DD  DISP=SHR,
000016 //             DSN=<MY.GPLDEFS>
000017 //SYSPRINT DD  SYSOUT=*
****** **************************** Bottom of Data ****************************
```

```
GPL7324I Autodiscovery for repository TESTREPO starting...
⋮
GPL7001I Discovered IMSplex PLXZZ
⋮
GPL7001I Processing IMSplex PLXZZ
GPL7002I Discovered ODBM JOB PLXZZOD1, XCF member DDQ1OD in IMSplex
PLXZZ on ABC1
GPL7008I PARM = BPECFG=BPECONFG,BPEINIT=CSLDINI0,ODBMINIT=DQ1,ARMRST=Y
GPL7009I STEPLIB = IDDQ.VD10.SDFSRESL
GPL7009I = IMS.V13.SDFSRESL
GPL7009I PROCLIB = IDDQ.VD10.PROCLIB
GPL7046I ODBM JOB PLXZZOD1 selected for further processing
⋮
GPL7001I Processing IMSplex PLYYY
GPL7036I CSLSCREG command error. RC=01000010 RSN=00004000
GPL7037I IMSPlex Register failed: the SCI is not active
GPL7001I Skipping IMSplex PLYYY
⋮
GPL7058I Searching for CQS connections to IMS systems
GPL7017I Reading IMS Proclib member DFSSQPS3 for IMS job IAAACTL
GPL7062I IMS system IAAA is searching for a CQS using CQSSN=CDU3
GPL7057I To discover the CQSSN CDU3 connected to IMS IAAA,
autodiscovery must be run on ABC3
⋮
GPL7011I Searching for IMSCON jobs in XCF group XCFGGPL1 which is
associated with IMS system IBBB...
GPL7012I Discovered IMSCON, job ICMIC04, XCF member ICMI4DS1 in XCF
group XCFGGPL1
GPL7008I PARM = BPECFG=BPECFG1N,HWSCFG=HWSCFG04
GPL7009I STEPLIB = CEX000.SAMPLE.DUMMY.SCEXLINK
GPL7009I = IMS.V13.SDFSRESL.EXITS
GPL7009I = IMS.V13.SDFSRESL GPL7009I PROCLIB =
GPL000.SAMPLE.HWS.PROCLIB
GPL7017I Reading IMS Proclib member HWSCFG04 for IMSCON job ICMIC04
GPL7035I IMSCON job ICMIC04, XCF member ICMI4DS1 is not connected to
any IMS system discovered - Skipping…
⋮
```

Discovery processing log

```
⋮
GPL7024I Checking for discovered IMS components in the ICM repository...
GPL7023I RM object S3XDPRM, job PLXMMRM, XCF member S3XDPRM - Object is not in the repository
GPL7023I IMS object IBBB, job IBBBCTL, XCF member IBBB - Object is not in the repository
⋮
GPL7013I Beginning DISCOVER update phase...
GPL7014I RM object S3XDPRM, job PLXMMRM, XCF member S3XDPRM - Object will be added
GPL7007I Added RM object S3XDPRM GPL7014I IMS object IBBB, job IBBBCTL, XCF member IBBB -
Object will be updated
GPL7007I Updated RM object IBBB
⋮
GPL7015I MBRTYPE Discovered Added Updated No change Skipped Error
GPL7019I ------- ---------- ----- ------- --------- ------- -----
GPL7020I PLEX            13     1       0         2       0    10
GPL7020I IMS              4     0       4         0       0     0
GPL7020I IMSCON          12     1      10         0       1     0
GPL7020I ODBM             3     3       0         0       0     0
GPL7020I REPO             3     3       0         0       0     0
GPL7020I OM               5     5       0         0       0     0
GPL7020I RM               4     4       0         0       0     0
GPL7020I SCI              5     5       0         0       0     0
         ------------------------------------------------------------
GPL7020I TOTALS          51    22      18         2       1    10
GPL7325I Autodiscovery successful for repository TESTREPO
GPL7317I SCI is not active for IMSplex PLODH GPL7317I SCI is not active for IMSplex PLODJ
GPL7317I SCI is not active for IMSplex PLIDH GPL7317I SCI is not active for IMSplex PLIDJ
GPL7317I SCI is not active for IMSplex PLXXH GPL7317I SCI is not active for IMSplex PLXXJ
GPL7317I SCI is not active for IMSplex PLXXQ GPL7308I IMS Configuration Manager product
initialized
```

Final result

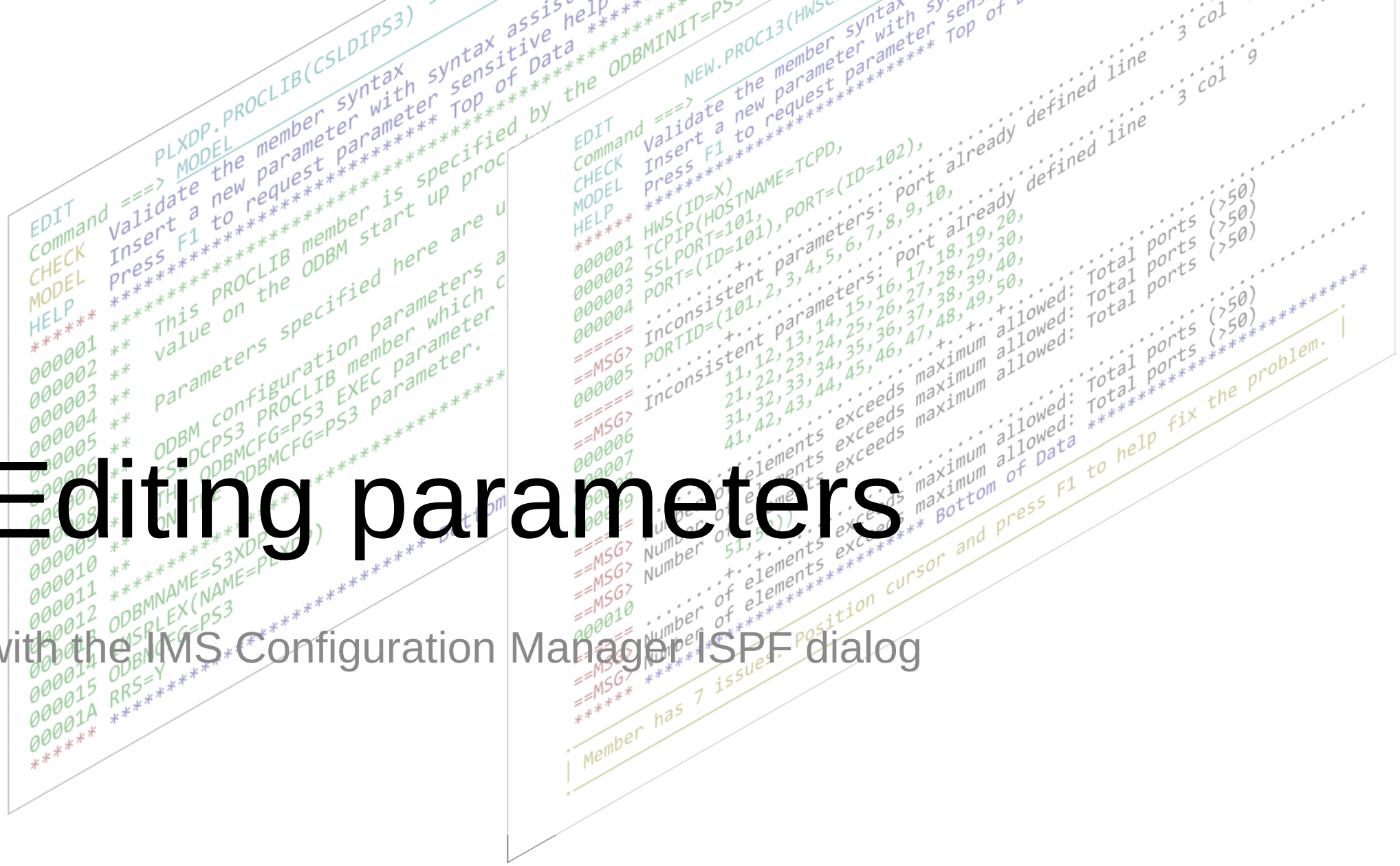
Two interfaces – two purposes

```
                IMS Configuration Manager 2.3 - Primary Option Menu
Option ===> ____________________________________________________________

0 Profile     Customize your IMS Configuration Manager profile
1 IMSplexes   Maintain IMS parameters across an IMSplex
2 Systems     Maintain IMS parameters for a system
3 PROCLIBs    Maintain IMS PROCLIB data sets
4 Discovery   Run the autodiscovery utility

