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zSeries z990 I/O Configuration Definition Support HCD - HCD/HCM - IOCP



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Definition support - HCD - HCM - IOCP



- ❑ z990 GA3 requires the same HCD release as GA2
 - z/OS V1.4 HCD, plus PTF support for:
 - 4 logical channel subsystems
 - Spanning channels
 - OSC channels
 - Dynamic naming partitions
- ❑ HCM v1.4 plus service levels 5 and 6 also supports the new z990 GA 3 functions
 - Spanning, OSC Channels, Dynamic naming LPAR support,
- ❑ IOCP - ICPIOCP V1 R2 supports the new z990 functions
 - Strong recommendation to use HCD or HCD/HCM as the prime definition support tool
 - IOCP statements are complex, HCD provides guidance

HCD z990 Definition sequence



- ❑ For HCD the definition sequence remains the same
 - Operating system configurations
 - System-defined generics
 - EDTs
 - a. Esoterics
 - b. User-modified generics
 - Consoles - define during device definition - *can use OSC devices*
 - Switches
 - Ports - *for ISL ports, connect switch_port to switch_port in HCD*
 - Switch configurations
 - a. Port matrix
 - Processors
 - Channel subsystems - *1 to 4 LCSSs supported*
 - a. *Each LCSS supports up to 63K devices (specified by MAXDEV)*
 - b. *Partitions - Dynamic Partition Naming*
 - c. *Channel paths - Spanned and OSC*
 - Control units
 - I/O devices

z/OS V1.4 HCD definition panel



z/OS V1.4 HCD

Define, Modify, or View Configuration Data

Select type of objects to define, modify, or view data.

___ 1. Operating system configurations

consoles

system-defined generics

EDTs

esoterics

user-modified generics

2. Switches

ports

switch configurations

port matrix

3. Processors

channel subsystems

partitions

channel paths

4. Control units

5. I/O devices

☐ z990 Support

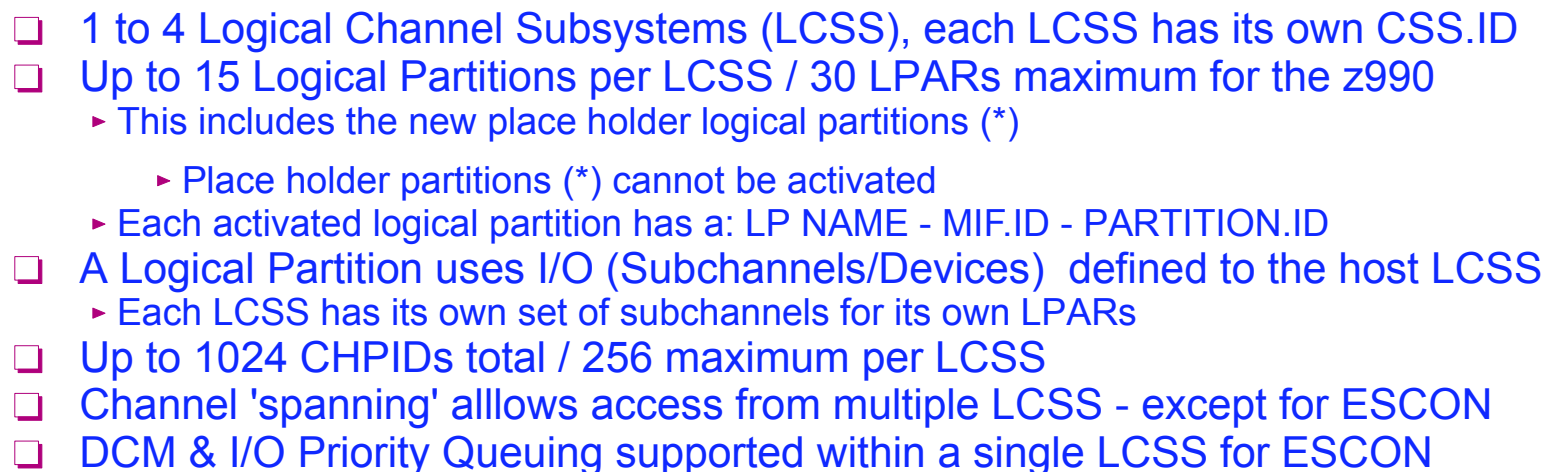
z990 GA3 - select support

Up to 4 LCSSs supported

Dynamic partition Naming supported

Spanning, and OSC channel Types

Via spanning, connected to LCSSs



LCSS, Partitions and Subchannel Support



- ❑ 1 to 4 Logical Channel Subsystems (LCSS)
 - Each LCSS has its own CSS.ID, 0, 1, 2, or 3
- ❑ Up to 15 Logical Partitions per LCSS
 - 30 LPARs maximum for the z990
 - This includes the new place holder logical partitions (*)
 - Place holder partitions (*) cannot be activated
 - Each activated logical partition has a:
 - LP NAME - must be unique across all logical partition in the z990
 - MIF.ID - a unique value of x'1' through x'F' within an LCSS
 - PARTITION.ID - a unique value of x'00' to x'3F' across all logical partitions in the z990
- ❑ A Logical Partition uses I/O (Subchannels/Devices) defined to its host LCSS
 - Each LCSS has its own set of subchannels for its own LPARs (up to 64512)
- ❑ Each LCSS can support up to 256 CHPIDs (x'00' to x'FF')
 - CHPID numbers cannot be duplicated within an LCSS

z990 ADD processor - 4 LCSSs



Add Processor

Specify or revise the following values.

Processor ID SCZP902

Processor type 2084 +

Processor model B16 +

Configuration mode LPAR +

Number of channel subsystems . . **4** +

Serial number 1234562084

Description TEST 2084

Specify SNA address only if part of an S/390 microprocessor cluster:

Network name USIBMSC +

CPC name SCZP902 +

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F9=Swap
F12=Cancel

**z990 GA3 supports
1 to 4 LCSSs**

z990 Select required support level



Add Processor

Available Support Levels

Row 1 of 4 More:

>

Command ==>

Select the processor support level which provides the processor capabilities you want to use.

**z990 GA3 supports
OSC Channels**

Support Level

XMP, Basic 2084 support, 3xx models

#

/ XMP, 3xx models, OSC

#

***** Bottom of data *****

F1=Help

F2=Split

F3=Exit

F7=Backward

F8=Forward

F9=Swap

F12=Cancel

F20=Right

F22=Command

A support level selection is required. Press PF1 on the Support Level field for available detail information.

z990 LCSS Device (subchannel support)



- ❑ You may change the MAXDEV value to provide the required quantity of I/O device support
 - Reducing the MAXDEV number reduces the amount of HSA storage required
 - Reducing the MAXDEV too much may impact the ability to add devices dynamically via dynamic I/O reconfiguration

Channel Subsystem ListRow 1 of 4

Command ==> _____ Scroll ==> CSR

Select one or more channel subsystems, then press Enter. To add, use F11.

Processor ID . . . : SCZP902 Test 2084

CSS Max number

/	ID	of devices +	Description
— 0	64512		_____
— 1	64512		_____
— 2	32256		_____
— 3	32256		_____

