



IBM @server zSeries 990

# z990 I/O Configuration Definition Support

2084 Upgrade, Swap or New install

HCD, HCD/HCM or IOCP I/O configuration definition support

ITSO Poughkeepsie  
zSeries  
2084 z990

- 2084 installation cases - using z/OS HCD

1. 2084 Upgrade, Swap or New install - HCD full processor and I/O configuration definition
  - Using HCD and defining a complete 2084 I/O configuration, use CMT for PCHID to CHPID mapping
2. 2084 - Upgrade, Swap or New install - using HCD with 2064/9672 COPY CSS or LCSS
  - Using HCD to Copy 2064s / 9672s processor CSS definitions, use CMT for PCHID to CHPID mapping
3. 2084 - Upgrade, Swap or New install - Define 2084 - Connect existing CUs and Devices
  - Using HCD to Define the 2084 Processor, CSSs, LPs, Channels - then connect existing CUs and Devices
  - Also use CMT CMT for PCHID to CHPID mapping
4. 2084 - Upgrade, Swap or New install - Multi-Copy approach (Copy CSS and Copy LPs)
  - Using HCD to Copy 2064/9672 CSS to 2084 a CSS, then Copy LPs another 2084 CSS
5. 2084 Channel MES - use HCD to define channel and I/O configuration changes
  - 2084 Channel MES - using HCD to define new channel and I/O configuration - with and without the CMT
6. 2084 Book MES and with STI rebalance - Consider Channel Remap
  - Determine if any PCHID changes (should only be for ICB-4) if none there is no HCD changes
  - Determine the % amount of STI changes, if over 40% consider channel remap
    - This impacts channel cabling and will require cable to channel changes
7. 2084 - Upgrade, Swap or New - Use HCD to Migrate IOCP statements
  - Using HCD with 2064 IOCP source statements, and w/ and w/o the CMT

- 2084 installation - using z/OS HCM and HCD

8. Upgrade, Swap or New install - using z/OS HCM and HCD
  - Using HCM/HCD to COPY 2064/9672 CSS definitions, define new or changed definitions - also using the CMT

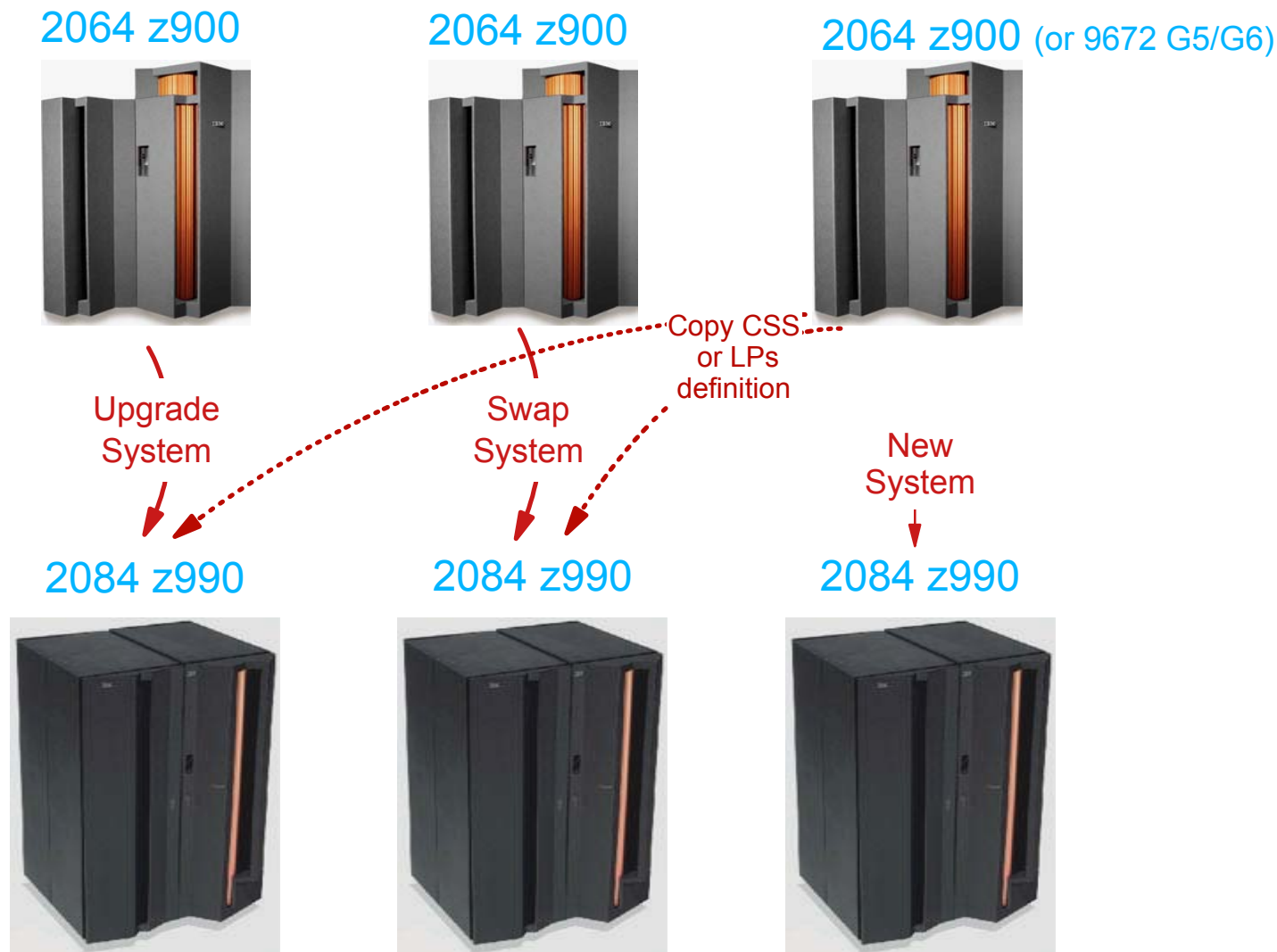
- 2084 installation - using z/VM HCM and HCD

9. Upgrade, Swap or New install - using z/VM HCM and HCD
  - Using HCM/HCD to COPY 2064/9672 CSS definitions, define new or changed definitions - also using the CMT

- 2084 installation - using IOCP only

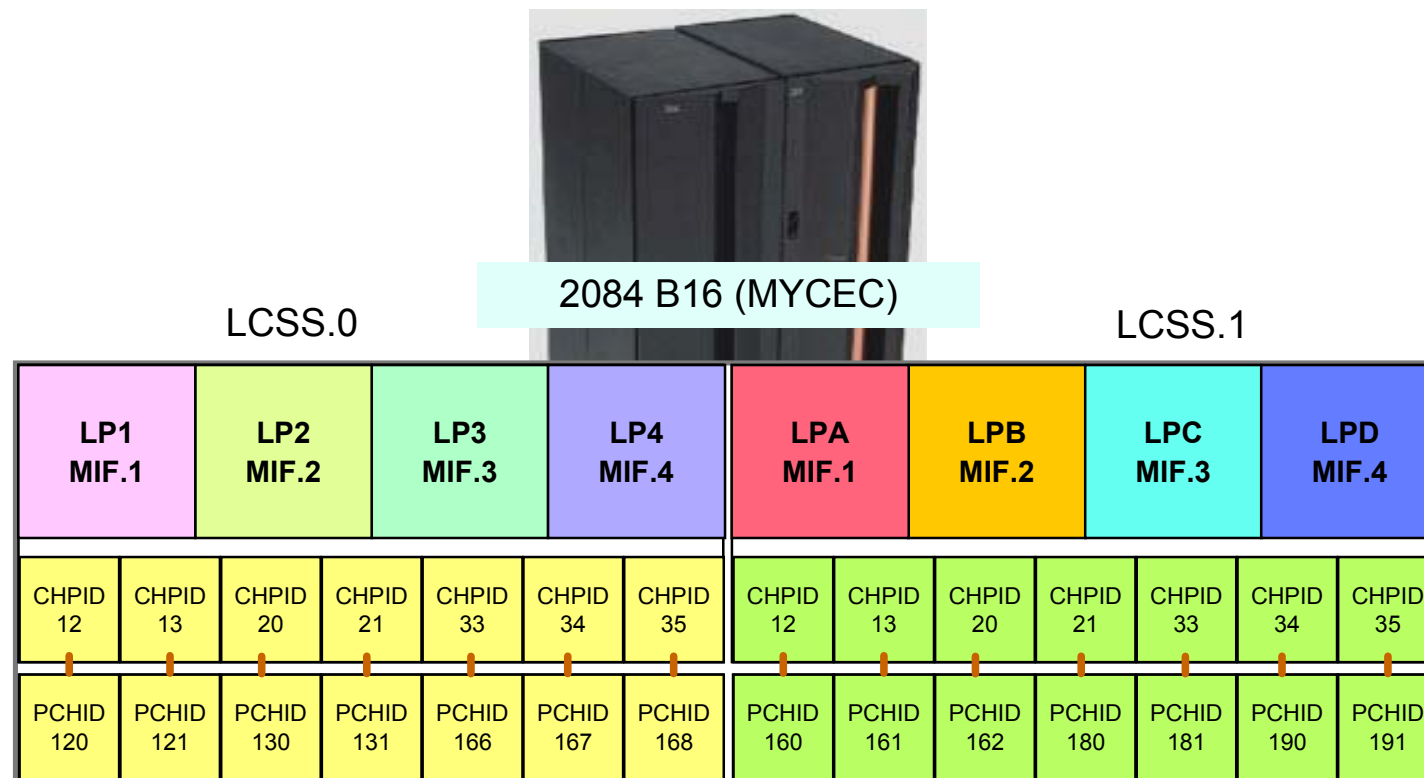
10. 2084 Upgrade, Swap or New install - merging and changing IOCP statements
  - Using ICPIOCP and IOCP statements only

# 2084 - I/O Configuration Definition Support - I/O Configuration Definition Options

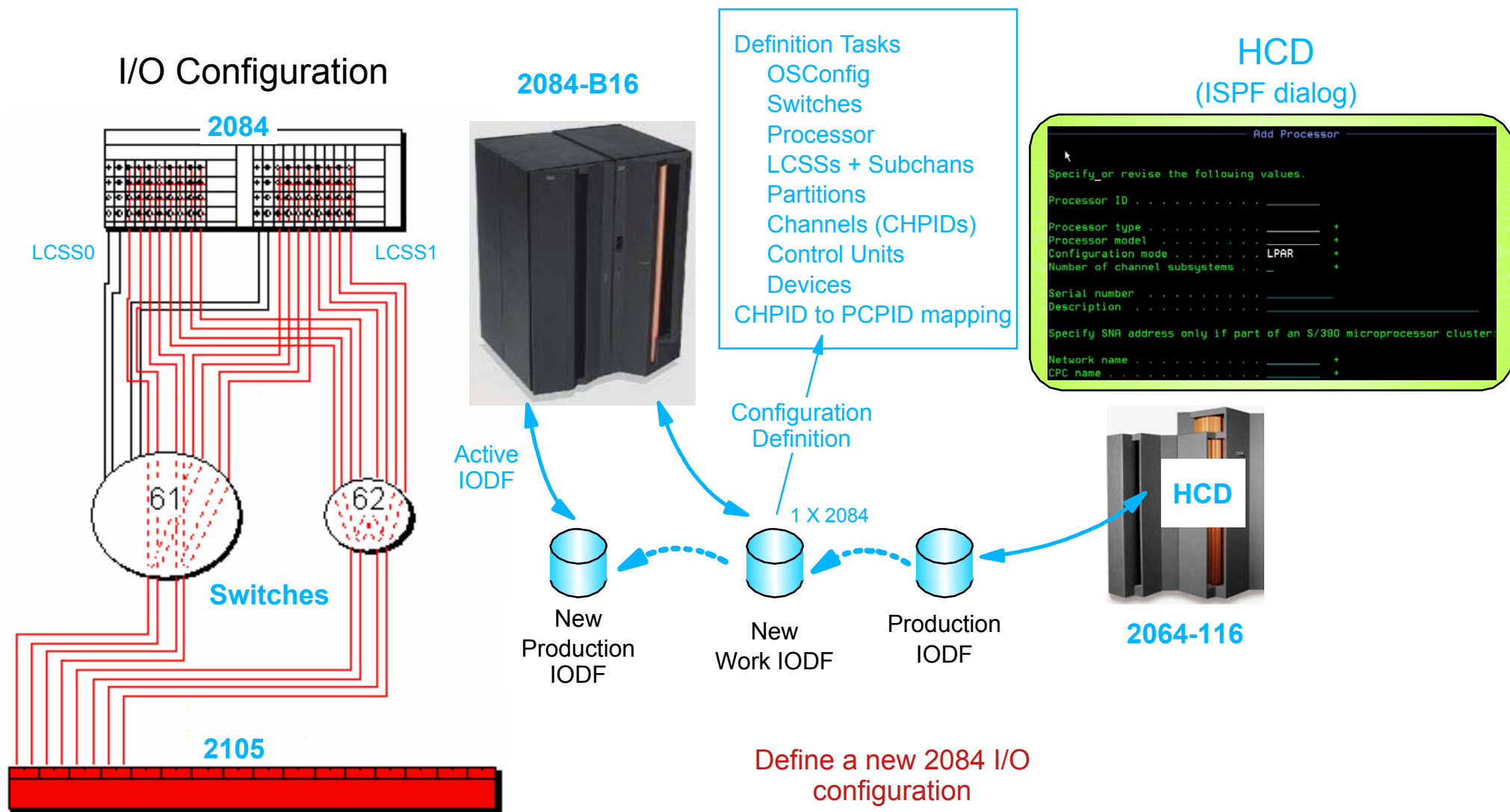


- **Define a new 2084 I/O configuration Definition (using HCD or HCD/HCM)**
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- Copy, an existing CSS or LCSS I/O configuration definition - to a predefined or currently defined 2084
  - LCSSs or LPs - (copy / migration) - copies the I/O configuration
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing CUs

## 2084 Complete I/O Configuration Definition



- 2084 z990 model B16, with 480 channels (not all channels are shown)
  - ▶ Define the Processor - (2084 - B16 - MYCEC)
  - ▶ Define number of LCSSs and the LCSS.id for each LCSS, and
    - The maximum numbers of subchannels required for each LCSS (current plus dynamic support)
  - ▶ Define logical partitions for LCSS.0
  - ▶ Define logical partitions for LCSS.1 (logical partition names must be unique 2084 CEC wide)
  - ▶ Define channels for LCSS.0 (at this stage the CHPIDs are not associated/defined to physical channels)
  - ▶ Define channels for LCSS.1 (at this stage the CHPIDs are not associated/defined to physical channels)
- Define the CUs and connect to the required LCSSs / CHPIDs, define Devices to the CU/Proc and OS Config(s)
- CHPID to PCHID Mapping using the CMT - the CHPIDs are now associated with a physical channel (PCHID)



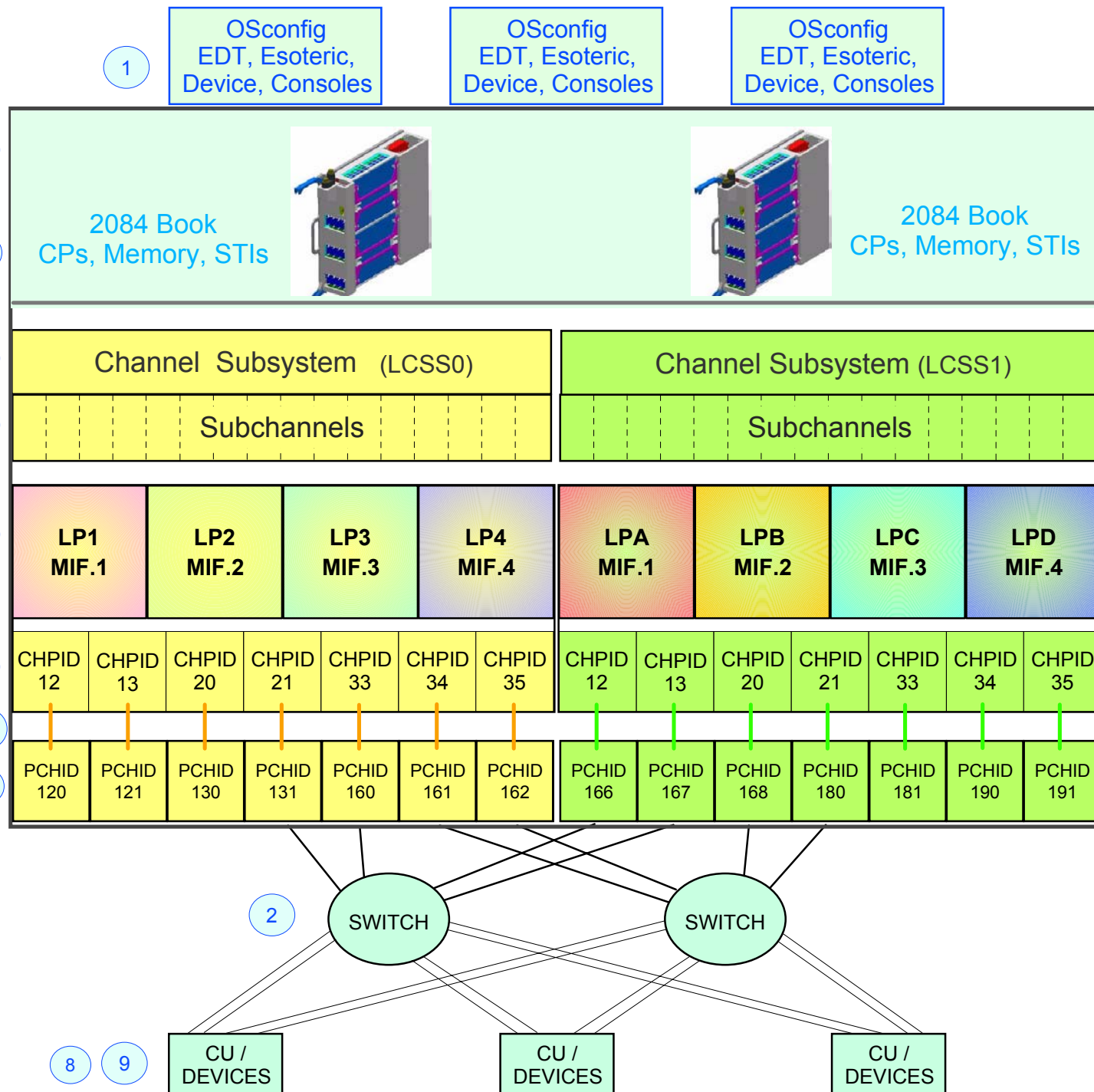
- Planning items - configuring / ordering
  - No Parallel channels (BL or BY), no OSA-2 channels (OSA)
    - No 4 Port ESCON channel card, also requires a cable connector change - IBM duplex to MT-RJ
    - No FICON 1.5 channel card, also requires cable connector change - SC to LC
  - Consider 'Plan-Ahead' for channels for additional I/O cages - prevents disruption
- Planning items - 2084 processor - any change to the following is disruptive
  - Number of LCSSs (1 or 2)
  - Quantity of logical partitions per LCSS and for the 2084 in total
  - Logical partition names - they must be unique across the CSSs
  - Number of Subchannels per LCSS
  - If any of the above are changed, HCD will not allow a dynamic change
- Planning items - I/O configuration definition
  - FICON CTC (FCTC) target 2084 CUADD - must be CSS.ID + MIF.ID
  - HCD FCTC support change (PTF) required for the 9672
  - If CTCs are defined, always produce an HCD CTC connection report for checking
  - CF Connectivity - may be required to be defined by the user
  - IQD connectivity - supports Spanning definition (GA2)
  - ICP connectivity - allows connections across LCSSs (supports spanning channels GA2)
- Planning items - I/O definition file, and HCD IOCP statements
  - Do not change a validated work IODF after a generation of the IOCP statements
  - The HCD validated work IOCP statement file must only be used by the CMT
  - The HCD validated work IOCP statement file CANNOT be used by any IOCP program
- Planning items - HCD panel changes
  - HCD hierarchical changes - use HCD options 1.3.s.s to display Channel Path List panel
  - Use the HCD channel path list panel (1.3.s.s). then PF20 to display SHR LP access & PCHIDs
  - Use the HCD channel path panel and PF20 + PF20 to display SPANed channels LCSS access



## 2084 HCD Definition Support - HCD Definition Sequence - 2084 versus 2064

2064	2084	Comments
OS/390 HCD release 9 Create work IODF	z/OS 1.4 HCD Create work IODF	
Operating Systems EDTs Esoteric Consoles	Operating Systems - option 1.1 EDTs Esoteric Consoles	
Switches (ESCON and FICON) Ports	Switches - option 1.2 (ESCON and FICON) Ports	
Processors Requires 2064 PIT Type, Mode	Processors - option 1.3 Requires 2084 PIT Type, <b>Mode</b> , <b>#CSSs</b>	
--- N/A ---	<b>(L)CSSs</b> - option 1.3.s <b>CSS.ID</b> Max # Devices for each CSS	No HSA expansion support on the 2084 SE. 2084 always supports the maximum PCUs, CUHs, PCHIDs # of subchannels specified in HCD
Partitions (for the processor) Name unique to a processor	<b>Partitions</b> (for a CSS) - option 1.3.s.p LP names are unique across all CSSs	IOCP changes from using Partition numbers to MIF_ID for a partition
Channels (for the processor) Type, Mode	<b>Channels</b> (for a CSS) - option 1.3.s.s Type, Mode - SPANNED, PCHID	2084 channels do not have default CHPID numbers (require PCHIDs) 2084 crypto function does not use CHPID numbers.
CU Type, Paths, Link Addresses	CU - option 1.4 Type, then define paths to each CSS <b>CSS.Paths</b> , Link Addresses	Define ALL processors and <b>CSSs</b> (with partitions and channels) before CU definitions
I/O Device	I/O Device - option 1.5	

# 2084 - I/O Configuration Definition Support - Complete Definition



## Install a 2084 (including PCHIDs)

- 2084 model A08, B16, C24, D32
  - Installed channels (PCHIDs)
- Use z/OS 1.4 HCD and a work UODF



- Define the Operating Systems
- Define the Switches and Ports
- Define the 2084 processor Model and mode (LPAR)
- Define 2 CSSs in the 2084
  - 1 to 4 CSSs are supported
  - 2 CSSs shown being defined
- Define the subchannel support
  - Maxdevs for CSS0
  - Maxdevs for CSS1
- Define the logical partitions + MIF
  - LPs for CSS0
  - LPs for CSS1
  - LP name must be 2084 unique
- Defined the channel path types (CHPID) and connections to switches
- Define the CU and the channel (CHPID) to CU channel path
  - Define for all CUs
- Define the devices to the:
  - CUs (8)
  - LPARs (6)
  - OSs (1)
- Define the channel (CHPID) to physical channel (PCHID) association





IBM @server zSeries 990

## z990 I/O Configuration Definition Support

Define a new 2084 I/O configuration definition:

New or Swap 2084

**HCD Full I/O Configuration Definition**

ITSO Poughkeepsie

zSeries

2084 z990

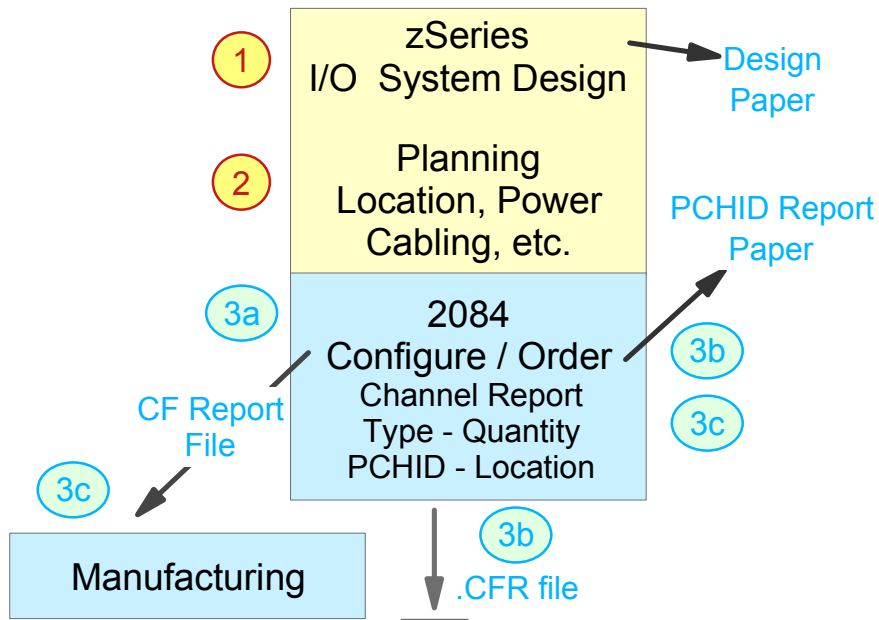
- Multi-step approach, from the system I/O configuration design to loading the OS (IPL)
  1. Design
  2. Planning
  3. a. Configuring, b. Optional channel/CU configuration availability testing (uses steps 4-9), c. Ordering
  4. Define or Copy an I/O configuration definition for the 2084 (using z/OS HCD with a work IODF)
  5. Validate the I/O configuration definition (also changes the IODF type to a 'Validated Work')
  6. Create an IOCP statements file from the HCD validated work IODF
  7. Transfer (download) files to a PC-WS with the CHPID Mapping Tool (CMT) installed
    - ▶ The machine order file - CFReport file (.CFR) or the manufacturing order file (.HWC)
    - ▶ IOCP statements file (from HCD)
  8. Start the z990 CHPID Mapping Tool (CMT) program
    - ▶ Select the required 2084 hardware configuration file file (.HWC or .CFR)
    - ▶ Resolve any hardware definition types to order types (e.g. OSD - OSA-Express GbE or HSTR)
  9. Map the 2084 CHPID definitions to the 2084 installed PCHIDs
    - ▶ Use either or both the Availability mapping function, or the Manual mapping function
  10. Create a CMT IOCP statements file (this will include the CHPID to PCHID mapping)
  11. Create the required CMT PCHID and CHPID reports
  12. Transfer (upload) the CMT IOCP statements file to the z/OS host (normal dataset)
  13. Use HCD to migrate the CMT PCHID IOCP statements file into the HCD validated work IODF
  14. Build a production IODF (from the work IODF)
  15. Upgrade/Install the 2084, using the production IODF write the IOCDS to the 2084 support element
  16. Customize the RESET, IMAGE, and Load profiles
  17. POR the 2084
  18. IPL the required image
  19. Operate the system, and perform dynamic I/O reconfiguration changes as required





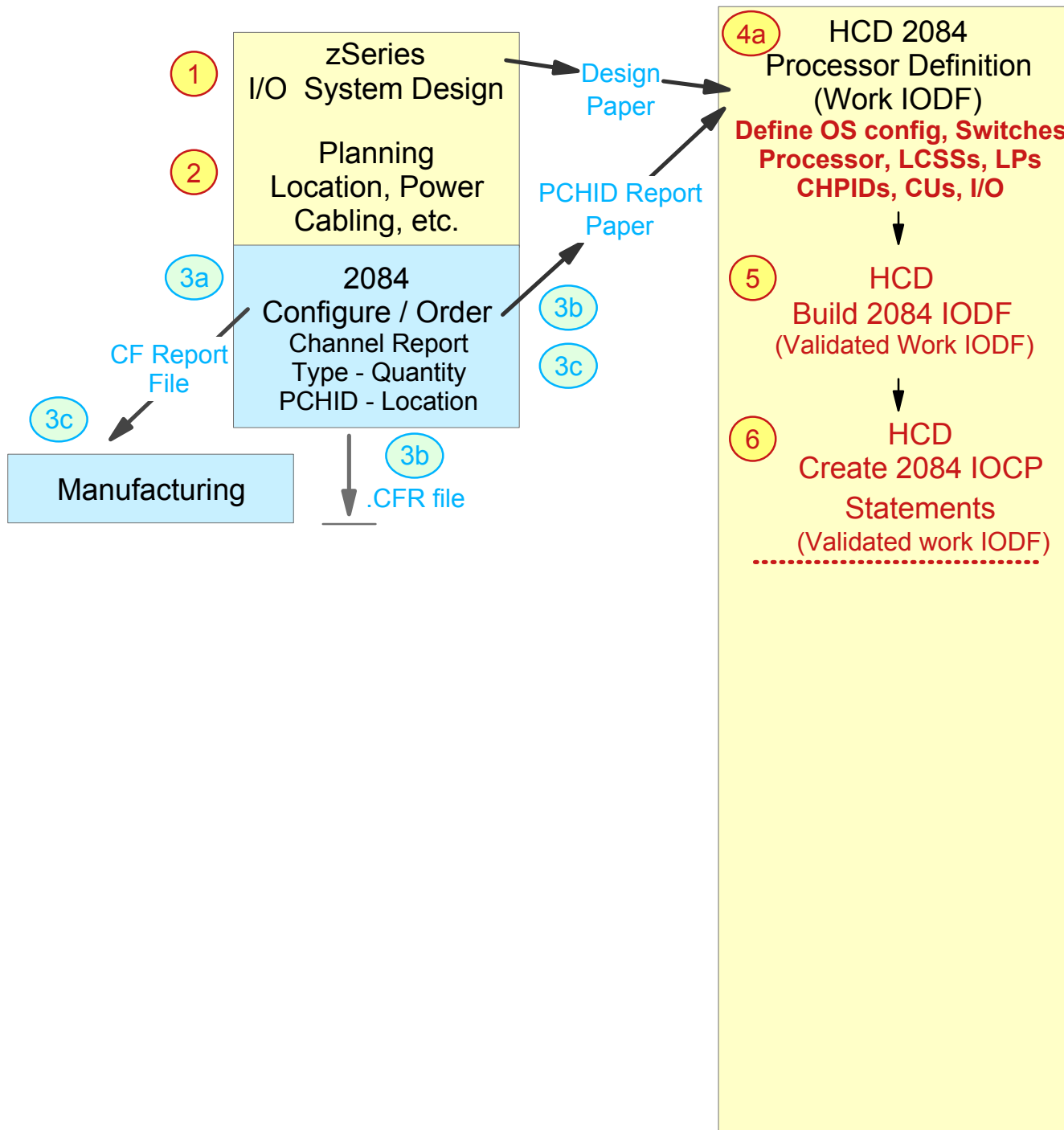
So all aboard  
and let the process begin

## Define new 2084 I/O configuration definition: New or Swap 2084, full definition

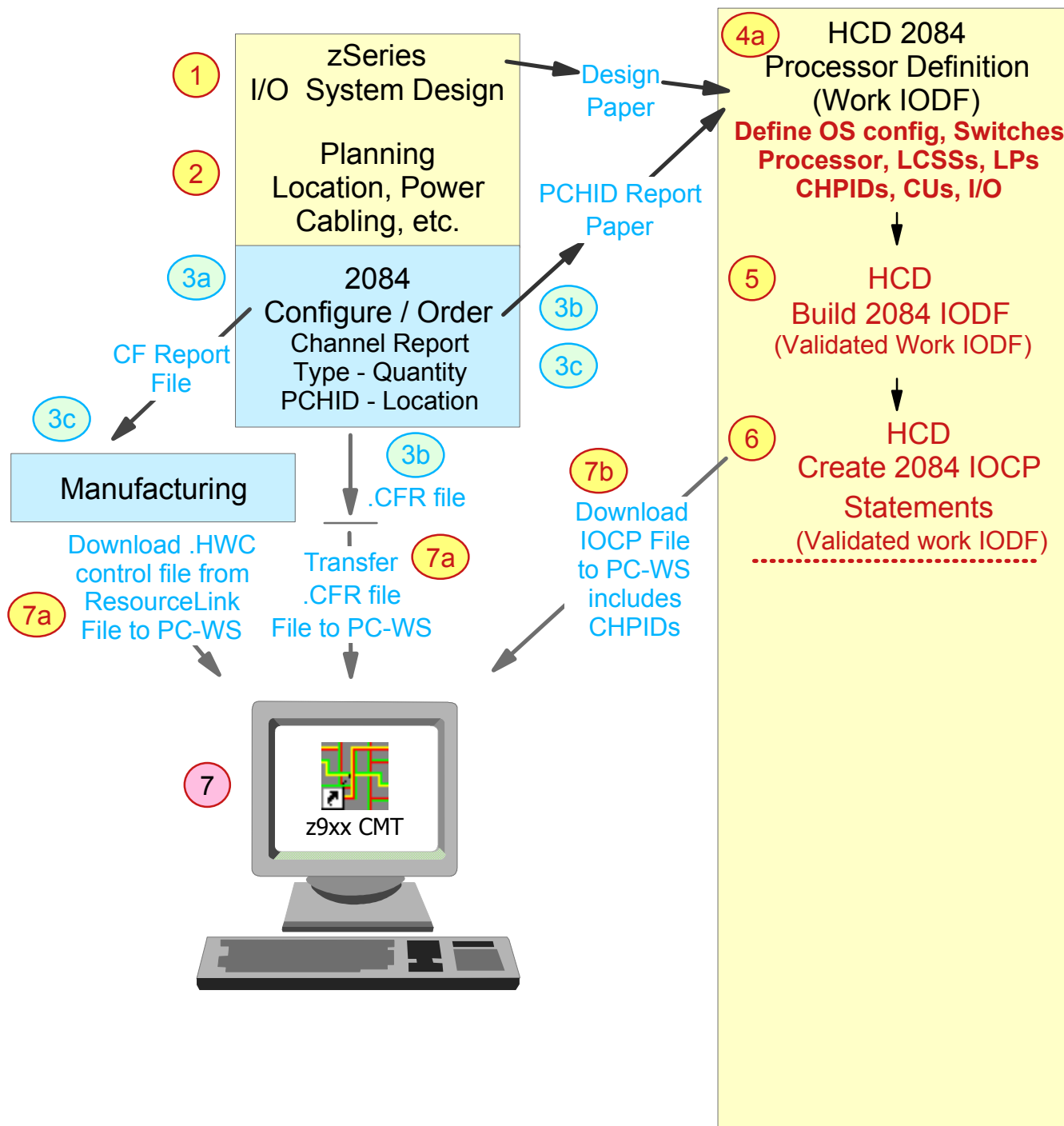




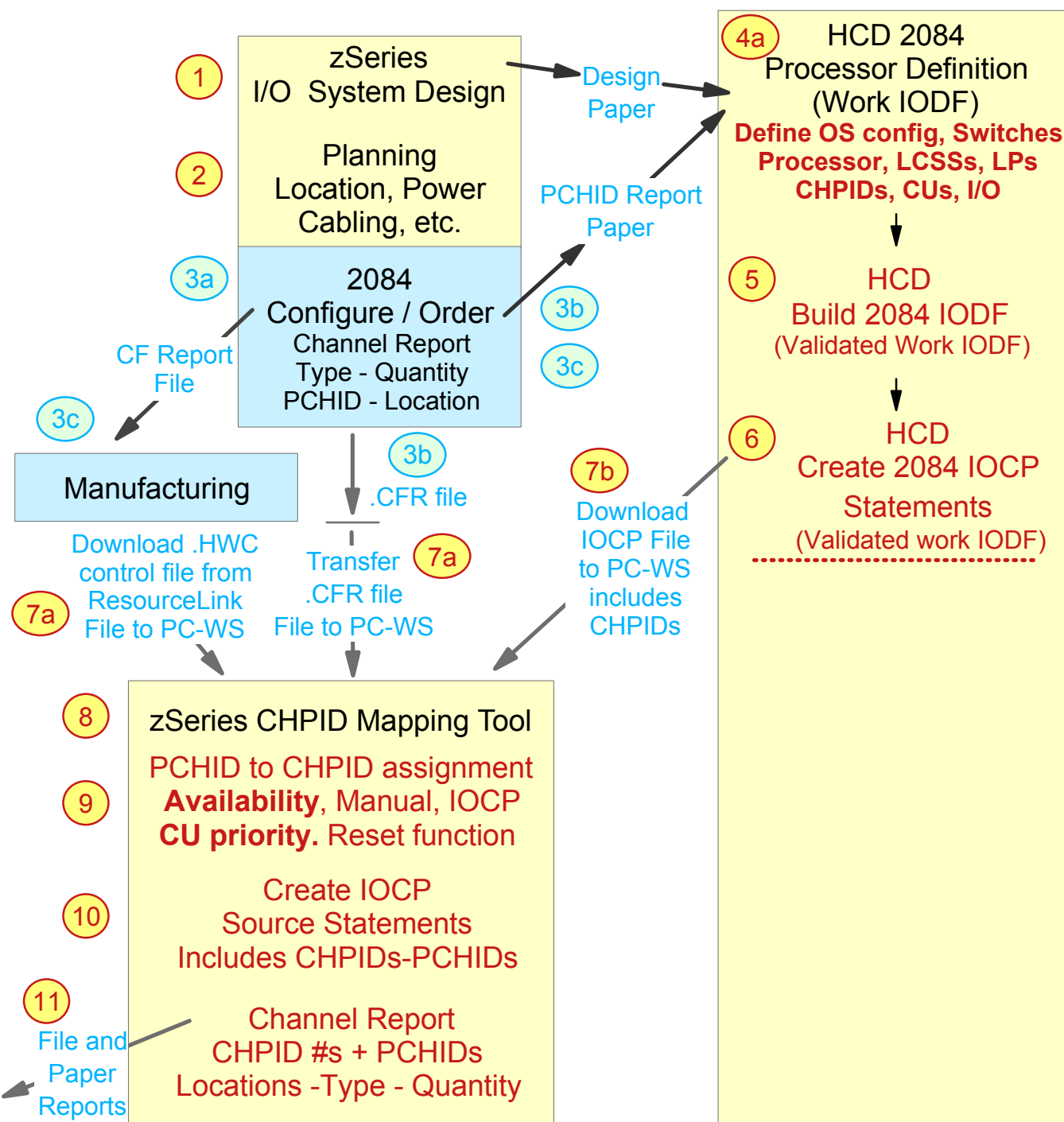
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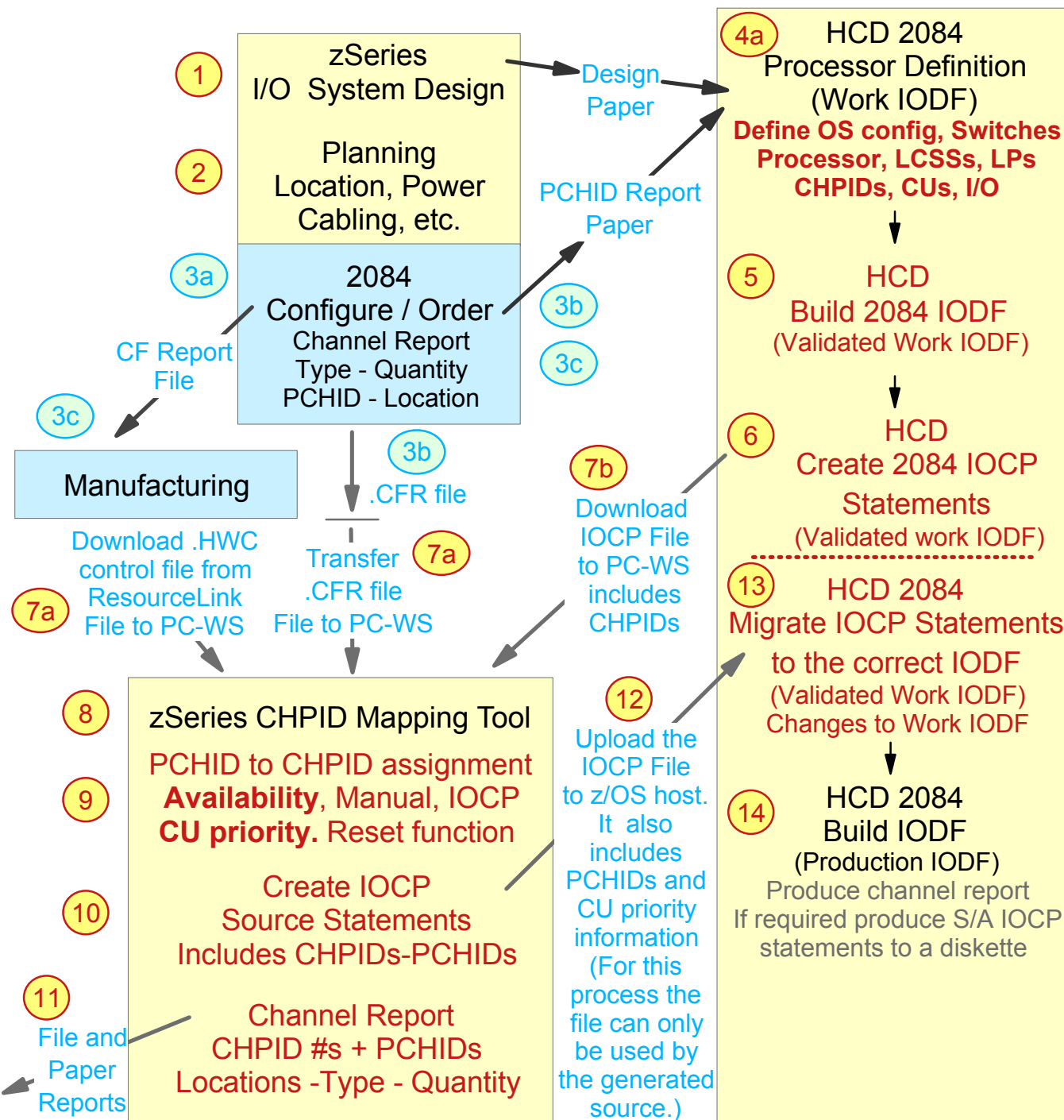
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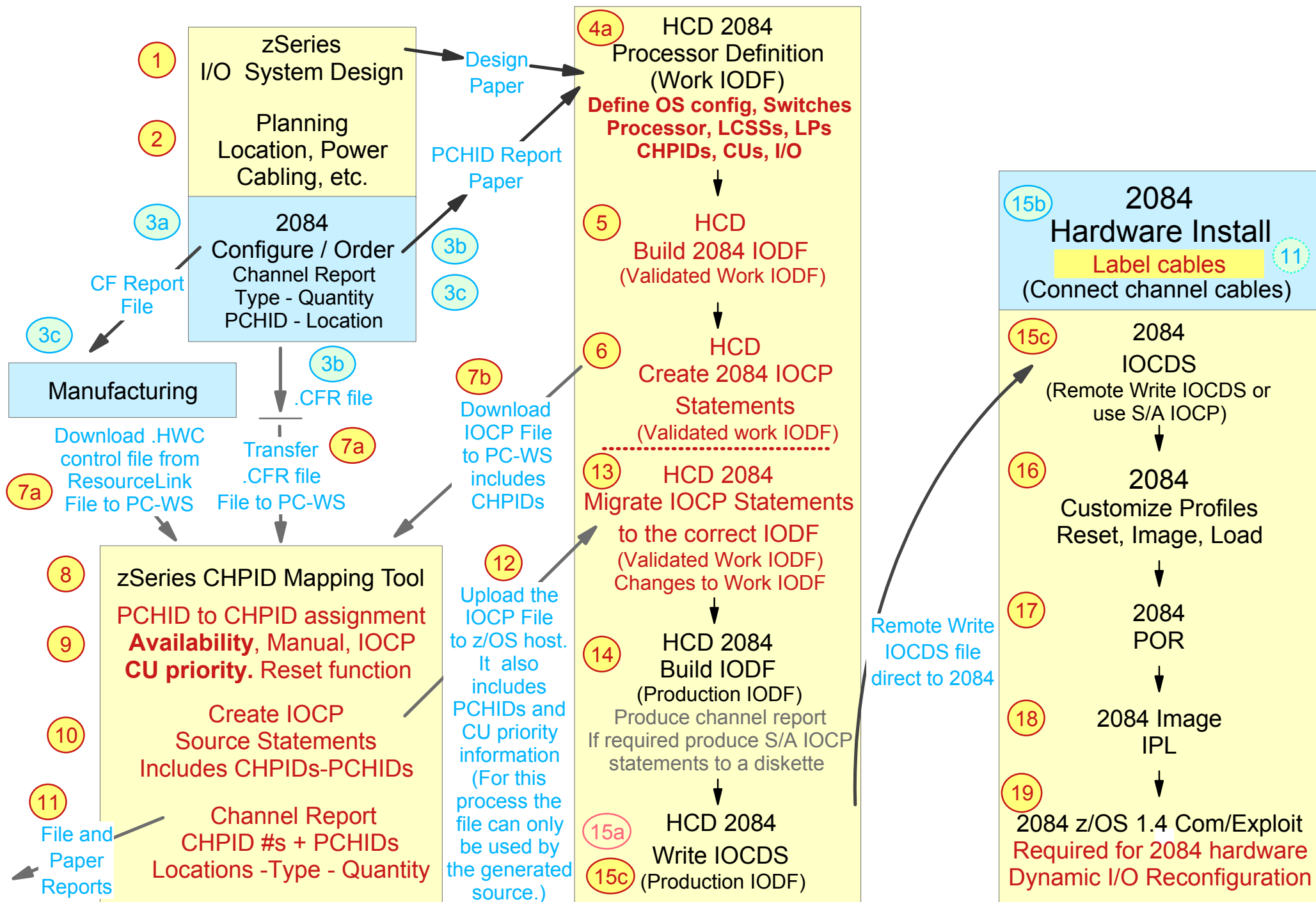
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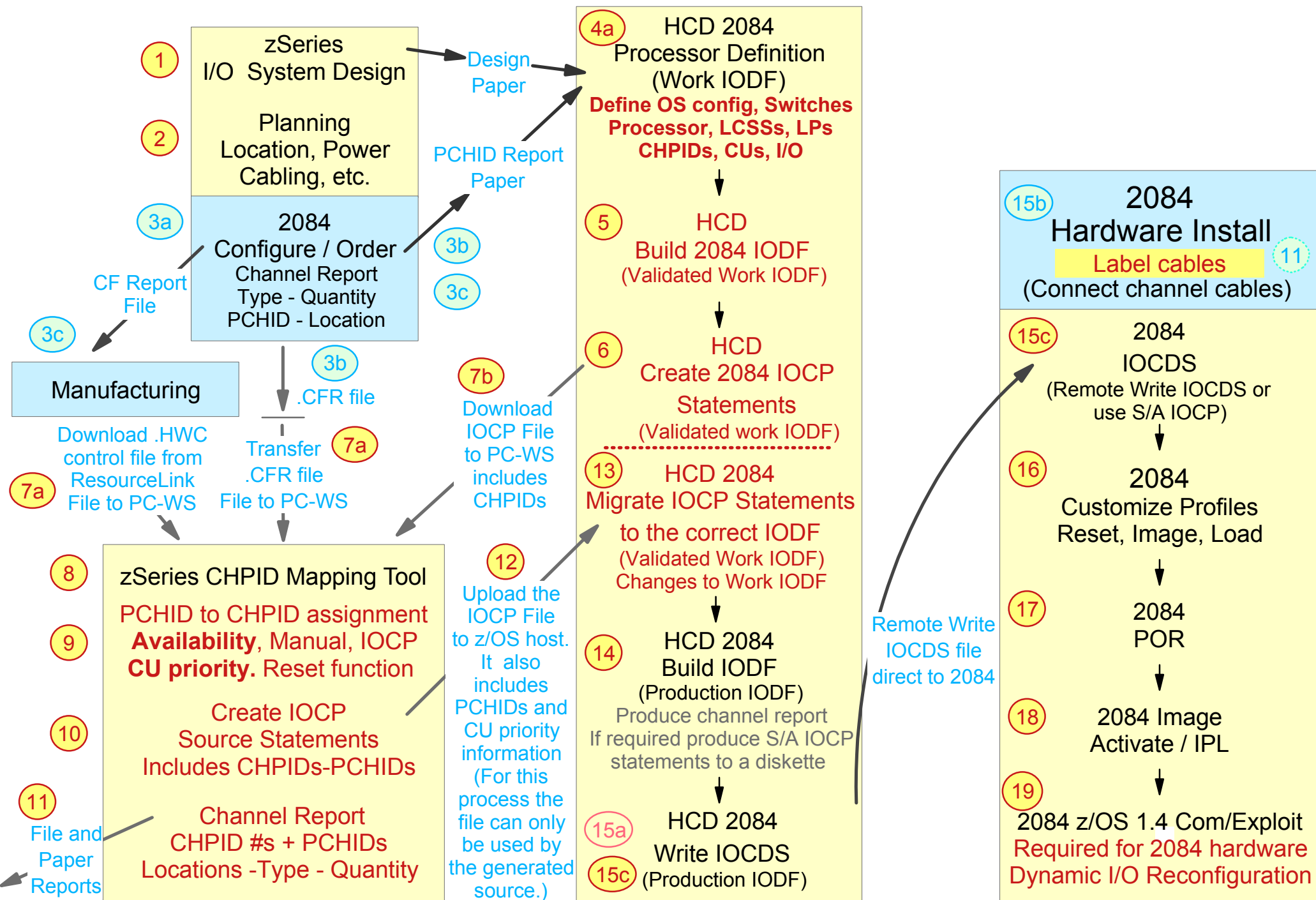


# Define new 2084 I/O configuration definition: New or Swap 2084, full definition





## Define new 2084 I/O configuration definition: New or Swap 2084, full definition



# 2084 - I/O Configuration Definition Support: New or Swap 2084, full definition

## HCD Processor definition options

1.3	Processor (2084)
1.3.s	CSS + # Subchans
1.3.s.p	Partitions (for a CSS)
1.3.s.s	Channels (for a CSS)

## HCD CU definition options

1.4	CU path connections to each required LCSS
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\* Once having built a 'validated work' IODF do not make ANY changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

## 8x z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT **Reports**  
CHPID Report  
Port Report - sorted by CHPID

CF File

7x Download the  
HCD validated  
work IOCP file  
to CMT PC WS

12 Upload the CMT  
IOCP file  
to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process  
the CMT IOCP file  
can only be used by  
the source that  
generated the initial  
statements )

## 4a HCD - Create work files and Define 2084

Create an HCD IODF work file from current production IODF file.  
Assumes the OS Config, Switches and Ports are already defined in the IODF  
**Define the 2084**

Use HCD options 1.3 and PF11 to add the new 2084, Model, Mode, LCSSs

Use HCD options 1.3.s to view and re-specify the MAXDEV (for each LCSS)

Use HCD options 1.3.s.p to define the required Logical Partition names

Use HCD options 1.3.s.s to define the required Channels and CHPIDs

You may specify the PCHID in the PCHID field (for non IQD and ICP channels) as:  
Blank (use (CMT to provide PCHID value later) - PCHID value, or an asterisk (\*)  
Use (\*) when the channel not installed on no PCHID assignment required (for now)

Use HCD options 1.4 to define the CUs, and connect them to required LCSSs

Use HCD options 1.5 to define the required devices to Proc.ID and OS Config.ID

Use HCD options 1.3.s.s.f.p to specify CF connections

Print an HCD CTC connection report, FICON target CUADDD s/b CSS.ID - MIF.ID

## 5 HCD 2084 Build Validated Work IODF \*

Use the work IODF and HCD option 2.12, this validates the work IODF for the 2084, with or without PCHIDs defined. Check the completion messages

Use HCD option 6.4 to check IODF type - should be 'Validated work'

## 6 HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3 to create the IOCP statements file

## HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 1.3.s.s and PF20 to view PCHIDs, PF20 again for Spanned channel

Use HCD option 6.4, IODF type will be changed to a work type IODF

## 14 HCD 2084 Build Production IODF

Use HCD option 2.1 to build a production IODF from the work IODF. Note: every defined 2084 CHPID must have a PCHID or \* specified (except IQD and ICP)

## 15a/c HCD 2064 or 2084 Write IOCDS

Use production IODF & HCD option 2.11 to remote write the IOCDS.