X Exit        Exit IMS Configu

Environment:
  Definitions Repository  'GPI
```

Source	IMSplex	SystemName	MemberName	ParmSource	ALOT	AOIS	AOI1	APPLID1	APPC	APPCSE	ARC	ARMRST	ASOT	AUTO	BSIZ	CMDMCS
1	PLBDP	IBDR	DFSPBPLP	INEFFECT							01			N	02048	
1	PLCDH	ICDH	DFSPBHWS	INEFFECT	60		N	ICDHEVT1			01	N	60	N	02048	
1	PLCDP	ICDR	DFSPBPLP	INEFFECT	1440	N	N	CCDR			1		1440			Y
1	PLDDH	IDDH	DFSPBHWS	INEFFECT	60		N				01	N	60	N	02048	
1	PLDDQ	ICDQ	DFSPBDQ1	INEFFECT	60		N	ICDQEVT1			01	N	60	N	02048	
1	PLDDQ	IDDQ	DFSPBDQ1	INEFFECT	60		N				01	N	60	N	02048	
1	PLXDH	IBDH	DFSPBHWS	INEFFECT	60		N	IBDHEVT1			01	N	60	N	02048	
1	PLXDP	IBDP	DFSPBPLP	INEFFECT	60	S	N	IBDPEVT1			01	Y	60	N	02048	
1	PLXDP	ICDP	DFSPBPLP	INEFFECT	60	S	N	ICDPEVT1	N	F	1		60	N	2048	
1	PLXDP	IDDP	DFSPBPLP	INEFFECT	60	S	N				01	N	60	N	02048	
1	PLXNU	IADP	DFSPBPLP	INEFFECT	60	S	N	IADPEVT1			01		60	N	02048	
1	IPABX	ABS0	DFSPB00M	INEFFECT		R	R	IMABIMS0	Y		01			N		R
1	IPABX	ABS1	DFSPB01M	INEFFECT		R	R	IMABIMS1	Y		01			N		R
1	IPABX	ABS2	DFSPB02M	INEFFECT		R	R	IMABIMS2	Y		01			N		R
1	IPABX	ABS3	DFSPB03M	INEFFECT		R	R	IMABIMS3	Y		01			N		R

1 of 25

Parameters DFSPB



Editing parameters

with the IMS Configuration Manager ISPF dialog

Editing IMS parameters in ISPF

Finding parameters:

- Issue line action P against an IMSplex (POM 1)
  - View all active parameter members for the IMSplex
- Issue line action P against a system (POM 2)
  - View active parameter members for the system
- Browse by PROCLIB data set (POM 3)
  - Create a list of PROCLIB data sets

View/editing parameters

- Check the syntax of a member (CHECK)
- Insert a model/template for a new parameter (MODEL)
- Describe the function of a parameter ((HELP)

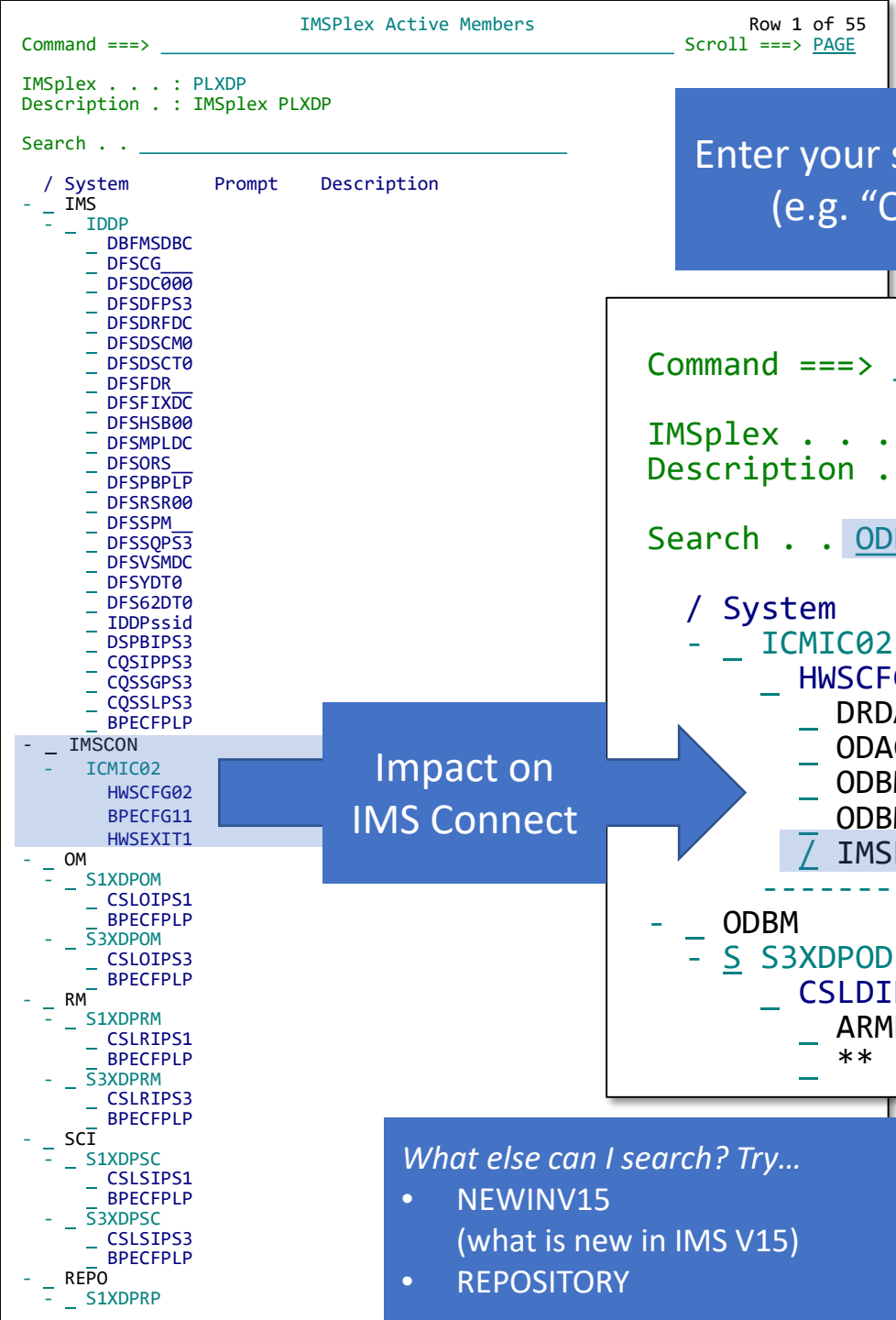
View history of changes

- Who changed what?
- Revert when things go wrong

Viewing active parameters by IMSplex

```
                IMS Configuration Manager 2.3 - Primary Option Menu
Option ===>

0 Profile     Customize your IMS Configuration Manager profile
1 IMSplexes   Maintain IMS parameters across an IMSplex
2 Systems     Maintain IMS parameters for a system
3 PROCLIBs    Maintain IMS PROCLIB
4 Discovery   Run the autodiscovery

X Exit        Exit IMS Configuratio

Environment:
  Definitions Repository  'GPL999.
```

```
                                  IMSplex                    Row 1 to 11 of 11
Command ===>                                                  Scroll ===> PAGE

Enter NEW to create a new IMSplex

      IMSplex  Description                          Changed              ID
/     *        *                                   =*                   *
___   PLBDP                                        2014-01-08 13.52.00  DISCOVER
___   PLCDH                                        2014-01-09 11.23.13  DISCOVER
___   PLCDJ                                        2014-01-09 11.23.13  DISCOVER
___   PLCDP                                        2014-01-08 13.52.00  DISCOVER
___   PLDDH                                        2014-01-09 11.23.13  DISCOVER
___   PLDDJ                                        2014-01-09 11.23.13  DISCOVER
___   PLDDQ                                        2014-01-08 13.52.00  DISCOVER
___   PLXDH                                        2014-01-09 11.23.13  DISCOVER
___   PLXDJ                                        2014-01-08 13.52.00  DISCOVER
P     PLXDP    IMSplex PLXDP                       2014-01-08 13.52.00  DISCOVER
___   PLXNU                                        2014-01-08 13.52.00  DISCOVER
****************************** Bottom of data ******************************
```



Enter your search term (e.g. “ODBM”)

I’m looking for parameters relating to ODBM…

Impact on IMS Connect

```
                    IMSPlex Active Members                    Row 4 of 55
Command ===>                                                  Scroll ===> CSR

IMSplex . . . : PLXDP
Description . :

Search . . ODBM

  / System          Prompt     Description
  - _ ICMIC02
      _ HWSCFG02
        _ DRDAPORT=...         Port used for Open Database APIs and DRDA
        _ ODACCESS=...         Communication between ODBM, DRDA clients
        _ ODBMAUTOCONN=...     IMS Connect automatically to ODBM
        _ ODBMTMOT=...         Amount of time that IMS Connect waits
        / IMSPLEX (MEMBER=ICMI2XDP,TMEMBER=PLXDP)
      ------------------------------------------------------------------
- _ ODBM
  - S S3XDPOD
      _ CSLDIPS3
        _ ARMRST=...           Whether the    S ARM restarts the ODBI
        _ **  THE ODBMCFG=PS3 EXEC
```

View/edit or display parameter help

```
Parameter Actions

Select by number or action code then press Enter.
_  1. Select the parameter...    (S or E)
   2. Show parameter help...     (H)
```

What else can I search? Try…

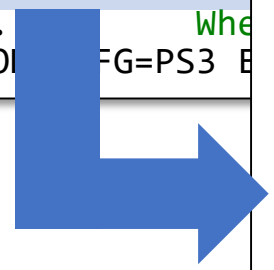
- NEWINV15 (what is new in IMS V15)
- REPOSITORY
- DATABASE
- VTAM
- MSC
- CATALOG

What does that parameter do?


```
                          IMSPlex Active Members                 Row 4 of 55
Command ===> ____________________________________________ Scroll ===> CSR

IMSplex . . . : PLXDP
Description . :

Search . . ODBM_____________________________________

  / System        Prompt    Description
- _ ODBM
  - _ S3XDPOD
      _ CSLDIPS3
        H ARMRST=...        Whether the z/OS ARM restarts the ODBM
        _ **  THE ODBMCFG=PS3 EXEC parameter or... this PROCLIB member
```

```
                        Help - ARMRST (CSLDIxxx)

ARMRST=
  Specifies whether the z/OS Automatic Restart Manager (ARM) is to be used
  to restart the ODBM address space after an abend. If you specify Y
  (yes), ARM restarts the ODBM address space after most system failures.
  If you specify N (no), ARM does not restart the ODBM address space after
  any system failure.

  ARM does not restart the ODBM address space if ODBM abends before
  restart is complete. For more information on ARM, see  Using z/OS
  Automatic Restart Manager  in IMS Version 11 System Administration.

  Note:  The CSLDIxxx member was introduced in IMS Version 11.
```

```
                          IMSPlex Active Members                 Row 4 of 55
Command ===> ____________________________________________ Scroll ===> CSR

IMSplex . . . : PLXDP
Description . :

Search . . ODBM_____________________________________

  / System          Prompt     Description
- _ ODBM
  - _ S3XDPOD
      E CSLDIPS3
          _ ARMRST=..                    Whe
          _ **  THE OD      FG=PS3 E
          _
```



```
EDIT       PLXDP.PROCLIB(CSLDIPS3) - 01.04              Columns 00001 00072
Command ===> ____________________________________________ Scroll ===> CSR
CHECK  Validate the member syntax
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
****** ***************************** Top of Data ****************************
000001 ************************************************************************
000002 **  This PROCLIB member is specified by the ODBMINIT=PS3              *
000003 **  value on the ODBM start up procedure.                             *
000004 **                                                                    *
000005 **  Parameters specified here are used for ODBM initialization.       *
000006 **                                                                    *
000007 **  ODBM configuration parameters are specified in the                *
000008 **  CSLDCPS3 PROCLIB member which can be specified by either          *
000009 **  THE ODBMCFG=PS3 EXEC parameter or in this PROCLIB member          *
000010 **  ON THE ODBMCFG=PS3 parameter.                                     *
000011 **                                                                   **
000012 ************************************************************************
000013 ODBMNAME=S3XDP
000014 IMSPLEX(NAME=PLXDP)
000015 ODBMCFG=PS3
000016 RRS=Y
****** ************************** Bottom of Data ****************************
```

Adding new parameters using a model (MODEL)

```
EDIT       PLXDP.PROCLIB(CSLDIPS3) - 01.04                Columns 00001 00072
Command ===> MODEL                                         Scroll ===> CSR
CHECK  Validate the member syntax
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
****** ***************************** Top of Data ***********************************
000001 ***************************************************************************
000002 **  This PROCLIB member is specified by the ODBMINI    S3                  *
000003 **  value on the ODBM start up procedure.                                  *
000004 **                                                                         *
000005 **  Parameters specified here are used for ODBM ini   lization.           *
000006 **                                                                         *
000007 **  ODBM configuration parameters are specified in                         *
000008 **  CSLDCPS3 PROCLIB member which can be specified    either              *
000009 **  THE ODBMCFG=PS3 EXEC pa
000010 **  ON THE ODBMCFG=PS3 para
000011 **
000012 ***************************
000013 ODBMNAME=S3XDP
000014 IMSPLEX(NAME=PLXDP)
000015 ODBMCFG=PS3
00001A RRS=Y
****** ***************************
```


```
                          Select a parameter
                                                          Row 1 to 6 of 6
Command ===>

Select one or more parameters then press EXIT.