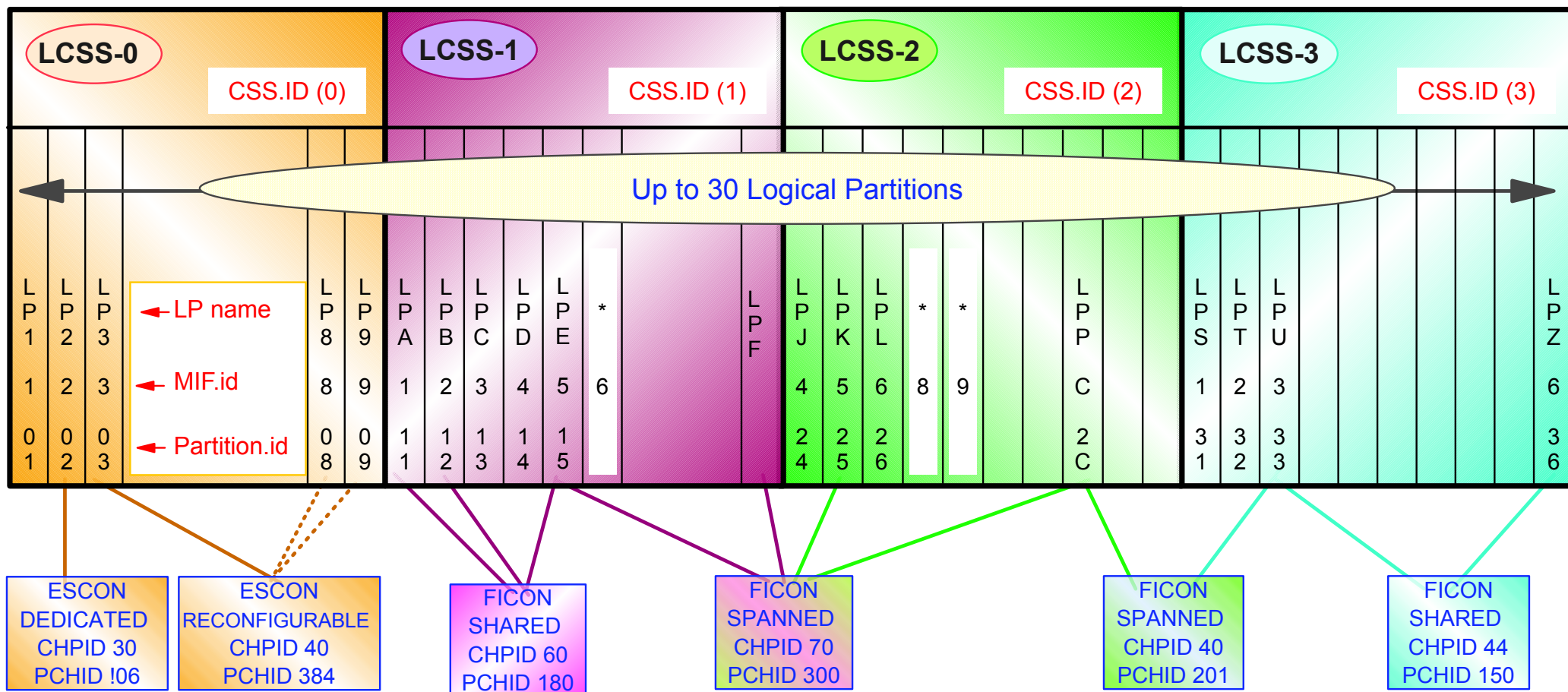
***** Bottom of data *****

z990 GA3 supports
4 LCSSs
You may change
(overtpe) the
MAXDEV value

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F7=Backward

F8=Forward F9=Swap F10=Actions F11=Add F12=Cancel F13=Instruct

z990 Channel - Definitions and Access



- ❑ Dedicated - Can only be accessed by one LP in the z990
- ❑ Reconfigurable - Accessed by one partition, can be configured offline, and then online to another LP in the same LCSS
- ❑ Shared - Can be accessed (be online) by one or more accessing LPs at the same time, all LPs must be in the same LCSS
- ❑ Spanned - Can be accessed (be online) by one or more accessing LPs at the same time, the LPs can be in any LCSS
- ❑ Note - 1. Duplication of CHPID numbers in the same LCSS are not allowed
- ❑ Note - 2: Place holder logical partitions (*) cannot be specified in a CHPID Access or Candidate list
- ❑ Note - 3. CHPID 40 in LCSS 0 and CHPID 40 in LCSS 2/3 are are not common (different PCHIDs)
- ❑ Note - 4. CHPID 70 in LCSS 1 and LCSS 2, are a common CHPID 70 (same PCHID)

z990 Channel definitions



□ z990 Channels are defined as

- Dedicated
 - Defined to be accessed by only one logical partition
 - Definition can be changed either via an dynamic I/O reconfiguration activate or POR
- Reconfigurable
 - Defined to be *accessed by only one logical partition within an LCSS* and can be specified as a *candidate to other logical partitions within the same LCSS*.
 - Can be reconfigured to another logical partition
 - Use z/OS to configure offline to the Logical Partition and z/OS in another logical partition to configure online (in the same LCSS)
- Shared
 - Defined to be *accessed by 1 to all (up to 15) logical partitions **within the same LCSS***
 - Each logical partition is required to establish its own logical path when accessing the same logical control unit on the same channel path - CHPID and link address
- Spanned
 - Defined to be *accessed by 1 to all (up to 30) logical partitions **from any LCSS***
 - Each logical partition is required to establish its own logical path when accessing the same logical control unit on the same channel path - CHPID and link address

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zSeries z990 I/O Configuration Definition Support - HCD Spanned Channels



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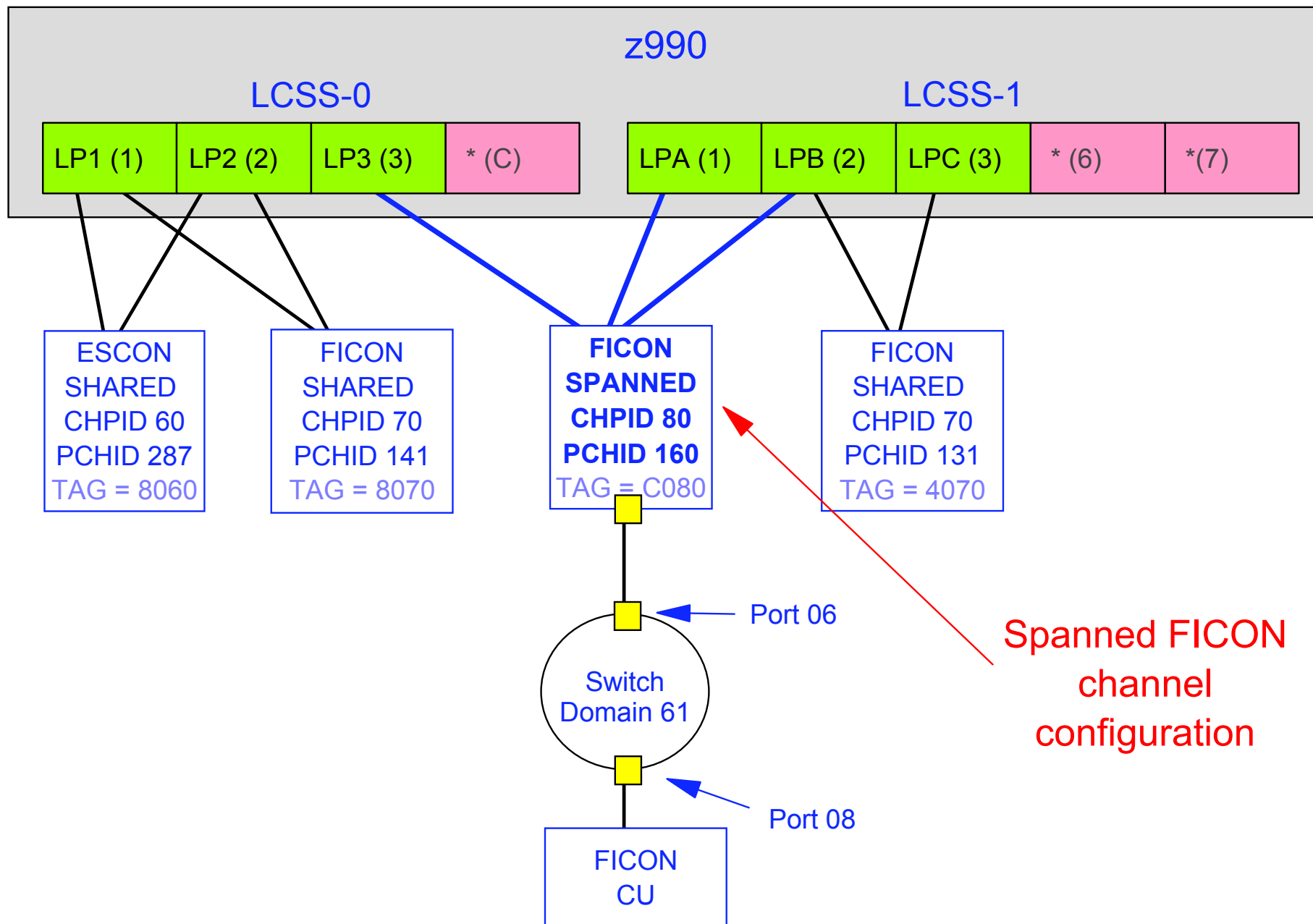
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z990 GA3 FICON Spanned channel



- Reduces the customer's channel to control unit connection infrastructure costs in a z990 multiple channel subsystem environment
 - All z990 channel types other than ESCON may be spanned
 - For FICON reduction from:
 - 4 Shared FICON channels to -> 1 Spanned channel
 - 4 Channel to switch connection ports to -> 1 Switch port
 - 4 Channel to switch Fiber cables to -> 1 fiber cable

z990 GA3 FICON Spanned channel



HCD - z990 Add Channel Path



- ❑ CHPID 80 as being spanned but not who it is spanned to, go to the CHPID ACCESS/CANDIDATE list to state which LPARs in which LCSSs can access the spanned channel

Add Channel Path

Specify or revise the following values.

Processor ID : SCZP901

Configuration mode . . : LPAR

Channel Subsystem ID : 0

Channel path ID 80 +

PCHID . . . 160

Number of CHPIDs 1

Channel path type FC_ +

Operation mode SPAN +

Managed No (Yes or No) I/O Cluster _____ +

Description _____

Specify the following values only if connected to a switch:

Dynamic entry switch ID 61 + (00 - FF)

Entry switch ID 61 +

Entry port 06 +

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F9=Swap

F12=Cancel

CHPID 80 is defined
as Spanned

- ❑ This approach is the same as defining a CHPID as SHARED, you then go to the CHPID ACCESS/CANDIDATE list to state who can access the channel

HCD - z990 Define Access List



Define Access List

Row 11 of 30

Command ==> _____ Scroll ==> CSR

Select one or more partitions for inclusion in the access list.

Channel subsystem ID : 0

Channel path ID . . . : 80 Channel path type . : FC

Operation mode . . . : SPAN Number of CHPIDs . . : 1

**CHPID
defined as
spanned**

/	CSS ID	Partition Name	Number	Usage	Description
_	0	A05	5	OS	Trainer #@\$2
_	0	A06	6	OS	Trainer #@\$3
/	0	A07	7	OS	Sysplex SC61
/	0	A08	8	OS	Sysplex SC62
/	0	A09	9	OS	Sysplex SC47
/	1	A1A	A	OS	VMLINUX3
/	1	A1B	B	OS	WTSCZVM1
/	1	A1C	C	CF	xxxx
_	1	A1D	D	CF	FACIL07
_	1	A1E	E	CF	Sysplex CF03

**The Images
that are
selected
determines to
which LCSS
the CHPID is
spanned to**

F1=Help

F2=Split

F3=Exit

F5=Reset

F6=Previous

F7=Backward

F8=Forward

F9=Swap

F12=Cancel

F22=Command

HCD - z990 Channel Path List



- The Channel path (CHPID) list panel shows that the CHPID is defined as Spanned, but not who it is spanned to, use the PF20 function (Shift PF8) to display the ACCESS / CANDIDATE matrix for the CHPIDs for each LCSS

Channel Path List Row 79 of 120 More: >

Command ==> _____ Scroll ==> CSR

Select one or more channel paths, then press Enter. To add use F11.

Processor ID : SCZP901
Configuration mode . : LPAR
Channel Subsystem ID : 0

/	CHPID	Type+	Mode+	DynEntry	Entry +	Switch	Sw	Port	Con	Mngd	Description
—	80	FC	SPAN	61	61	06				No	
—	81	FC	SPAN	61	61	0A				No	
—	82	FC	SPAN	61	61	0E				No	
—	83	FC	SPAN	61	61	12				No	
—	84	FC	SPAN	62	62	06				No	
—	85	FC	SPAN	62	62	0A				No	
—	86	FC	SPAN	62	62	0E				No	
—	87	FC	SPAN	62	62	12				No	

F1=Help

F8=Forward

F20=Right

F2=Split

F9=Swap

F22=Command

F3=Exit

F10=Actions

F4=Prompt

F11=Add

F5=Reset

F12=Cancel

F7=Backward

F13=Instruct

HCD - z990 Channel Path List - cont ...