The HCD CPC object name and HMC CPC object name must be the same

## IPL 2084 Image

OS/390 2.10 - z/OS 1.4 with compatability support IPL in a CSS0 image

z/OS 1.4 with exploitation support IPL in any CSS0 or CSS1 image

## 19 HCD 2084 Dynamic I/O Reconfiguration

Use the z/OS activate command or the HCD activate function to perform I/O changes dynamically. Requires OS/390 2.10 - z/OS 1.4 + compatability support for dynamic to LCSS0, or z/OS 1.4 + Exploitation support for dynamic to LCSS0 and LCSS1

Note: H/W activates are 2084 multi-LCSS wide

## z990 CHPID Mapping Tool (CMT)

Transfer the customer's 2084 CFReport file to the PC-WS

Transfer z/OS IOCP file to the PC-WS

8



z990 CMT

Start the CMT program

### Load the 2084 configuration file

File: Import H/W Config from file (.HWC), or

File: Import CFReport order file (.CFR)

(Select the required processor)

### Load the IOCP statements file

Tool: Import IOCP file

Observe/resolve any PCHID conflicts

Resolve CHPIDs to hardware channel type

9

Invoke the CMT **Availability** function

PCHID to CHPID assignment

Set any required CU priority

Process CU Priority

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority** - define if required
- Reset function

View result - Select the CMT Manual tab

- View the CHPID to PCHID mapping, or
- View the PCHID to CHPID mapping

10

Create the IOCP input source

(includes PCHID #s and, CCN# & CU priority)

Transfer file to z/OS 'Text Fixed 80'

11

Create CMT **Reports**

1. CHPID Report
2. Port Report - sorted by CHPID

CF File .HWC or .CFR

7a

7b

Download the  
HCD validated  
work CMT IOCP  
file to CMT PC  
WS

6

## HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

## HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 6.4, IODF type should be a work type IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs

12

Upload the CMT IOCP  
file to z/OS host. The  
file also includes  
PCHIDs and CU priority  
information

(For this process the  
CMT IOCP file can only  
be used by the source  
that generated the initial  
statements )

11

File and  
Paper  
Reports

?

Warning an HCD CMT IOCP  
statement file cannot be used  
by any IOCP program.

Do not get caught by this  
situation for a 2084 new install  
thinking you can use these  
IOCP statements with the S/A  
IOCP program, YOU CANNOT

- Planning items - configuring / ordering
  - No Parallel channels (BL or BY), no OSA-2 channels (OSA)
    - No 4 Port ESCON channel card, also requires a cable connector change - IBM duplex to MT-RJ
    - No FICON 1.5 channel card, also requires cable connector change - SC to LC
  - Consider 'Plan-Ahead' for channels for additional I/O cages - prevents disruptive install
- Planning items - 2084 processor - changes to the following is disruptive to a running system
  - Number of LCSSs (1 or 2)
  - Quantity of logical partitions per LCSS and for the 2084 in total
  - Logical partition names - they must be unique across the CSSs
  - Number of Subchannels per LCSS
  - If any of the above are changed, HCD will not allow a dynamic change
- Planning items - I/O configuration definition
  - Channel PCHID values can be defined in a work IODF as, blank, a PCHID value, or asterisk (\*)
  - FICON CTC (FCTC) target 2084 CUADD - must be CSS.ID + MIF.ID
  - FCTC HCD support change required for the 9672
  - If CTCs are defined, always produce an HCD CTC connection report for checking
  - CF Connectivity - must be defined by the user
  - IQD connectivity - allows connections across LCSSs
  - ICP connectivity - allows connections across LCSSs
- Planning items - I/O definition file, and HCD IOCP statements
  - Do not change a validated work IODF after a generation of the IOCP statements
  - The HCD validated work IOCP statement file must only be used by the CMT
  - The HCD validated work IOCP statement file CANNOT be used by any IOCP program
- Planning items - HCD panel changes
  - HCD hierarchical changes - use HCD options 1.3.s.s to display Channel Path List panel
  - Use the HCD channel path list panel (1.3.s.s) and PF20 to display PCHIDs
  - Use the HCD channel path panel and PF20 + PF20 to display the SPANNED

## 2084 HCD Definition Support - HCD Definition Sequence - 2084 versus 2064

2064	2084	Comments
OS/390 HCD release 9 Create work IODF	z/OS 1.4 HCD Create work IODF	
Operating Systems EDTs Esoteric Consoles	Operating Systems - option 1.1 EDTs Esoteric Consoles	
Switches (ESCON and FICON) Ports	Switches - option 1.2 (ESCON and FICON) Ports	
Processors Requires 2064 PIT Type, Mode	Processors - option 1.3 Requires 2084 PIT Type, <b>Mode</b> , <b>#CSSs</b>	
--- N/A ---	<b>(L)CSSs</b> - option 1.3.s <b>CSS.ID</b> Max # Devices for each CSS	No HSA expansion support on the 2084 SE. 2084 always supports the maximum PCUs, CUHs, PCHIDs # of subchannels specified in HCD
Partitions (for the processor) Name unique to a processor	<b>Partitions</b> (for a CSS) - option 1.3.s.p LP names are unique across all CSSs	IOCP changes from using Partition numbers to MIF_ID for a partition
Channels (for the processor) Type, Mode	<b>Channels</b> (for a CSS) - option 1.3.s.s Type, Mode - SPANNED, PCHID	2084 channels do not have default CHPID numbers (require PCHIDs) 2084 crypto function do not require CHPID numbers.
CU Type, Paths, Link Addresses	CU - option 1.4 Type, then define paths to each CSS <b>CSS.Paths</b> , Link Addresses	Define ALL processors and <b>CSSs</b> (with partitions and channels) before CU definitions
I/O Device	I/O Device - option 1.5	





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## z990 I/O Configuration Definition Support

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2084 - Upgrade, Swap or New install

Using HCD **COPY CSS** (2064 or 9672 CSS, or 2084 LCSS)

ITSO Poughkeepsie

zSeries

2084 z990

### ● 2084 installation cases - using z/OS HCD

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  - Also use CMT CMT for PCHID to CHPID mapping
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  - Determine if any PCHID changes (should only be for ICB-4) if none there is no HCD changes
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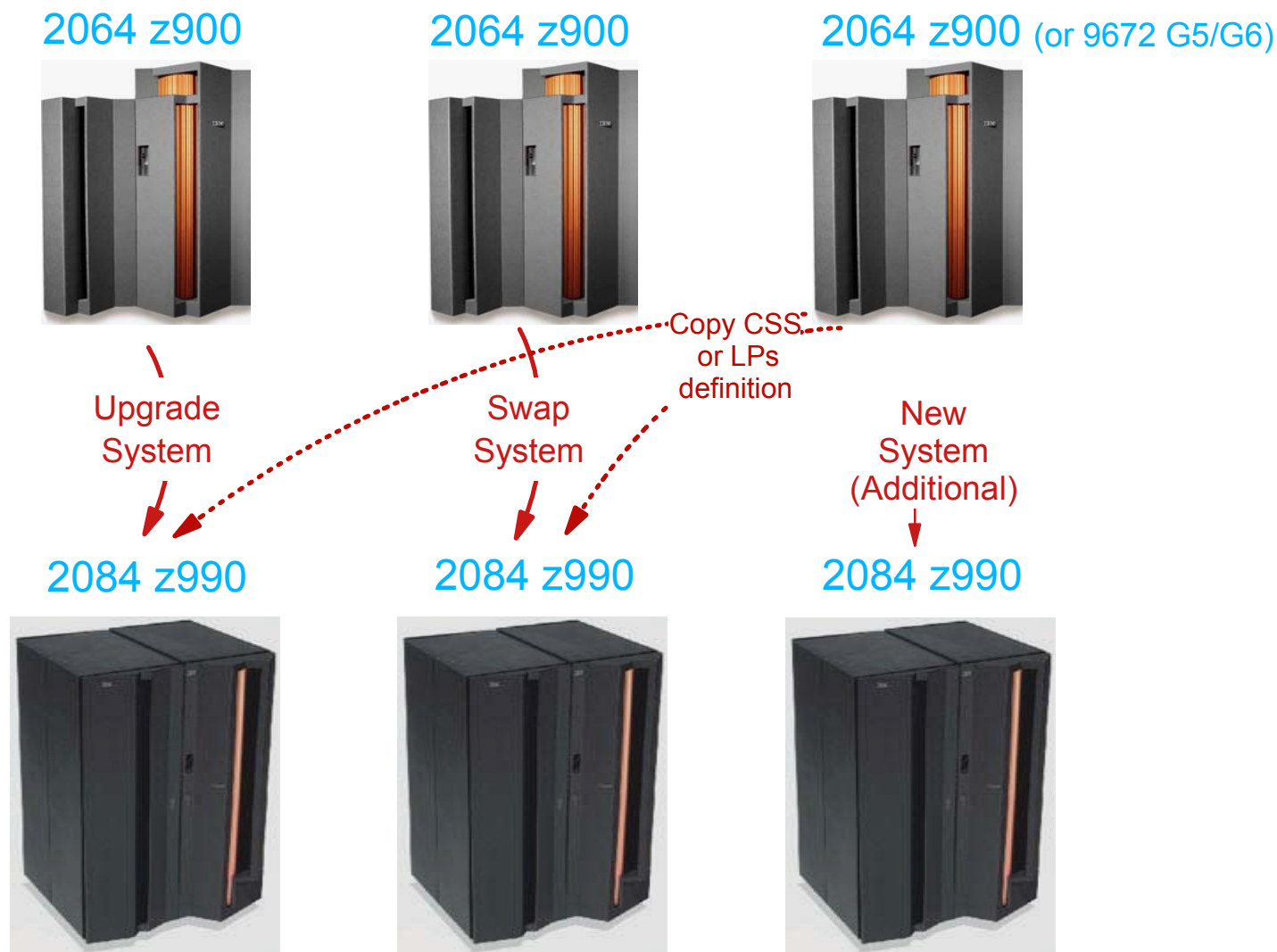
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  - Using HCM/HCD to COPY 2064/9672 CSS definitions, define new or changed definitions - also using the CMT

### ● 2084 installation - using z/VM HCM and HCD

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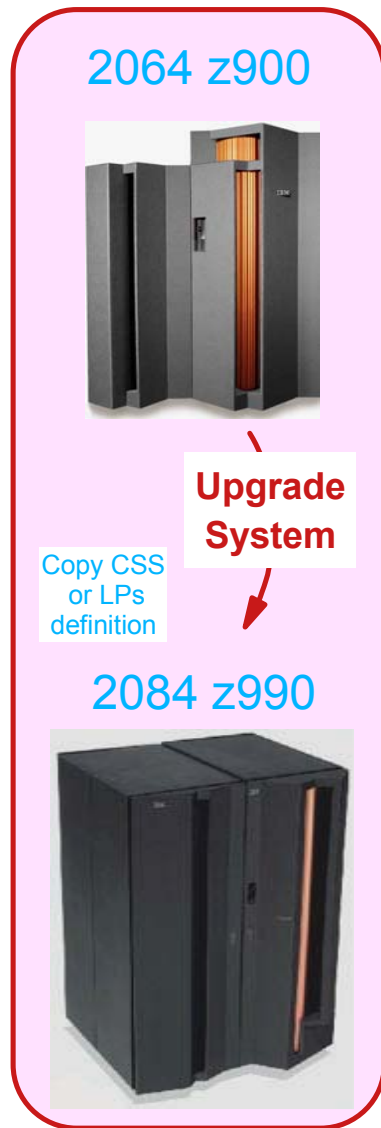
### ● 2084 installation - using IOCP only

10. 2084 Upgrade, Swap or New install - merging and changing IOCP statements
  - Using ICPIOCP and IOCP statements only

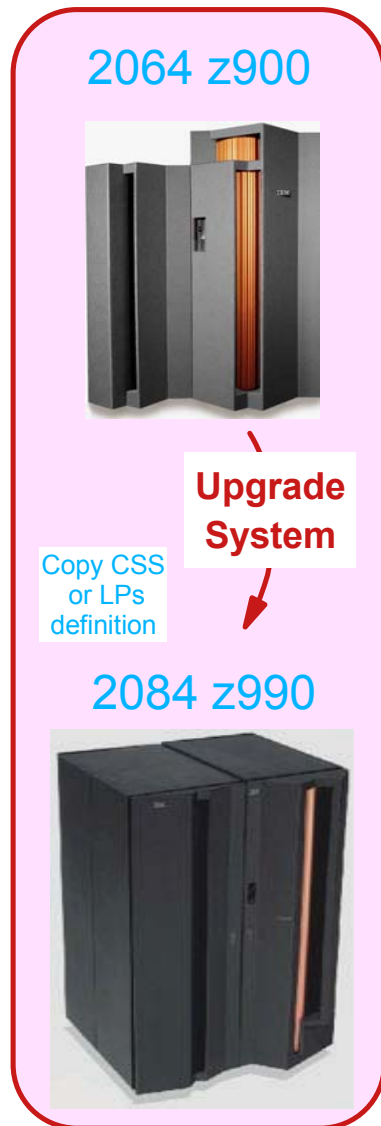


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- **Copy, an existing CSS or LCSS I/O configuration definition - to a predefined or currently defined 2084**
  - **LCSSs or LPs - (copy / migration) - copies the I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing CUs

2084 - Upgrade, Swap or New install  
Using HCD COPY CSS function to  
Copy a 2064/9672 CSS to a 2084 LCSS







- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time

2064 z900



Upgrade System

Copy CSS or LPs definition

2084 z990



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time

2064 z900



**Upgrade System**

Copy CSS or LPs definition

2084 z990



2064 z900  
(or 9672 G5/G6)



**Swap System**

Copy CSS or LPs definition

2084 z990



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

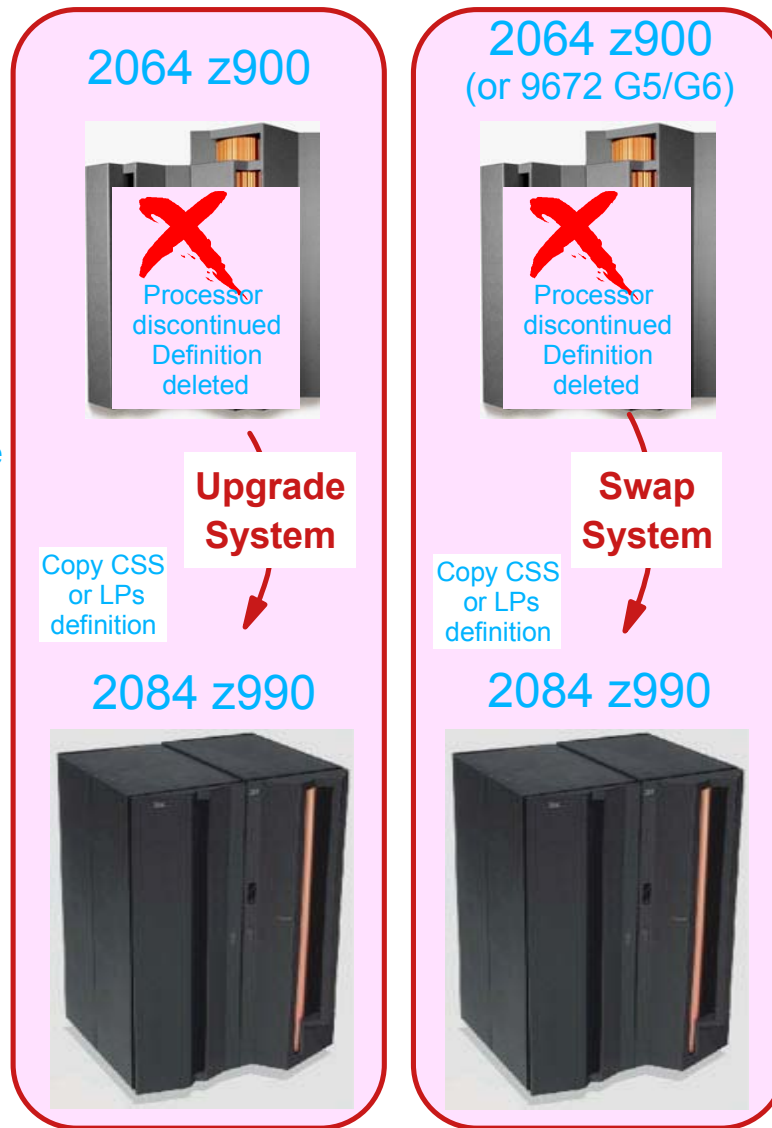
Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time

2064 z900



**Upgrade System**

Copy CSS or LPs definition

2084 z990



2064 z900  
(or 9672 G5/G6)



**Swap System**

Copy CSS or LPs definition

2084 z990



2064 z900  
(or 9672 G5/G6)



**Add New System**

Repeat CSS definition. Then Copy CSS or LPs definition

2084 z990



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time

2064 z900



**Upgrade System**

Copy CSS or LPs definition

2084 z990



2064 z900  
(or 9672 G5/G6)



**Swap System**

Copy CSS or LPs definition

2084 z990



2064 z900  
(or 9672 G5/G6)



**Add New System**

Repeat CSS definition. Then Copy CSS or LPs definition

2084 z990



4a/b

Repeat source processor CSS definitions

Delete unsupported channels from the repeated processor definition

Copy the CSS I/O configuration definitions from repeated processor CSS to target CSS. Delete repeated processor

Define new channel to switch cable connection definitions

Make other definition changes  
- new/change FCTC CUs  
- additional CF chans  
- new CF connections

Install new channel cables (physically) from the copy target processor channels to switch at installation time

- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs



# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

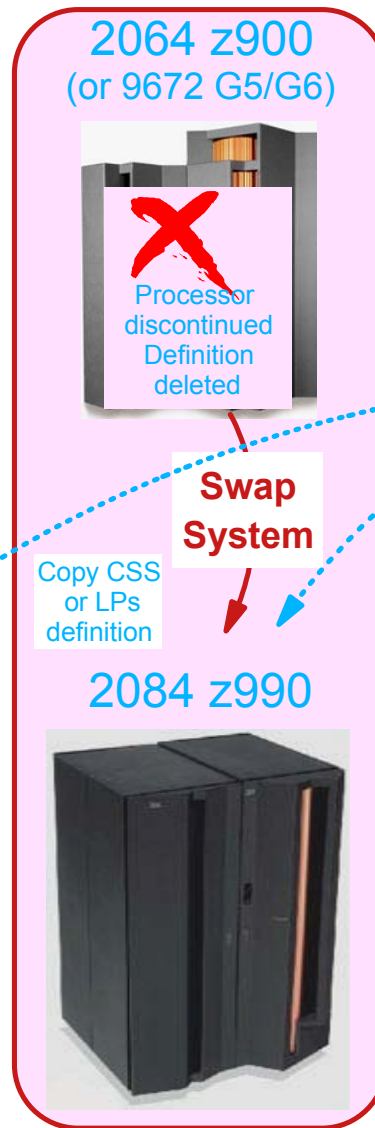
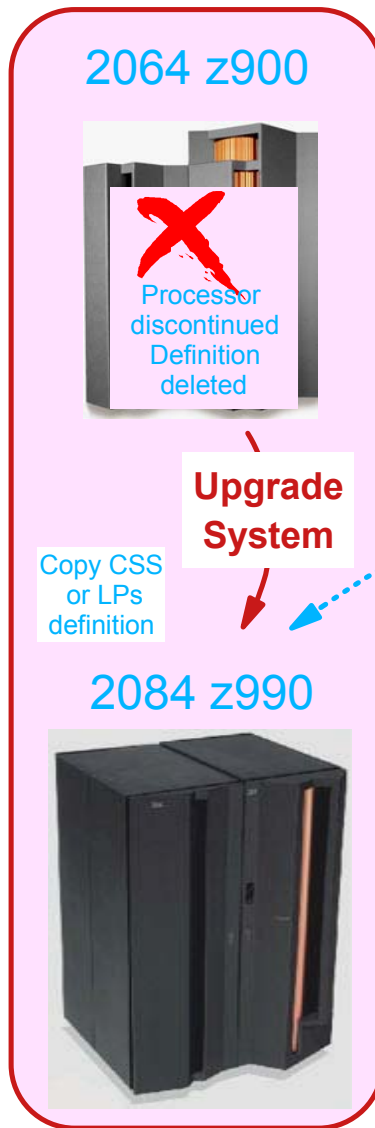
Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

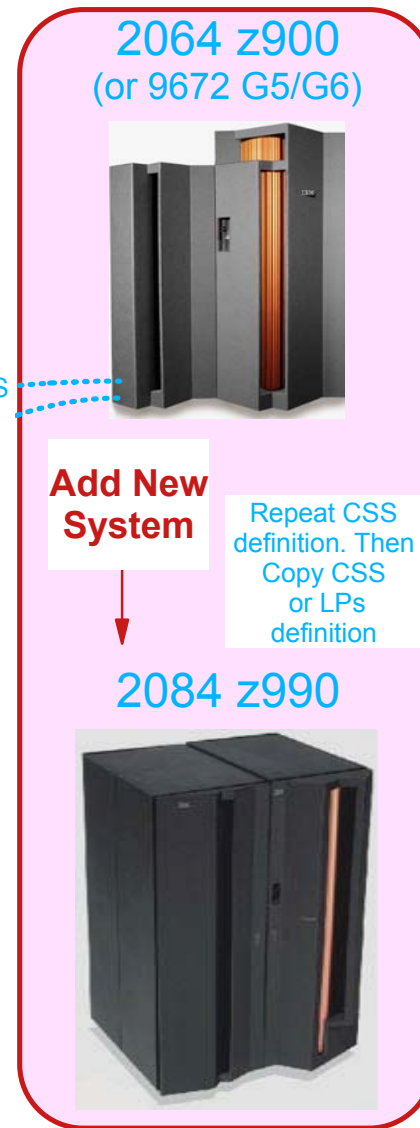
Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time