      Parameter          Description
.     ARMRST             Whether the z/OS ARM restarts the ODBM
.     IMSPLEX            Specifies definitions for the IMSplex
. *   LOGOPT             Specifies the level of logging
.     ODBMCFG            Specifies ODBM configuration member suffix
S     ODBMNAME           The name of the ODBM address space
.     RRS                ODBM to use Resource Recovery Services (RRS)?
*************************** Bottom of data ****************************
```

Adding new parameters using a model (MODEL)

```
EDIT       PLXDP.PROCLIB(CSLDIPS3) - 01.05                Columns 00001 00072
Command ===> _____________________________________________ Scroll ===> PAGE
CHECK  Validate the member syntax
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
****** ***************************** Top of Data ******************************
000001 ************************************************************************
000002 **  This PROCLIB member is specified by the ODBMINIT=PS3              *
000003 **  value on the ODBM start up procedure.                             *
000004 **                                                                    *
000005 **  Parameters specified here are used for ODBM initialization.       *
000006 **                                                                    *
000007 **  ODBM configuration parameters are specified in the                *
000008 **  CSLDCPS3 PROCLIB member which can be specified by either          *
000009 **  THE ODBMCFG=PS3 EXEC parameter or in this PROCLIB member          *
000010 **  ON THE ODBMCFG=PS3 parameter.                                     *
000011 **                                                                   **
000012 ************************************************************************
000013 ODBMNAME=S3XDP
000014 IMSPLEX(NAME=PLXDP)
000015 ODBMCFG=PS3
000016 RRS=Y
000017 ODBMNAME=_____
=NOTE= ODBMNAME - The name of the ODBM address space
****** ***************************** Bottom of Data ***************************
```

Ready to fill in…

Syntax checker (CHECK)

Run CHECK

```
EDIT       PLXDP.PROCLIB(CSLDIPS3) - 01.05                Columns 00001 00072
Command ===> CHECK                                         Scroll ===> PAGE
Member has 2 issues. Position cursor and press F1 to help fix the problem.
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
****** ***************************** Top of Data ******************************
000001 ************************************************************************
000002 **  This PROCLIB member is specified by the ODBMINIT=PS3              *
000003 **  value on the ODBM start up procedure.                             *
000004 **                                                                    *
000005 **  Parameters specified here are used for ODBM initialization.       *
000006 **                                                                    *
000007 **  ODBM configuration parameters are specified in the                *
000008 **  CSLDCPS3 PROCLIB member which can be specified by either          *
000009 **  THE ODBMCFG=PS3 EXEC parameter or in this PROCLIB member          *
000010 **  ON THE ODBMCFG=PS3 parameter.                                     *
000011 **                                                                   **
000012 ************************************************************************
000013 ODBMNAME=S3XDP
000014 IMSPLEX(NAME=PLXDP)
000015 ODBMCFG=PS3
000016 RRS=Y
000017 ODBMNAME=THISNAMEISTOOLONG
====== +.........+.....................................................
==MSG> Duplicate parameter: ODBMNAME
==MSG> Value too long: THISNAMEISTOOLONG
****** ***************************** Bottom of Data ***************************
```

Two errors:

1. ODBMNAME is already defined!
2. The name we have selected is too long.

Syntax checker marks the positions of the errors

More complex example with MODEL

```
EDIT       GPL000.QAAUTO.HWS.PROCLIB(HWSCFG02) - 01.08     Columns 00001 00072
Command ===> _____________________________________________ Scroll ===> CSR
CHECK  Validate the member syntax
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
000032 ODACCESS(
000033   DRDAPORT=(ID=_____,KEEPAV=0,PORTTMOT=18000),
000034   IMSPLEX=(MEMBER=________,TMEMBER=_____),
000035   ODBMAUTOCONN=_,
000036   ODBMTMOT=18000)
=NOTE= DRDAPORT - Port used for Open Database APIs and DRDA
=NOTE=  ID      - The port number
=NOTE=            1-65535
=NOTE=  KEEPAV  - The interval for keep alive mechanism
=NOTE=            0-2147460 Default 0
=NOTE=  PORTTMOT- Time that IMS Connect waits
=NOTE= IMSPLEX  - IMSplex
=NOTE=  MEMBER  - XCF member name that identifies IMS Connect
=NOTE=  TMEMBER - Target XCF member name
=NOTE= ODBMAUTOCONN - IMS Connect automatically to ODBM
=NOTE= ODBMTMOT - Amount of time that IMS Connect waits
```

Parameter(s)

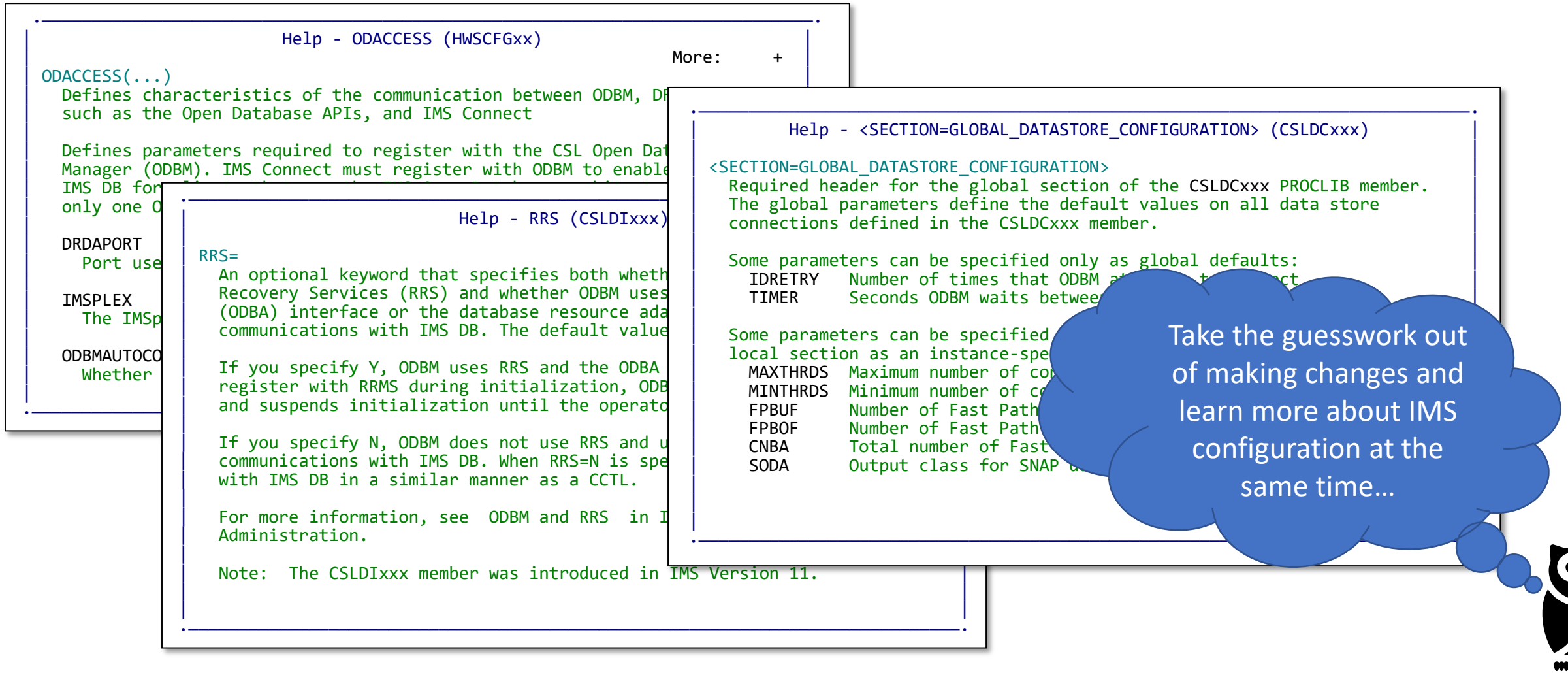
The meaning of each sub-parameter

Debugging a complex parameter member using CHECK…

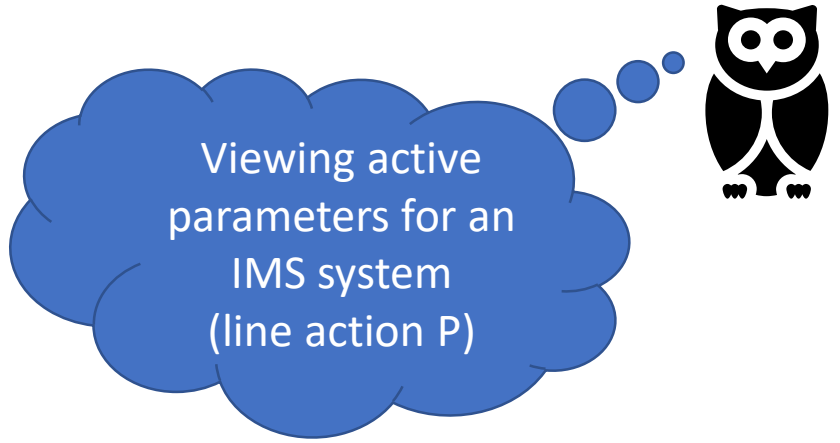
Cross-parameter validation…

