



z/OS Introduction and Workshop

Configuration

Unit Objectives

After completing this unit, you should be able to:

- Describe IPL process
- Describe IPL device and LOADPARM device
- Describe Support Element and HMC
- Describe System Parameters/Definitions
- Determine IPL and LOAPARM device using MVS commands
- Determine LOADPARM member read at IPL time
- Determine parameter libraries read at IPL time
- Determine parameter library members read at IPL time

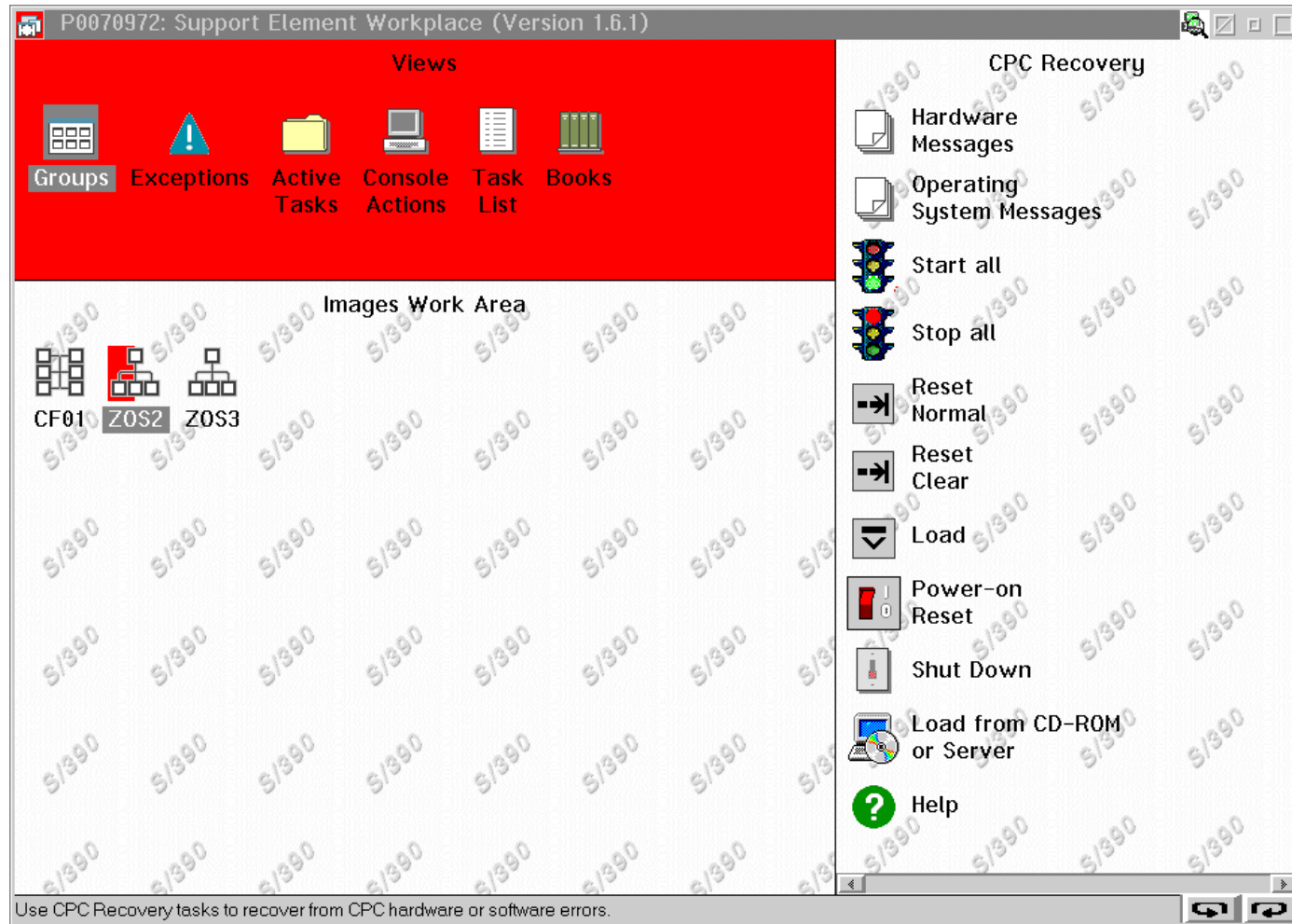
System Initialization

The system operator supplies parameters instructing the system to load

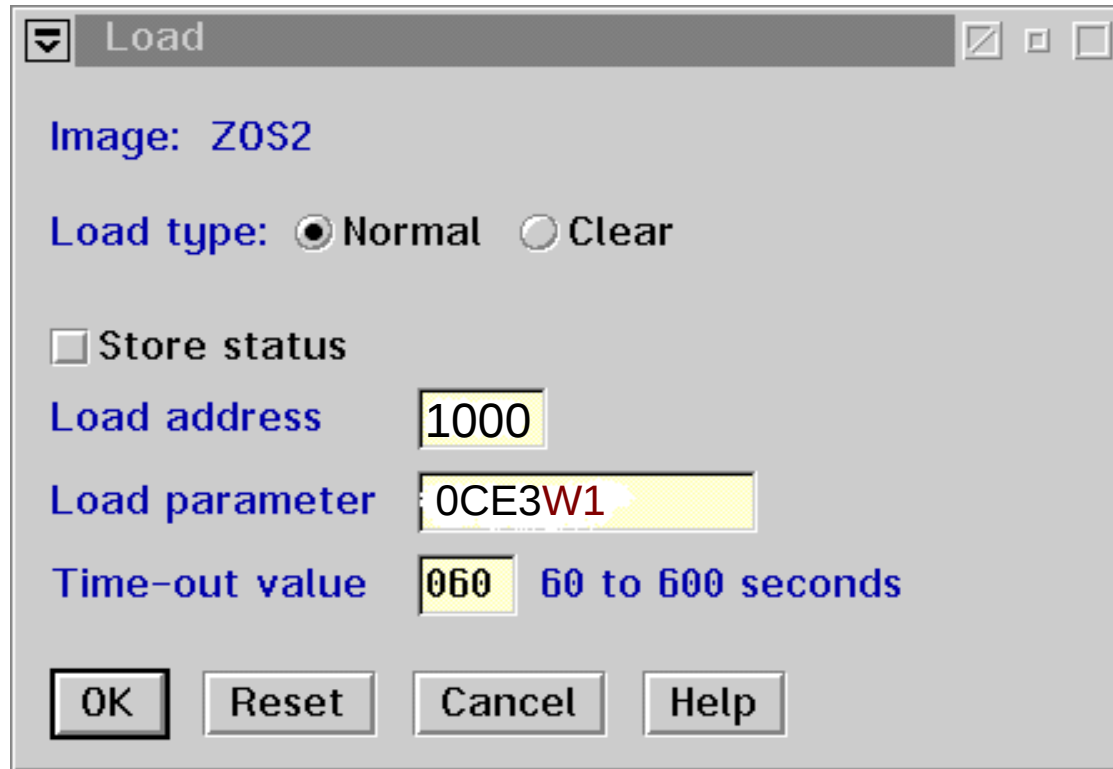
The bootstrap code on the IPL volume is loaded into storage at address 0 and control passed to it

The bootstrap the reads the IPLTEXT program IEAIPL00 which is given control and the complex task of loading the system starts

Hardware Management Console (HMC) & Support Element (SE)