- ❑ Use PF20 for - Channel path list viewed from LCSS0 for LPs in LCSS0

Channel Path List Row 79 of 120 More: < >
 Command ==> _____ Scroll ==> CSR

Select one or more channel paths, then press Enter. To add, use F11.

Channel Subsystem ID : 0

1=A01 2=A02 3=A03 4=A04 5=A05
 6=A06 7=A07 8=A08 9=A09 A=A0A
 B=A0B C=A0C D=A0D E=A0E F=A0F

					I/O Cluster	----- Partitions 0x -----																
/	CHPID	Type+	Mode+	Mngd	Name +	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	PCHID	
—	80	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	160	
—	81	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	1A0	
—	82	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	130	
—	83	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	1D0	
—	84	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	3A0	
—	85	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	330	
—	86	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	340	
—	87	FC	SPAN	No	_____	a	a	a	a	a	a	a	a	a	a	a	a	—	—	—	140	

HCD - z990 Channel Path List - cont ...



❑ Use PF20 for - Channel path list viewed from LCSS0 for LPs in LCSS1

```

                                Channel Path List      Row 79 of 120 More: <
Command ==> _____ Scroll ==> CSR

Select one or more channel paths, then press Enter. To add, use F11.

Channel Subsystem ID : 0
1=A11      2=A12      3=A13      4=A14      5=A15
6=A16      7=A17      8=A18      9=A19      A=A1A
B=A1B      C=*        D=A1D      E=A1E      F=A1F

                                I/O Cluster  ----- Partitions 1x -----
/ CHPID Type+ Mode+ Mngd  Name +      1 2 3 4 5 6 7 8 9 A B C D E F      PCHID
_ 80     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      160
_ 81     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      1A0
_ 82     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      130
_ 83     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      1D0
_ 84     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      3A0
_ 85     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      330
_ 86     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      340
_ 87     FC     SPAN  No    _____  a a a a a a a a a a a a # _ _ _      140
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions  F11=Add        F12=Cancel    F13=Instruct
F19=Left     F20=Right    F22=Command
    
```

HCD - z990 - Add Control Unit



❑ Adding a CU to a Spanned Channel (1st CU panel)

Add Control Unit

Specify or revise the following values.

Control unit number 8000 +

Control unit type 2105 _____ +

Serial number 0225132105

Description YE CUA 0 _____

Connected to switches . . . 61 61 61 61 62 62 62 62 +

Ports 08 0C 10 14 08 0C 10 14 +

If connected to a switch:

Define more than eight ports . . 2 1. Yes

2. No

Propose CHPID/link addresses and

unit addresses 2 1. Yes

2. No

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F9=Swap

F12=Cancel

HCD - z990 - Add Control Unit - cont ...



❑ Adding a CU to a Spanned Channel (2nd CU panel)

```

                                     Select Processor / CU      Row 1 of 5 More:      >
Command ==> _____ Scroll ==> CSR

Select processors to change CU/processor parameters, then press Enter.

Control unit number . . : 8000      Control unit type . . . : 2105

-----Channel Path ID . Link Address + -----
/ Proc.CSSID 1----- 2----- 3----- 4----- 5----- 6----- 7----- 8-----
- SCZP701      _____
- SCZP702      _____
- SCZP801      5A.14    5C.10    5E.6214 5B.610C 5D.6108 5F.620C
- SCZP901.0    80.08    81.0C    82.10    83.14    84.08    85.0C    86.10    87.14
- SCZP901.1    80.08    81.0C    82.10    83.14    84.08    85.0C    86.10    87.14
***** Bottom of data *****
```

There is a need to define each CSS channel path (CHPID.LINK ADDRESS) to CU for each CSS even if the CHPID specified is Spanned

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F6=Previous
F7=Backward F8=Forward F9=Swap F12=Cancel F20=Right F22=Command

HCD - z990 - Add Control Unit - cont ...



□ Adding a CU to a Spanned Channel (3rd CU panel)

```

                                     Select Processor / CU      Row 1 of 5 More: <      >
Command ==> _____ Scroll ==> CSR

Select processors to change CU/processor parameters, then press Enter.

Control unit number . . : 8000      Control unit type . . . : 2105

      CU  -----Unit Address . Unit Range + -----
/ Proc.CSSID Att ADD+ 1----- 2----- 3----- 4----- 5----- 6----- 7----- 8-----
- SCZP701      _  _____  _____  _____  _____  _____  _____  _____
- SCZP702      _  _____  _____  _____  _____  _____  _____  _____
- SCZP801      0   00.256      _____  _____  _____  _____  _____  _____
- SCZP901.0    0   00.256      _____  _____  _____  _____  _____  _____
- SCZP901.1    0   00.256      _____  _____  _____  _____  _____  _____
***** Bottom of data *****
```

There is a need to define the CUADD, Unit Address and Unit Range, for the channel path to CU definition for each CSS even if the CHPID specified is Spanned

```

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F6=Previous
F7=Backward  F8=Forward      F9=Swap      F12=Cancel     F19=Left      F20=Right
F22=Command
```

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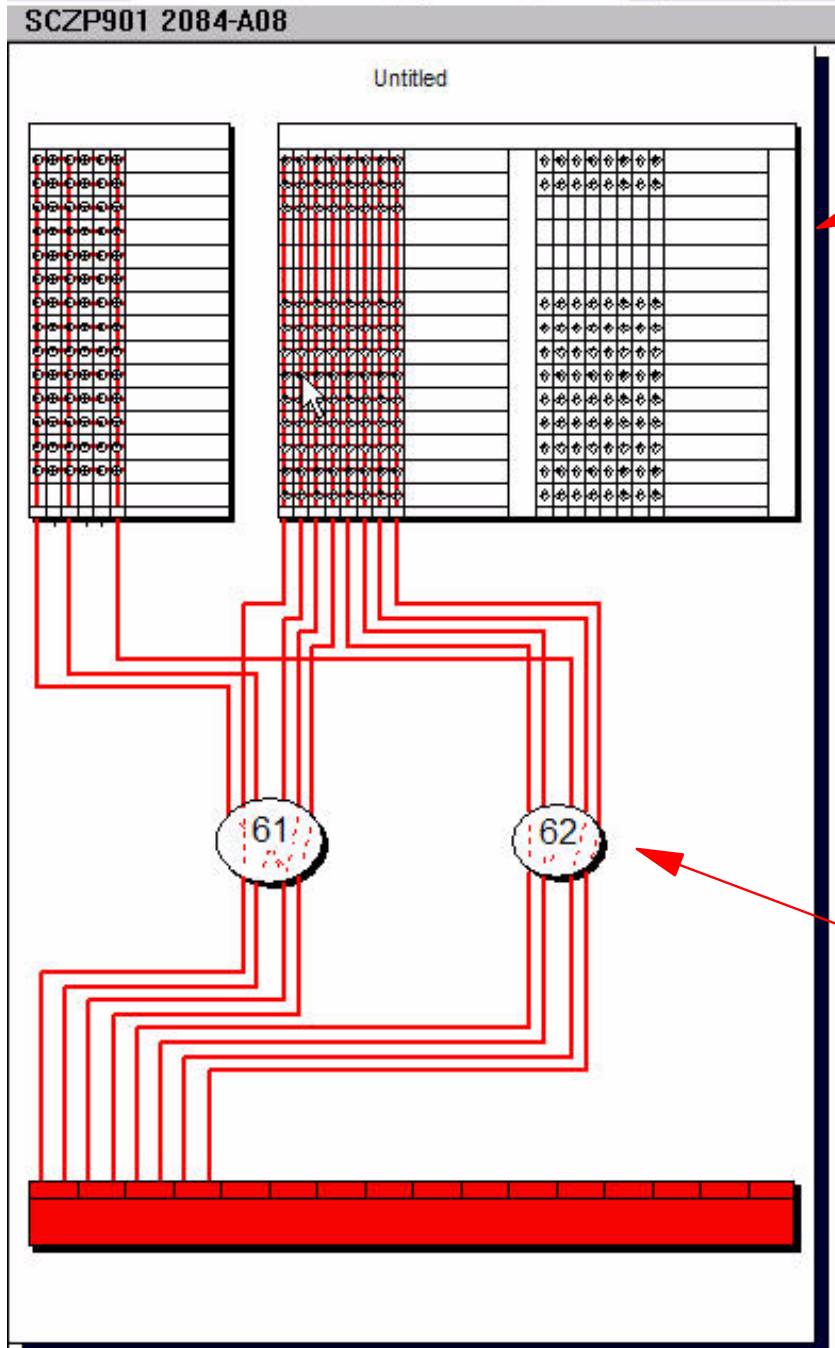


zSeries z990 I/O Configuration Definition Support - HCM



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HCM CHPID Spanning - HCM Diagrams



z990
2 LCSSs

- ❑ HCM z/OS v1.4 plus service level 5 and 6 provides full z990 GA3 definition and configuration support
- ❑ One situation with HCM and spanning channels configuration drawings
 - HCM selected object and logical channel path connectivity
 - Correct channel spanning is not shown when an object is selected