```
EDIT       NEW.PROC13(HWSCFG03) - 01.02                  Columns 00001 00072
Command ===> _____________________________________________ Scroll ===> CSR
CHECK  Validate the member syntax
MODEL  Insert a new parameter with syntax assistance
HELP   Press F1 to request parameter sensitive help
****** ***************************** Top of Data ******************************
000001 HWS(ID=X)
000002 TCPIP(HOSTNAME=TCPD,
000003 SSLPORT=101,
000004 PORT=(ID=101),PORT=(ID=102),
======  .....+.....................................................
==MSG> Inconsistent parameters: Port already defined line   3 col  9
000005 PORTID=(101,2,3,4,5,6,7,8,9,10,
======  ......+.....................................................
==MSG> Inconsistent parameters: Port already defined line   3 col  9
000006          11,12,13,14,15,16,17,18,19,20,
000007          21,22,23,24,25,26,27,28,29,30,
000008          31,32,33,34,35,36,37,38,39,40,
000009          41,42,43,44,45,46,47,48,49,50,
======  ..............................+.+.+.....................................
==MSG> Number of elements exceeds maximum allowed: Total ports (>50)
==MSG> Number of elements exceeds maximum allowed: Total ports (>50)
==MSG> Number of elements exceeds maximum allowed: Total ports (>50)
000010          51,52))
======  ......+..+..................................................
==MSG> Number of elements exceeds maximum allowed: Total ports (>50)
==MSG> Number of elements exceeds maximum allowed: Total ports (>50)
****** *************************** Bottom of Data ***************************
.-------------------------------------------------------------------------.
| Member has 7 issues. Position cursor and press F1 to help fix the problem. |
.-------------------------------------------------------------------------.
```

Getting help whilst viewing a member (HELP)

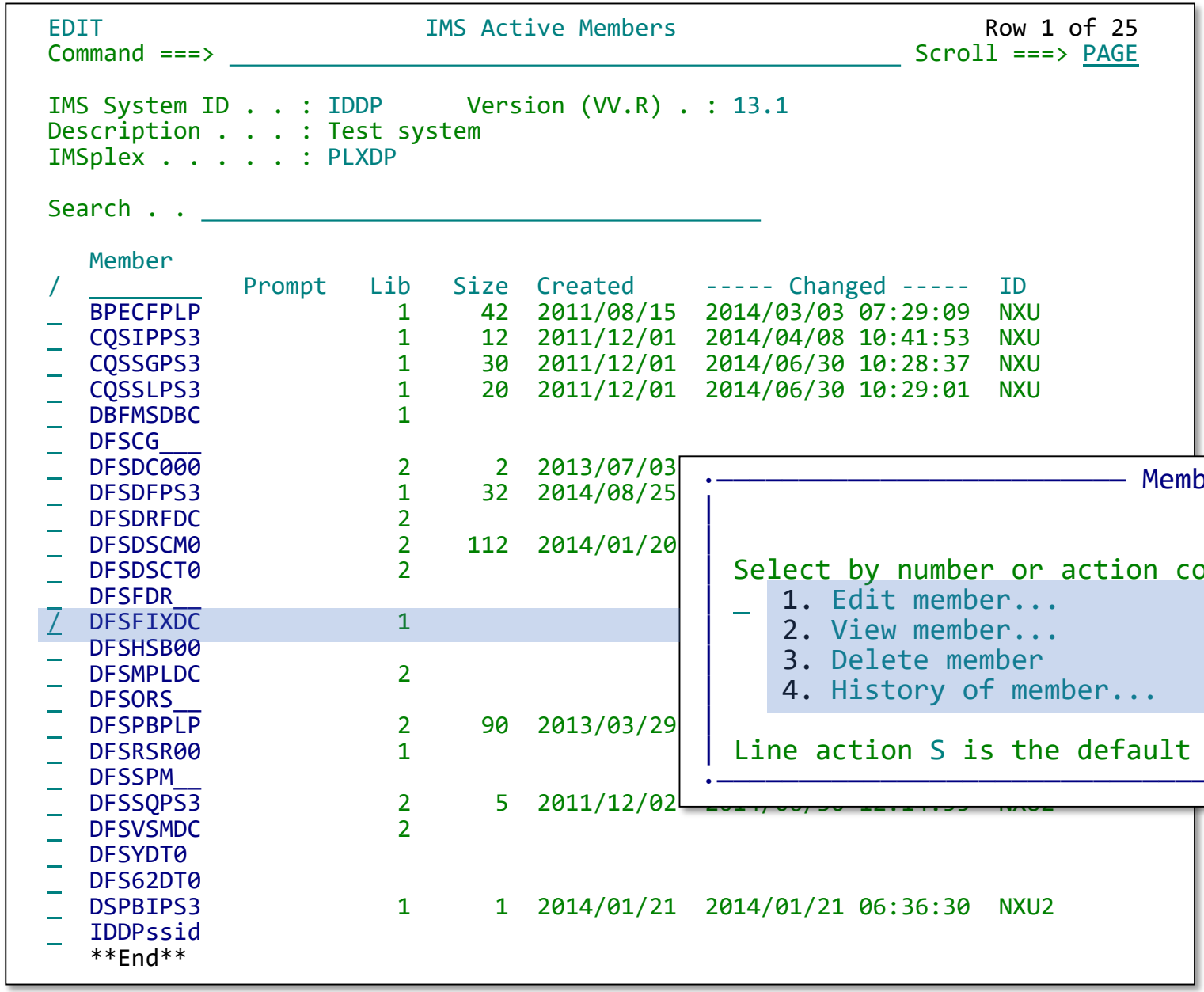


Viewing active parameters by IMS



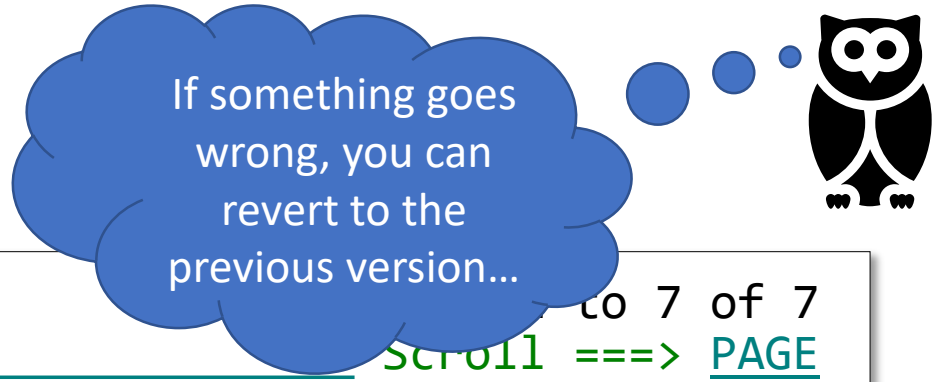

```
                IMS Configuration Manager 2.3 - Primary Option Menu
Option ===>

0 Profile     Customize your IMS Configuration Manager profile
1 IMSplexes   Maintain IMS parameters across an IMSplex
2 Systems     Maintain IMS parameters for a system
3 PROCLIBs    Maintain IMS PROCLIB data sets
4 Discovery   Run the autodiscovery utility

X Exit        Exit IMS Configuration Manager

Environment:
  Definitions Repository  'GPL999.REPOSTRY.VGPL3504'                    +
```

```
                                  System Member List          Row 23 of 67 More: <>
Command ===>                                                  Scroll ===> PAGE

Enter NEW to create a new Member

     Name      Type     IMSplex  VV.R  Description
/    *         *        *        *     *
___  ICMIC00   IMSCON   +2       12.1
___  ICMIC01   IMSCON            12.1
___  ICMIC02   IMSCON   PLXDP    13.1
___  ICONCDQ2  IMSCON   PLDDQ    12.1
___  ICONDDQ1  IMSCON            13.1
___  IDDH      IMS      PLDDH    13.1
___  IDDJ      IMS      PLDDJ    13.1
P    IDDP      IMS      PLXDP    13.1
___  IDDQ      IMS      PLDDQ    13.1
```



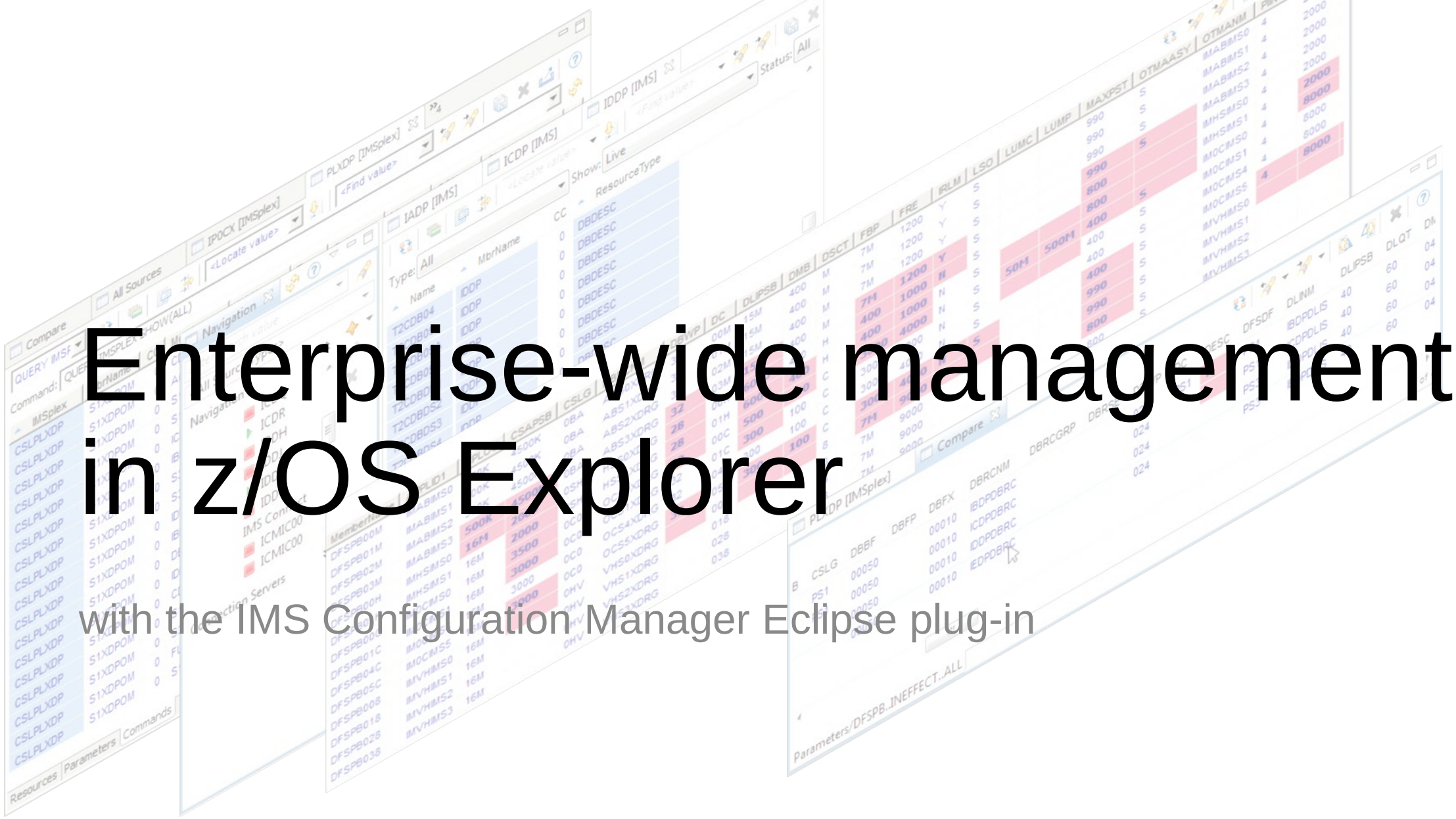
Viewing active parameters for an IMS system (line action P)

Parameter change history




```
                                Member History                  to 7 of 7
Command ===> _____________________________________________ Scroll ===> PAGE