Disk Device Address of SYSRES and SYS1.IPLPARM



Load

Image: ZOS2

Load type: Normal Clear

Store status

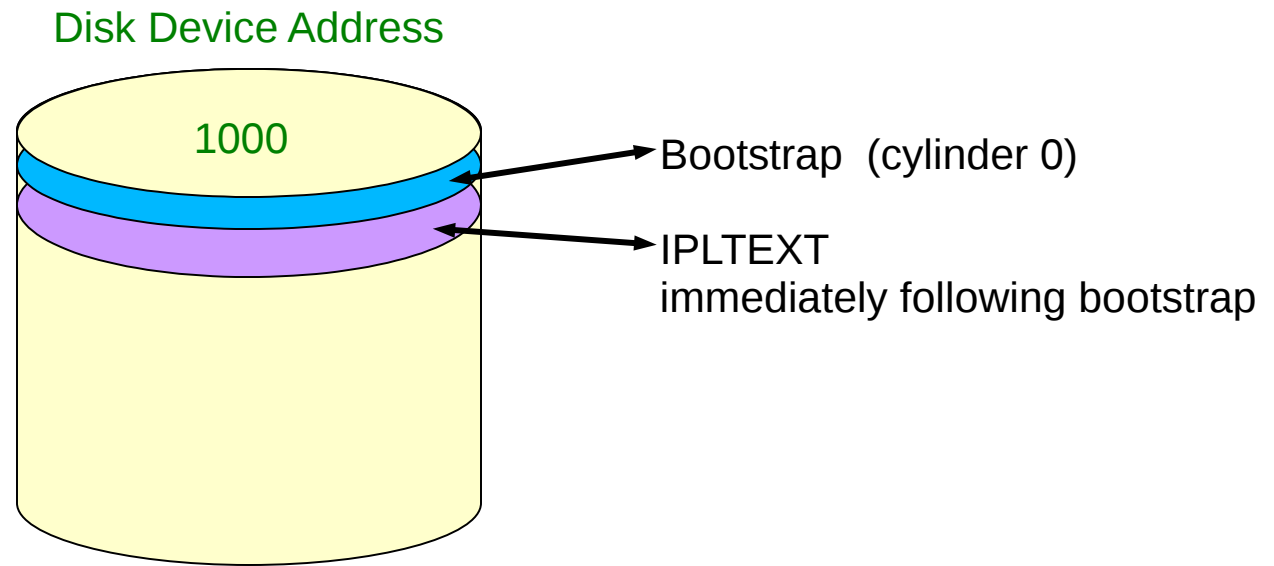
Load address

Load parameter

Time-out value 60 to 600 seconds

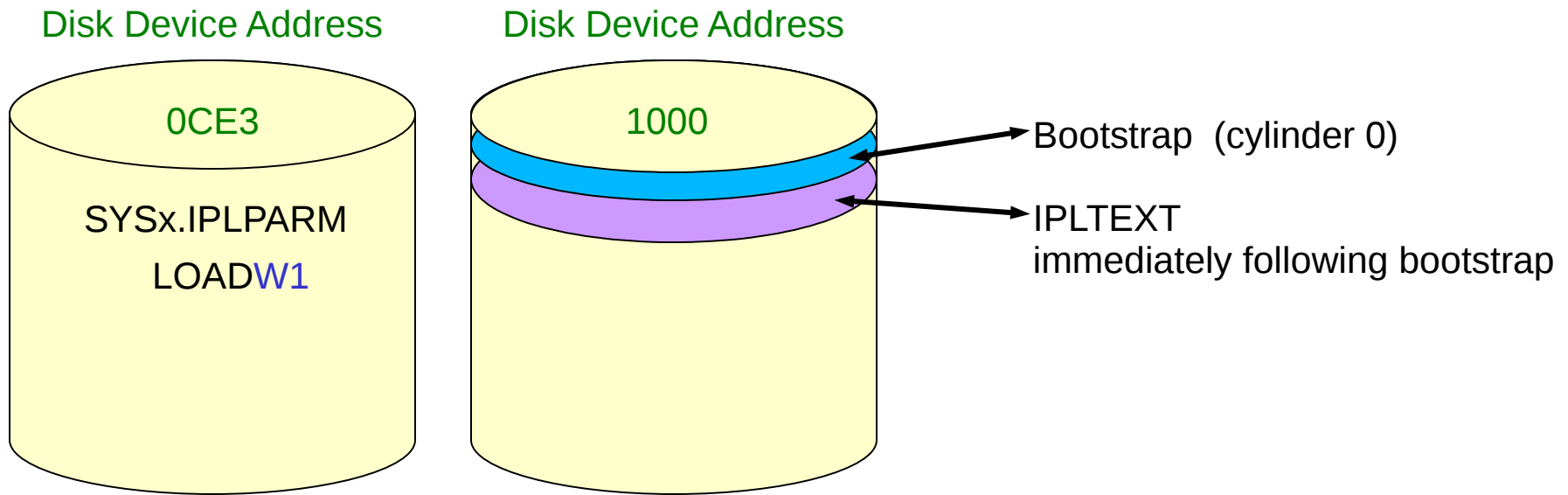
OK Reset Cancel Help

Initial Program Load (IPL)



Initial Program Load (IPL)

IPL 1000 LOADPARM 0CE3W1



System Definitions

IPL loadparm → **SYS1.IPLPARM(LOADW1)** → **PARMLIB(IEASYSxx)**

SYS1.IPLPARM(LOADW1)

IEASYM (W1,SV,VN)
 INITSQA 0000K 0512K
 IODF 00 SYS1 MVS 00 Y
 NUCLEUS 1
 NUCLST SV N

SYSCAT VPMVSB113MASTERV.CATALOG