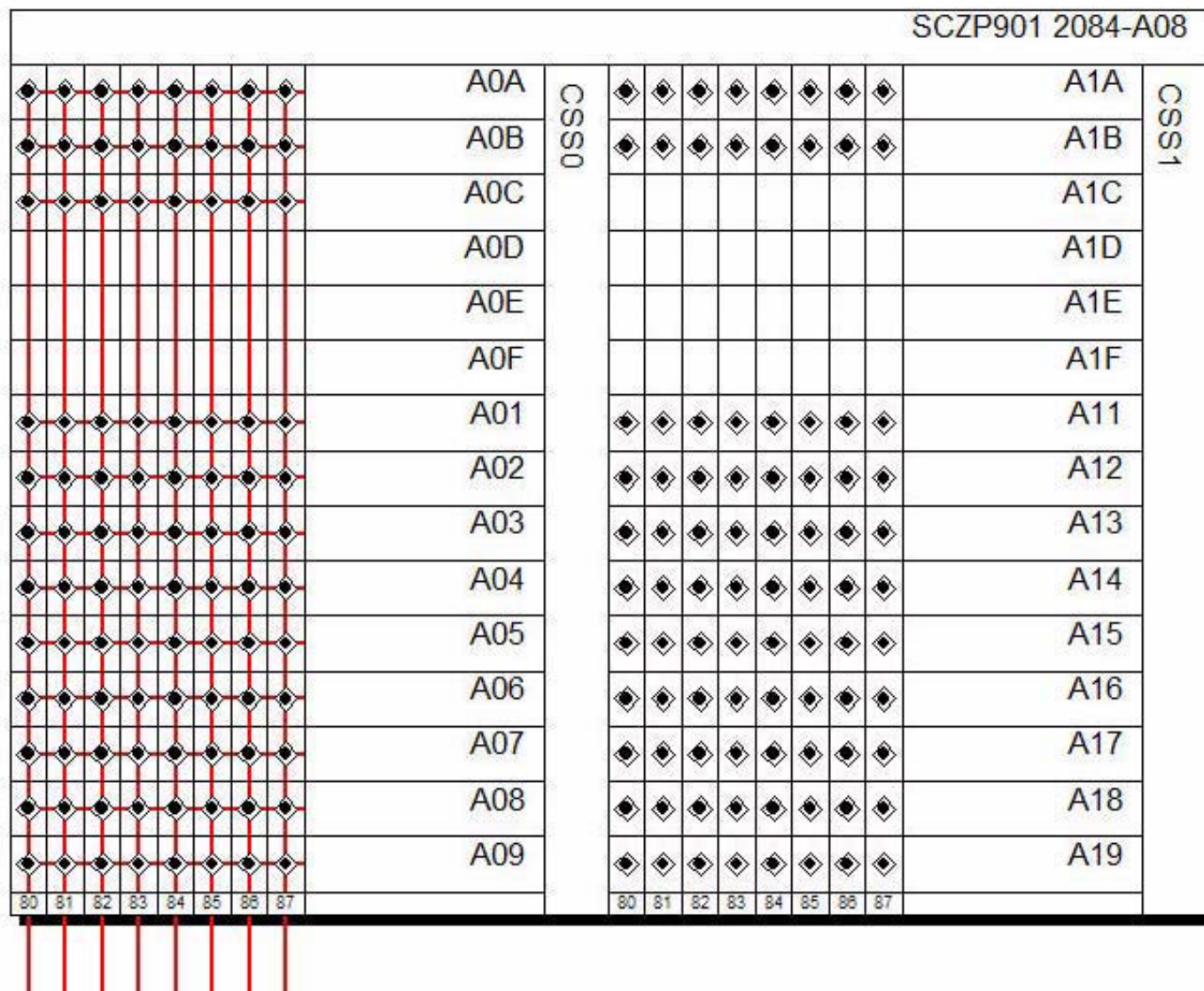
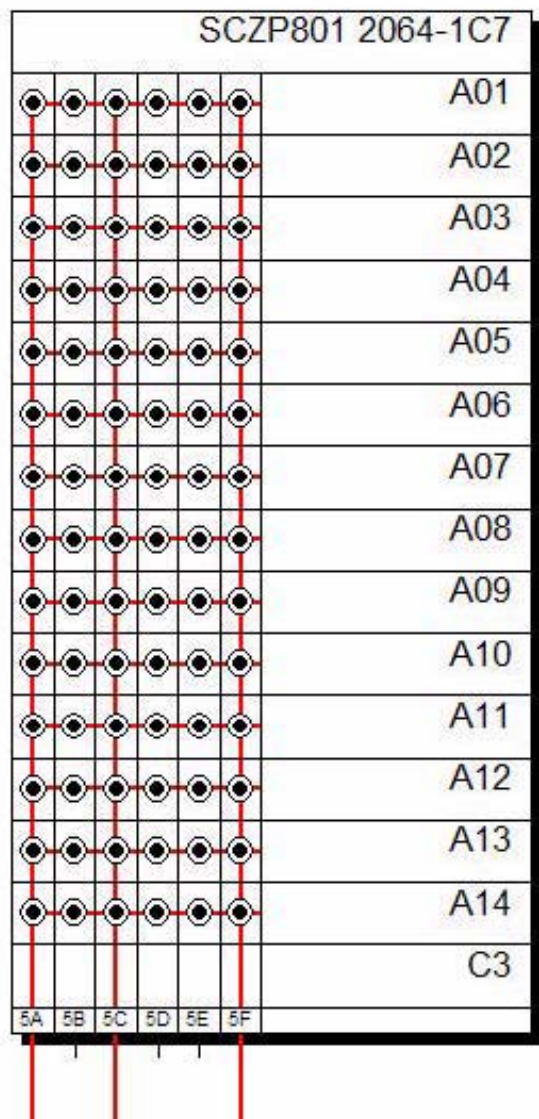
FICON
Switches

2105

HCM CHPID Spanning - HCM diagrams



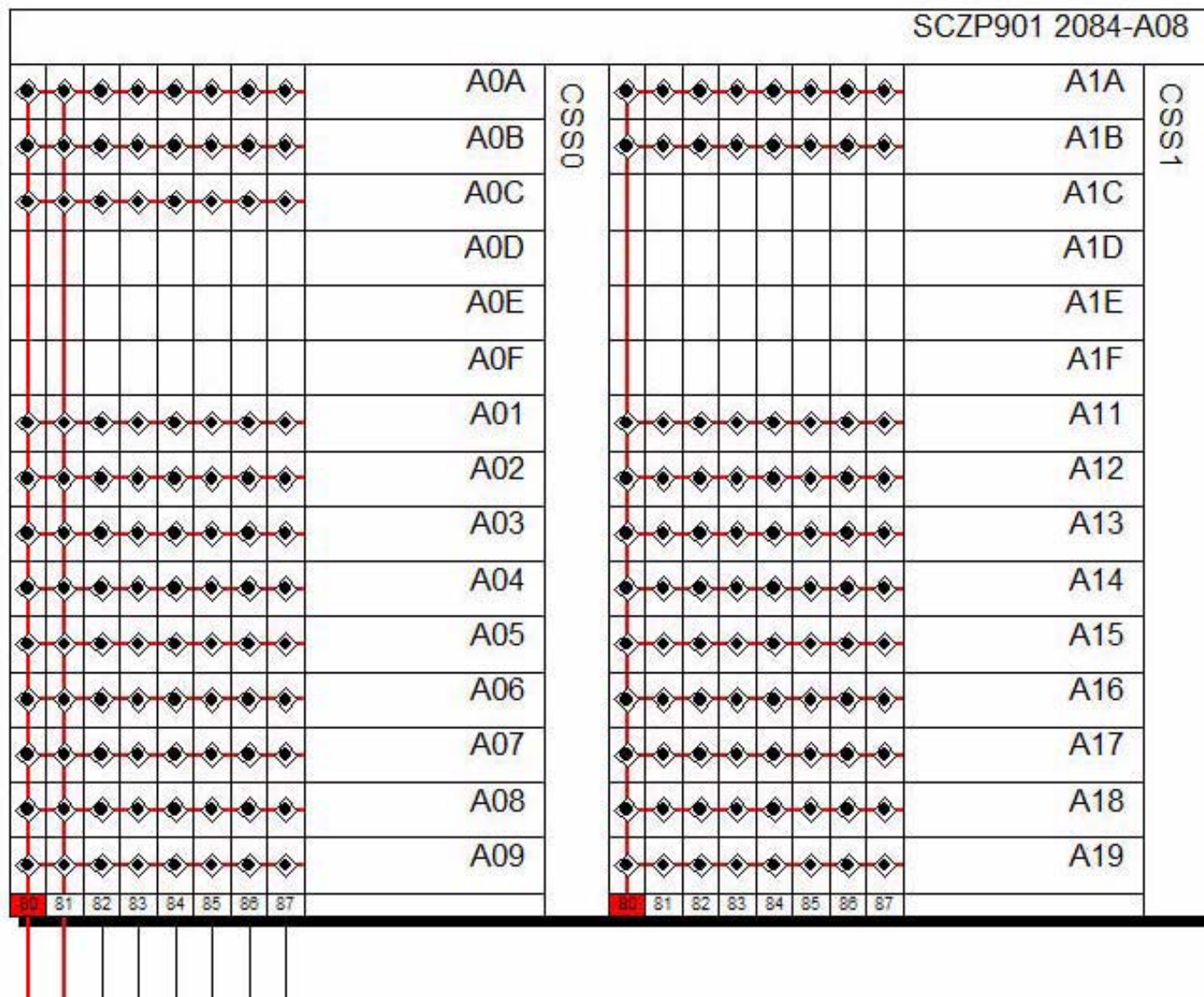
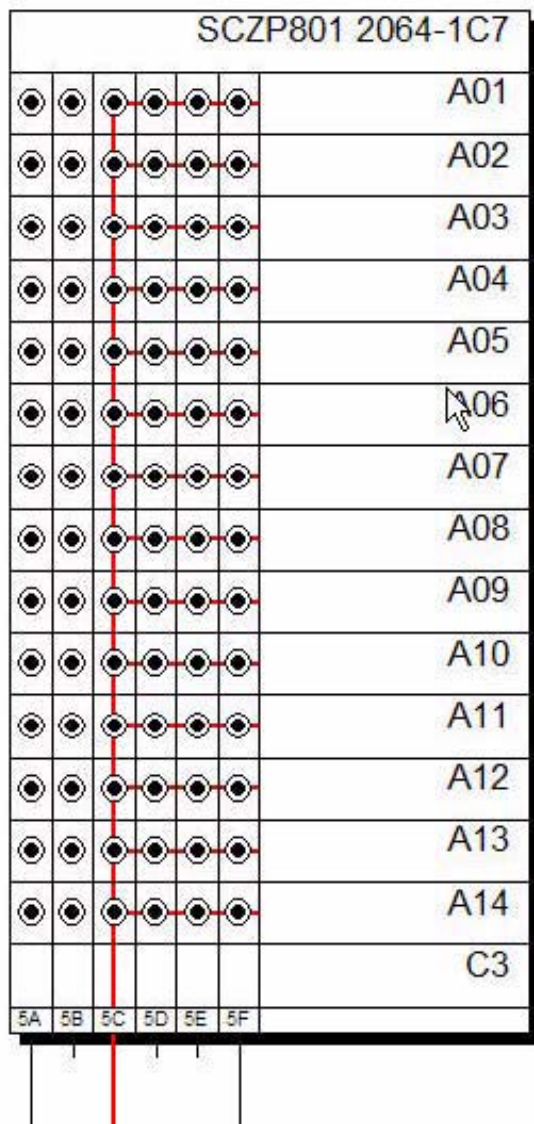
- ❑ Correct channel spanning not shown when an object is selected