PROCLIB . . : MY.PROC15

/     Member   Prompt    Level  Size ----- Created ----- ID
___   DFSPBV15           Active   12 2017/03/27 10:29:15 ME
___   DFSPBV15           00006     3 2017/02/13 17:08:38 YOU
___   DFSPBV15           00005     2 2016/11/29 16:41:45 ME
___   DFSPBV15           00004     3 2016/11/29 16:10:16 YOU
___   DFSPBV15           00003     2 2016/11/22 16:08:22 YOU
___   DFSPBV15           00002     2 2016/11/22 16:07:42 ME
___   DFSPBV15           00001     1 2016/11/02 15:53:37 ME
****************************** Bottom of data ******************************
```

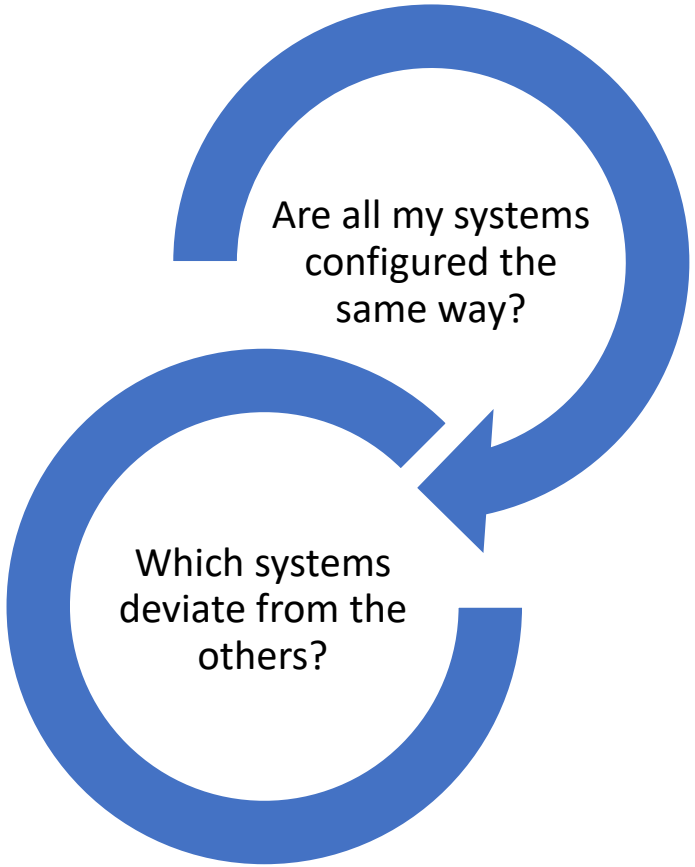
Changes must occur inside IMS Configuration Manager



Enterprise-wide management in z/OS Explorer

with the IMS Configuration Manager Eclipse plug-in

Extending out beyond a single IMS system



Use IMS Configuration Manager and z/OS Explorer to perform the following tasks:

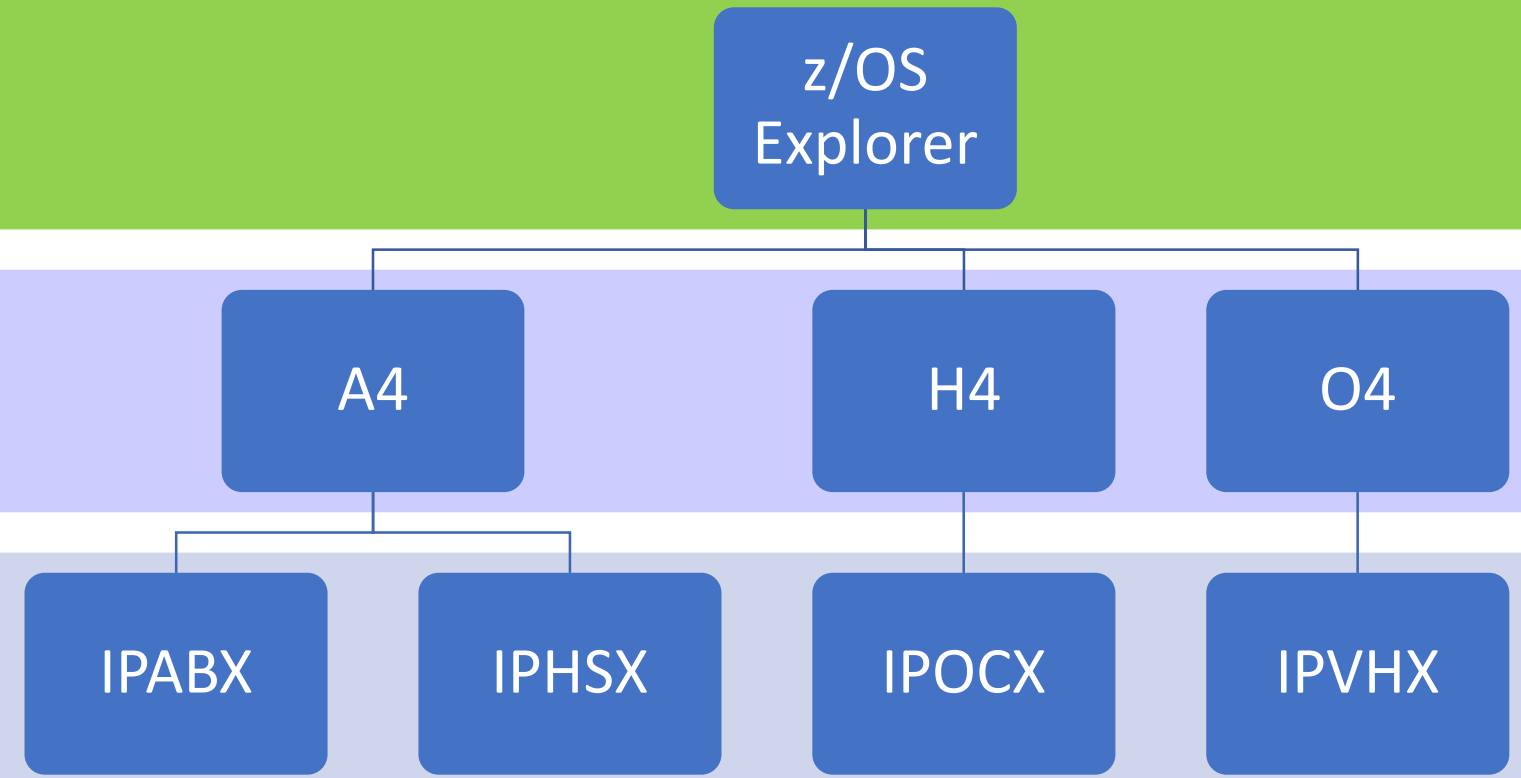
- Centralize and **consolidate** your IMS configurations
- View IMS **systems**, **resources**, and **parameters**
- **Compare** parameters across multiple systems
- Submit **IMS type-2 commands** and view the output
- Use **filters** to highlight transactions with special attributes
- List all **active parameter members** across your enterprise and drill down to parameter values
- **Export** data for external analysis

A unified view via the IBM Common Services Library

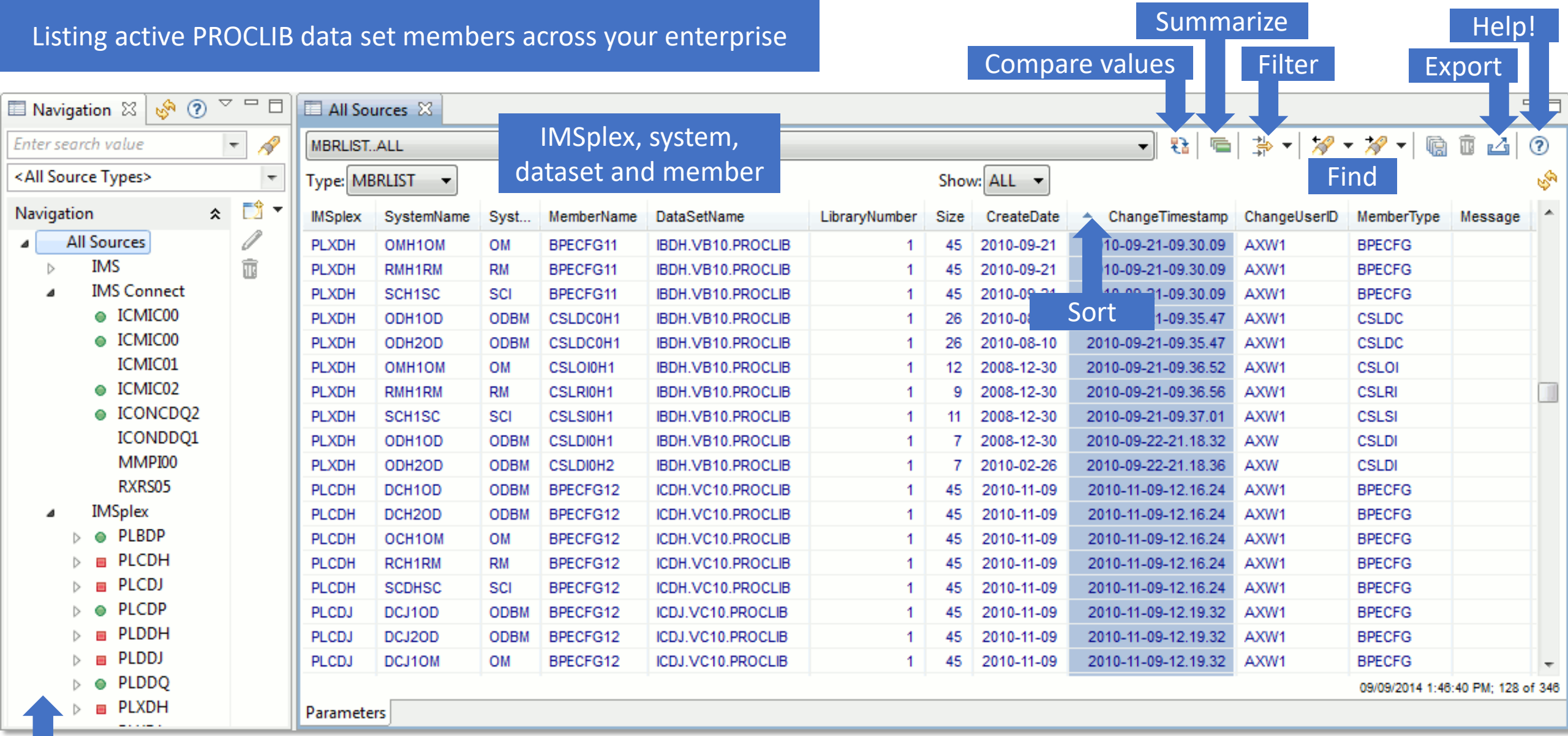
The **IMS Configuration Manager Eclipse plug-in for z/OS Explorer** displays a unified view for all IBM Common Services Library servers.

The **IBM Common Services Library server** supplies topology information to z/OS Explorer

IMS Configuration Manager automatically discovers and stores vital information about your IMS topology in a **definitions repository**



Listing active PROCLIB data set members across your enterprise



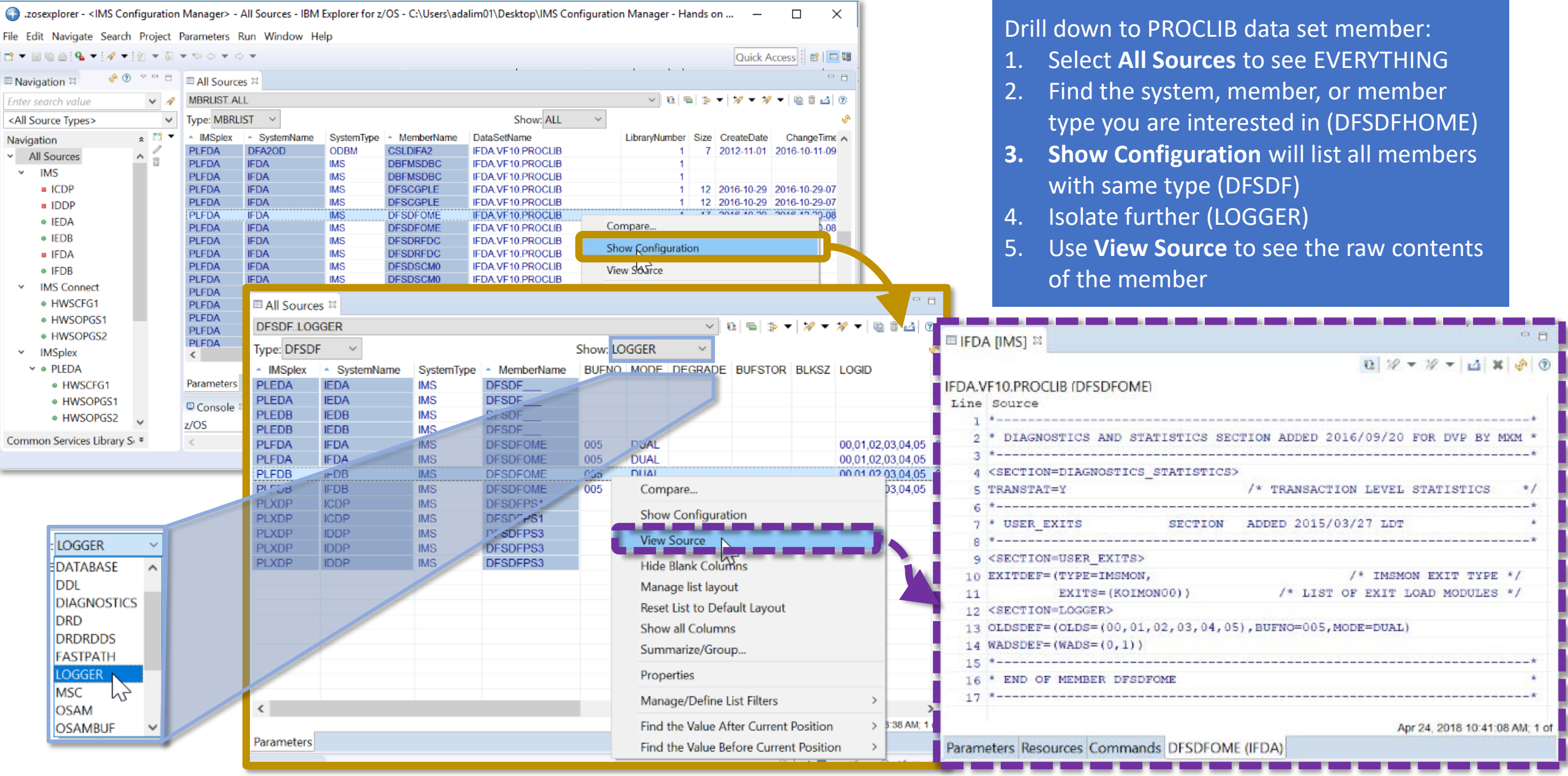
IMSplex	SystemName	Syst...	MemberName	DataSetName	LibraryNumber	Size	CreateDate	ChangeTimestamp	ChangeUserID	MemberType	Message
PLXDH	OMH1OM	OM	BPECFG11	IBDH.VB10.PROCLIB	1	45	2010-09-21	10-09-21-09.30.09	AXW1	BPECFG	
PLXDH	RMH1RM	RM	BPECFG11	IBDH.VB10.PROCLIB	1	45	2010-09-21	10-09-21-09.30.09	AXW1	BPECFG	
PLXDH	SCH1SC	SCI	BPECFG11	IBDH.VB10.PROCLIB	1	45	2010-09-21	10-09-21-09.30.09	AXW1	BPECFG	
PLXDH	ODH1OD	ODBM	CSLDC0H1	IBDH.VB10.PROCLIB	1	26	2010-08	1-09.35.47	AXW1	CSLDC	
PLXDH	ODH2OD	ODBM	CSLDC0H1	IBDH.VB10.PROCLIB	1	26	2010-08-10	2010-09-21-09.35.47	AXW1	CSLDC	
PLXDH	OMH1OM	OM	CSLOI0H1	IBDH.VB10.PROCLIB	1	12	2008-12-30	2010-09-21-09.36.52	AXW1	CSLOI	
PLXDH	RMH1RM	RM	CSLRI0H1	IBDH.VB10.PROCLIB	1	9	2008-12-30	2010-09-21-09.36.56	AXW1	CSLRI	
PLXDH	SCH1SC	SCI	CSLSI0H1	IBDH.VB10.PROCLIB	1	11	2008-12-30	2010-09-21-09.37.01	AXW1	CSLSI	
PLXDH	ODH1OD	ODBM	CSLDI0H1	IBDH.VB10.PROCLIB	1	7	2008-12-30	2010-09-22-21.18.32	AXW	CSLDI	
PLXDH	ODH2OD	ODBM	CSLDI0H2	IBDH.VB10.PROCLIB	1	7	2010-02-26	2010-09-22-21.18.36	AXW	CSLDI	
PLCDH	DCH1OD	ODBM	BPECFG12	ICDH.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.16.24	AXW1	BPECFG	
PLCDH	DCH2OD	ODBM	BPECFG12	ICDH.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.16.24	AXW1	BPECFG	
PLCDH	OCH1OM	OM	BPECFG12	ICDH.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.16.24	AXW1	BPECFG	
PLCDH	RCH1RM	RM	BPECFG12	ICDH.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.16.24	AXW1	BPECFG	
PLCDH	SCDHSC	SCI	BPECFG12	ICDH.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.16.24	AXW1	BPECFG	
PLCDJ	DCJ1OD	ODBM	BPECFG12	ICDJ.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.19.32	AXW1	BPECFG	