SYSPARM (00,LV,SV,VN)

SYSPLEX SVSCPLEX
 PARMLIB VENDOR.PARMLIB
 PARMLIB SVTSC.PARMLIB
 PARMLIB LVL0.PARMLIB
 PARMLIB SYS1.PARMLIB

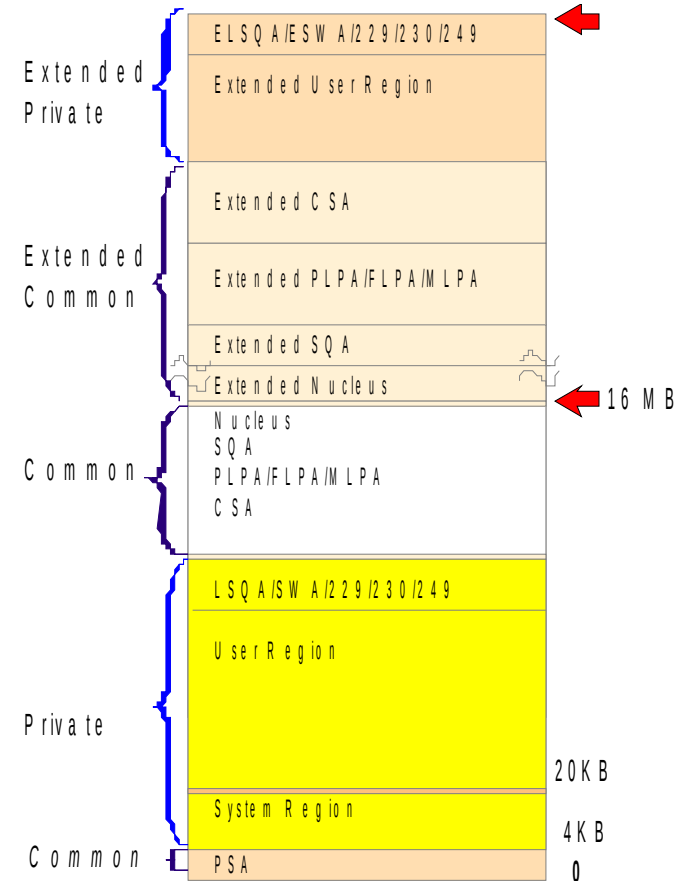
IEASYS00 Search PARMLIB concatenation for
 IEASYSLV IEASYSxx
 IEASYS SV PDS member names
 IEASYSVN

IEAIPL00 & Storage Map for Address Spaces

IEAIPL00 prepares the system by clearing central storage to zeroes then defines storage areas for the master scheduler

SYS1.NUCLEUS is located and a series of modules loaded which construct the normal environment of control blocks and subsystems