Copy CSS or LPs definition



4a/b

Repeat source processor CSS definitions

Delete unsupported channels from the repeated processor definition

Copy the CSS I/O configuration definitions from repeated processor CSS to target CSS. Delete repeated processor

Define new channel to switch cable connection definitions

Make other definition changes  
- new/change FCTC CUs  
- additional CF chans  
- new CF connections

Install new channel cables (physically) from the copy target processor channels to switch at installation time

- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W

- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**

- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

# 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS

4a/b

Use current CSS definitions source

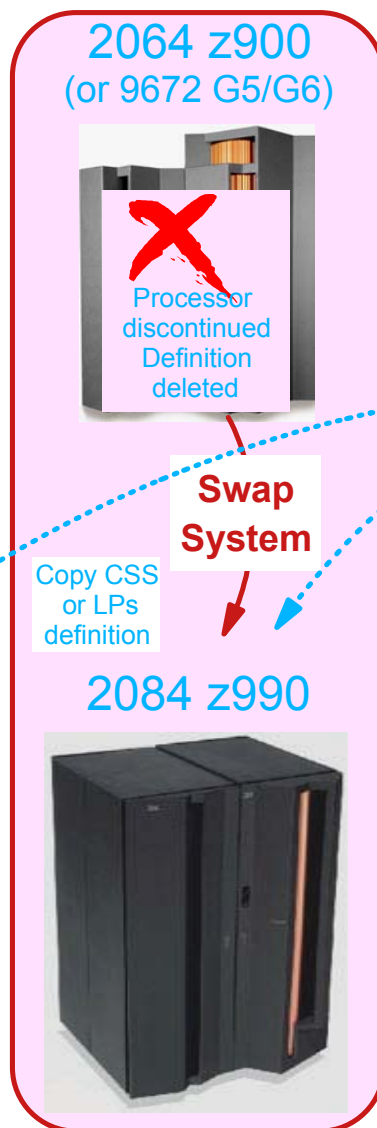
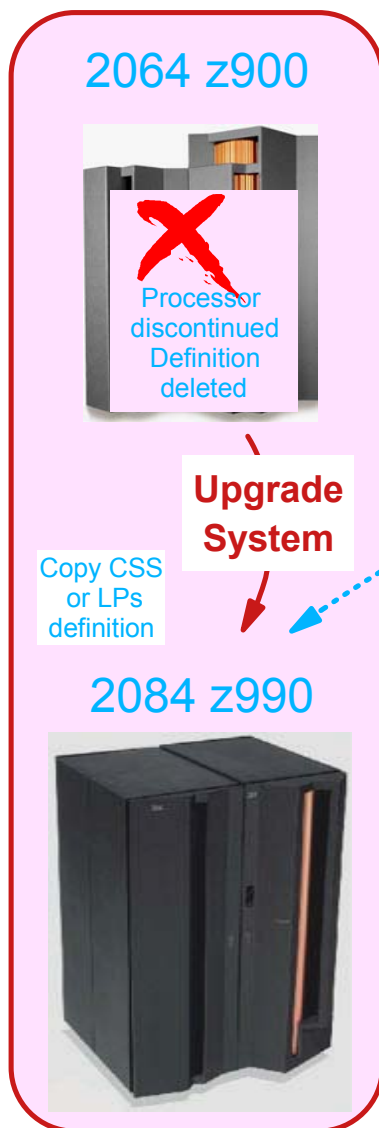
Check and delete unsupported channels from the copy source definition

Copy the CSS I/O configuration definitions from source CSS to target CSS. Delete source

Keep the channel to switch cable connection definitions

Make other definition changes  
- change FCTC CUs  
- add CF connections

Move channel cables (physically) from the copy source to copy target processor channels at installation time



4a/b

Repeat source processor CSS definitions

Delete unsupported channels from the repeated processor definition

Copy the CSS I/O configuration definitions from repeated processor CSS to target CSS. Delete repeated processor

Define new channel to switch cable connection definitions

Make other definition changes  
- new/change FCTC CUs  
- additional CF chans  
- new CF connections

Install new channel cables (physically) from the copy target processor channels to switch at installation time

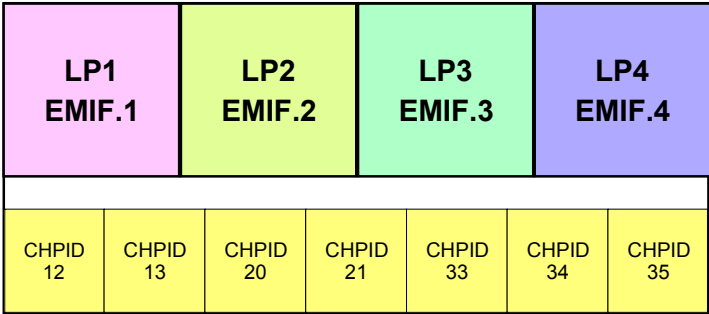
- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W

- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor CSS I/O configuration**

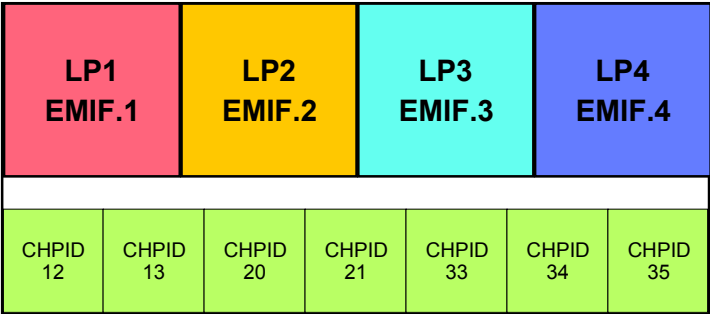
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing defined CUs

Migrate two 2064s  
to one 2084

2064 (PR2064AA)



2064 (PR2064BB)



1. Two 2064s installed

2064 (PR2064AA)

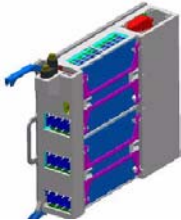
LP1 EMIF.1		LP2 EMIF.2		LP3 EMIF.3		LP4 EMIF.4	
CHPID 12	CHPID 13	CHPID 20	CHPID 21	CHPID 33	CHPID 34	CHPID 35	

2064 (PR2064BB)

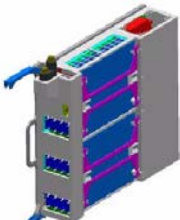
LP1 EMIF.1		LP2 EMIF.2		LP3 EMIF.3		LP4 EMIF.4	
CHPID 12	CHPID 13	CHPID 20	CHPID 21	CHPID 33	CHPID 34	CHPID 35	

2084 B16

- 1. Two 2064s installed
- 2. 2084 install or upgrade (2064)



2084 Book and memory

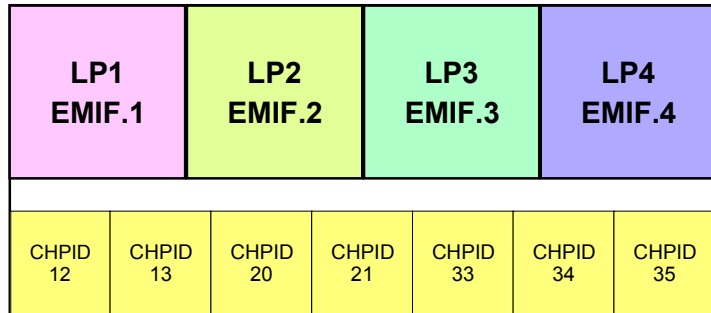


2084 Book and memory

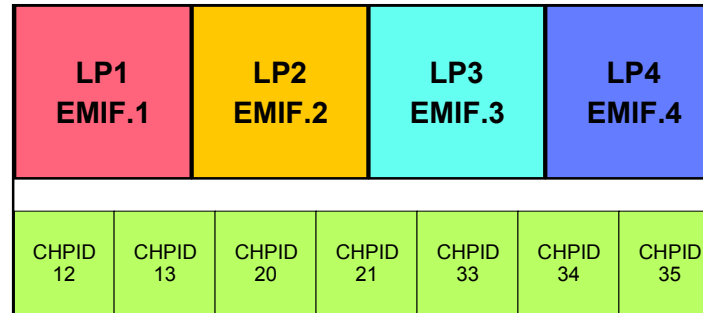
PCHID 120	PCHID 121	PCHID 130	PCHID 131	PCHID 160	PCHID 161	PCHID 162	PCHID 166	PCHID 167	PCHID 168	PCHID 180	PCHID 181	PCHID 190	PCHID 191
--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

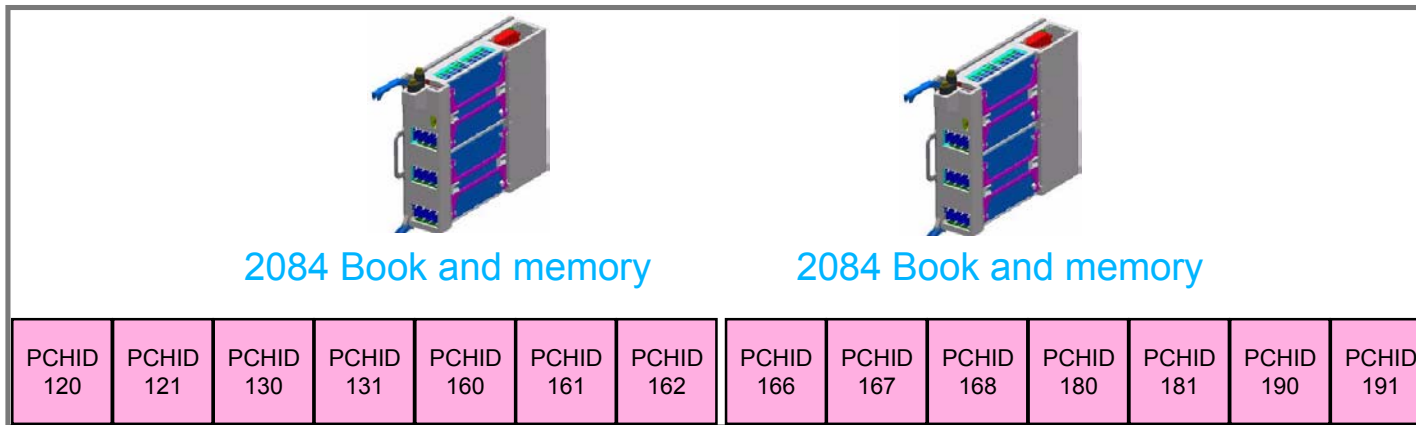
2064 (PR2064AA)



2064 (PR2064BB)

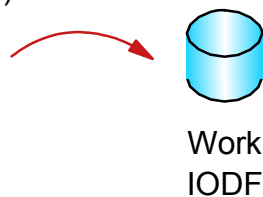


2084 B16 (MYCEC)



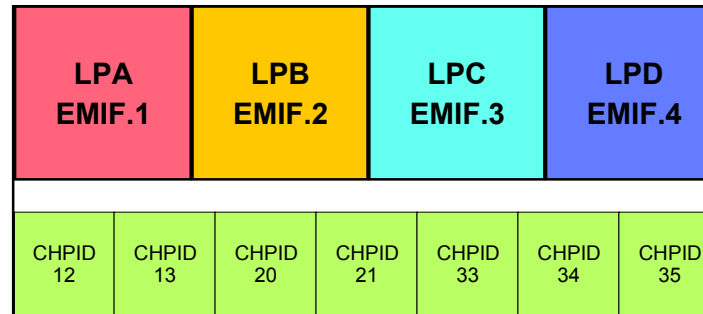
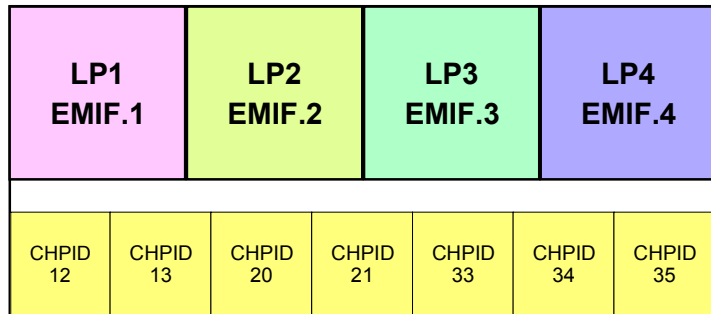
1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor

I/O definition File (Work IODF)  
Processor - MYCEC

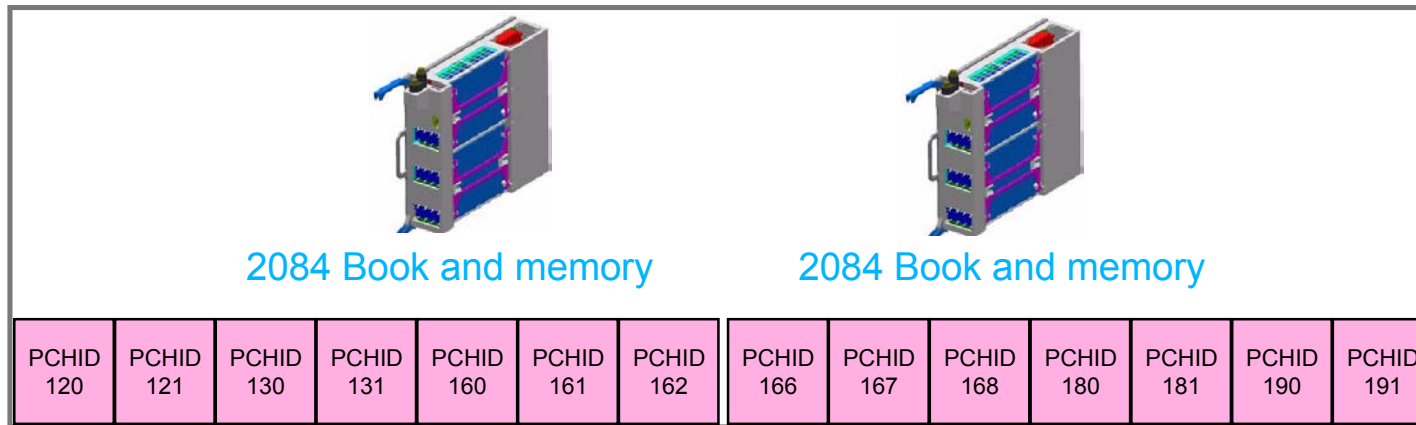




# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

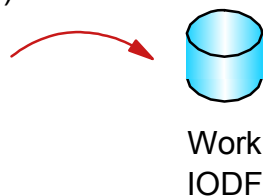


## 2084 B16 (MYCEC)



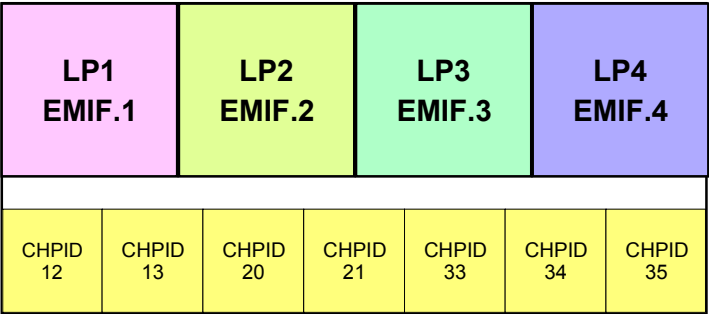
1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor

I/O definition File (Work IODF)  
Processor - MYCEC

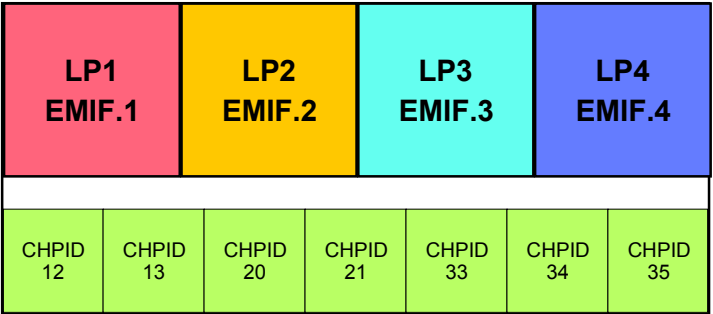


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

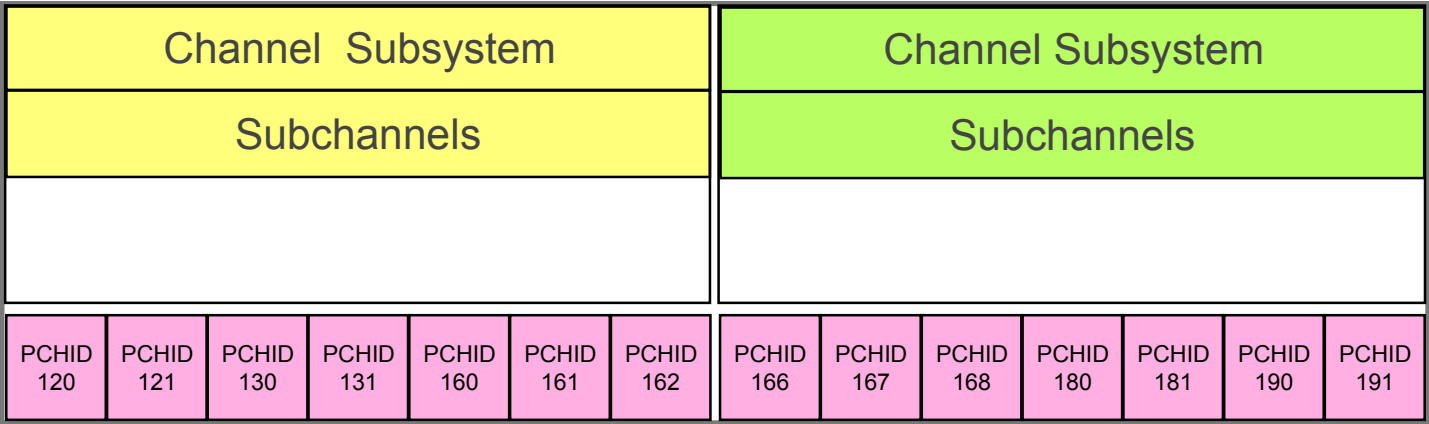
2064 (PR2064AA)



2064 (PR2064BB)

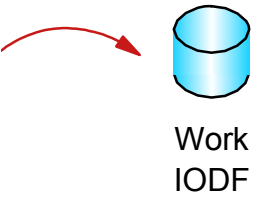


LCSS.0      2084 B16 (MYCEC)      LCSS.1



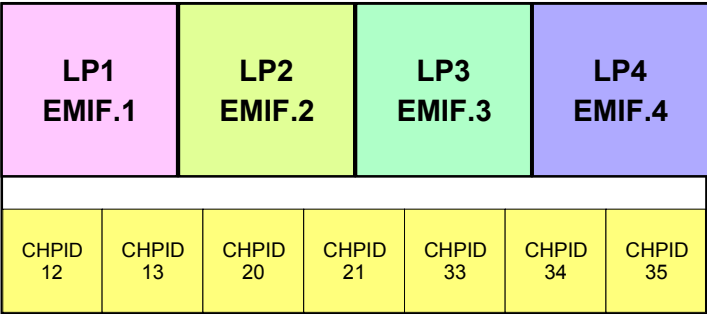
- 1. Two 2064s installed
- 2. 2084 install or upgrade (2064)
- 3. Define the 2084 processor
- 4. Define 2 CSSs in the 2084

I/O definition File (Work IODF)  
Processor - MYCEC  
CSS.0 + SubChan Support  
CSS.1 + SubChan Support

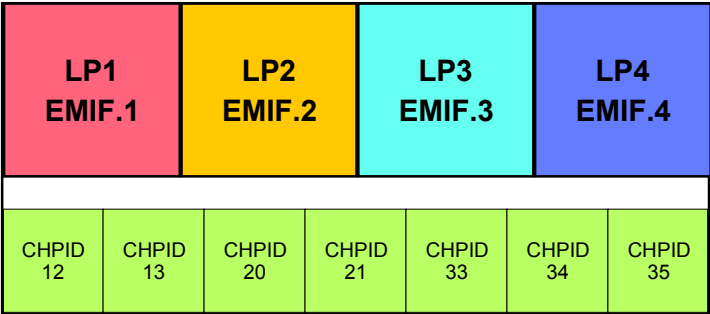


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

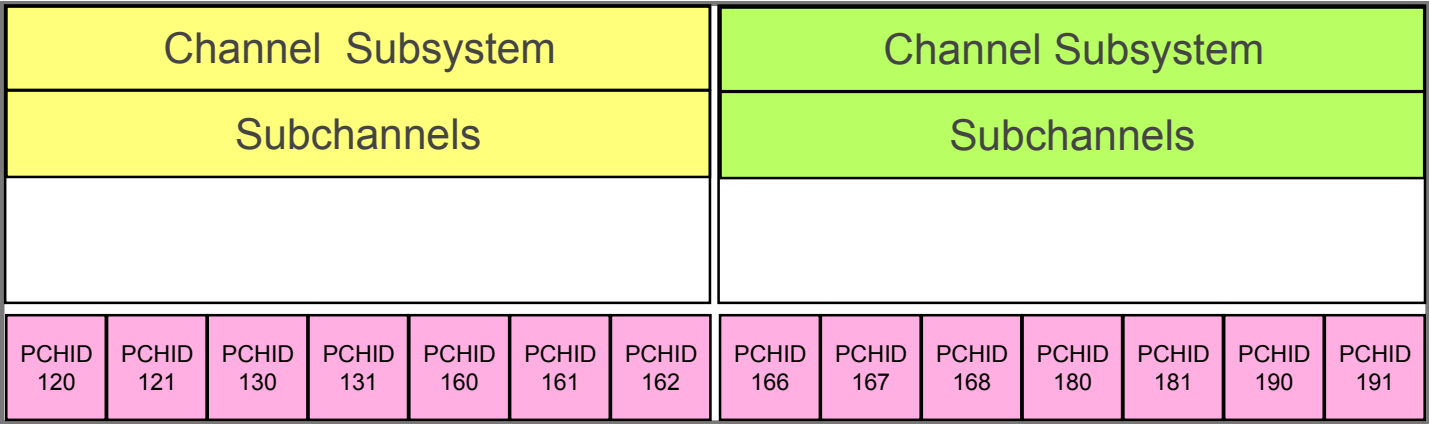
2064 (PR2064AA)



2064 (PR2064BB)

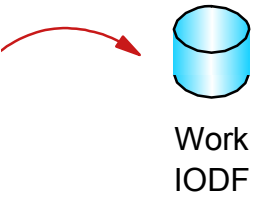


LCSS.0      2084 B16 (MYCEC)      LCSS.1



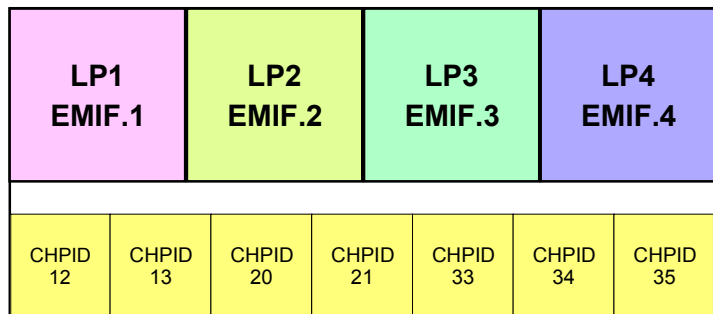
- 1. Two 2064s installed
- 2. 2084 install or upgrade (2064)
- 3. Define the 2084 processor
- 4. Define 2 CSSs in the 2084

I/O definition File (Work IODF)  
Processor - MYCEC  
CSS.0 + SubChan Support  
CSS.1 + SubChan Support