PLCDJ	DCJ2OD	ODBM	BPECFG12	ICDJ.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.19.32	AXW1	BPECFG	
PLCDJ	DCJ1OM	OM	BPECFG12	ICDJ.VC10.PROCLIB	1	45	2010-11-09	2010-11-09-12.19.32	AXW1	BPECFG	

Consolidated list of systems organized by IMS, IMSplex, and IMS Connect

d configure your IMS Systems with IMS Configuration Manager

Drill down to PROCLIB data set member:

1. Select **All Sources** to see EVERYTHING
2. Find the system, member, or member type you are interested in (DFSDFHOME)
3. **Show Configuration** will list all members with same type (DFSDF)
4. Isolate further (LOGGER)
5. Use **View Source** to see the raw contents of the member



A smarter way to manage and configure your IMS Systems with IMS Configuration Manager

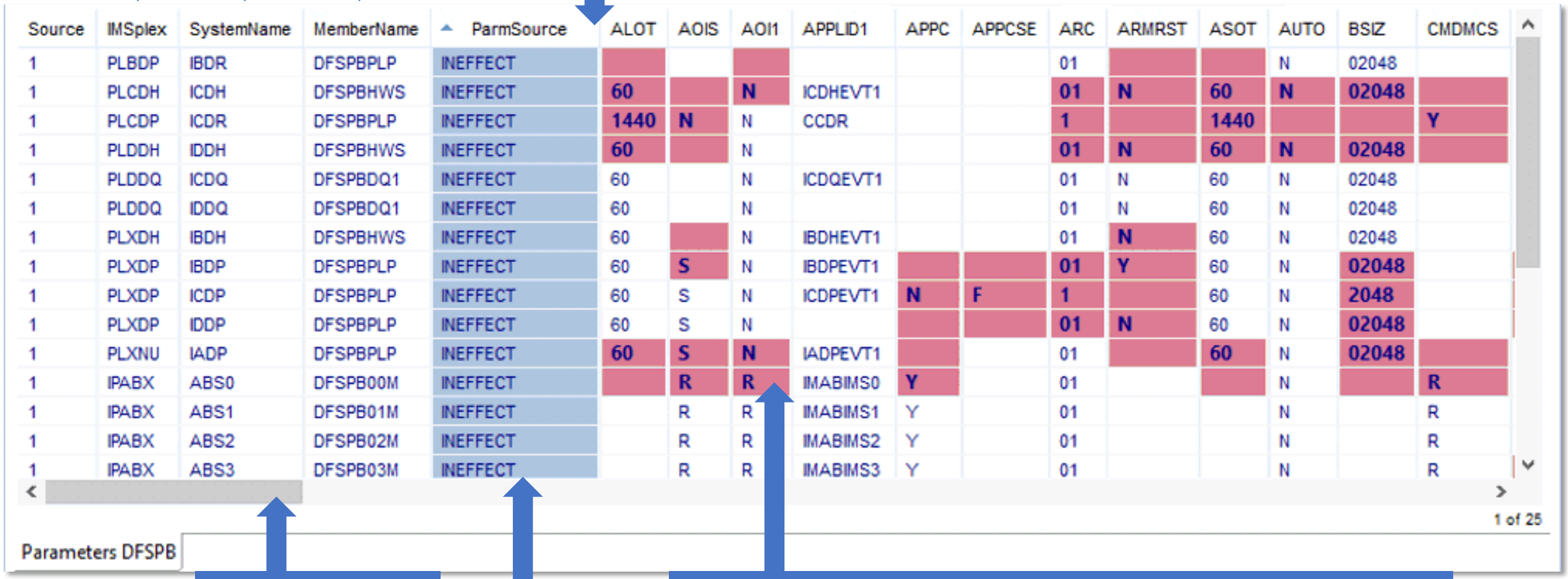
IBM IMS Tools

Location of parameter

Parameter values (down)

Identify parameter differences across the enterprise

Parameter names (across)



Source	IMSplex	SystemName	MemberName	ParmSource	ALOT	AOIS	AOI1	APPLID1	APPC	APPCSE	ARC	ARMRST	ASOT	AUTO	BSIZ	CMDMCS
1	PLBDP	IBDR	DFSPBPLP	INEFFECT							01			N	02048	
1	PLCDH	ICDH	DFSPBHWS	INEFFECT	60		N	ICDHEVT1			01	N	60	N	02048	
1	PLCDP	ICDR	DFSPBPLP	INEFFECT	1440	N	N	CCDR			1		1440			Y
1	PLDDH	IDDH	DFSPBHWS	INEFFECT	60		N				01	N	60	N	02048	
1	PLDDQ	ICDQ	DFSPBDQ1	INEFFECT	60		N	ICDQEVT1			01	N	60	N	02048	
1	PLDDQ	IDDQ	DFSPBDQ1	INEFFECT	60		N				01	N	60	N	02048	
1	PLXDH	IBDH	DFSPBHWS	INEFFECT	60		N	IBDHEVT1			01	N	60	N	02048	
1	PLXDP	IBDP	DFSPBPLP	INEFFECT	60	S	N	IBDPEVT1			01	Y	60	N	02048	
1	PLXDP	ICDP	DFSPBPLP	INEFFECT	60	S	N	ICDPEVT1	N	F	1		60	N	2048	
1	PLXDP	IDDP	DFSPBPLP	INEFFECT	60	S	N				01	N	60	N	02048	
1	PLXNU	IADP	DFSPBPLP	INEFFECT	60	S	N	IADPEVT1			01		60	N	02048	
1	IPABX	ABS0	DFSPB00M	INEFFECT		R	R	IMABIMS0	Y		01			N		R
1	IPABX	ABS1	DFSPB01M	INEFFECT		R	R	IMABIMS1	Y		01			N		R
1	IPABX	ABS2	DFSPB02M	INEFFECT		R	R	IMABIMS2	Y		01			N		R
1	IPABX	ABS3	DFSPB03M	INEFFECT		R	R	IMABIMS3	Y		01			N		R

1 of 25

Parameters DFSPB

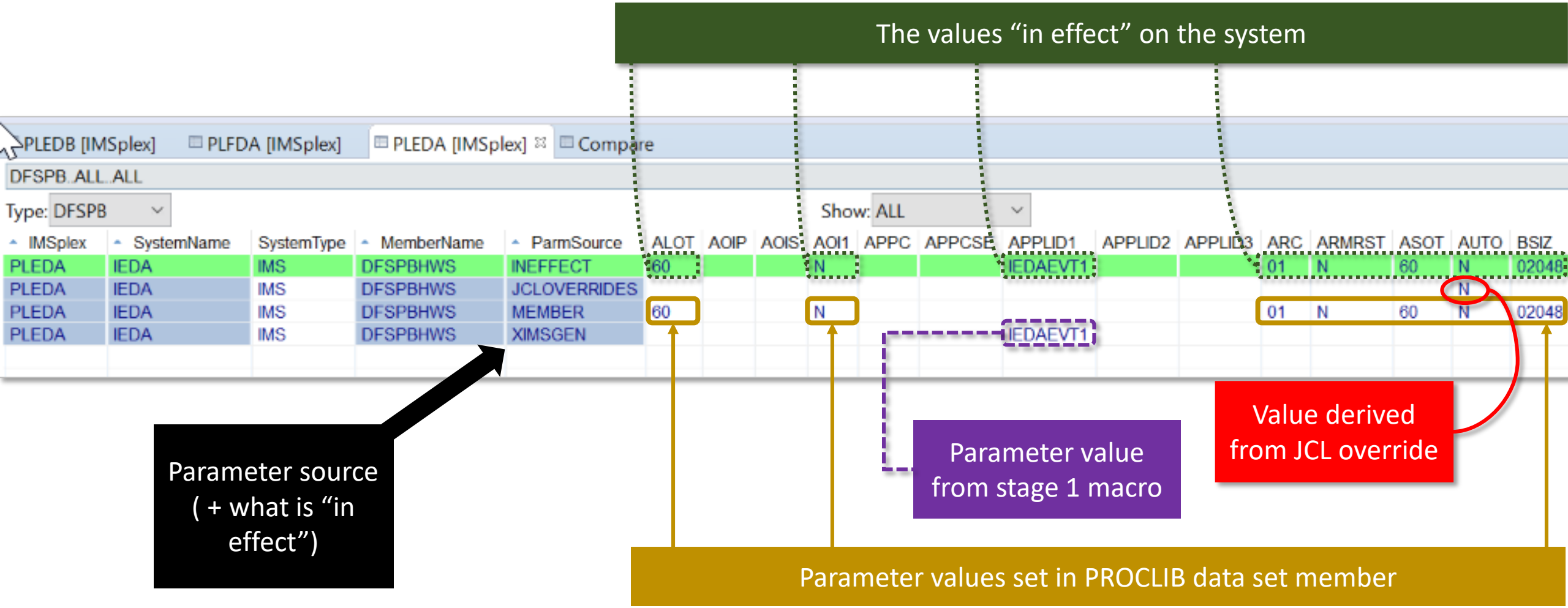
Scroll for more…

“Hotspot” shows a change in value from one row to the next…

Select the value that is “in effect” on the system, the value in a member, the values in JCL overrides (if present), or stage 1 macro

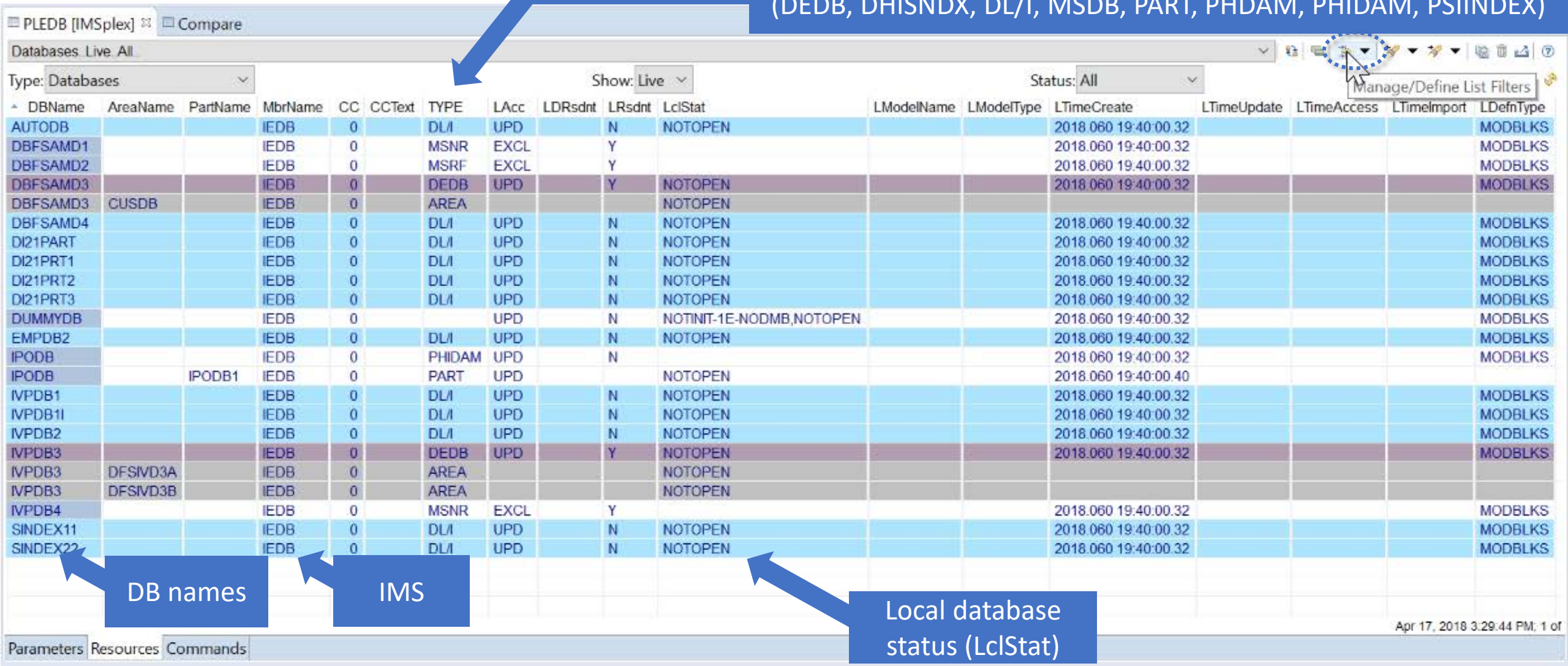
IBM IMS Tools

Are my parameters in stage 1, PROCLIB data set members, or in JCL overrides?



Browsing resources in an IMSplex

Here we have applied special highlighting to help us differentiate between values reported in the **TYPE** column (DEDB, DHISNDX, DL/I, MSDB, PART, PHDAM, PHIDAM, PSIINDEX)



DBName	AreaName	PartName	MbrName	CC	CCText	TYPE	LAcc	LDRsdnt	LRsdnt	LclStat	LModelName	LModelType	LTimeCreate	LTimeUpdate	LTimeAccess	LTimeImport	LDefnType
AUTODB			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DBFSAMD1			IEDB	0		MSNR	EXCL		Y				2018.060 19:40:00.32				MODBLKS
DBFSAMD2			IEDB	0		MSRF	EXCL		Y				2018.060 19:40:00.32				MODBLKS
DBFSAMD3			IEDB	0		DEDB	UPD		Y	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DBFSAMD3	CUSDB		IEDB	0		AREA				NOTOPEN							
DBFSAMD4			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DI21PART			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DI21PRT1			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DI21PRT2			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DI21PRT3			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
DUMMYDB			IEDB	0			UPD		N	NOTINIT-1E-NODMB,NOTOPEN			2018.060 19:40:00.32				MODBLKS
EMPDB2			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
IPODB			IEDB	0		PHIDAM	UPD		N				2018.060 19:40:00.32				MODBLKS