HCM CHPID Spanning - HCM diagrams



- Correct channel spanning is shown when a channel is selected



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zSeries Dynamic Partition Naming and Activation



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z990 Dynamic Partition Naming



- ❑ The z990 supports dynamic partition naming
 - Partitions may be defined with a proper partition name, or
 - Partitions may be defined with a place holder partition name
 - A partition place holder partition name = '*'
 - You may change
 - From a proper partition name to a place holder name '*', or
 - From a place holder name '*' to a proper partition name
 - Both of the above actions may be performed using HCD and Dynamic I/O Reconfiguration activation
 - You cannot change from a proper partition name to a different proper partition name in one step. This can only be done by going through the '*' partition name step(s)

z990 Dynamic Partition Naming



- ❑ This support allows the customer to:
 - Initially define a place holder partition - '*'
 - Change a place holder partition '*' to a proper partition name
 - Change a proper partition name to a place holder name '*'
- ❑ For a z990 you may have
 - None, one, or more than one place holder partition '*' in logical channel subsystem (LCSS)
 - Place holder partitions in any or all LCSSs
- ❑ Place holder partitions - '*' DO NOT appear as an Image Icon on the HMC or SE CPC Images work area
 - Newly created and dynamically activated proper partition name Icons will appear on the HMC and SE CPC Images work area
- ❑ For dynamic partition name changes this Icon information is obtained from the HSA

z990 Dynamic Partition Naming



- ❑ A z990 place holder partition cannot be activated, only proper partition name partitions may be activated
- ❑ The only z990 resource assigned to a place holder partition is a partition number (also known as a MIF ID)
- ❑ You should always be able to dynamically activate from a place holder partition name to a proper partition name
- ❑ But you can only dynamically activate from a proper partition name to a place holder partition name if the image is deactivated
- ❑ Once having dynamically activated a proper partition name (using HCD or the z/OS activate command) you may only perform z990 activate for that LPAR image if there is an Image Profile for that image name on the SE for the z990 processor

z990 Dynamic Partition Definition

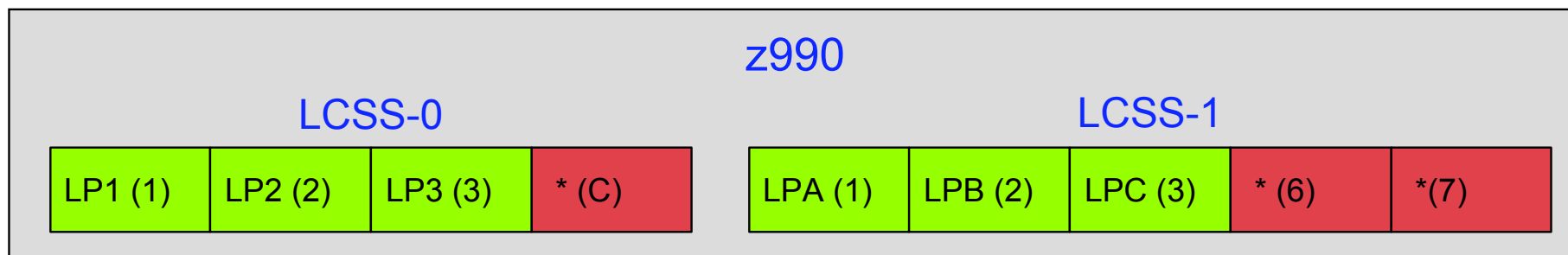


HCD initial logical partition definitions (Initial POR configuration)

LCSS-0 (LP1 (1), LP2 (2), LP3 (3), * (C))

LCSS-1 (LPA (1), LPB (2), LPC (3), * (6), * (7))

Write the IODS, POR the processor, Activate all the proper named logical partitions Images



These logical partitions cannot be activated while they have place holder (*) logical partition (LPAR) names

z990 Dynamic Partition Naming



HCD - LPAR definition change, and dynamic I/O reconfiguration activation

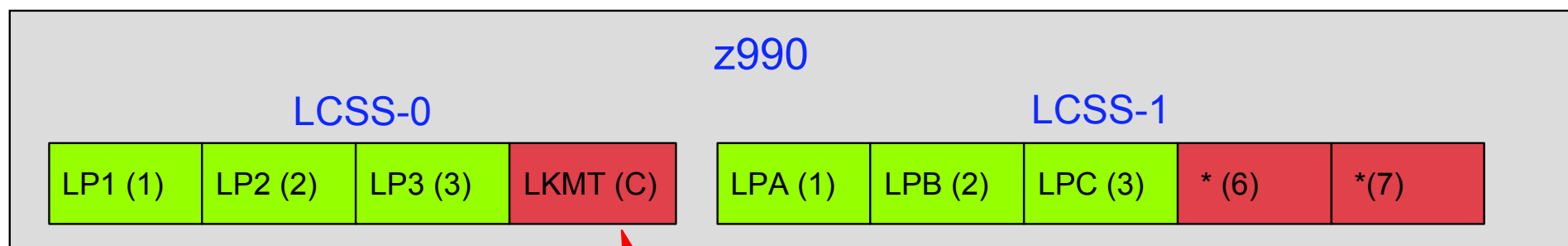
Change the LCSS-0 partition number (C) with a place holder name '*', to a proper partition name - LKMT (C)

Define the required CHPID ACCESS to this partition,

Access will be give to devices defined to be accessed via the CHPIDs, change if required

Perform a normal Dynamic I/O Reconfiguration activate from HCD or use the z/OS 'Activate' command

An image Icon for this logical partition will appear in the HMC and SE CPC Images work area



This logical partition name has been changed dynamically (using HCD dynamic I/O reconfiguration) from a place holder name to a proper logical partition LPAR name

z990 Dynamic Partition Activation



z990 Partition Activation

Create an Image profile for the new LPAR name

The recommended way to create the new Image profile is by
selecting the CPC and invoke the 'Customize/Delete Activation Profiles' task,

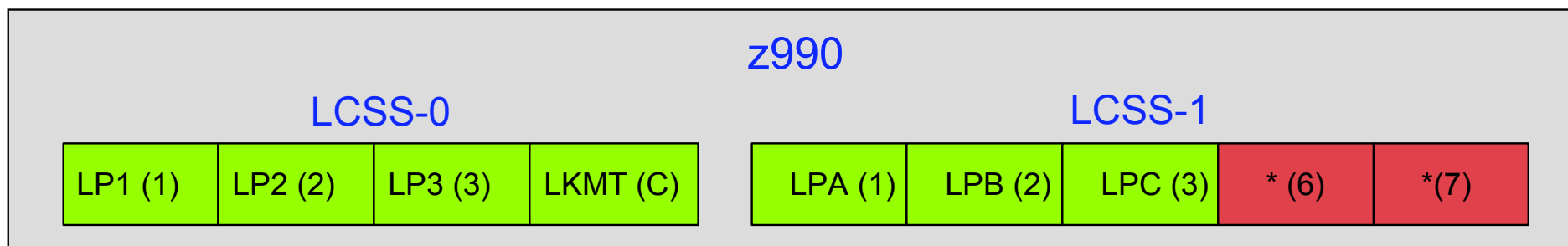
Then use the Default Image profile skeleton

Customize the profile for the required CP resource (CPs, weights, memory etc)

Activate the Image

Determine the state the channels to be accessed by this partition, CONFIG Online the required channels