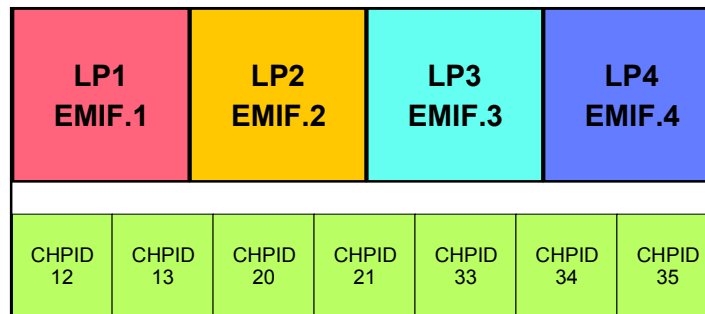


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)

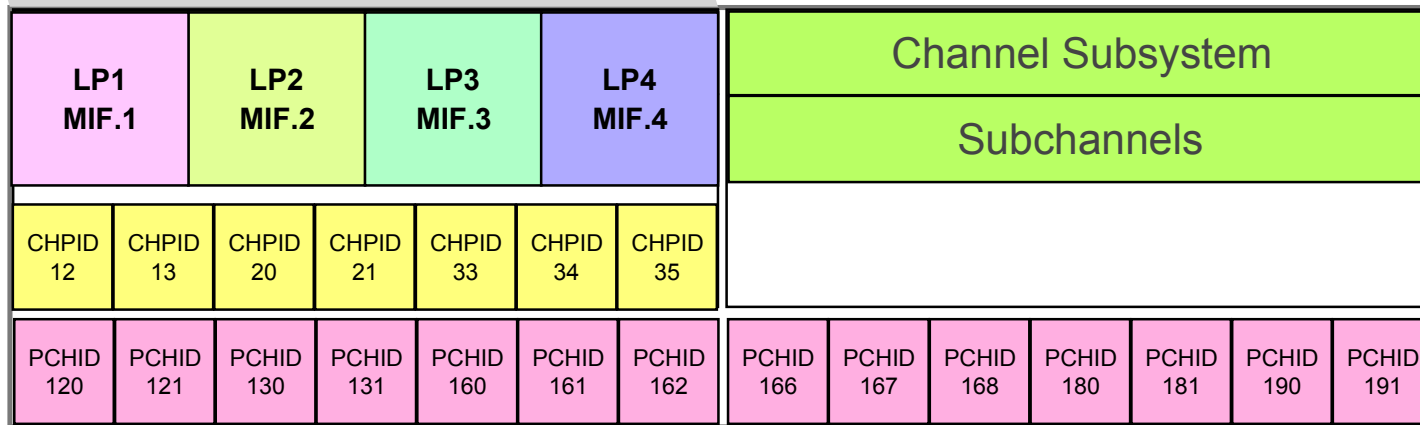


Copy 2064 (PR2064AA) to LCSS.0

LCSS.0

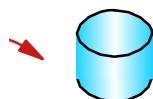
2084 B16 (MYCEC)

LCSS.1



1. LTwo 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0

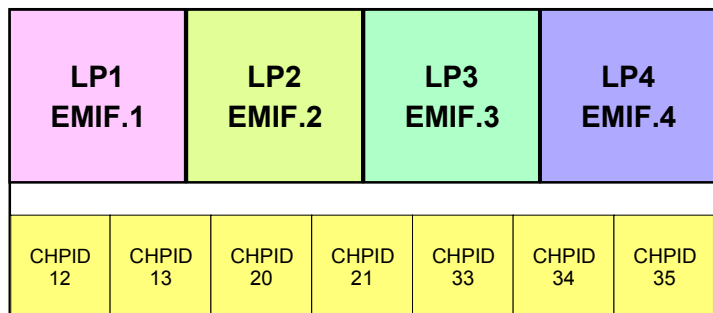
I/O definition File (Work IODF)  
Processor - MYCEC  
CSS.0 + SubChan Support  
CSS.1 + SubChan Support  
LPs, CHPIDs, CUs, Devs to LCSS.0



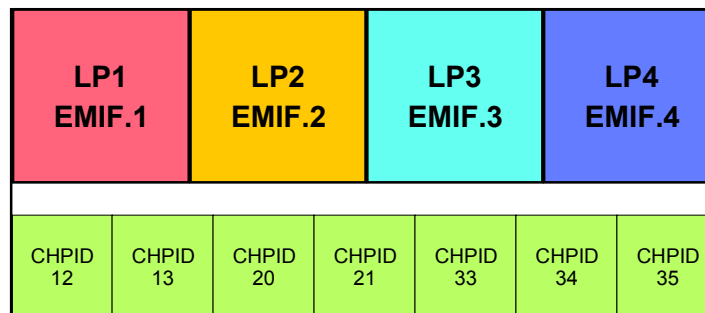
Work  
IODF

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



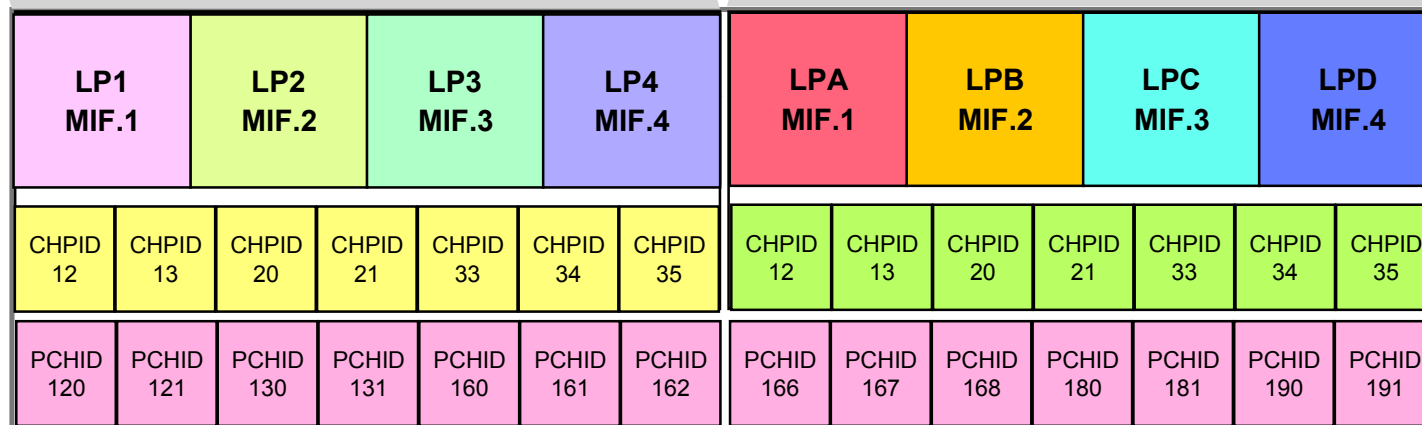
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1

I/O definition File (Work IODF)

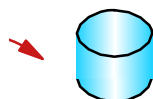
Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

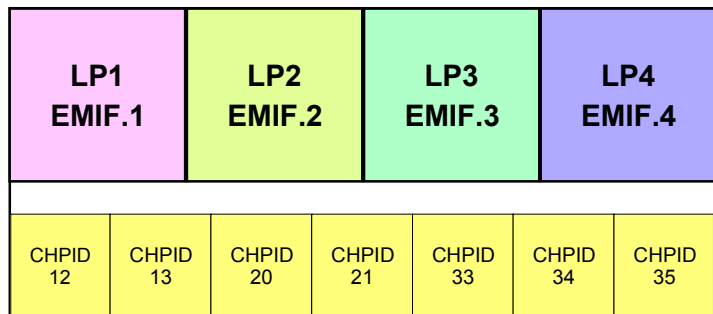
LPs, CHPIDs, CUs, Devs to LCSS.1



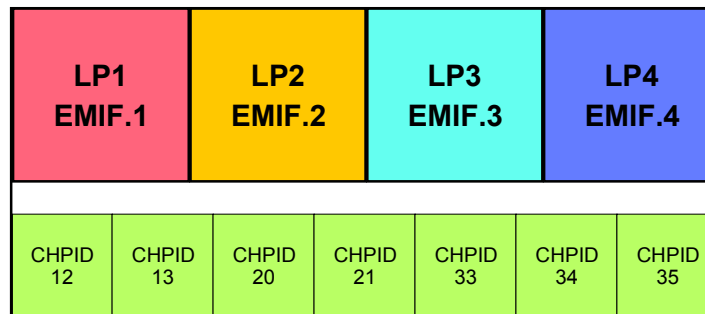
Work  
IODF

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



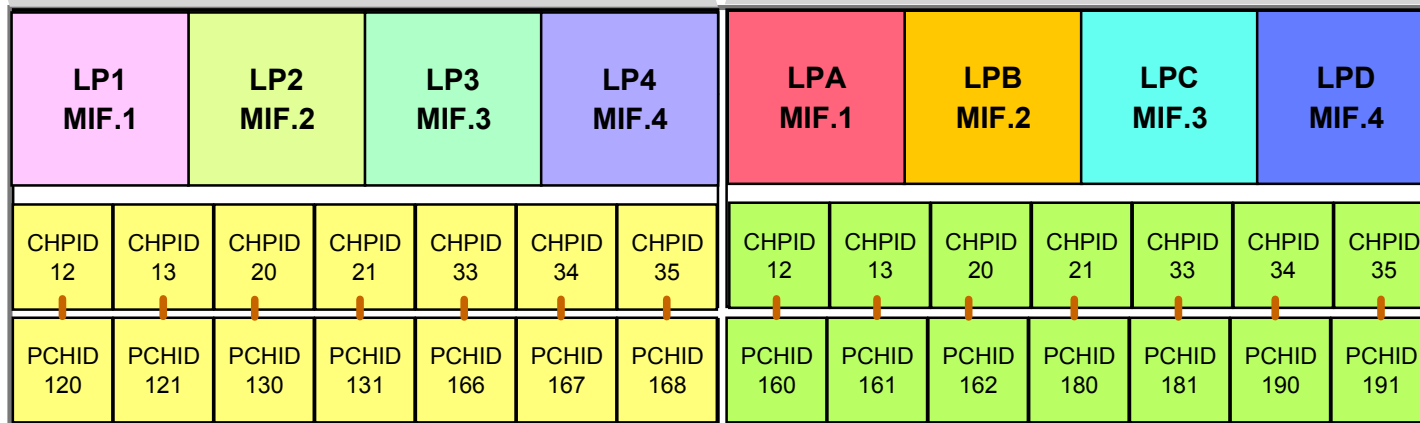
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. LTwo 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs

I/O definition File (Work IODF)

Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

LPs, CHPIDs, CUs, Devs to LCSS.1

Use CMT to map CHPIDs to PCHIDs

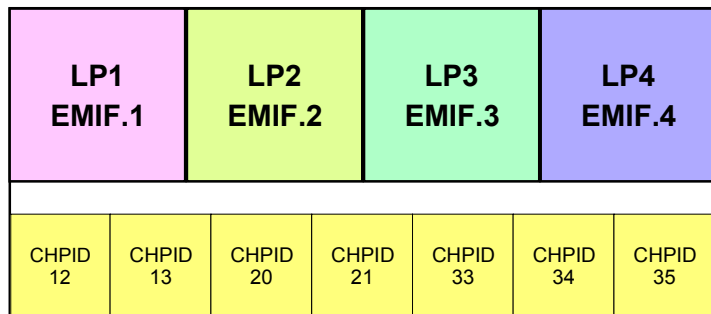


Work  
IODF

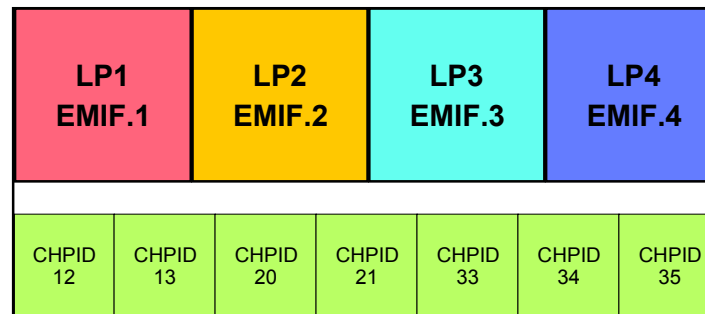


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



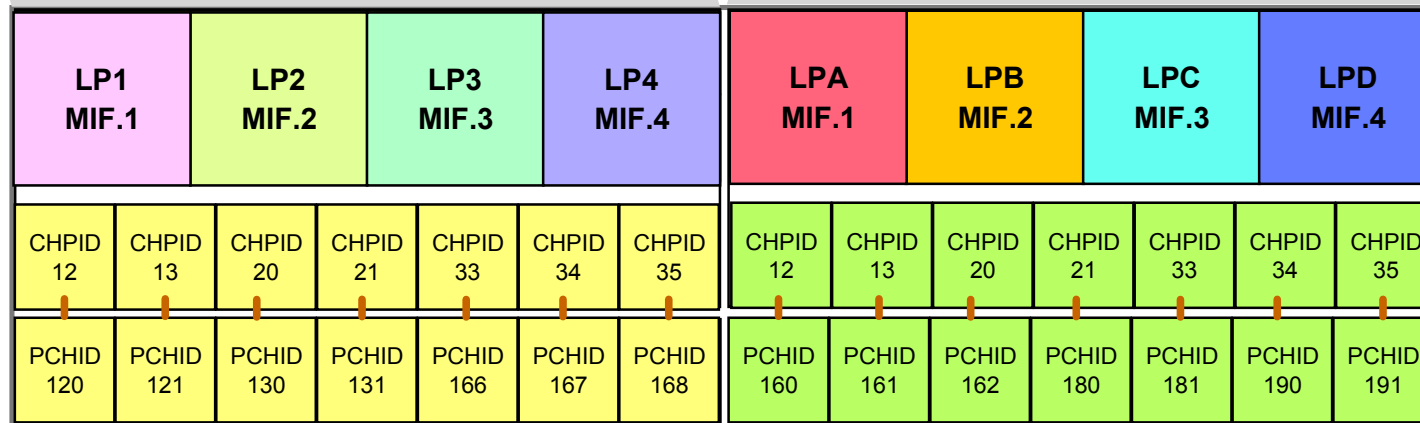
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF

I/O definition File (Work IODF)

Processor - MYCEC

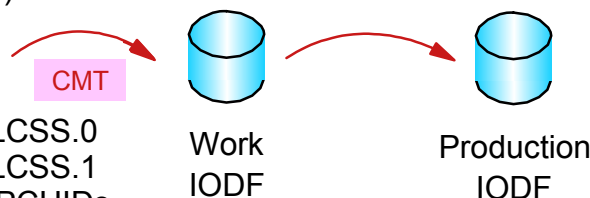
CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

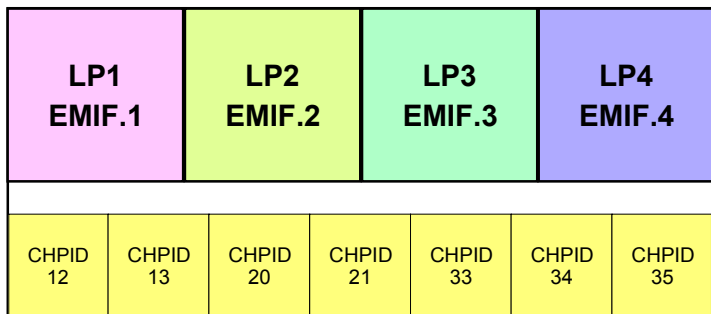
LPs, CHPIDs, CUs, Devs to LCSS.1

Use CMT to map CHPIDs to PCHIDs

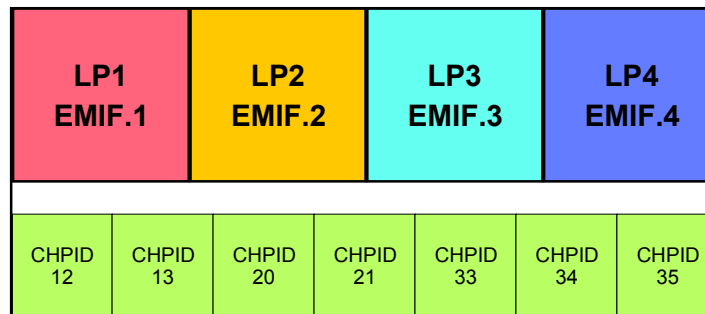


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



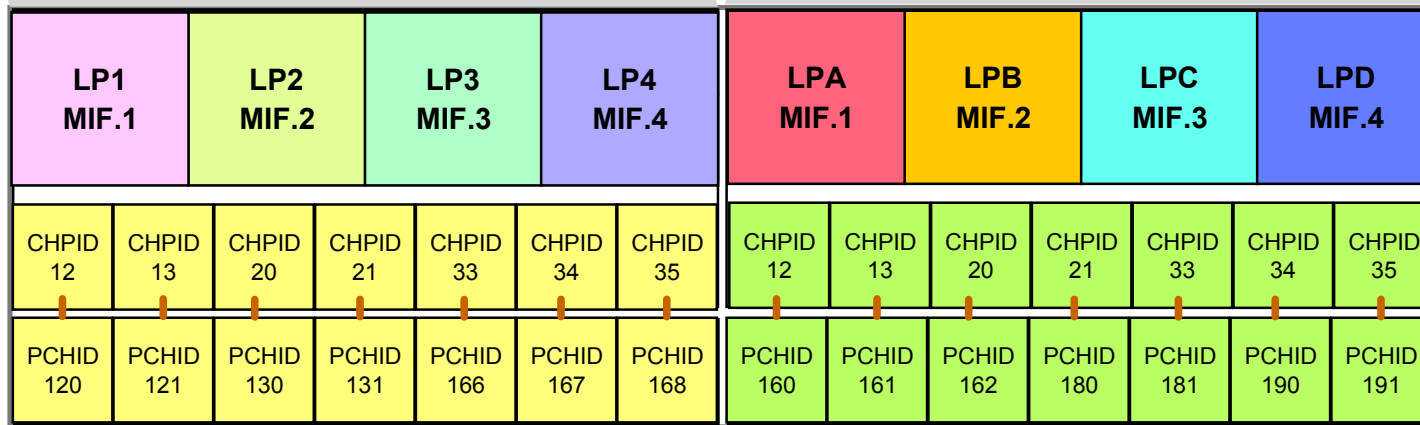
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. **Physically install/upgrade to the 2084**

I/O definition File (Work IODF)

Processor - MYCEC

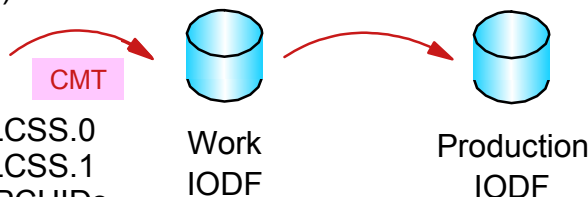
CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

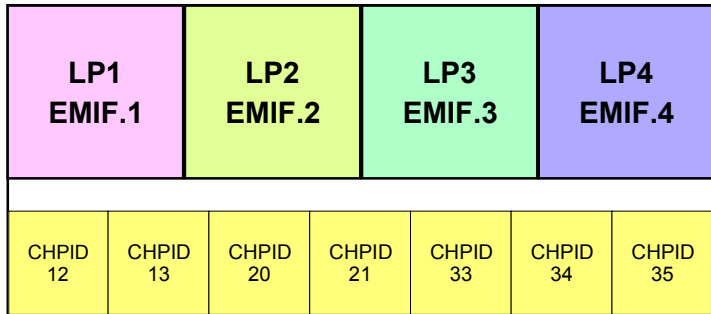
LPs, CHPIDs, CUs, Devs to LCSS.1

Use CMT to map CHPIDs to PCHIDs

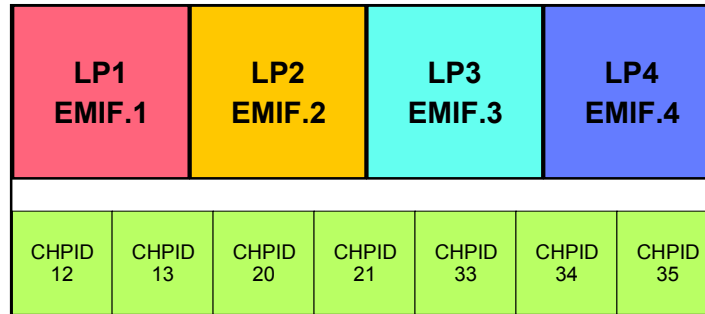


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



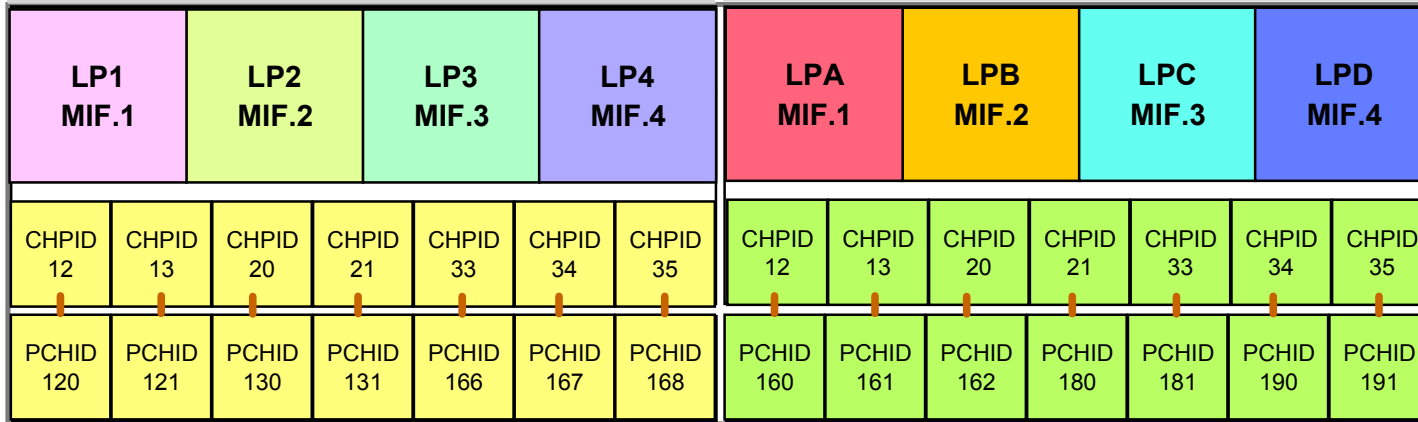
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/upgrade to the 2084
10. Write the IOCDS

I/O definition File (Work IODF)

Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

LPs, CHPIDs, CUs, Devs to LCSS.1

Use CMT to map CHPIDs to PCHIDs

CMT



Work  
IODF



Production  
IODF

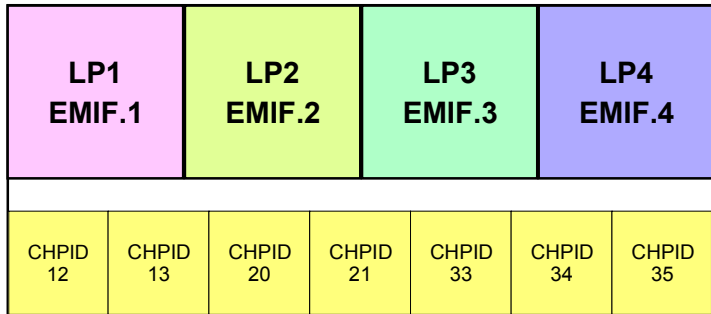


IOCDS

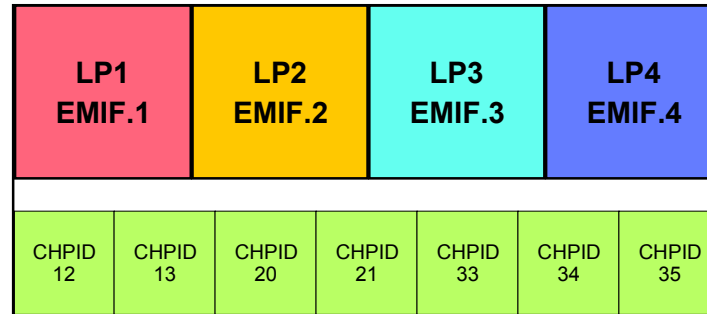
2084  
Support Element

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



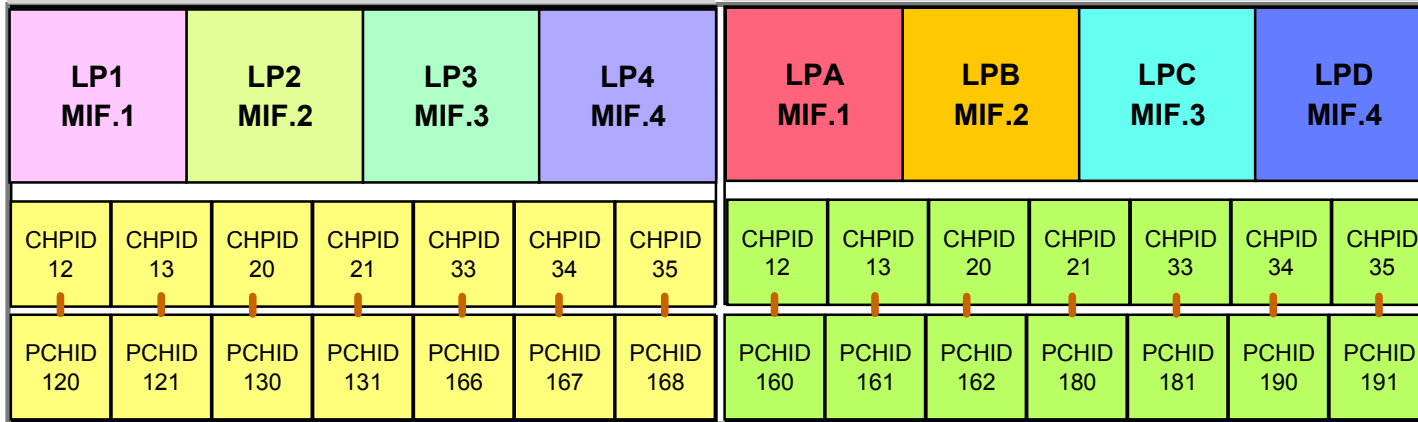
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/upgrade to the 2084
10. Write the IOCDS
11. **Customize profiles**

I/O definition File (Work IODF)  
 Processor - MYCEC  
 CSS.0 + SubChan Support  
 CSS.1 + SubChan Support  
 LPs, CHPIDs, CUs, Devs to LCSS.0  
 LPs, CHPIDs, CUs, Devs to LCSS.1  
 Use CMT to map CHPIDs to PCHIDs

CMT



Work  
IODF



Production  
IODF

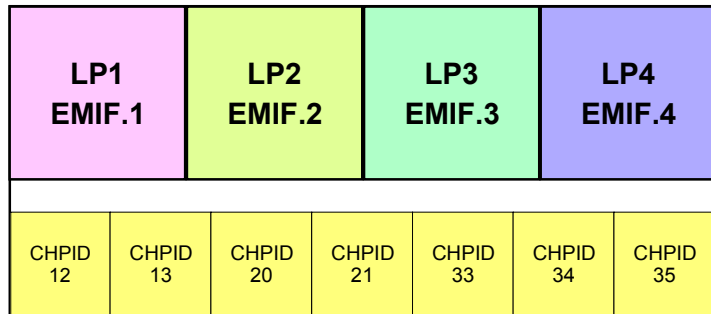


IOCDS  
Profiles

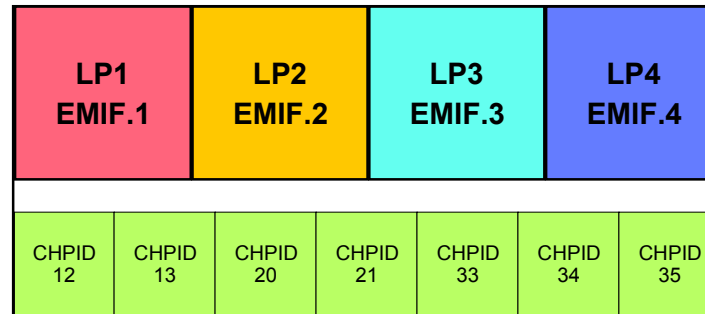
2084  
Support Element

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



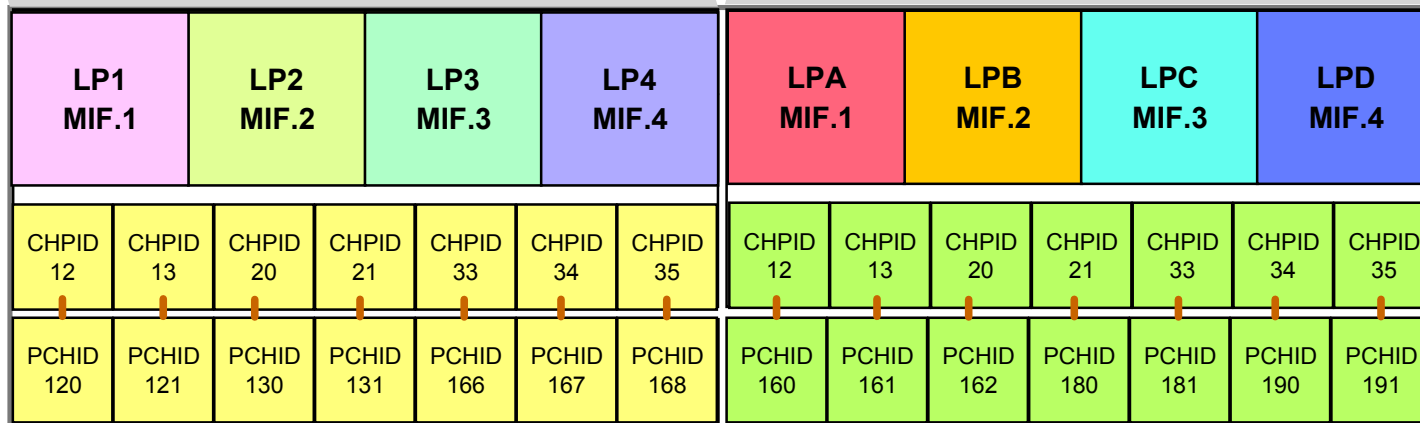
Copy 2064 (PR2064AA) to CSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/migrate to the 2084
10. Write the IOCDS
11. Customize profiles
12. **POR**

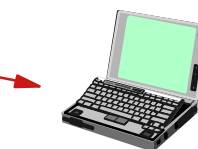
I/O definition File (Work IODF)  
 Processor - MYCEC  
 CSS.0 + SubChan Support  
 CSS.1 + SubChan Support  
 LPs, CHPIDs, CUs, Devs to LCSS.0  
 LPs, CHPIDs, CUs, Devs to LCSS.1  
 Use CMT to map CHPIDs to PCHIDs



Work  
IODF



Production  
IODF

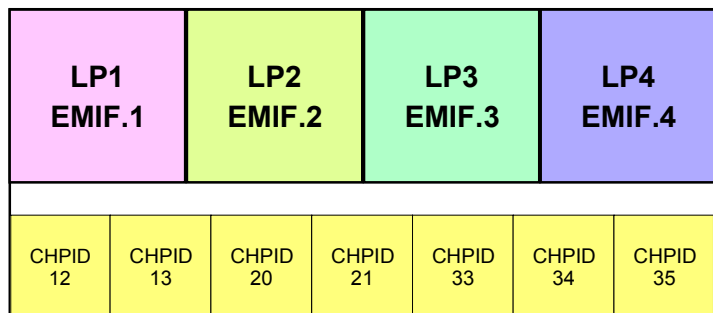


2084  
Support Element

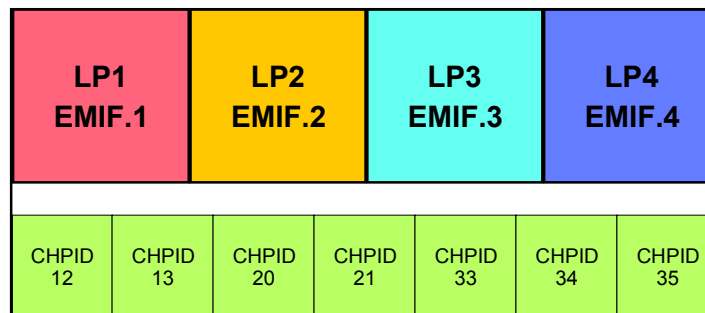
IOCDS  
Profiles  
POR

# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



2064 (PR2064BB)



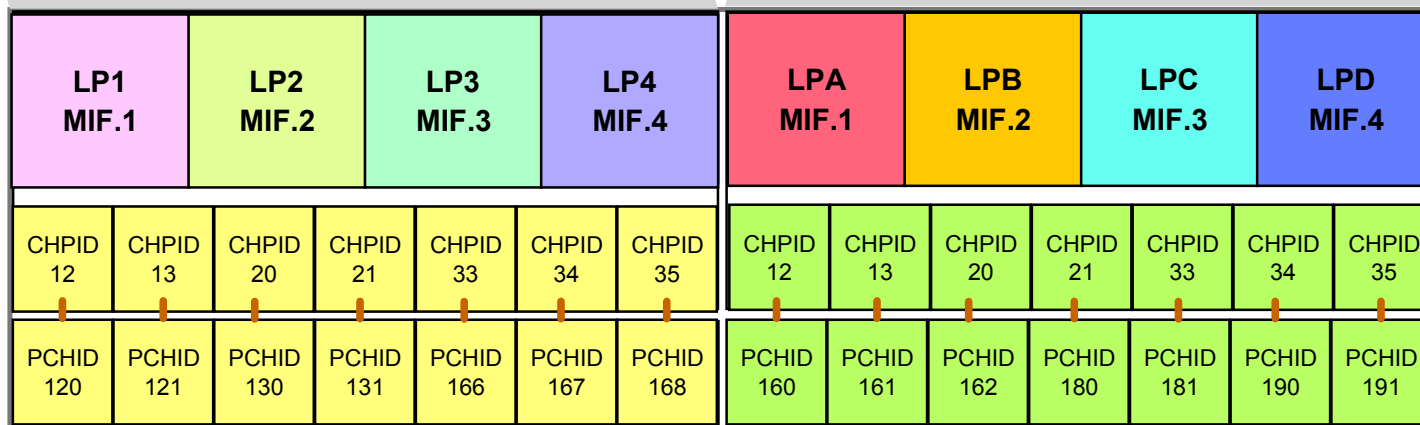
Copy 2064 (PR2064AA) to LCSS.0

Copy 2064 (PR2064BB) to LCSS.1

LCSS.0

2084 B16 (MYCEC)

LCSS.1



1. Two 2064s installed
2. 2084 install or upgrade (2064)
3. Define the 2084 processor
4. Define 2 LCSSs in the 2084
5. Copy PR2064AA to LCSS0
6. Copy PR2084BB to LCSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/upgrade to the 2084
10. Write the IOCDS
11. Customize profiles
12. POR
13. IPL

I/O definition File (Work IODF)

Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs, CHPIDs, CUs, Devs to LCSS.0

LPs, CHPIDs, CUs, Devs to LCSS.1

Use CMT to map CHPIDs to PCHIDs

CMT



Work  
IODF



Production  
IODF



2084  
Support Element

IOCDS  
Profiles  
POR



IPL  
Volume



- Understand what:

- Tools to use and when

- HCD
    - IOCP
    - HCM
    - CMT

- Sequence to follow

- Design
    - Plan
    - Configure 2084 z990 processor hardware (IBM task)
    - Order 20854 z990 processor hardware (IBM task)
    - Define

- The definition steps

- Creating the IODF dataset
    - Defining or Copying the I/O configuration
    - Using the CHPID mapping tool
    - Migrating the PCHID information
    - Building a production IODF
    - Writing an IOCDS

- HCD options and action codes

- HCD options 1.3 processor (common to all processors)
    - HCD options 1.3.s for a 2084 processor - channel subsystem list
    - HCD options 1.3.s.p for a 2084 processor - LCSS logical partition list
    - HCD options 1.3.s.s for a 2084 processor - LCSS channel path list
    - HCD options 1.3.s.s.f for a 2084 processor - LCSS CF connections list
    - HCD options 6.4 IODF details (used for determining the type of IODF - work or validated work)
    - HCD options 5.1.2 and option 3 (PCHID) migrate PCHID information
    - HCD options 1.3.s.s - 2084 CSS channel path list - then PF 20 for PCHID information
    - HCD options 1.3.s.s - 2084 CSS channel path list - then PF20 / PF20 Spanned LP access information
    - HCD options 1.4.c - Control Unit information - multiple entries per 2084

## Using z/OS HCD for COPY 2064 CSS to a 2084 LCSS

## HCD (ISPF dialog)

Add Processor

Specify or revise the following values.

Processor ID . . . . . \_\_\_\_\_

Processor type . . . . . \_\_\_\_\_ +

Processor model . . . . . \_\_\_\_\_ +

Configuration mode . . . . . LPAR +

Number of channel subsystems . . . . . \_\_\_\_\_ +

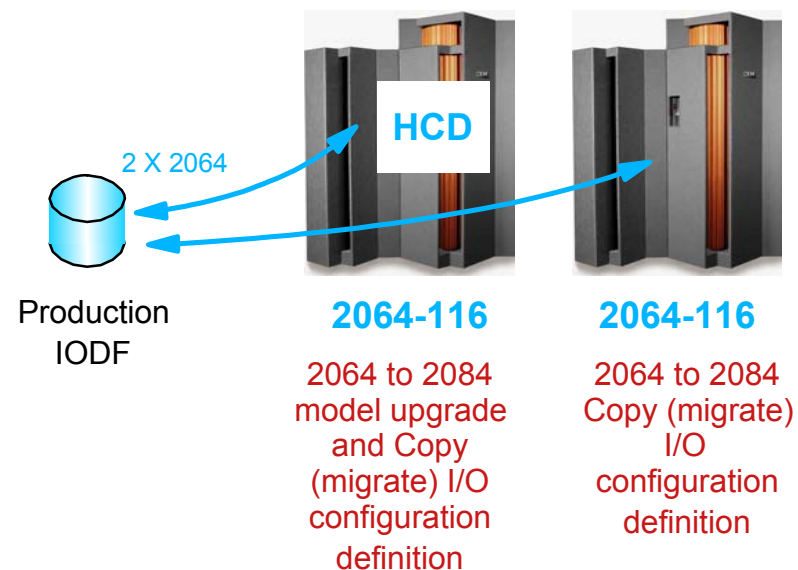
Serial number . . . . . \_\_\_\_\_

Description . . . . . \_\_\_\_\_

Specify SNA address only if part of an S/380 microprocessor cluster:

Network name . . . . . \_\_\_\_\_ +

CPC name . . . . . \_\_\_\_\_ +



## HCD (ISPF dialog)

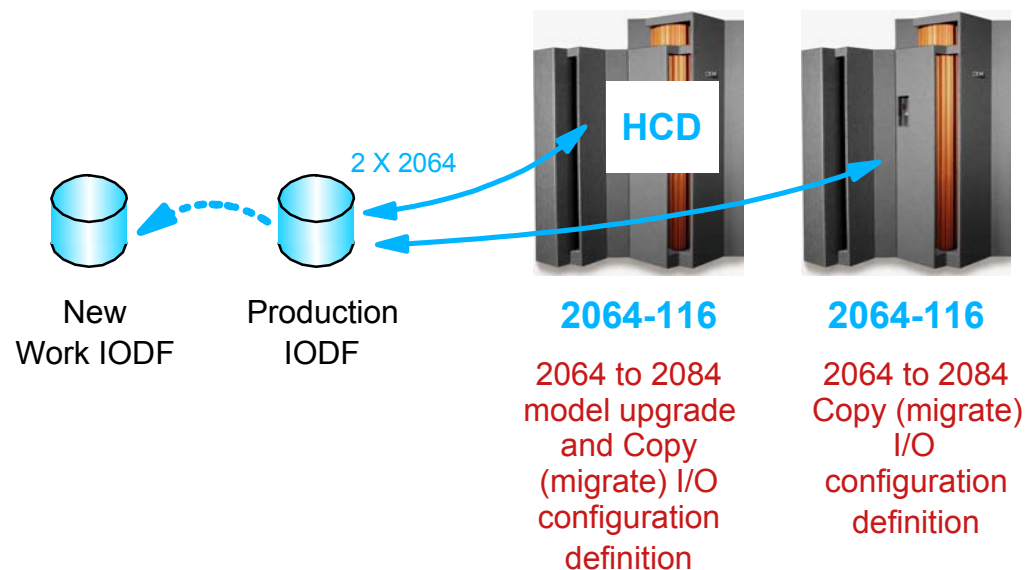
```

Add Processor

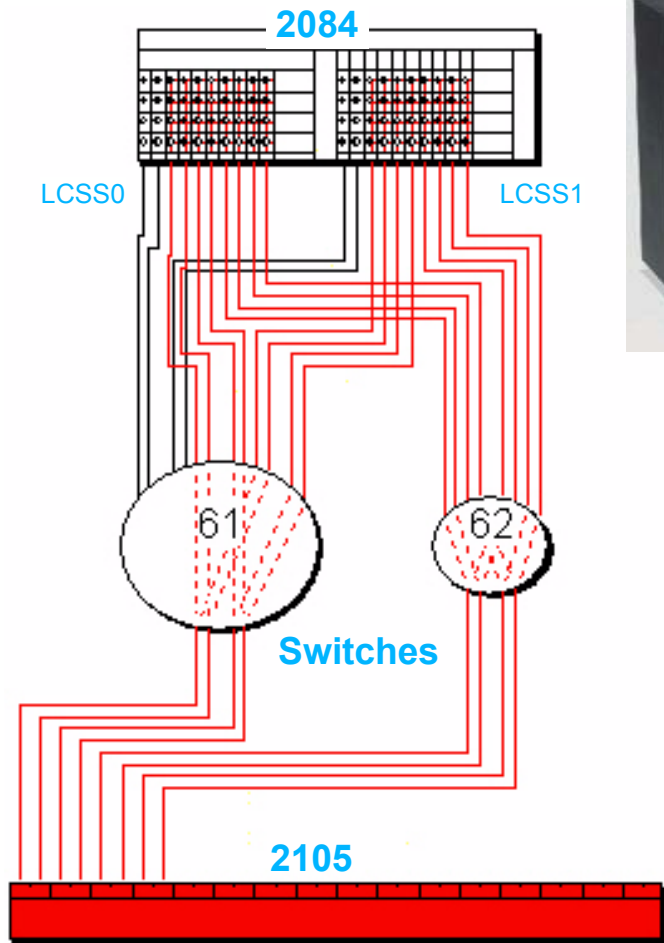
Specify or revise the following values.

Processor ID . . . . .
Processor type . . . . . +
Processor model . . . . . +
Configuration mode . . . . . LPAR +
Number of channel subsystems . . . . . +
Serial number . . . . .
Description . . . . .
Specify SNA address only if part of an S/390 microprocessor cluster:
Network name . . . . . +
CPC name . . . . . +

```



## I/O Configuration



## 2084-B16

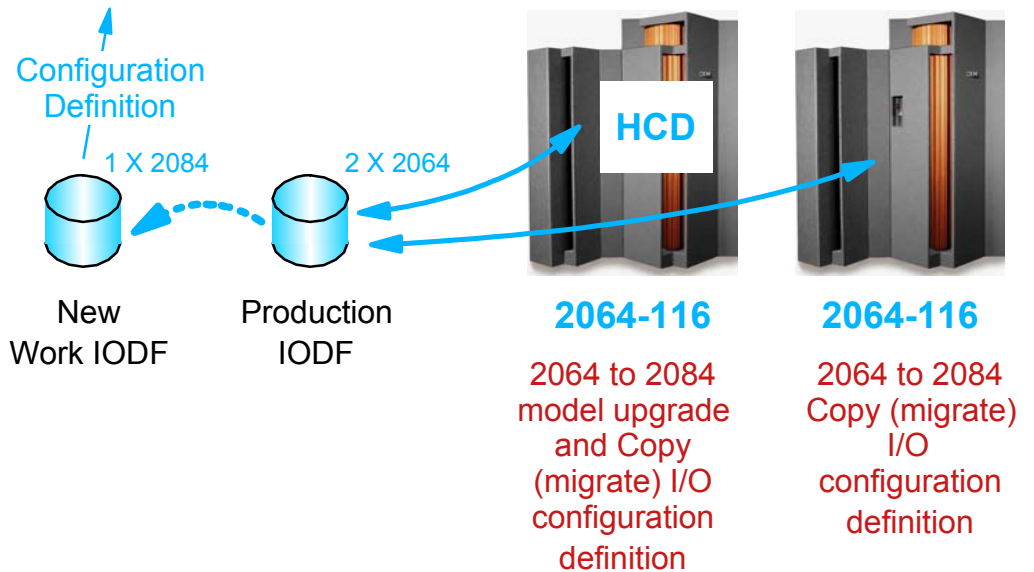


## Tasks

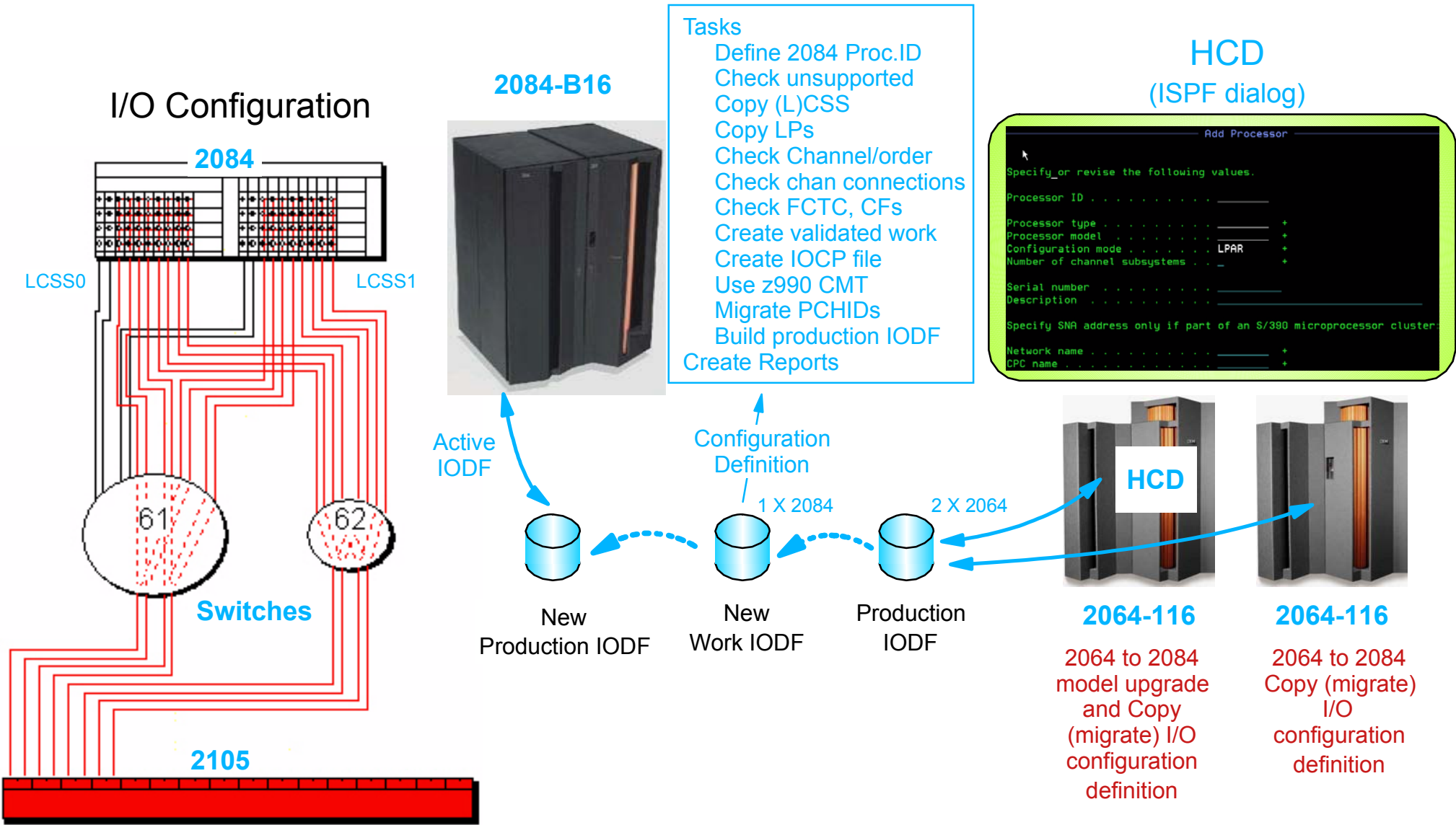
- Define 2084 Proc.ID
- Check unsupported Copy (L)CSS
- Copy LPs
- Check Channel/order
- Check chan connections
- Check FCTC, CFs
- Create validated work
- Create IOCP file
- Use z990 CMT
- Migrate PCHIDs
- Build production IODF
- Create Reports