IPODB		IPODB1	IEDB	0		PART	UPD			NOTOPEN			2018.060 19:40:00.40				
IVPDB1			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
IVPDB1I			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
IVPDB2			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
IVPDB3			IEDB	0		DEDB	UPD		Y	NOTOPEN			2018.060 19:40:00.32				MODBLKS
IVPDB3	DFSIVD3A		IEDB	0		AREA				NOTOPEN							
IVPDB3	DFSIVD3B		IEDB	0		AREA				NOTOPEN							
IVPDB4			IEDB	0		MSNR	EXCL		Y				2018.060 19:40:00.32				MODBLKS
SINDEX11			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS
SINDEX22			IEDB	0		DL/I	UPD		N	NOTOPEN			2018.060 19:40:00.32				MODBLKS

DB names

IMS

Local database status (LclStat)

Submit an IMS command, view formatted responses, sort, filter, compare…

QUERY IMSPLEX SHOW(ALL)

1. Enter query

2. Submit

Command: QUERY IMSPLEX SHOW(ALL)

IMSplex	MbrName	CC	Member	JobName	Type	Subtype	Version	OSName	Status
CSLPLXDH	OMH1OM	0	ACMEPLX	FUDREA	AOP	FUDSRVR	1.4.0	FTS1	ACTIVE
CSLPLXDH	OMH1OM	0	IDTCSEVR	IDT#FUD	AOP	FUDSRVR	1.4.0	FTS1	ACTIVE
CSLPLXDH	OMH1OM	0	AXLFUD	FUDAXL	AOP	FUDSRVR	1.4.0	FTS1	ACTIVE
CSLPLXDH	OMH1OM	0	MARK	FUDMMA	AOP	FUDSRVR	1.4.0	FTS1	ACTIVE
CSLPLXDH	OMH1OM	0	IBDH	IBDHCTL	IMS	DBDC	11.1.0	FTS1	READY,ACTIVE
CSLPLXDH	OMH1OM	0	SCH1SC	IBDHSCI	SCI		1.4.0	FTS1	READY,ACTIVE
CSLPLXDH	OMH1OM	0	OMH1OM	IBDHOM	OM		1.4.0	FTS1	READY,ACTIVE
CSLPLXDH	OMH1OM	0	RMH1RM	IBDHRM	RM	SNGLRM	1.4.0	FTS1	READY,ACTIVE

04/11/2013 9:42:16 AM; 1 of 8

For more information on IMS QUERY commands:
https://www.ibm.com/support/knowledgecenter/en/SSEPH2_15.1.0/com.ibm.ims15.doc.cr/imscmds/ims_querycmds.htm

Submit IMS command, view formatted response

QUERY PGM NAME(*) SHOW(ALL)

PLEDB [IMSplex] Compare

QUERY PGM NAME(*) SHOW(ALL)

Command: QUERY PGM NAME(*) SHOW(ALL)

PgmName	MbrName	CC	CCText	LRgnTyp	BMPType	LFP	LDOPT	LGPSB	LDRsdnt	LRsdnt	LTranStat	LPgmLang	LSchdType	LclStat	LModelName	LModelType	LTimeCreate	LTimeUpdate	LTimeAccess	LTimeImport	LDefnType
DFSIVP62	IEDB	0		BMP		N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP64	IEDB	0		BMP	Y	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP65	IEDB	0		BMP	Y	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP67	IEDB	0		JBP	Y	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP7	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP8	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVP9	IEDB	0		BMP	Y								PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPA	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPB	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPC	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPD	IEDB	0		BMP	Y	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPE	IEDB	0		MPP	N	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPF	IEDB	0		MPP	N	N	N	N					PARALLEL				2018.060 19:40:00.32				MODBLKS
DFSIVPG	IEDB	0		IFP	N	E	N	N					PARALLEL				2018.060				LKS
DFSSAM01	IEDB	0		BMP	Y	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM02	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM03	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM04	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM05	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM06	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM07	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM08	IEDB	0		BMP	Y	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM09	IEDB	0		BMP	Y	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM31	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM32	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAM33	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060				LKS