IPL the Image



Dynamic partition naming



```

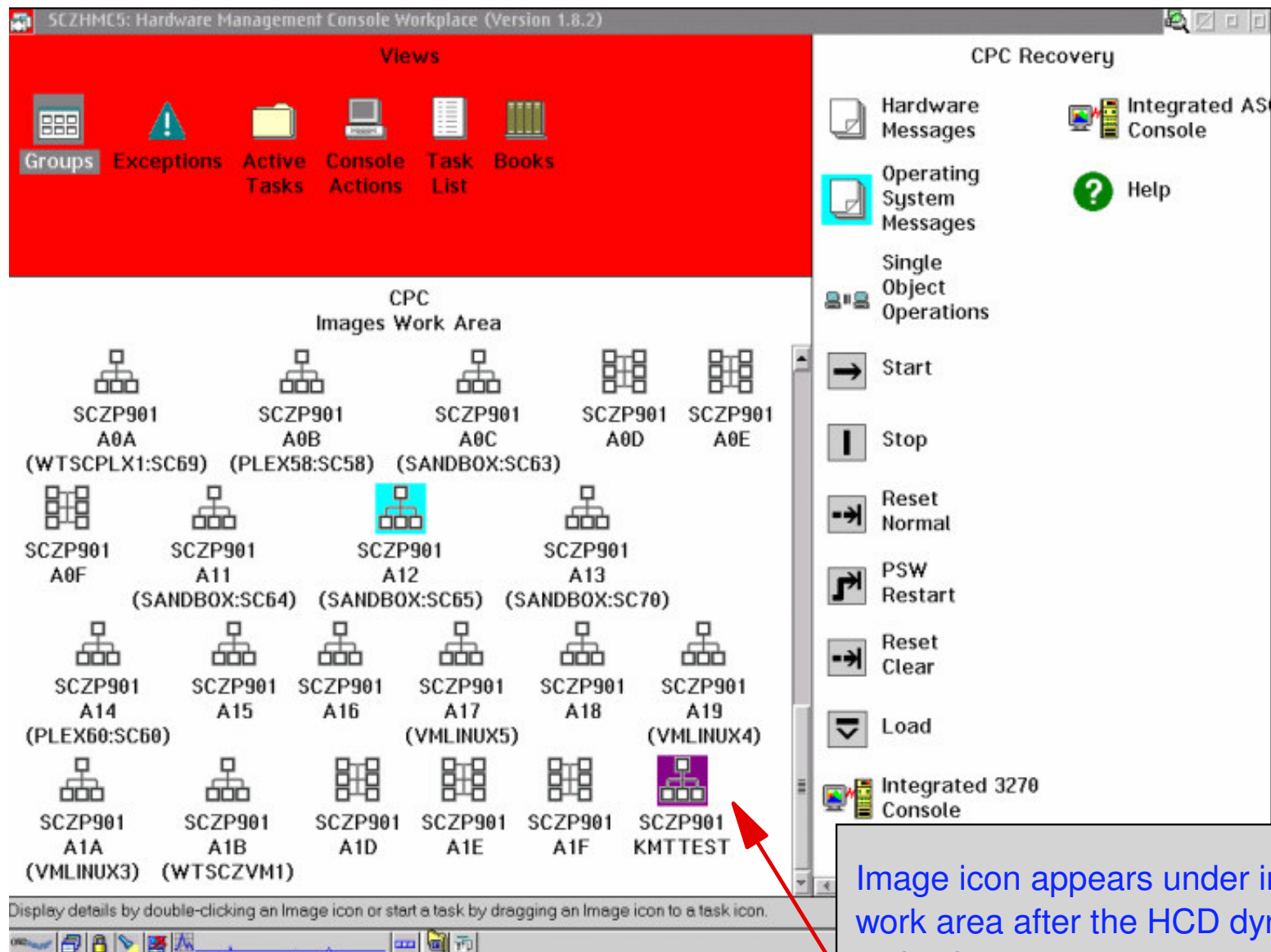
                                Partition List
Goto  Backup  Query  Help
-----
                                Row 10 of 15
Command ==> _____ Scroll ==> CSR

Select one or more partitions, then press Enter. To add, use F11.

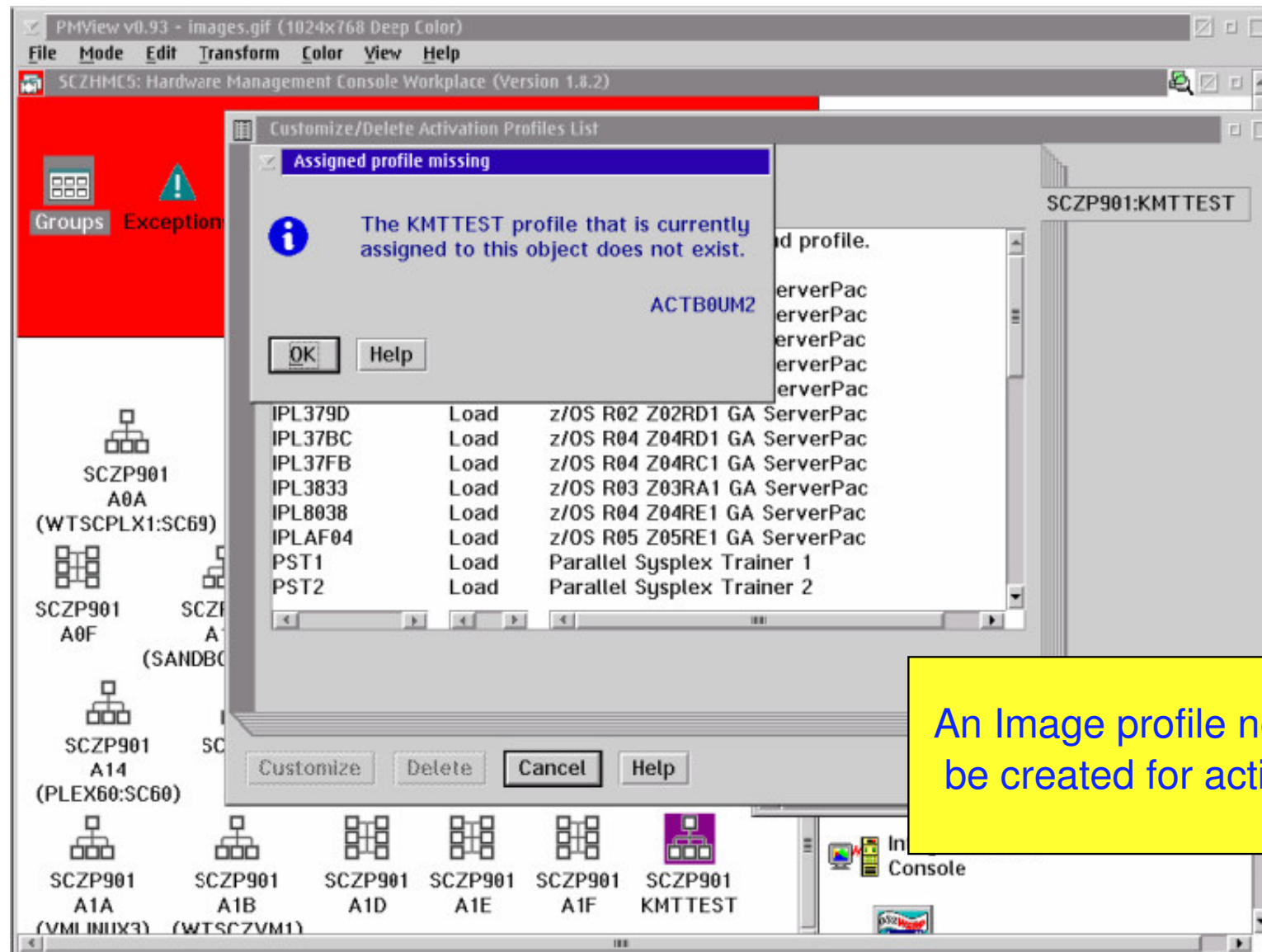
Processor ID   . . . . : SCZP901
Configuration mode . : LPAR
Channel Subsystem ID : 1

/ Partition Name  Number Usage + Description
- A15             5      OS   Test + AO target
- A16             6      OS   xxxx
- A17             7      OS   VMLINUX5
- A18             8      OS   TOTVM1
- A19             9      OS   VMLINUX4
- *               C      OS   Dynamic Name LPAR
***** Bottom of data *****
```