## HCD

(ISPF dialog)



# z/OS HCD Support - Definition Migration (HCD CSS Copy) 2064s to 2084



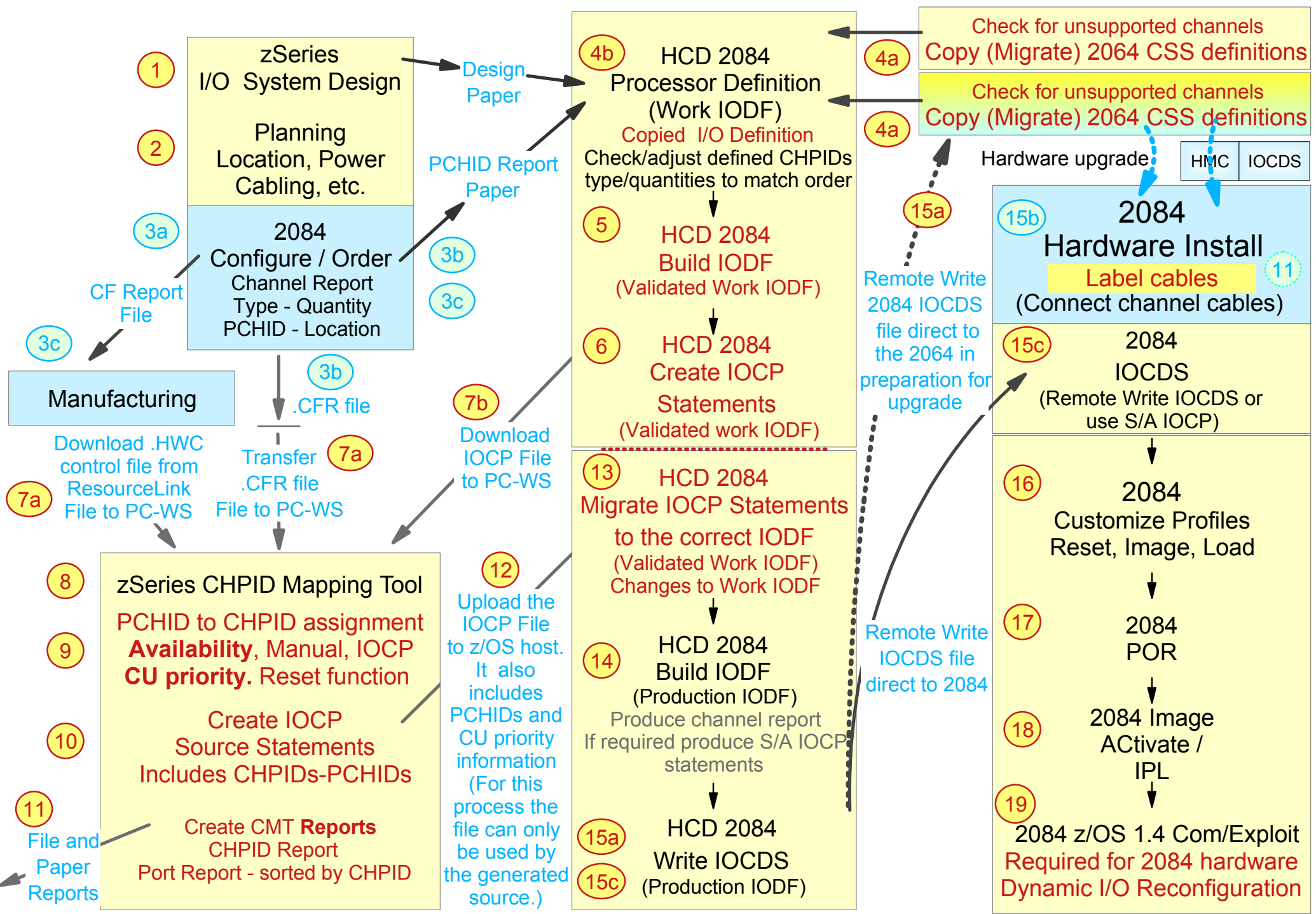
- Planning items - configuring / ordering
  - No Parallel channels (BL or BY), no OSA-2 channels (OSA)
    - No 4 Port ESCON channel card, also requires a cable connector change - IBM duplex to MT-RJ
    - No FICON 1.5 channel card, also requires cable connector change - SC to LC
  - Consider 'Plan-Ahead' for channels for additional I/O cages - prevents disruption
- Planning items - 2084 processor - any change to the following is disruptive
  - Number of LCSSs (1 or 2)
  - Quantity of logical partitions per LCSS and for the 2084 in total
  - Logical partition names - they must be unique across the CSSs
  - Number of Subchannels per LCSS
  - If any of the above is changed later, HCD will not allow a dynamic change
- Planning items - I/O configuration definition
  - FICON CTC (FCTC) target 2084 CUADD - must be CSS.ID + MIF.ID
  - FCTC support change required for the 9672
  - If CTCs are defined, always produce an HCD CTC connection report for checking
  - CF Connectivity - must be defined by the user
  - IQD connectivity - span can be used at GA2
  - ICP connectivity - allows connections across LCSSs
- Planning items - I/O definition file, and HCD IOCP statements
  - Do not change a 'validated work' IODF after a generation of the IOCP statements
  - The HCD validated work IOCP statement file must only be used by the CMT
  - The HCD validated work IOCP statement file CANNOT be used by any IOCP program
- Planning items - HCD panel changes
  - HCD hierarchical changes - use HCD options 1.3.s.s to display Channel Path List panel
  - Use the HCD channel path list panel (1.3.s.s) and PF20 to display PCHIDs
  - Use the HCD channel path panel and PF20 + PF20 to display the SPANNED channels





- Multi-step approach, from the system I/O configuration design to loading the OS (IPL)
  1. Design - workload, logical partitions, data access, connectivity (physical and logical)
  2. Planning - source of the configuration definition, channel connections, CF connections
  3. a. Configuring, b. Optional channel/CU configuration availability testing (uses steps 4-9), c. Ordering
  4. Define or Copy an I/O configuration definition for the 2084 (using z/OS HCD with a work IODF)
  5. Validate the I/O configuration definition (also changes the IODF type to a 'Validated Work')
  6. Create an IOCP statements file from the HCD validated work IODF
  7. Transfer (download) files to a PC-WS with the CHPID Mapping Tool (CMT) installed
    - The machine order file - CFReport file (.CFR) or the manufacturing order file (.HWC)
    - IOCP statements file (from HCD)
  8. Start the z990 CHPID Mapping Tool (CMT) program
    - Select the required 2084 hardware configuration file file (.HWC or .CFR)
    - Resolve any hardware definition types to order types (e.g. OSD - OSA-Express GbE or HSTR)
  9. Map the 2084 CHPID definitions to the 2084 installed PCHIDs
    - Use either or both the Availability mapping function, or the Manual mapping function
  10. Create a CMT IOCP statements file (this will include the CHPID to PCHID mapping)
  11. Create the required CMT PCHID and CHPID reports
  12. Transfer (upload) the CMT IOCP statements file to the z/OS host (normal dataset)
  13. Use HCD to migrate the CMT PCHID IOCP statements file into the HCD validated work IODF
  14. Build a production IODF (from the work IODF)
  15. Upgrade/Install the 2084, using the production IODF write the IOCDS to the 2084 support element
  16. Customize the RESET, IMAGE, and Load profiles
  17. POR the 2084
  18. IPL the required image
  19. Operate the system, and perform dynamic I/O reconfiguration changes as required

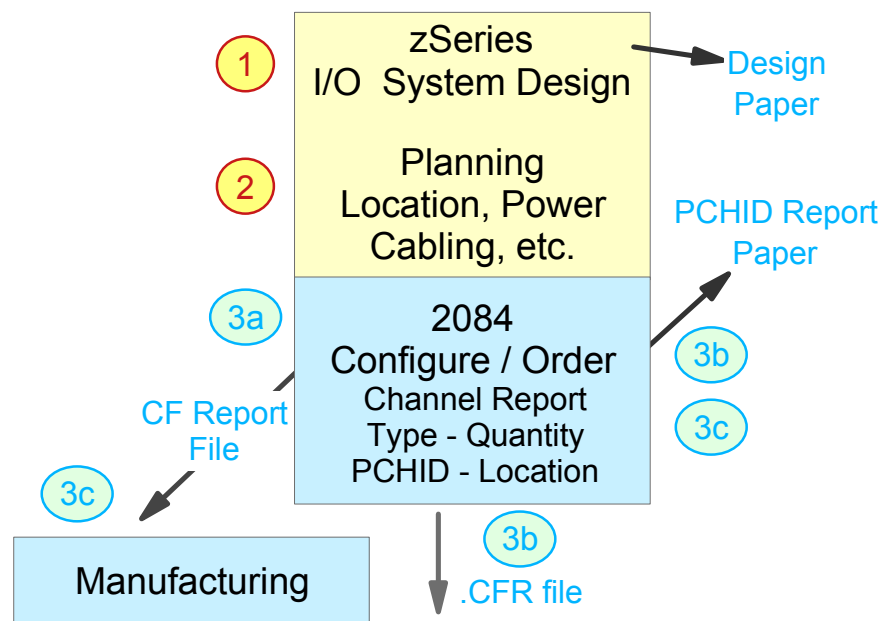
2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



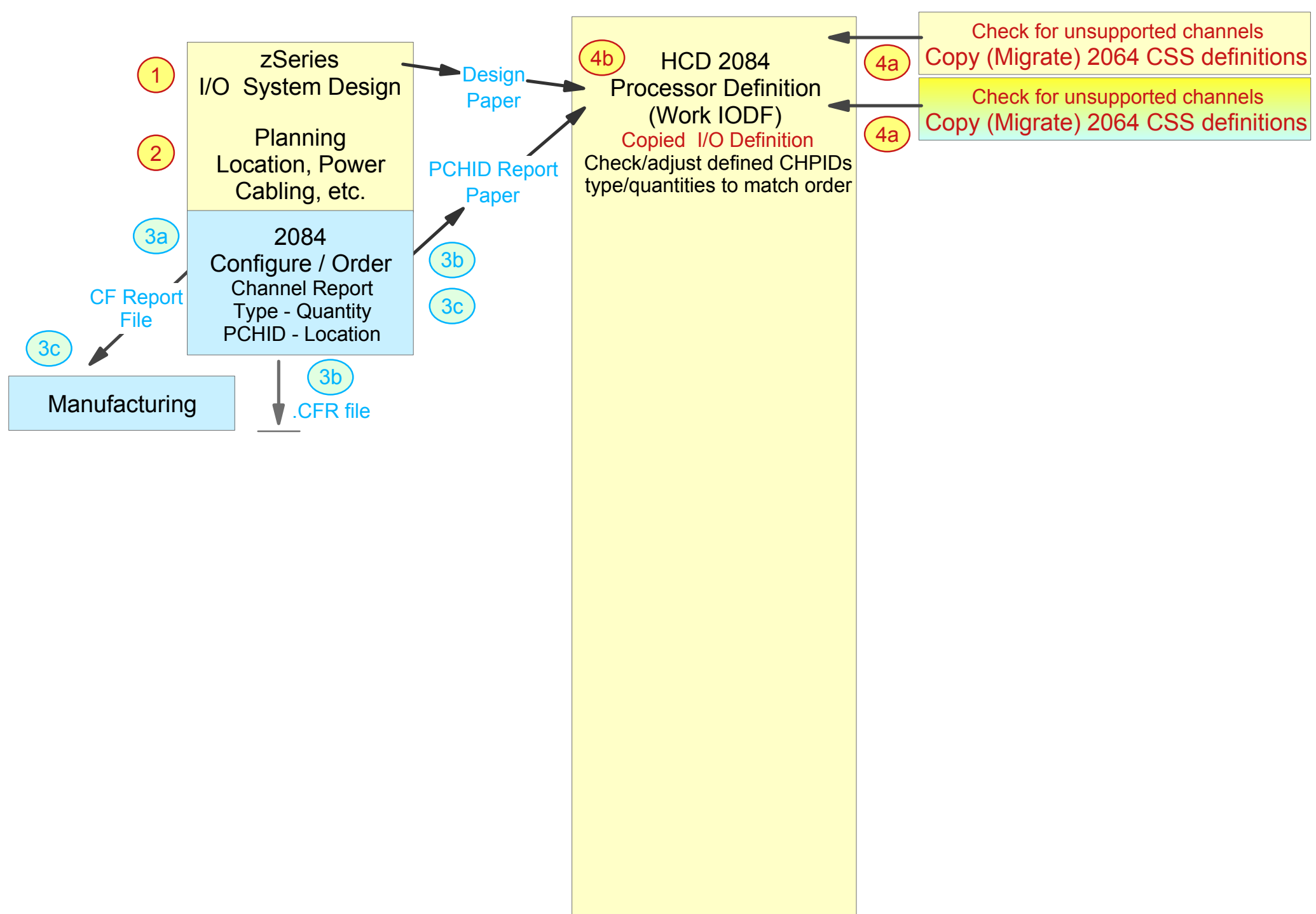
Upgrade Processor  
2064 to 2084

COPY (CSS)  
I/O Configuration  
definitions

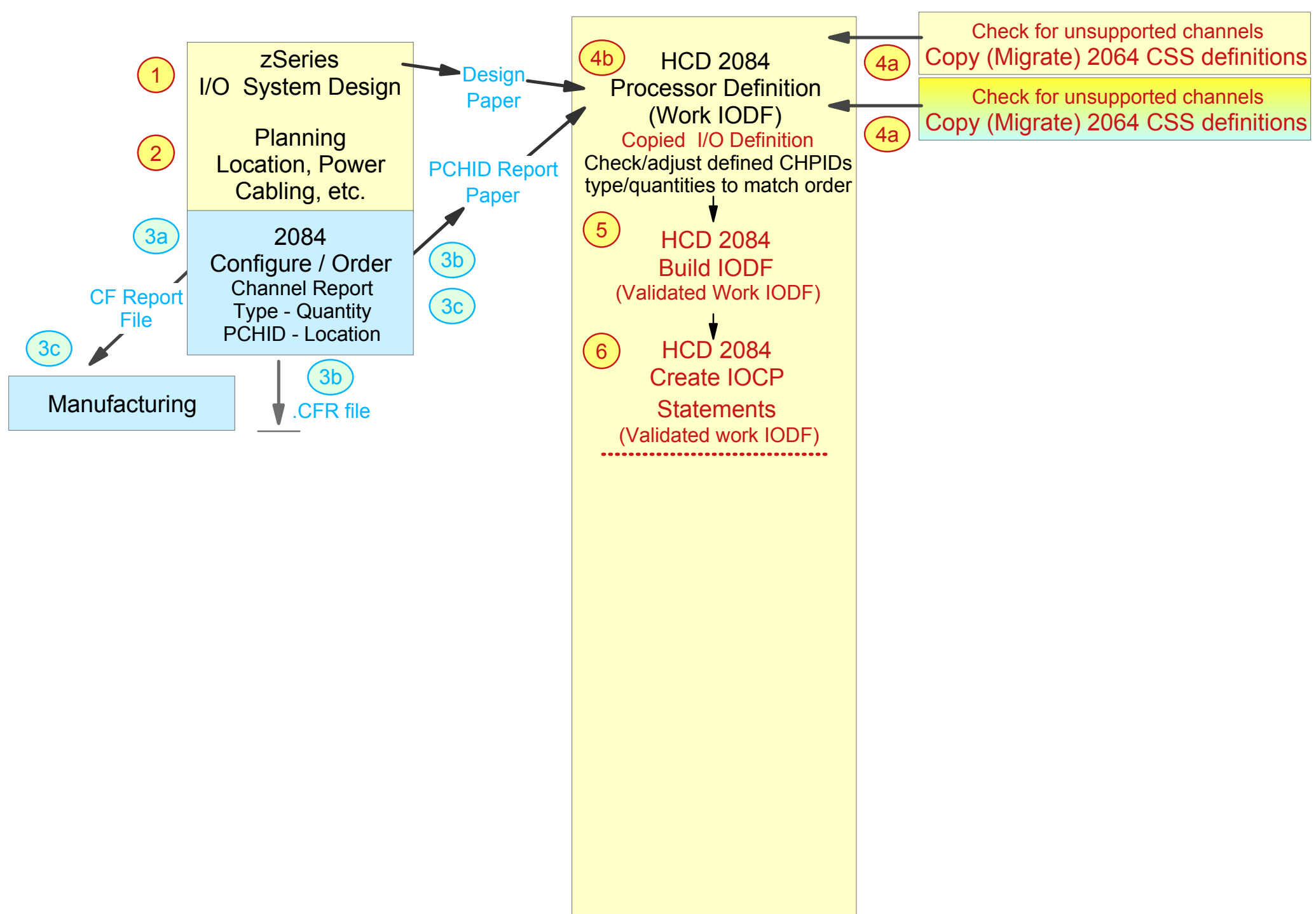
# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)

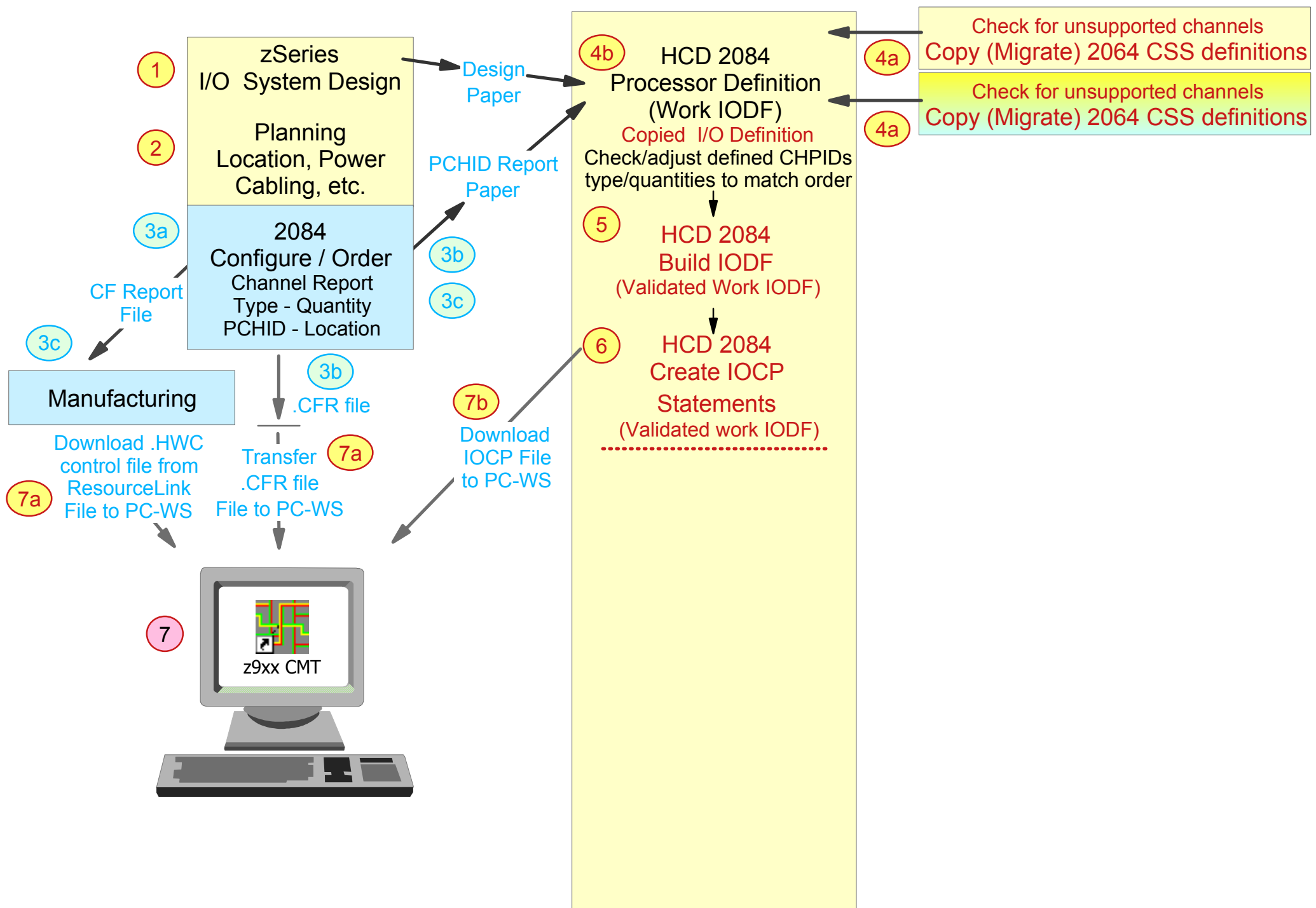


# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)