The first part of the Nucleus Initialization Program, NIP, is then loaded



Data Areas and Control Blocks

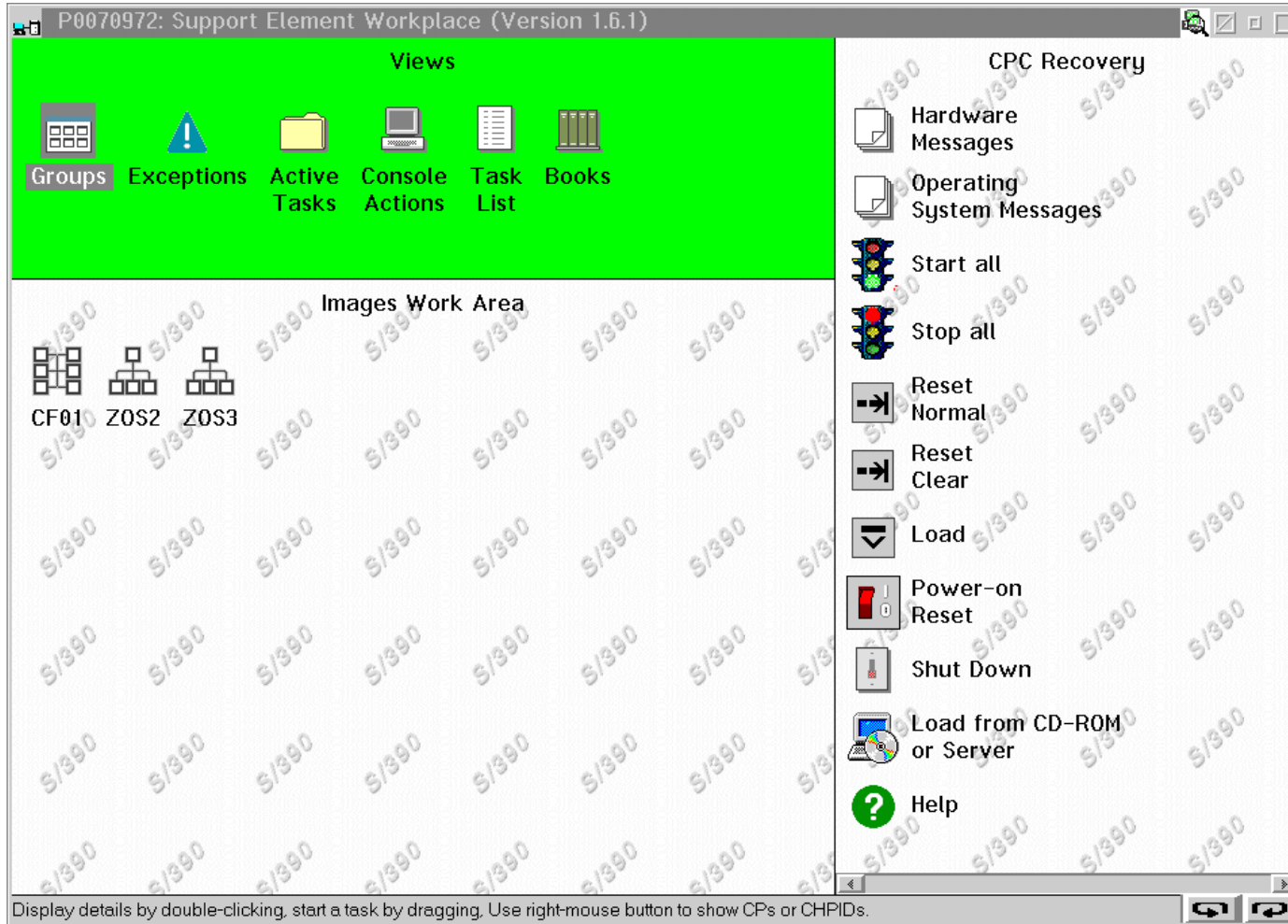
4K pages of system information

4K page of system information can reside in a 'frame' or 'slot'

Some 4K pages of system information are marked as a permanent resident in real storage – 'frame' only

Private	High User Region	16 EB
Shared Area	Default Shared Memory Addressing	512TB
Low User Private	Low User Region	2TB
	Reserved	4G
Extended Private	Extended LSQA/SWA/229/230	2G
	Extended User Region	
Extended Common	Extended CSA	
	Extended PLPA/FLPA/MLPA	
	Extended SQA	
	Extended Nucleus	16 Mb
Common	Nucleus	
	SQA	
	PLPA/FLPA/MLPA	
	CSA	
Private	LSQA/SWA/229/230	
	User Region	
Common	System Region	24K
	PSA	8K
		0

Systems are operational and connected to CF (Coupling Facility)



System Definitions

z/OS is highly configurable to best serve a customer's workload

System definitions (system parameters) are read during z/OS initialization

The values of many system parameters can be changed dynamically

Default values exist for the majority of system parameters

More matured systems change the defaults as their workloads change

It is important to develop a back out plan for any system definition change

System Initialization (IEE252I messages)

```

Lab System
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
SDSF SYSLOG      4346.101 S0W1 S0W1 04/16/2007 0W      0      COLUMNS 51 130
COMMAND INPUT ===> _      SCROLL ===> CSR
***** TOP OF DATA *****
0000 IEE042I SYSTEM LOG DATA SET INITIALIZED
0290 CONTROL M,UEXIT=Y IEAVN701 - INTERNALLY ISSUED K M
0090 IEA590I WTO USER EXIT IEAVMXIT NOT FOUND
0290 IEA371I SYS1.IPLPARM ON DEVICE 0CE3 SELECTED FOR IPL PARAMETERS
0290 IEA246I LOAD ID W1 SELECTED
0290 IEA246I NUCLST ID SV SELECTED
0290 IEA519I IODF DSN = SYS1.IODF00
0290 IEA520I CONFIGURATION ID = MVS . IODF DEVICE NUMBER = 0CE3
0290 IEA091I NUCLEUS 1 SELECTED
0290 IEA093I MODULE IEANUC01 CONTAINS UNRESOLVED WEAK EXTERNAL REFERENCE
      IFFIOM
0290 IEA093I MODULE IEANUC01 CONTAINS UNRESOLVED WEAK EXTERNAL REFERENCE
      IEDQATTN
0290 IEA093I MODULE IEANUC01 CONTAINS UNRESOLVED WEAK EXTERNAL REFERENCE
      IECTATEN
0290 IEA370I MASTER CATALOG SELECTED IS MASTERV.CATALOG
0290 IEE252I MEMBER IEASYMW1 FOUND IN LVL0.PARMLIB
0290 IEE252I MEMBER IEASYMSV FOUND IN SVTSC.PARMLIB
0290 IEE252I MEMBER IEASYMVN FOUND IN VENDOR.PARMLIB
0290 *IEA008I SYSTEM PARMS FOLLOW FOR z/OS 01.06.01 JBB77S9 020
0290      IEASYS00
0290      IEASYSLV
0290      IEASYSSV
0290      IEASYSVN
0290 IEE252I MEMBER IEASYS00 FOUND IN LVL0.PARMLIB
0290 IEE252I MEMBER IEASYSLV FOUND IN LVL0.PARMLIB
0290 IEE252I MEMBER IEASYSSV FOUND IN SVTSC.PARMLIB
MA a
04/021
Connected to remote server /host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:
  
```

System Log (Trail of IEE252I messages)

IEE252I MEMBER *member* FOUND IN *parmdsname*

Explanation: This is an informational message that appears only in the hardcopy log when member *member* is found in **parmlib** dataset *parmdsname*

In the message text:

member is the parmlib member name that is being processed.

parmdsname is the parmlib data set where member *member* is located.