Dynamic Lpar Definition

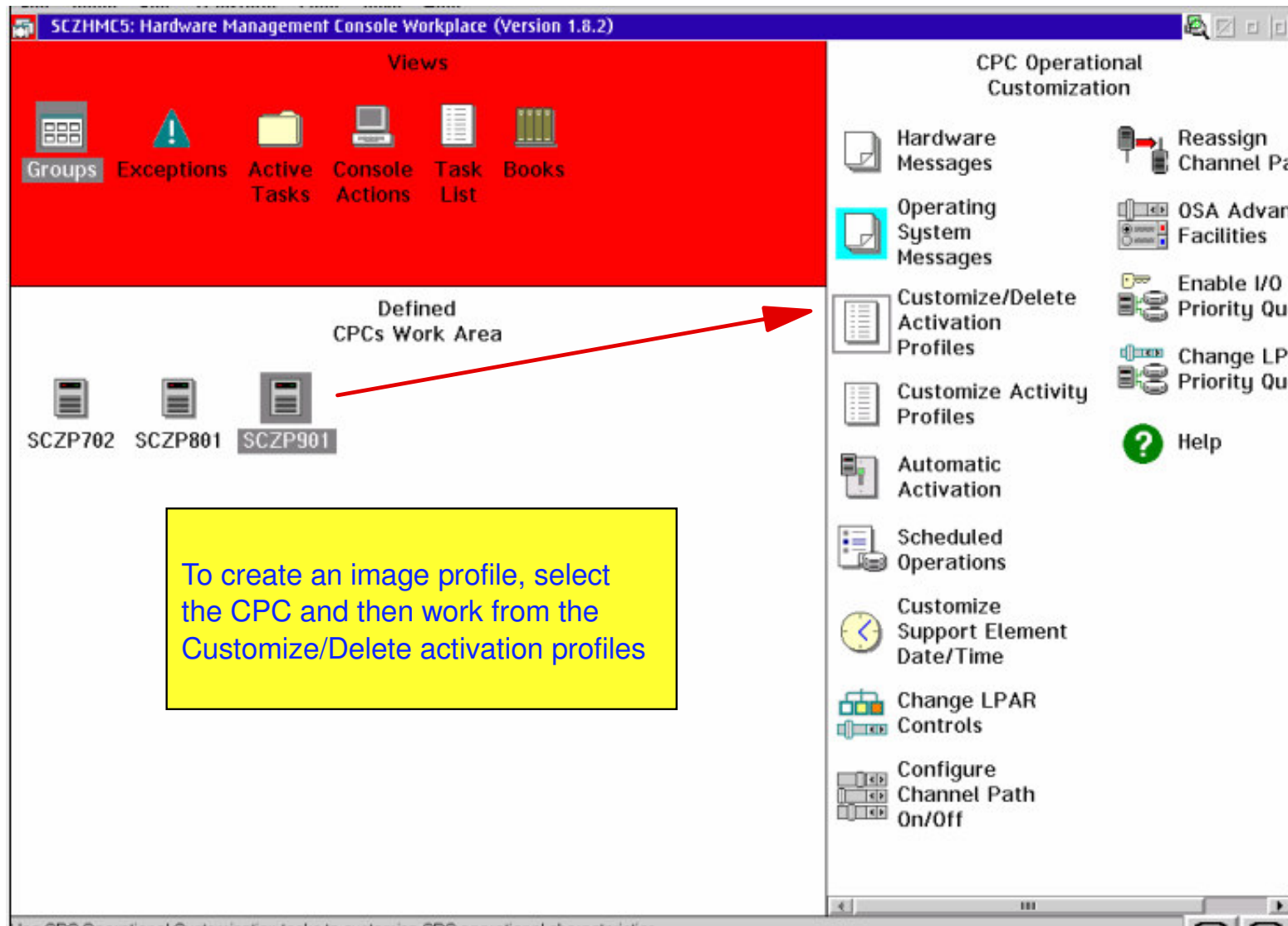


Dynamic Lpar Definition

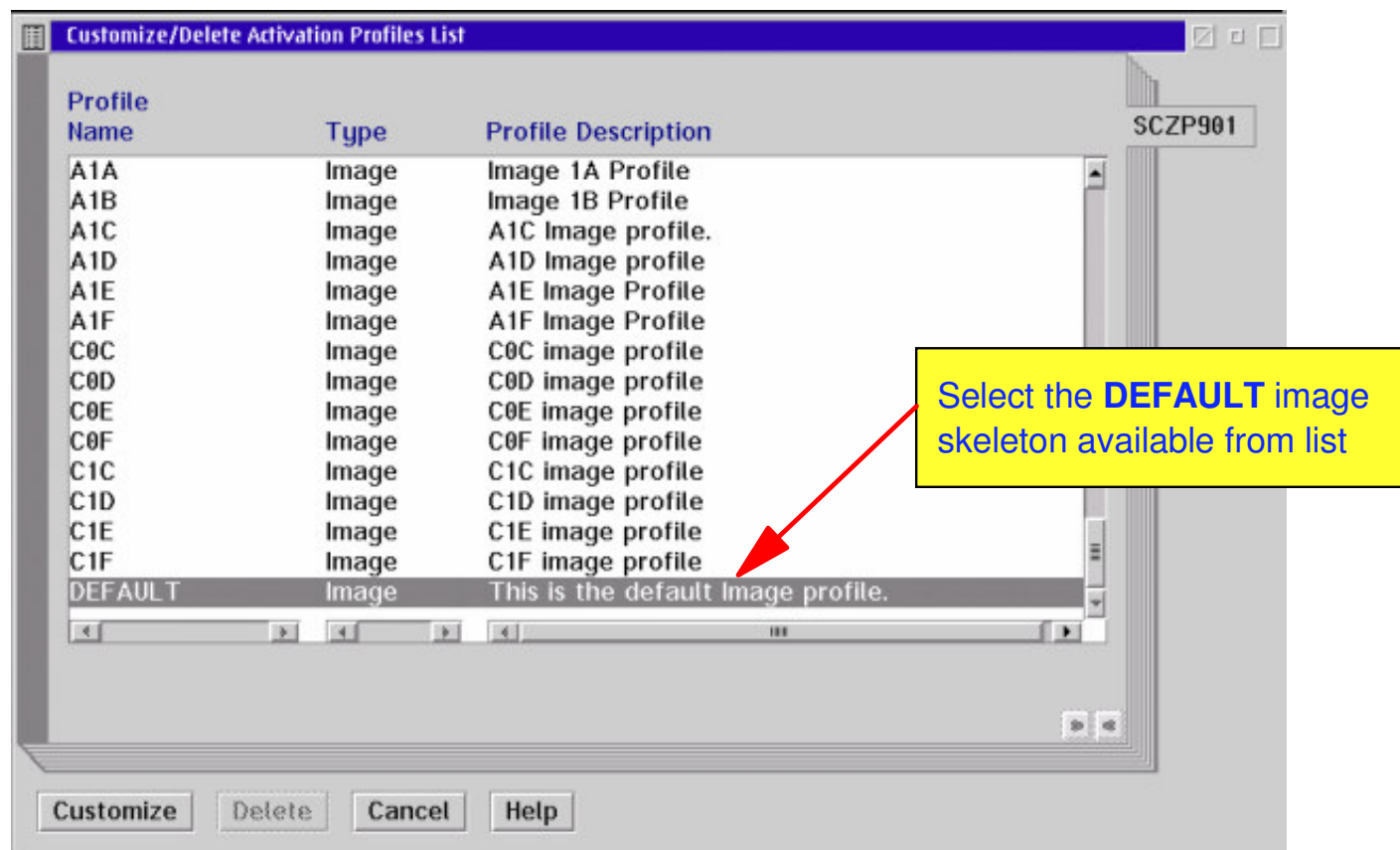


An Image profile needs to be created for activation

Dynamic Lpar Definition



Dynamic Lpar Definition



Dynamic Lpar Definition



Customize Image Profiles: SCZP901

Profile name:

Description:

Partition identifier:

Mode:
ESA/390
ESA/390 TPF
Coupling facility
LINUX Only

Clock type assignment
☒ Standard time of day
☐ Logical partition sysplex timer offset

General Processor Security Storage Options Load PCI Crypto

Save Copy notebook Paste notebook Cancel Help

Change the **DEFAULT** name to the LPAR name just created

Dynamic Lpar Definition



Customize Image Profiles: SCZP901

Profile name: KMTTEST

Description: This is the default Image profile.

Partition identifier: 0

Mode: ESA/390, ESA/390 TPF, Coupling facility, LINUX Only

Clock type assignment:
☒ Standard time of day
☐ Logical partition sysplex timer offset

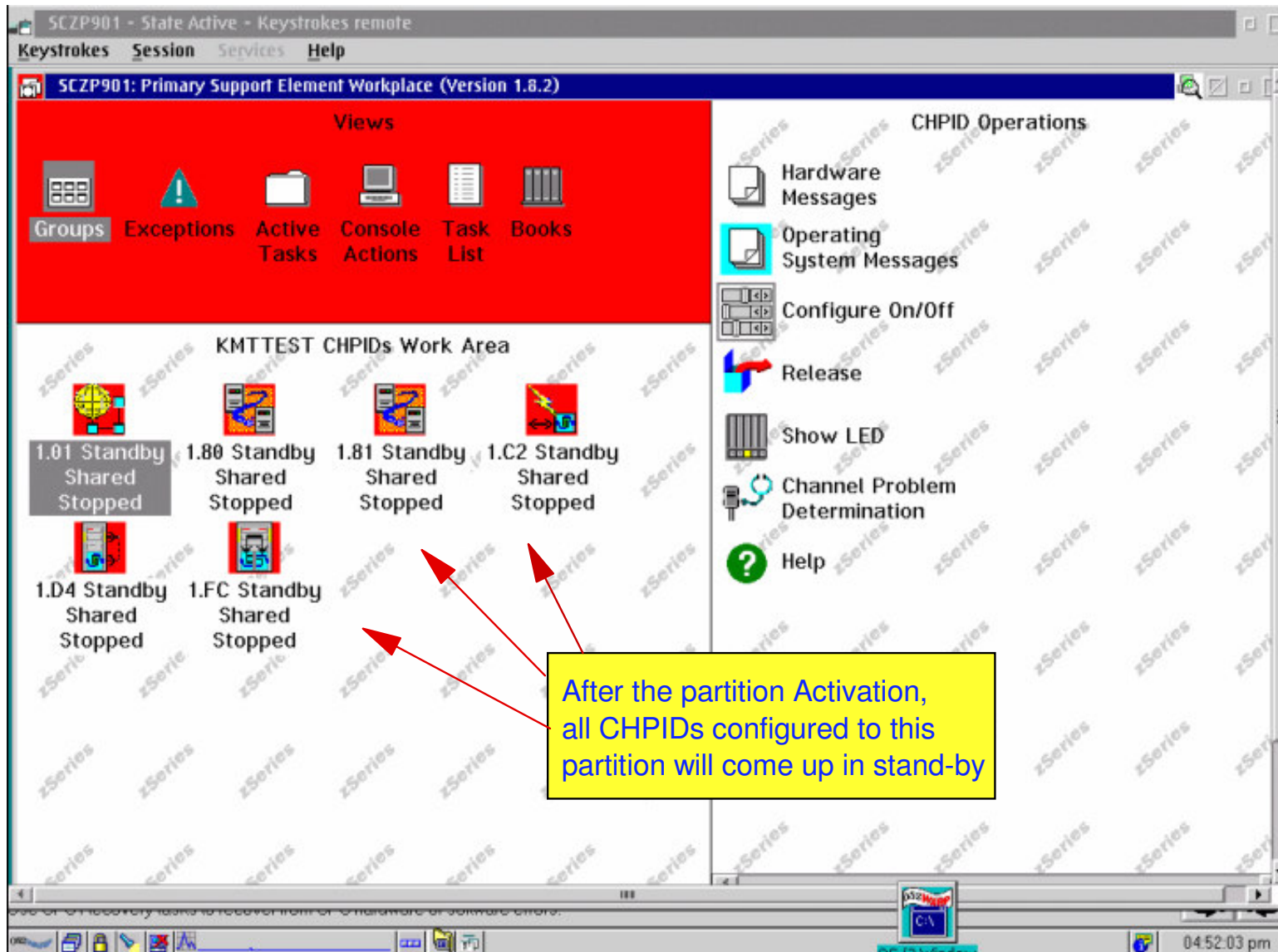
Configure the LPAR resources then Save

General Processor Security Storage Options Load PCI Crypto

Save Copy notebook Paste notebook Cancel Help

After Saving your settings the partition is ready to be activated

Dynamic Lpar Definition



Partition Number Considerations



- ❑ You cannot change a place holder LPAR partition number (MIF) without a POR, therefore for the following determine with the connection needs
 - FICON FCTC - destination image = place holder MIF
 - 3745 with ESCON adapters
 - OSC channels customization

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zSeries z990 GA3 FICON channel Port 'TAG' Field