DFSSAMA1	IEDB	0		BMP	Y	N	N	N		N	N		SERIAL	NOTINIT-40-NOPSB			2018.060				LKS
DFSSAMA2	IEDB	0		BMP	Y	N	N	N		N	N		SERIAL	NOTINIT-40-NOPSB			2018.060				LKS
DFSSAMA3	IEDB	0		BMP	Y	N	N	N		N	N		SERIAL	NOTINIT-40-NOPSB			2018.060				LKS
DVPPGM01	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
IPOPSB	IEDB	0		JMP	N	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
IVPREXX	IEDB	0		MPP	N	N	N	Y		N	N	ASM/CBL	PARALLEL				2018.060 19:40:00.32				MODBLKS
JLMPGM01	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS
MQATPGM	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL	NOTINIT-40-NOPSB			2018.060 19:40:00.32				MODBLKS
TWMPGM01	IEDB	0		MPP	N	N	N	N		N	N		PARALLEL				2018.060 19:40:00.32				MODBLKS

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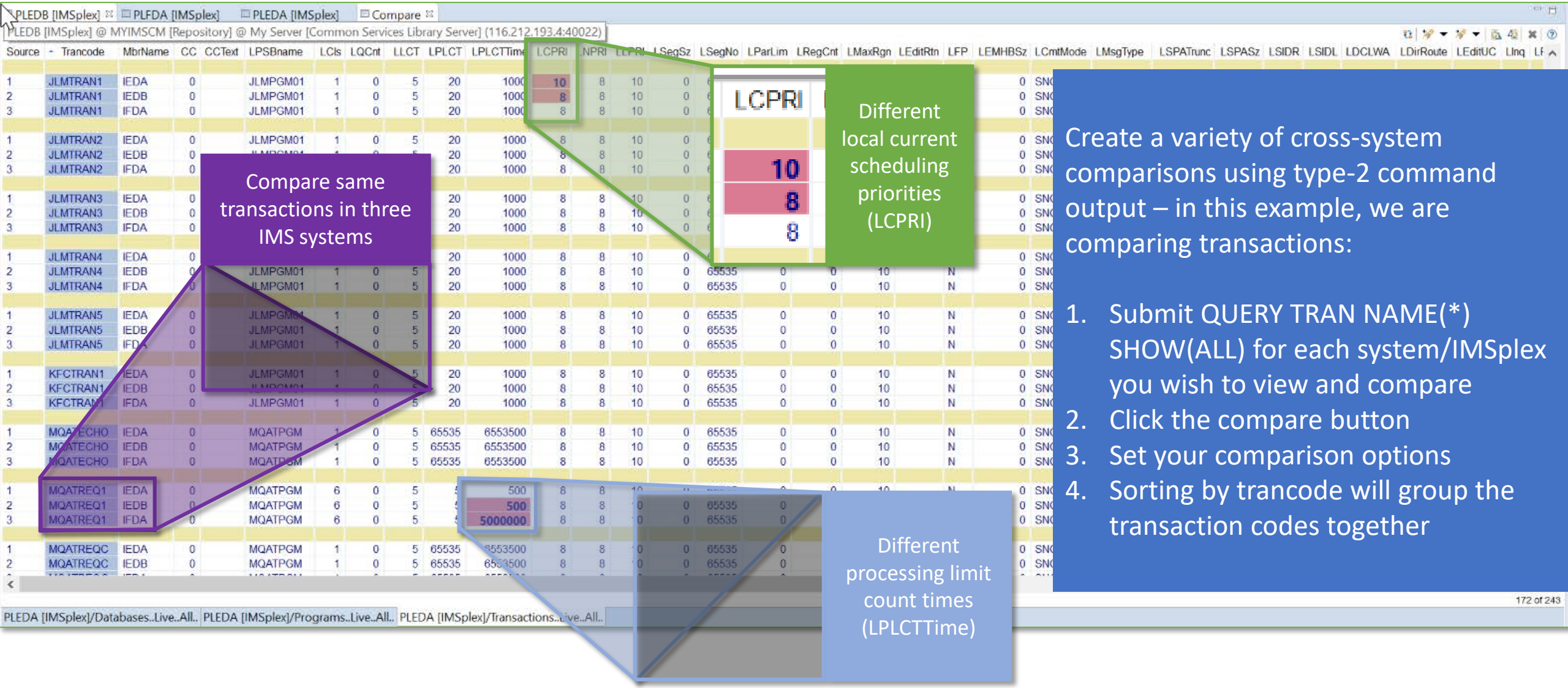
Parameters | Resources | Commands

Show me the programs in IMSplex PLEDB

Here we have applied a filter to the **LclStat** column output to highlight local application program status information

Submit IMS commands, view formatted responses, ***and perform cross-system response comparison***



Create a variety of cross-system comparisons using type-2 command output – in this example, we are comparing transactions:

1. Submit QUERY TRAN NAME(*) SHOW(ALL) for each system/IMSplex you wish to view and compare
2. Click the compare button
3. Set your comparison options
4. Sorting by trancode will group the transaction codes together

Your IMS configuration under complete control

Autodiscovery: Your topology questions answered.

- IMSplexes
- IMS systems
- IMS Connect
- CSL members
- PROCLIB data sets
- JCL overrides

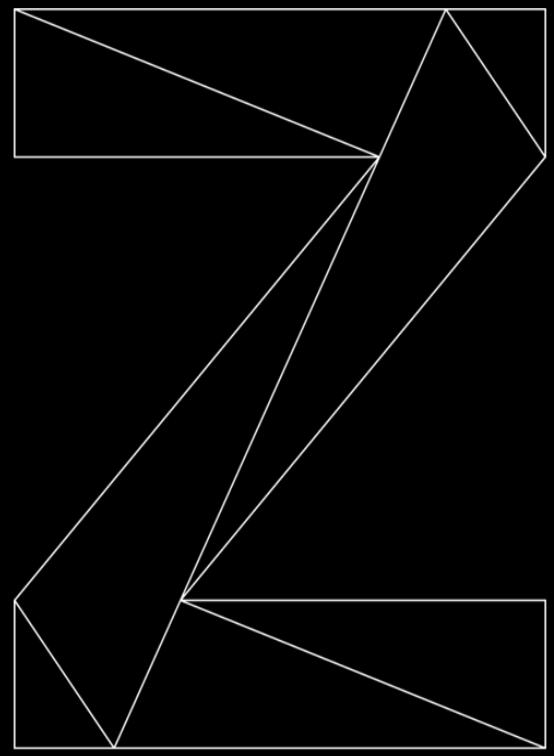
Parameter editing (ISPF): Make changes with confidence

- Active members
- Syntax checker
- Parameter model
- Parameter help
- Change history
- Revert

Enterprise-wide management (z/OS Explorer): Your enterprise now fully understood.

- Cross-system parameter comparisons
- Browse resources (programs, databases..)
- Submit IMS commands (e.g. QUERY)
- Highlight, filter, and find
- Export for offline analysis

Reference	Link
IMS Configuration Manager for **z/OS Explorer**	https://developer.ibm.com/mainframe/products/downloads/eclipse-tools/
IMS Configuration Manager **documentation**	https://www.ibm.com/support/knowledgecenter/en/SSF2ZH_2.3.0
IMS Configuration Manager **marketplace** page	https://www.ibm.com/au-en/marketplace/ims-configuration-manager-for-zos



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For More Information

- IMS Tools website
  www.ibm.com/it-infrastructure/z/ims/tools

- IMS Tools new functions
  www.ibm.com/support/docview.wss?uid=swg22015506

- IMS Tools Product Documentation
  www.ibm.com/support/docview.wss?uid=swg27020942

- IMS Tools Youtube Playlist
  www.youtube.com/playlist?list=PLezLS0Tuqb-5DSdF1Locnq5IhTgcX02vf

- IMS new functions
  www.ibm.com/support/knowledgecenter/en/SSEPH2_15.1.0/com.ibm.ims15.doc.rpg/ims_cd_functions.htm

- IBM zITSM newsletter (email every 2 months with summary articles and links to more information)
  http://ibm.biz/zITSMNewsletterSubscribe

धन्यवाद

Hindi

多謝

Traditional

감사합니다

Korean

Спасибо

Russian

Ndzi khense ngopfu

Tsonga

Gracias

Spanish

Thank You

English

Obrigado

Brazilian Portuguese

شكرا

Arabic

Grazie

Italian

Danke

German

多谢

Simplified Chinese

Merci

French

Ke a leboha

Tswana

நன்றி

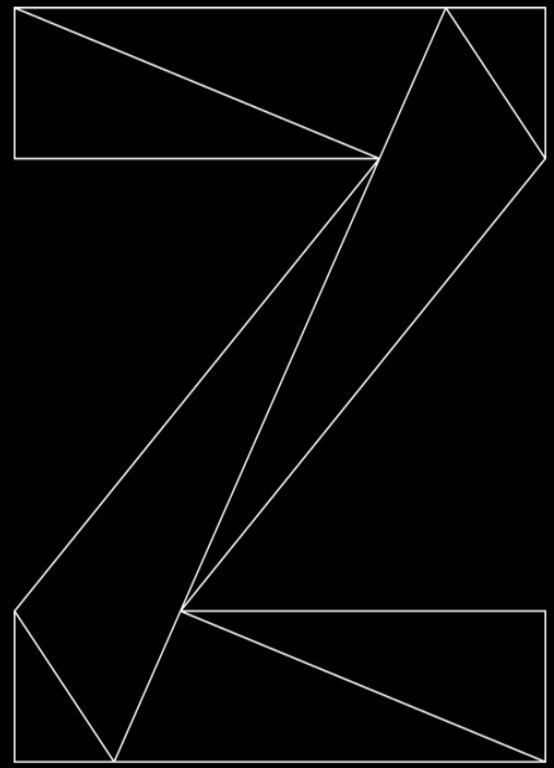
Tamil

ありがとうございました

Japanese

ขอบคุณ

Thai



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