System Action:

The system continues processing.

System Programmer Response:

Check the hardcopy to see if all the members in parmlib specified in LOADxx or in operator input are being used correctly and are found in the correct parmlib data set.

Source: Master scheduler, IPL/NIP

System Definitions

D IPLINFO

SYSTEM IPLLED AT 08.41.25 ON 01/29/2007
RELEASE z/OS 01.07.01 LICENSE = z/OS
USED LOADW1 IN SYS1.IPLPARM ON 0CE3
ARCHLVL = 2 MTLSHARE = N
IEASYM LIST = (W1,SV,VN)
IEASYS LIST = (00,LV,SV,VN) (OP)
IODF DEVICE 0CE3
IPL DEVICE 1000 VOLUME VIMVSB

D PARMLIB

PARMLIB DATA SETS SPECIFIED
AT IPL

ENTRY	FLAGS	VOLUME	DATA SET
1	S	VPMVSD	VENDOR.PARMLIB
2	S	VTMVSG	SVTSC.PARMLIB
3	S	VTLVL0	LVL0.PARMLIB
4	D	VIMVSB	SYS1.PARMLIB

SYS1.IPLPARAM LOADxx member startup parameters

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          SYS1.IPLPARAM(LOADW1) - 01.10          Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001 *---+---1---+---2---+---3---+---4---+---5
000002 IEASYM   (W1,SV,VN)
000003 INITSQA  0000M 0000M
000004 IODF     00 SYS1     MVS      00 Y
000005 NUCLEUS  1
000006 NUCLST   SV N
000007 SYSCAT   VPMVSB113MASTERV.CATALOG          CATALOG
000008 SYSPARM   (00,LV,SV,VN)
000009 SYSPLEX   SVSCPLEX
000010 PARMLIB  VENDOR.PARMLIB
000011 PARMLIB  SVTSC.PARMLIB
000012 PARMLIB  LVLO.PARMLIB
000013 PARMLIB  SYS1.PARMLIB
***** ***** Bottom of Data *****

MA a 04/015
Connected to remote server /host 204.90.115.184 using lu/pool TCP00021 and port 623 PDF Writer (Ghostscript) on Ghostscript1:
  
```


Display IPLINFO and system PARMLIB concatenation

```

Lab System
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
SDSF ULOG  CONSOLE ZIBM030                LINE 0          COLUMNS 19- 98
COMMAND INPUT ==> _                      SCROLL ==> CSR
***** TOP OF DATA *****
16:13:45.10      ISF031I CONSOLE ZIBM030 ACTIVATED
16:13:48.88      -D IPLINFO
16:13:48.91      IEE254I 16.13.48 IPLINFO DISPLAY 178
                  SYSTEM IPLED AT 14.10.36 ON 04/16/2007
                  RELEASE z/OS 01.06.01  LICENSE = z/OS
                  USED LOADW1 IN SYS1.IPLPARM ON 0CE3
                  ARCHLVL = 2  MTLSHARE = N
                  IEASYM LIST = (W1,SV,VN)
                  IEASYM LIST = (00,LV,SV,VN) (OP)
                  IODF DEVICE 0CE3
                  IPL DEVICE 1000 VOLUME VIMVSB
16:13:51.51      -D PARMLIB
16:13:51.54      IEE251I 16.13.51 PARMLIB DISPLAY 180
                  PARMLIB DATA SETS SPECIFIED
                  AT IPL
                  ENTRY  FLAGS  VOLUME  DATA SET
                   1      S      VPMVSD  VENDOR.PARMLIB
                   2      S      VTMVSG  SVTSC.PARMLIB
                   3      S      VTLVL0  LVL0.PARMLIB
                   4      D      VIMVSB  SYS1.PARMLIB
***** BOTTOM OF DATA *****
MA a
04/021
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:
  
```

Master JCL for Master Scheduler

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          LVLO.PARMLIB(MSTJCLSV) - 01.02          Columns 00001 00072
Command ==> _____ Scroll ==> CSR_
***** ***** Top of Data *****
000001 //MSTJCLSV JOB MSGLEVEL=(1,1),TIME=1440
000002 //          EXEC PGM=IEEMB860,DPRTY=(15,15)
000003 //STCINRDR DD SYSOUT=(A,INTRDR)
000004 //TSOINRDR DD SYSOUT=(A,INTRDR)
000005 //IEFJOBS  DD DISP=SHR,DSN=VENDOR.STCJOBS
000006 //          DD DISP=SHR,DSN=SVTSC.STCJOBS
000007 //          DD DISP=SHR,DSN=LVLO.STCJOBS
000008 //IEFPDSI  DD DISP=SHR,DSN=VENDOR.PROCLIB
000009 //          DD DISP=SHR,DSN=SVTSC.PROCLIB
000010 //          DD DISP=SHR,DSN=LVLO.PROCLIB
000011 //          DD DISP=SHR,DSN=SYS1.PROCLIB
000012 //SYSUADS  DD DSN=SYS1.UADS,DISP=SHR
000013 //SYSLBC   DD DSN=SYS1.BROADCAST,DISP=SHR
000014 /*
***** ***** Bottom of Data *****

MA a
04/015
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:

```

CLIST to easily find system PARMLIB and PROCLIB members

```

Lab System
File Edit View Communication Actions Window Help
  File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          VENDOR.CLIST(SYSLIB) - 01.00          Columns 00001 00072
Command ==> tso syslib                               Scroll ==> CSR
***** ***** Top of Data *****
000001 PROC 0
000002 ALLOC SHR REUSE FI($PARMLIB) DA( -
000003     'VENDOR.PARMLIB' -
000004     'SVTSC.PARMLIB' -
000005     'LVLO.PARMLIB' -
000006     'SYS1.PARMLIB')
000007 ALLOC SHR REUSE FI($PROCLIB) DA( -
000008     'VENDOR.PROCLIB' -
000009     'SVTSC.PROCLIB' -
000010     'LVLO.PROCLIB' -
000011     'SYS1.PROCLIB')
000012 ALLOC SHR REUSE FI($STCJOBS) DA( -
000013     'VENDOR.STCJOBS' -
000014     'SVTSC.STCJOBS' -
000015     'LVLO.STCJOBS')
000016 ISRDDN
000017 EXIT
***** ***** Bottom of Data *****
MA a 04/025
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623 PDF Writer (Ghostscript) on Ghostscript1:

```

View system \$PARMLIB concatenation

```

Lab System
File Edit View Communication Actions Window Help

Current Data Set Allocations
Row 1 of 160
Command ===> Scroll ==> PAGE

Volume  Disposition Act DDname  Data Set Name  Actions: B E V M F C I Q
VPMVSD  SHR,KEEP  > v  $PARMLIB  VENDOR.PARMLIB
VTMVSG  SHR,KEEP  > -  SVTSC.PARMLIB
VTLVL0  SHR,KEEP  > -  LVL0.PARMLIB
VIMVSB  SHR,KEEP  > -  SYS1.PARMLIB
VPMVSD  SHR,KEEP  > -  $PROCLIB  VENDOR.PROCLIB
VTMVSG  SHR,KEEP  > -  SVTSC.PROCLIB
VTLVL0  SHR,KEEP  > -  LVL0.PROCLIB
VIMVSB  SHR,KEEP  > -  SYS1.PROCLIB
VPMVSD  SHR,KEEP  > -  $STCJOBS  VENDOR.STCJOBS
VTMVSG  SHR,KEEP  > -  SVTSC.STCJOBS
VTLVL0  SHR,KEEP  > -  LVL0.STCJOBS
VPUT8A  SHR,KEEP  > -  ADMCDATA  QMF810.ADMCDATA
VTUT8A  SHR,KEEP  > -  ADMCFORM  QMF810.SDSQCHRT
VTMVSE  SHR,KEEP  > -  ADMCGM    GDDM.SADMSAM
VTMVSE  SHR,KEEP  > -  ADMGDF    GDDM.SADMMAP
VPUT8A  SHR,KEEP  > -  ADMGDF    QMF810.ADMGDF
VTMVSE  SHR,KEEP  > -  ADMGMAP   GDDM.SADMMAP
VTUT8A  SHR,KEEP  > -  ADMGMAP   QMF810.SDSQMAPE
VTMVSE  SHR,KEEP  > -  ADMIMG    GDDM.SADMMAP
VTMVSE  SHR,KEEP  > -  ADMIMG    GDDM.SADMMAP
VTMVSE  SHR,KEEP  > -  ADMPROJ   GDDM.SADMMAP
VTMVSE  SHR,KEEP  > -  ADMPROJ   GDDM.SADMMAP
VTMVSE  SHR,KEEP  > -  ADMSYMBL  GDDM.SADMSYM
VPUT8A  SHR,KEEP  > -  ADMSYMBL  QMF810.ADSYMBL
VPMVSD  SHR,KEEP  > -  CIDTABL   VENDOR.CIDTABL
VPMVSD  MOD,DEL   > -  DSQDEBUG  ----- JES2 Subsystem file -----
VPUT8A  SHR,KEEP  > -  DSQPNLE   QMF810.DSQPNLE

MA a
06/025
Connected to remote server /host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:
  
```

SYSPARM IEASYSxx values in PARMLIB

Lab System

File Edit View Communication Actions Window Help

Menu Functions Utilities Help

VIEW **VENDOR.PARMLIB** Row 00139 of 00262

Command ==> Scroll ==> PAGE

Name	Prompt	Lib	Size	Created	Changed	ID
. IEASYMW3		3	3	1996/06/21	1996/06/21 11:19:53	SVTSCU
. IEASYSAA		3	19	1997/07/15	2002/03/14 20:18:53	RAMON
. IEASYSAP		3	6	1998/08/07	1998/08/07 11:34:01	TODD
. IEASYSFS		3	11	2003/09/18	2003/09/18 15:00:00	PKRUTZA
. IEASYSLV		3	65	1999/04/15	2004/03/10 11:58:25	PKRUTZA
. IEASYSSV		2	29	1998/10/07	2006/05/18 10:37:39	IBMUSER
. IEASYSVN		1	10	1998/10/07	2001/08/10 16:24:48	RAMON
. IEASYSZE		3	2	2002/01/29	2002/01/29 19:44:34	RALEY
s IEASYS00		3	4	1997/07/15	1997/07/15 16:45:14	TODD
. IEASYS52		3	9	1998/08/07	1998/08/07 11:33:20	TODD
. IEASYS98		3	61	2001/10/11	2001/10/11 13:24:06	PKRUTZA
. IEASYS99		3	56	1998/10/09	1999/01/04 16:21:34	TODD
. IEAVIPCS		4				
. IECIOSTC		3	3	1996/07/09	1997/06/10 18:18:38	RALEY
. IEFIPCSA		4				
. IEFIPCSI		4				
. IEFIPCST		4				
. IEFSSNAT		3	1	1999/12/02	1999/12/02 18:41:00	TODD
. IEFSSNDB		2	3	2006/05/17	2006/05/17 12:30:35	DPACK
. IEFSSND1		3	2	1996/07/17	1996/07/17 06:22:01	DPACK
. IEFSSND2		3	2	1997/09/24	2000/06/17 19:19:31	TODD
. IEFSSNFF		3	1	1997/04/18	1997/04/18 18:15:18	RALEY
. IEFSSNI9		2	2	2006/05/17	2006/05/17 12:30:56	DPACK
. IEFSSNJ2		3	6	1998/08/07	1998/08/07 11:32:00	TODD
. IEFSSNJ3		3	7	1996/02/23	1998/08/07 11:42:48	TODD
. IEFSSNMQ		2	6	2002/10/22	2005/08/08 16:39:04	IBMUSER
. IEFSSNPE		3	1	1999/11/16	1999/11/16 18:43:54	TODD