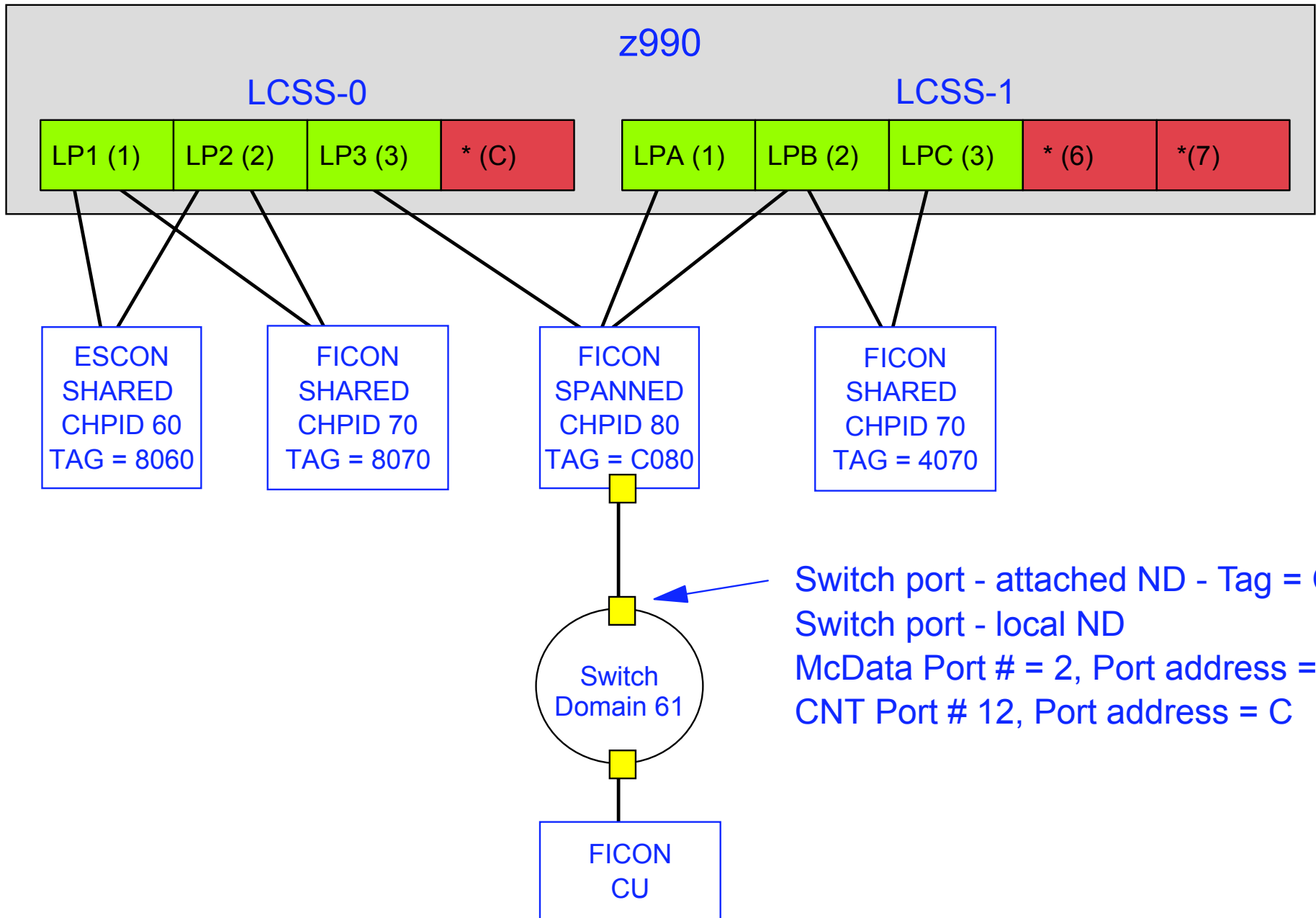
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z990 GA3 FICON channel Port 'TAG' Field



- ❑ Model dependent node connection information
- ❑ For z990 GA3 supports LCSS and spanning channel usage
- ❑ For FICON channel 'TAG' shows a CSS.ID bit map of the LCSSs accessing the channel and the CHPID # assigned to the channel (assigned to the PCHID)
- ❑ This information can be used during FICON channel path Problem Determination, at the channel end and the neighbor connection (usually a FICON switch)

z990 GA3 FICON channel Port 'TAG' Field



z990 GA3 FICON channel Port 'TAG' Field



z990 GA3 - Channel Analysis Panel - CHPID 80

Analyze Channel Information			
Channel type:	Fibre FC	Hardware Type:	0B
		Hardware Sub Type:	00
		2Byte Control Unit Link Addr defined:	No
Partition ID:	1	Absolute address:	00000000
MIF Image ID:	1	Absolute address:	62B83000
Channel mode:	Spanned		
CHPARM:	00		
CSS.CHPID:	0.80		
PCHID:	0160		
Switch number:	61	CVC CCC threshold:	5
Switch number valid:	1	IECC threshold:	4
		Channel link address:	610613
State:	Online	Temp error threshold:	04
Status:	Operating	Suppress:	0000000000000000
Image chnl state:	Online	SAP affinity	01
Image chnl status:	Operating		
Error code:	00		
Ber inbound:	0	Connection Rate	FICON 1.75 at 2Gb
Ber outbound:	0		
Node type:	Self	Node type:	Attached
Node status:	Valid	Node status:	Valid
Flag/Parm:	10000780	Flag/Parm:	00200A06
Type/Model:	002084-B16	Type/Model:	006064-001
MFG:	IBM	MFG:	MCD
Plant:	02	Plant:	01
Seq. number:	000000026A3A	Seq. number:	0000000119D3
Tag:	C080	Tag:	0002
Worldwide Node name	5005076400C26A3A	Worldwide Node name	1000080088A0DCD
Worldwide Port name	5005076401003C55	Worldwide Port name	2006080088A0DCD

z990 GA3 FICON channel Port 'TAG' Field



z990 GA3 - Channel Analysis - CHPID 80 - McData Port #2

IBM ED-6064 : ID61 Entry Switch										
Product Configure Logs Maintenance Help										
Hardware	Port List	Node List	Performance	FRU List						
Port #	Address	Node Type	Serial #	TAG	Type	Model	Class	Protocol	BB_Credit	Port WWN
0 (00)	04	E_Port	119D2		006064	001	Switch (Domain ID 2)		60	McDATA-20:04:08:00:88:A0:BC:01
1 (01)	05	N_Port	IBM 10ECB	5A05	2064	1C7	Channel path 5A	FC-SB-2	107	IBM-50:05:07:64:01:00:13:EC
2 (02)	06	N_Port	IBM 26A3A	C080	2084	B16	Channel path 80	FC-SB-2	107	IBM-50:05:07:64:01:00:3C:55
3 (03)	07	N_Port	IBM 22513	20	2105	800	Direct access storage	FC-SB-2	107	IBM-50:05:07:63:00:CC:95:89
4 (04)	08	N_Port	IBM 22513	4	2105	800	Direct access storage	FC-SB-2	107	IBM-50:05:07:63:00:C3:95:89
5 (05)	09	N_Port	IBM 10ECB	5C09	2064	1C7	Channel path 5C	FC-SB-2	107	IBM-50:05:07:64:01:00:16:28
6 (06)	0A	N_Port	IBM 26A3A	C081	2084	B16	Channel path 81	FC-SB-2	107	IBM-50:05:07:64:01:00:3C:63
8 (08)	0C	N_Port	IBM 22513	24	2105	800	Direct access storage	FC-SB-2	107	IBM-50:05:07:63:00:CB:95:89
9 (09)	0D	N_Port	IBM 10ECB	5E0D	2064	1C7	Channel path 5E	FC-SB-2	107	IBM-50:05:07:64:01:00:16:4D
10 (0A)	0E	N_Port	IBM 26A3A	C082	2084	B16	Channel path 82	FC-SB-2	107	IBM-50:05:07:64:01:00:3C:59
12 (0C)	10	N_Port	IBM 22513	84	2105	800	Direct access storage	FC-SB-2	107	IBM-50:05:07:63:00:C7:95:89
14 (0E)	12	N_Port	IBM 26A3A	C083	2084	B16	Channel path 83	FC-SB-2	107	IBM-50:05:07:64:01:00:3C:60
16 (10)	14	N_Port	IBM 22513	A4	2105	800	Direct access storage	FC-SB-2	107	IBM-50:05:07:63:00:CF:95:89
17 (11)	15	N_Port	IBM FCA37	4	2105	F20	Direct access storage	FC-SB-2	64	IBM-50:05:07:63:00:C3:0C:25
18 (12)	16	N_Port	IBM 26A3A	C088	2084	B16	Channel path 88	FC-SB-2	107	IBM-50:05:07:64:01:40:3C:55
20 (14)	18	E_Port	119D2		006064	001	Switch (Domain ID 2)		60	McDATA-20:18:08:00:88:A0:BC:01
21 (15)	19	N_Port	IBM FCA37	84	2105	F20	Direct access storage	FC-SB-2	64	IBM-50:05:07:63:00:C7:0C:25
22 (16)	1A	N_Port	IBM 26A3A	C089	2084	B16	Channel path 89	FC-SB-2	107	IBM-50:05:07:64:01:40:3C:63
26 (1A)	1E	N_Port	IBM 26A3A	C08A	2084	B16	Channel path 8A	FC-SB-2	107	IBM-50:05:07:64:01:40:3C:59
30 (1E)	22	N_Port	IBM 26A3A	C08B	2084	B16	Channel path 8B	FC-SB-2	107	IBM-50:05:07:64:01:40:3C:60

Machine type	Model	Manufacturer	Plant	Serial # Sequence #	Tag
002084	B16	IBM	02	026A3A 000000026A3A	C080

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zSeries z990 FICON Spanning ESCON Sharing I/O request Addressing Identifiers



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- ❑ I/O requests from the channel to a control must:
 - Identify the source of the I/O request and the destination of (target) of the I/O request
 - FICON
 - Source - image (LPAR) and port (channel port S_ID)
 - Destination - port (control unit port D_ID) and Image (control unit image)
 - Unit address (device in the Logical control Unit)
 - ESCON (channel to CU)
 - Source - logical (LPAR) and link address (channel port)
 - Destination link address (control unit port) and logical (control unit image)
 - Unit address (device in the Logical control Unit)

ESCON channels cannot be spanned as the ESCON channel image identifier is only 4 bits, therefore only MIF can be identified and not the LCSS in an ESCON I/O request.

FICON / ESCON I/O Identifier



ESCON channels cannot be spanned as the ESCON channel image identifier is only 4 bits, therefore only MIF can be identified and not the LCSS in an ESCON I/O request.