MA a 14/004

Connected to remote server /host 204.90.115.184 using lu/pool TCP00021 and port 623 PDF Writer (Ghostscript) on Ghostscript1:

IEASYS00 is read first. IEASYS00 has few parameters

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          LVLO.PARMLIB(IEASYS00) - 01.00          Columns 00001 00072
Command ==>  _____ Scroll ==>  CSR
***** ***** Top of Data *****
000001 CLPA,
000002 REAL=280,          ALLOWS 2 64K JOBS OR 1 128K JOB TO RUN V=R
000003 RSU=0,            NO RECONFIG STORAGE UNITS          DEFAULT
000004 VRREGN=140        DEFAULT REAL-STORAGE REGION SIZE
***** ***** Bottom of Data *****
MA a
04/015
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:

```

IEASYSLV is read 2nd. IEASYSLV has more parameters

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          LVLO.PARMLIB(IEASYSLV) - 01.23          Invalid command
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001 APG=07,          AUTOMATIC PRIORITY GROUP IS 7          DEFAULT
000002 CLOCK=SV,      SELECT CLOCK SETTING
000003 CMB=(UNITR,COMM,GRAPH,CHRDR),  ADDITIONAL CMB ENTRIES
000004 CMD=(&JESSN.,00,LV,LW,SV,VN),
000005 CON=00,        SELECT CONSOL00          DEFAULT
000006 COUPLE=SV,
000007 CSA=(4500,3000),  MVS/ESA CSA RANGE
000008 CSCBLOC=ABOVE,
000009 DEVSUP=SV,      SET IDRC DEFAULT
000010 DUMP=DASD,      PLACE SVC DUMPS ON DASD DEVICES  DEFAULT
000011 FIX=(00,RF),    FIX MODULES SPECIFIED          /*J3*/
000012 GRS=TRYJOIN,
000013 GRSCNF=00,
000014 GRSRNL=SV,
000015 ILMODE=NONE,
000016 IOS=TC,
000017 LNKAUTH=LNKLST,  AUTHORIZE LNKLST00-DEFAULT, APFTAB IS ALT
000018 LOGCLS=C,        WILL NOT BE PRINTED BY DEFAULT
000019 LOGLMT=008000,    MUST BE 6 DIGITS, MAX WTL MESSAGES QUEUED
000020 LOGREC=SYS1.&SYSNAME..LOGREC,
000021 LPA=(00),
000022 MAXUSER=300,      (SYS TASKS + INITS + TSOUSERS)
000023 MLPA=(RF,I5),    MLPA PARAMETERS
000024 MSTRJCL=SV,
000025 PAGTOTL=(8),     MAX # PAGE D/S AVAILABLE - ALLOWS 3 ADD'L
000026 PAK=00,         IEAPAK00
000027 PLEXCFG=MULTISYSTEM,
MA a
04/015
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1:

```

IEASYSSV is read 3rd -- duplicate parm values are overridden

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          SVTSC.PARMLIB(IEASYSSV) - 01.06          Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001  CMD=( &JESSN.,00,LV,LW,SV,VN,60),
000002  CSA=( 4500,800000),          MVS/ESA CSA RANGE
000003  DUMP=DASD,
000004  LPA=(00,60,64),
000005  MLPA=(RF,I9),
000006  OMVS=(0M,VN,60,MS,64),          ALLOW OPERATOR OVERRIDE TO IEASYS00
000007  PAGE=(PAGE.&SYSNAME..PLPA,
000008          PAGE.&SYSNAME..COMMON1,
000009          PAGE.&SYSNAME..LOCALA,
000010          PAGE.&SYSNAME..LOCALB,
000011          PAGE.&SYSNAME..LOCALC,
000012          PAGE.&SYSNAME..LOCALD,
000013          PAGE.&SYSNAME..LOCALE,
000014          PAGE.&SYSNAME..LOCALF,
000015          PAGE.&SYSNAME..LOCALG,
000016          PAGE.&SYSNAME..LOCALH,L),
000017  PROG=(00,64,52,J3,AA,DB,C6,I9,MS,
000018          SY,LA,LB,MC,MD,LE,LG,LJ,LN,DB,B6,MR,L9),
000019  PAGTOTL=(14),
000020  SCH=(00,I9,TC,MQ,AT,C6),          PPT UPDATES
000021  SSN=(SM,&JESSN.,RF,TC,MQ,FF,PE,RS,AT,DB,64),
000022  SVC=(I9,64),
000023  VAL=00          SELECT VATLST00          DEFAULT
000024  /* COMMENTS:
000025  /*
000026  /* USE THIS MEMBER TO OVERRIDE PARAMETERS IN LVL0.PARMLIB(IEASYSLV)
000027  /*

MA a 04/015
Connected to remote server/host 204.90.115.184 using lu/pool TCP00021 and port 623 PDF Writer (Ghostscript) on Ghostscript1:
  
```


IEASYSVN the last member read has only one PARMLIB entry

```

Lab System
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW          VENDOR.PARMLIB(IEASYSVN) - 01.03          Columns 00001 00072
Command ==> _____ Scroll ==> CSR
***** ***** Top of Data *****
000001 DUMP=DASD
000002 /* COMMENTS:
000003 /*
000004 /* USE THIS MEMBER TO OVERRIDE PARAMETERS IN
000005 /* SVTSC.PARMLIB(IEASYSSV) AND LVLO.PARMLIB(IEASYSLV)
000006 /*
000007 /* PUT ONLY THE PARMS REQUIRED HERE. DO NOT COPY ALL THE PARMS FROM
000008 /* IEASYSSV OR IEASYSLV TO THIS MEMBER.
000009 /*
000010 /* CONTACT SOLUTION DEVELOPER TECHNICAL SUPPORT IF YOU NEED HELP.
***** ***** Bottom of Data *****
MA a
Connected to remote server /host 204.90.115.184 using lu/pool TCP00021 and port 623
PDF Writer (Ghostscript) on Ghostscript1: 04/015

```

System Libraries

SYS1.LINKLIB prime system software library

–LNKLST concatenation

SYS1.LPALIB system subroutines

SYS1.NUCLEUS basic supervisor modules

SYS1.PROCLIB system procedure JCL

–PROCLIB concatenation

SYS1.PARMLIB control parameters

–PARMLIB concatenation

System search order for programs

Programs (load modules) must be in central storage and therefore in the virtual storage of the address space before they can run

System has a defined search order for a newly requested program

Search order for programs

- 1) JCL STEPLIB (if present)
- 2) JCL JOBLIB (if present)
- 3) Link Pack Area (LPA)
 - Fixed LPA (FLPA)
 - Modified LPA (MLPA)
 - Pageable LPA (PLPA)
- 4) LINKLST (Concatenated Group of Partitioned Data Sets)

SYS1.LPALIB

The Link Pack Area (LPA) is built at IPL time from the modules defined in the LPALSTxx member of parmlib.

SYS1.LPALIB is always the first library used unless overridden by a SYSLIB statement

Modules are loaded into common storage at IPL time and so are available to all address spaces

SYS1.LPALIB

Fixed LPA comprises those modules defined in IEAFIXxx that are fixed in central storage

Pageable LPA comprises most other modules whose pages are eligible to be stolen

Modified LPA has modules which are temporary replacements for PLPA modules and is searched first.

JES JOB JCL Procedure Library

JES2 JCL Procedure Libreres are searched for JOB and STC PROCs

```
//PROC00    DD    DSN=SYS1.PROCLIB,DISP=SHR
//          DD    DSN=SYS3.PROD.PROCLIB,DISP=SHR
//PROC01    DD    DSN=SYS1.PROC2,DISP=SHR
//PROCnn    DD    DSN=SYS1.LASTPROC,DISP=SHR
...
```

JOB JCL can have personal JCL Procedure Libraries search first

```
//MYJOB      JOB
//MYLIBS     JCLLIB ORDER=(MY.PROCLIB.JCL,YOUR.PROCLIB.JCL)
//S1        EXEC  PROC=MYPROC1
...
```

System Symbols

System symbols allow the use of a shared PARMLIB by two or more systems

Each symbol has a name which can be used in various places and then substituted at IPL time

Major uses are indirect cataloging and substituting system specific datasets such as the page data sets

Static and Dynamic System Symbols

Static and Dynamic System Symbols

<u>SYMBOL</u>	<u>Value</u>	<u>Type</u>
&DAY.	15	DYNAMIC
&HHMMSS.	184422	DYNAMIC
&HR.	18	DYNAMIC
&JDAY.	046	DYNAMIC
&JESSN.	J2	STATIC
&JOBNAME.	ZIBM050	DYNAMIC
&J2MLQX.		STATIC
&J3MLQX.		STATIC
&LDAY.	15	DYNAMIC
&LHHMMSS.	124422	DYNAMIC
&LHR.	12	DYNAMIC
&LJDAY.	046	DYNAMIC
&LMIN.	44	DYNAMIC
&LMON.	02	DYNAMIC
&LSEC.	22	DYNAMIC
&LWDAY.	WED	DYNAMIC

<u>SYMBOL</u>	<u>Value</u>	<u>Type</u>
&LYR2.	17	DYNAMIC
&LYR4.	2017	DYNAMIC
&LYMMDD.	170215	DYNAMIC
&MIN.	44	DYNAMIC
&MON.	02	DYNAMIC
&SEC.	22	DYNAMIC
&SVTSC.	SV	STATIC
&SYSALVL.	2	STATIC
&SYSCLONE.	W1	STATIC
&SYSNAME.	S0W1	STATIC
&SYSOSLVL.	Z1020200	STATIC
&SYSPLEX.	SVSCPLEX	STATIC
&SYSR1.	VIMVSB	STATIC
&UNIXVER.	VERSYSB	STATIC
&VENDOR.	V1	STATIC
&VTAMLST.	W1	STATIC
&WDAY.	WED	DYNAMIC
&YR2.	17	DYNAMIC
&YR4.	2017	DYNAMIC
&YYMMDD.	170215	DYNAMIC

Manuals

MVS Initialization and Tuning Guide

MVS Initialization and Tuning Reference

JES2 Initialization and Tuning Guide

JES2 Initialization and Tuning Reference



hyperlinks

Unit Summary

Having completed this unit, you should be able to:

- ✓ Describe IPL process
- ✓ Describe IPL device and LOADPARM device
- ✓ Describe Support Element and HMC
- ✓ Describe System Parameters/Definitions
- ✓ Determine IPL and LOAPARM device using MVS commands
- ✓ Determine LOADPARM member read at IPL time
- ✓ Determine parameter libraries read at IPL time
- ✓ Determine parameter library members read at IPL time
- ✓