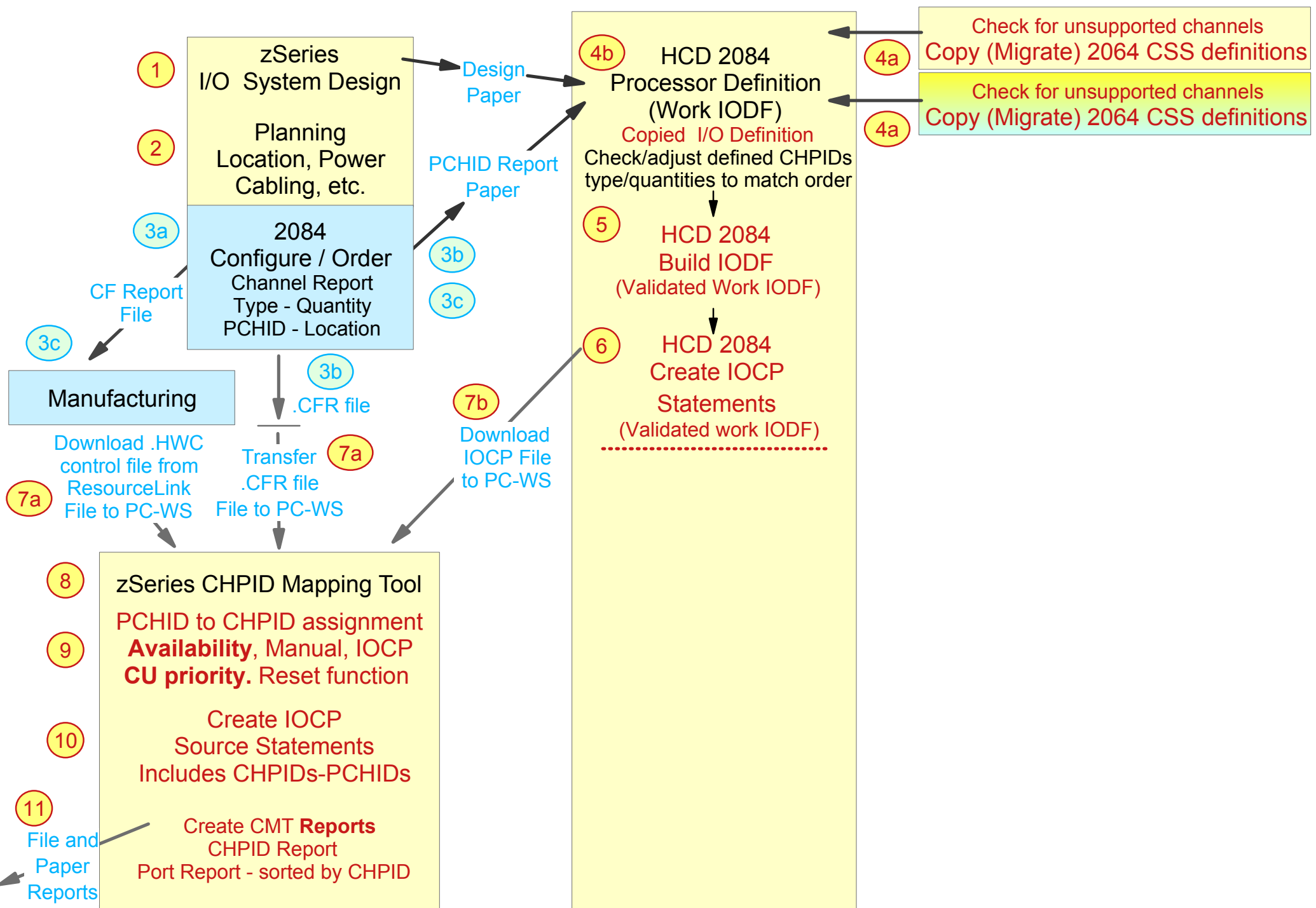




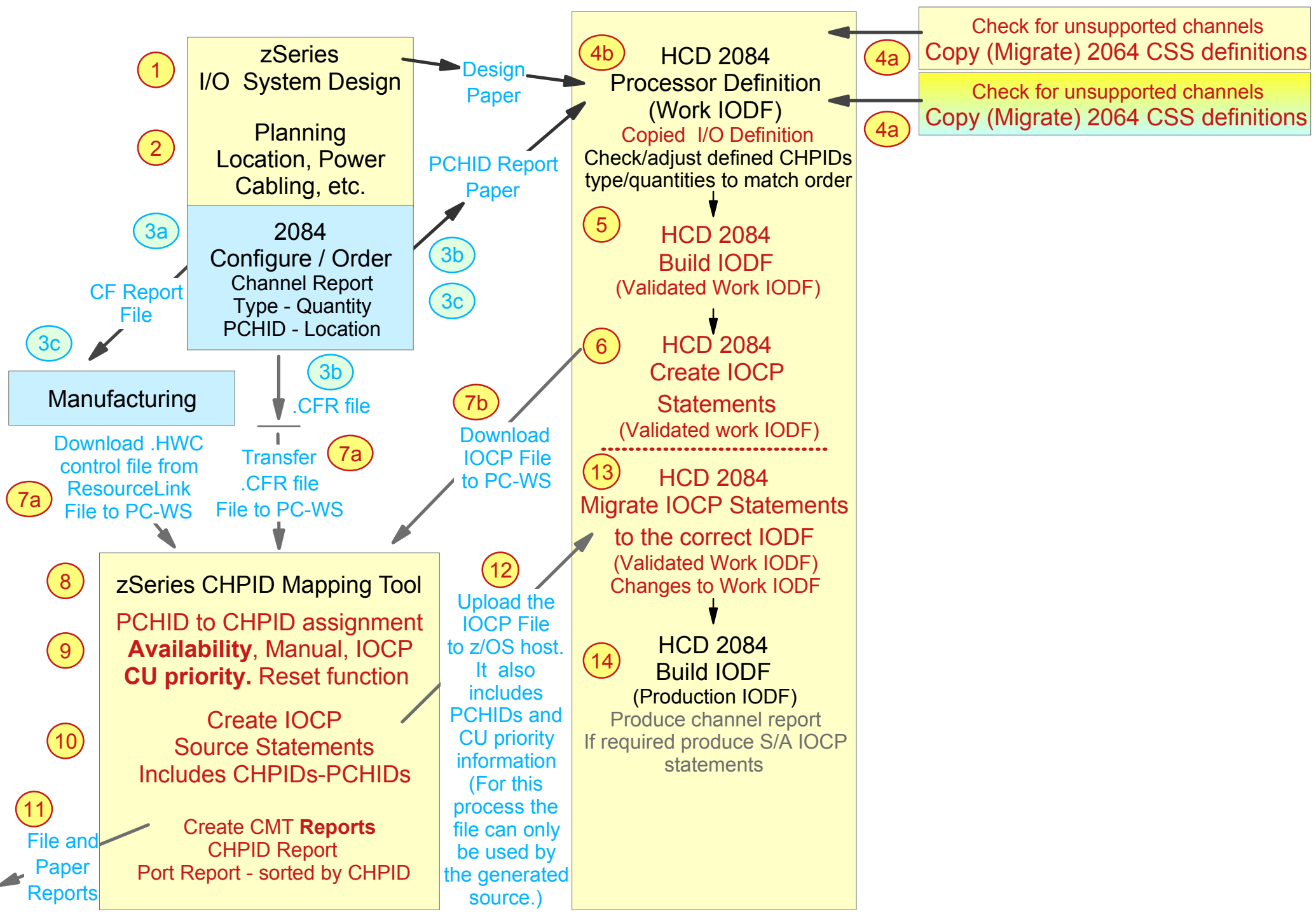
# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



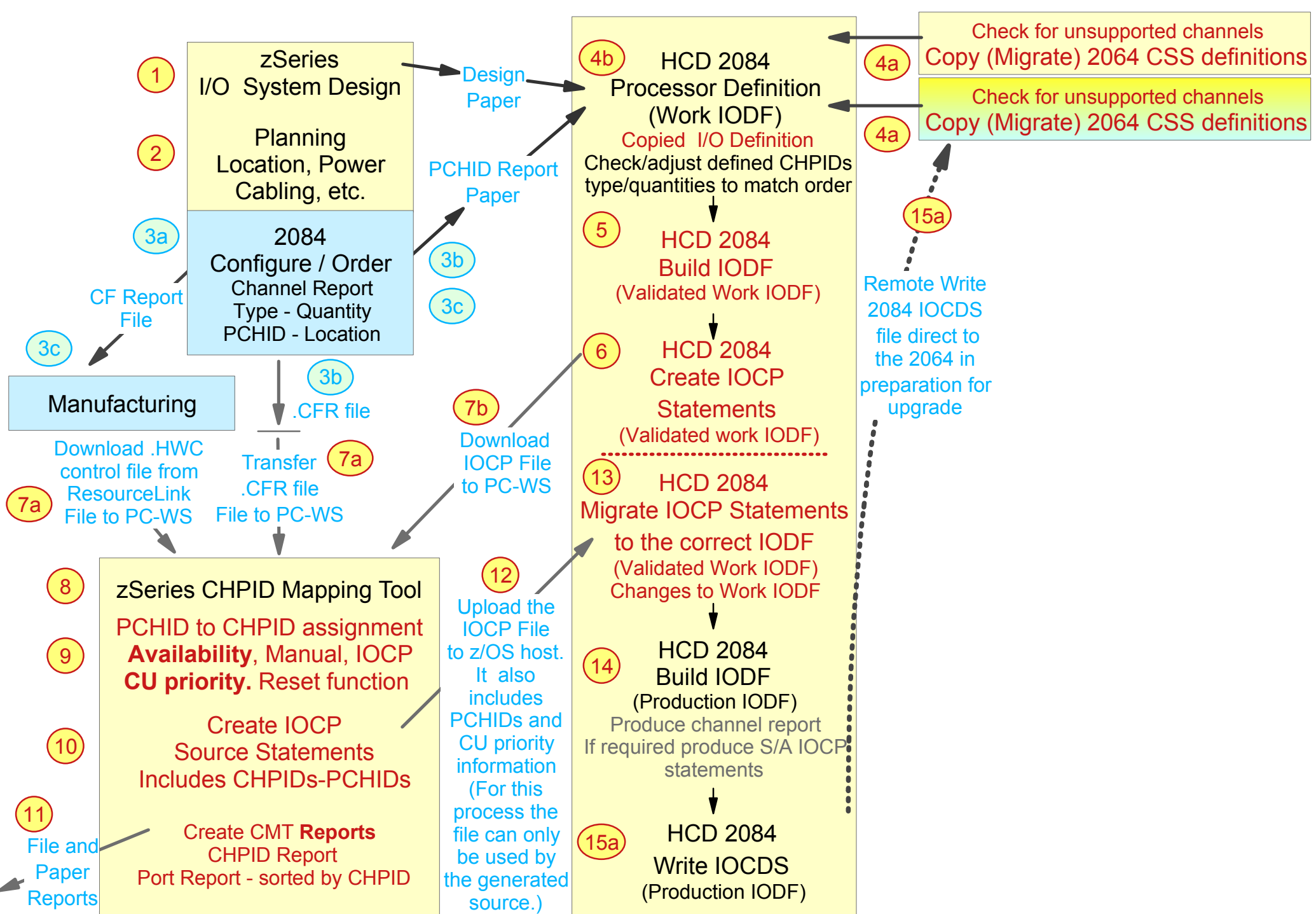
2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



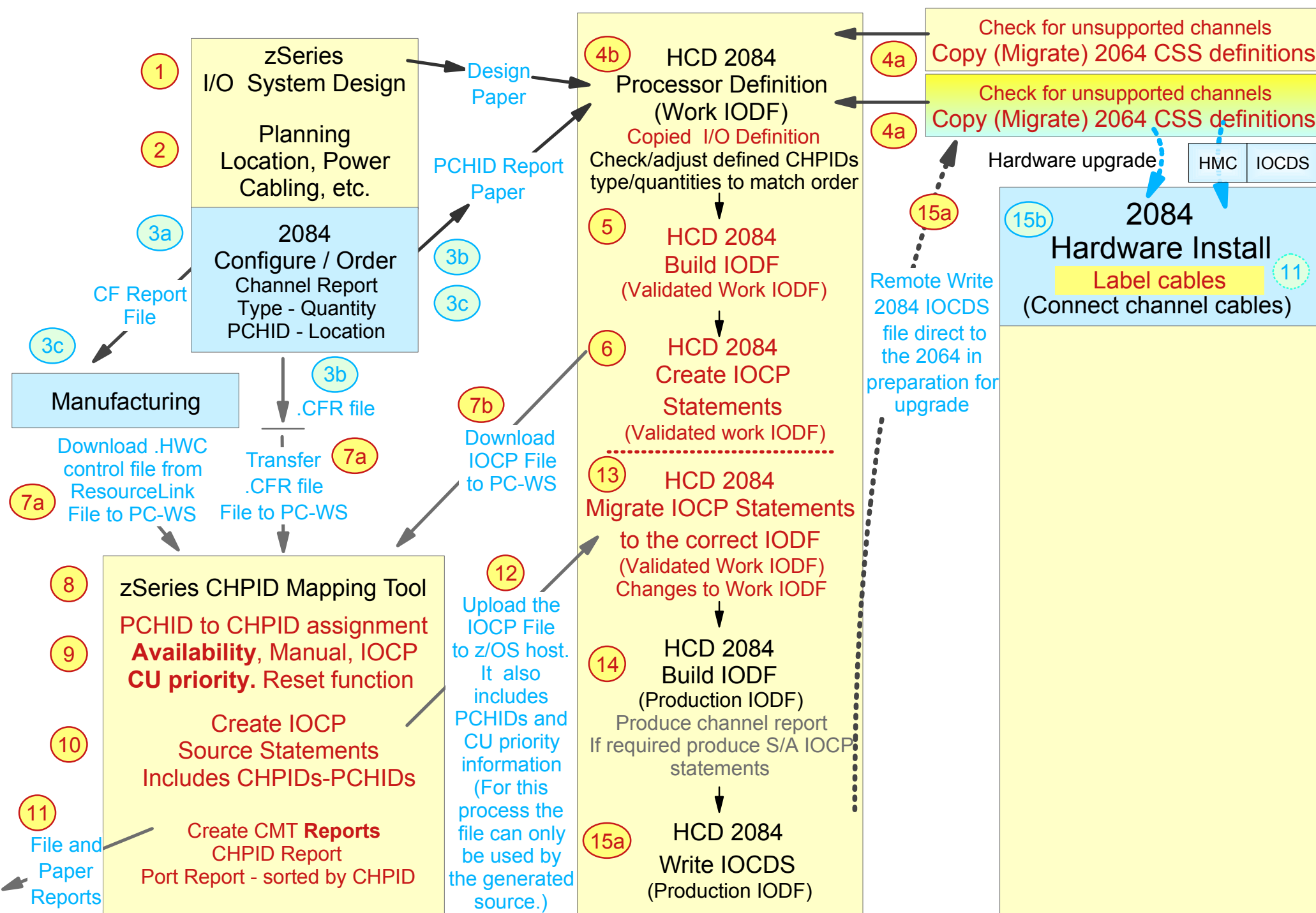
# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)

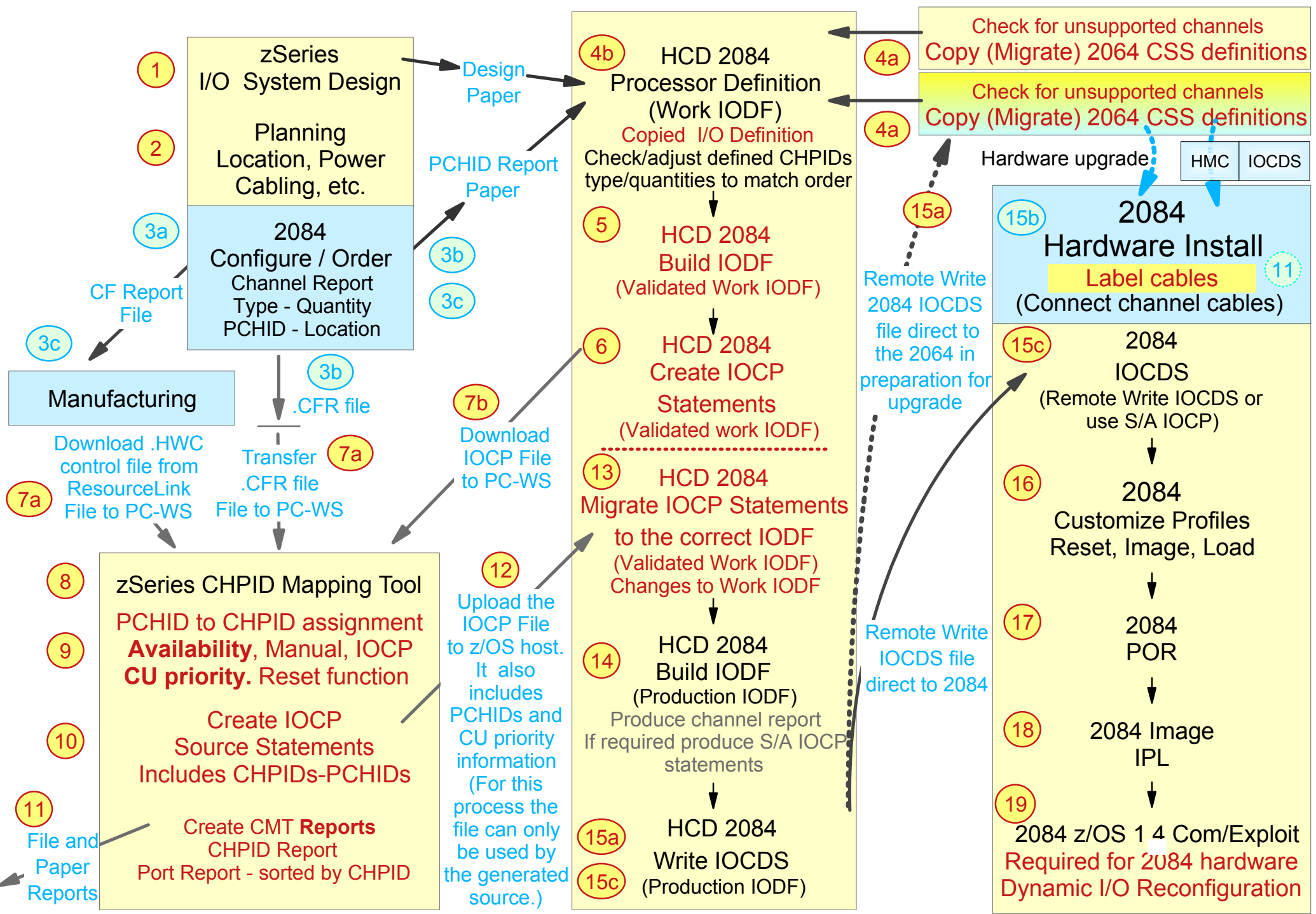


## 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)





2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (2064/2084 Upgrade)



# 2084 - I/O Configuration Definition Support - z/OS HCD COPY (Migrate) CSSs

Assumes within the IODF there is:

2

- No changes to the OS Config definition
- No changes to the ESCON or FICON switch definitions, for Upgraded or Swapped systems/machines. There maybe be switch port additions/connections changes for Added 2084 systems/machines/LCSSs (at a later date)
- If LPAR names are not unique HCD will request a change
- No changes to the CU paths definitions
  - Same numbers of paths and CHPID #s
  - If real duplicate device number are used then the associated CUs must have different CU numbers
- No change to the I/O device definitions

- 5 \* Once having built a 'validated work' IODF do not make any changes to the IODF prior to importing the CMT IOCP statements
- 13

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport

Transfer z/OS IOCP file to the PC IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source (includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT Reports

CHPID Report

Port Report - sorted by CHPID

CFReport

Download the HCD validated work IOCP file to CMT PC WS

Upload the CMT IOCP file to the z/OS host. The file includes PCHIDs, CCN, CMT version, and CU priority, information

For this process the CMT IOCP file can only be used by the source that generated the initial statements

4a/b

## HCD Migrate (Copy) 2064 or 9672 CSS Definitions to 2084

Use or create a work IODF (from the production IODF) to later define the 2084 Upgrade or Swap use HCD options 1.3.s for source copy processor, delete unsupported channels New Install, use HCD 1.3.r to repeat 2064, use 1.3.s delete unsupported channels in the Copy Use HCD options 1.3 and PF11 to add the new 2084, Model, Mode, LCSSs Use HCD options 1.3.s to view and re-specify the MAXDEV (for each LCSS) Use HCD options 1.3.y to copy the 2064/9672 CSS to a 2084 CSS Define/Change the required Logical Partition names (and MF.ids). For an Upgrade, Swap or New Install use HCD 1.3.d to delete the copied CSSs (processors), but for a new install also use HCD 1.3.s.s to adjust the 2084 channel to switch connections Use HCD options 1.3.s.s to make any required Channel add/delete/change You may specify the PCHID in the PCHID field (for non IQD and ICP channels) as:  
1. Blank (use CMT to provide PCHID value later). 2. PCHID value. 3. An asterisk (\*) Use (\*) when CHPID/channel is not installed, or no PCHID assignment required (for now) Use HCD option 1.3.s.s to view channel to switch connections, and HCD 1.2.p for switch ports Run the FCTC connection report - HCD option 3.1.CTC.2. FCTC use HCD option 1.4, locate required CU #, adjust CUADD (CSSid + MIFid) Define any required CF channels, use HCD 1.3.s.s PF11, then define CF connections 1.3.s.s.f.p Define any required ESCON CVC and CBY to replace unsupported BL and BY channels Define OSA-Express OSD/OSE for physically replaced unsupported OSA TR channels

## HCD 2084 Build Validated Work IODF \*

- 5 Use the work IODF and HCD option 2.12, check completion messages This validates the work IODF for the 2084, w/ or w/o PCHIDs Use HCD option 6.4 to check IODF type - s/b 'Validated work'

## HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3, select required ProcId Browse the IOCP statements file. Note there are no PCHID keywords

## HCD Migrate CMT IOCP Statement 'PCHIDs' \*

Migrate IOCP statements into the correct 'validated work' IODF by using HCD option 5.1 plus options 2 and 3 - PCHIDs Use HCD option 1.3.s.s and PF20 to view PCHIDs, 2nd PF20 for Spanned Use HCD option 6.4, IODF type will be changed to a work type IODF

## HCD 2084 Build Production IODF

Use HCD option 2.1 to build a production IODF from the work IODF Note every defined CHPID must have a PCHID (except IQD and ICP)

## HCD 2064 or 2084 Write IOCDS

Use production IODF and HCD option 2.11 to remote write the IOCDS. The HCD CPC name and HMC CPC object names must be the same

## IPL the 2084 Image

OS/390 2.10 - z/OS 1.4 with compatability support IPL in CSS0 image z/OS 1.4 with exploitation support IPL in CSS0 or CSS1 image

## HCD 2084 Dynamic I/O Reconfiguration

18 Use the z/OS activate command or the HCD activate function to perform dynamic I/O reconfiguration. Requires OS/390 2.10 - z/OS 1.4 + compatability support for dynamic to CSS0, or z/OS 1.4 + Exploitation support for dynamic to CSS0 and CSS1 - Note: z/OS 1.3 H/W activates are multi-CSS wide

19



# 2084 - I/O Configuration Definition Support: New or Swap 2084, full definition

HCD Processor definition options	
1.3	Processor (2084)
1.3.s	CSS + # Subchans
1.3.s.p	Partitions (for a CSS)
1.3.s.s	Channels (for a CSS)
HCD CU definition options	
1.4	CU path connections to each required LCSS

\* Once having built a 'validated work' IODF do not make ANY changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

## 8x z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT Reports

CHPID Report  
Port Report - sorted by CHPID

CF File  
Download the  
HCD validated  
work IOCP file  
to CMT PC WS

Upload the CMT  
IOCP file  
to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process  
the CMT IOCP file  
can only be used by  
the source that  
generated the initial  
statements )

## 4a HCD - Create work files and Define 2084

Create an HCD IODF work file from current production IODF file.  
Assumes the OS Config, Switches and Ports are already defined in the IODF  
**Define the 2084**

Use HCD options 1.3 and PF11 to add the new 2084, Model, Mode, LCSSs  
Use HCD options 1.3.s to view and re-specify the MAXDEV (for each LCSS)

Use HCD options 1.3.s.p to define the required Logical Partition names

Use HCD options 1.3.s.s to define the required Channels and CHPIDs

You may specify the PCHID in the PCHID field (for non IQD and ICP channels) as:  
Blank - PCHID value, or an asterisk (\*)

Use HCD options 1.4 to define the CUs, and connect them to required LCSSs

Use HCD options 1.5 to define the required devices to Proc.ID and OS Config.ID

Use HCD options 1.3.s.s.f.p to specify CF connections

Print an HCD CTC connection report, FICON target CUADDD s/b CSS.ID - MIF.ID

## 5 HCD 2084 Build Validated Work IODF \*

Use the work IODF and HCD option 2.12, this validates the work IODF for the 2084, with or without PCHIDs defined. Check the completion messages

Use HCD option 6.4 to check IODF type - should be 'Validated work'

## 6 HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3 to create the IOCP statements file

## 13 HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 1.3.s.s and PF20 to view PCHIDs, PF20 again for Spanned channel

Use HCD option 6.4, IODF type will be changed to a work type IODF

## 14 HCD 2084 Build Production IODF

Use HCD option 2.1 to build a production IODF from the work IODF. Note: every defined 2084 CHPID must have a PCHID or \* specified (except IQD and ICP)

## 15a/c HCD 2064 or 2084 Write IOCDS

Use production IODF & HCD option 2.11 to remote write the IOCDS.

The HCD CPC object name and HMC CPC object name must be the same

## 18 IPL 2084 Image

OS/390 2.10 - z/OS 1.4 with compatability support IPL in a CSS0 image

z/OS 1.4 with exploitation support IPL in any CSS0 or CSS1 image

## 19 HCD 2084 Dynamic I/O Reconfiguration

Use the z/OS activate command or the HCD activate function to perform I/O changes dynamically. Requires OS/390 2.10 - z/OS 1.4 + compatability support for dynamic to LCSS0, or z/OS 1.4 + Exploitation support for dynamic to LCSS0 and LCSS1

Note: H/W activates are 2084 multi-LCSS wide

## z990 CHPID Mapping Tool (CMT)

Transfer the customer's 2084 CFReport file to the PC-WS

Transfer z/OS IOCP file to the PC-WS

8



z990 CMT

Start the CMT program

### Load the 2084 configuration file

File: Import H/W Config from file (.HWC), or

File: Import CFReport order file (.CFR)

(Select the required processor)

### Load the IOCP statements file

Tool: Import IOCP file

Observe/resolve any PCHID conflicts

Resolve CHPIDs to hardware channel type

9

Invoke the CMT **Availability** function

PCHID to CHPID assignment

Set any required CU priority

Process CU Priority

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority** - define if required
- Reset function

View result - Select the CMT Manual tab

- View the CHPID to PCHID mapping, or
- View the PCHID to CHPID mapping

10

Create the IOCP input source

(includes PCHID #s and, CCN# & CU priority)

Transfer file to z/OS 'Text Fixed 80'

11

Create CMT **Reports**

1. CHPID Report
2. Port Report - sorted by CHPID

CF File .HWC or .CFR

7a

7b

Download the  
HCD validated  
work CMT IOCP  
file to CMT PC  
WS

6

## HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

## HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 6.4, IODF type should be a work type IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs

12

Upload the CMT IOCP  
file to z/OS host. The  
file also includes  
PCHIDs and CU priority  
information

(For this process the  
CMT IOCP file can only  
be used by the source  
that generated the initial  
statements )

11

File and  
Paper  
Reports

?

Warning an HCD CMT IOCP  
statement file cannot be used  
by any IOCP program.

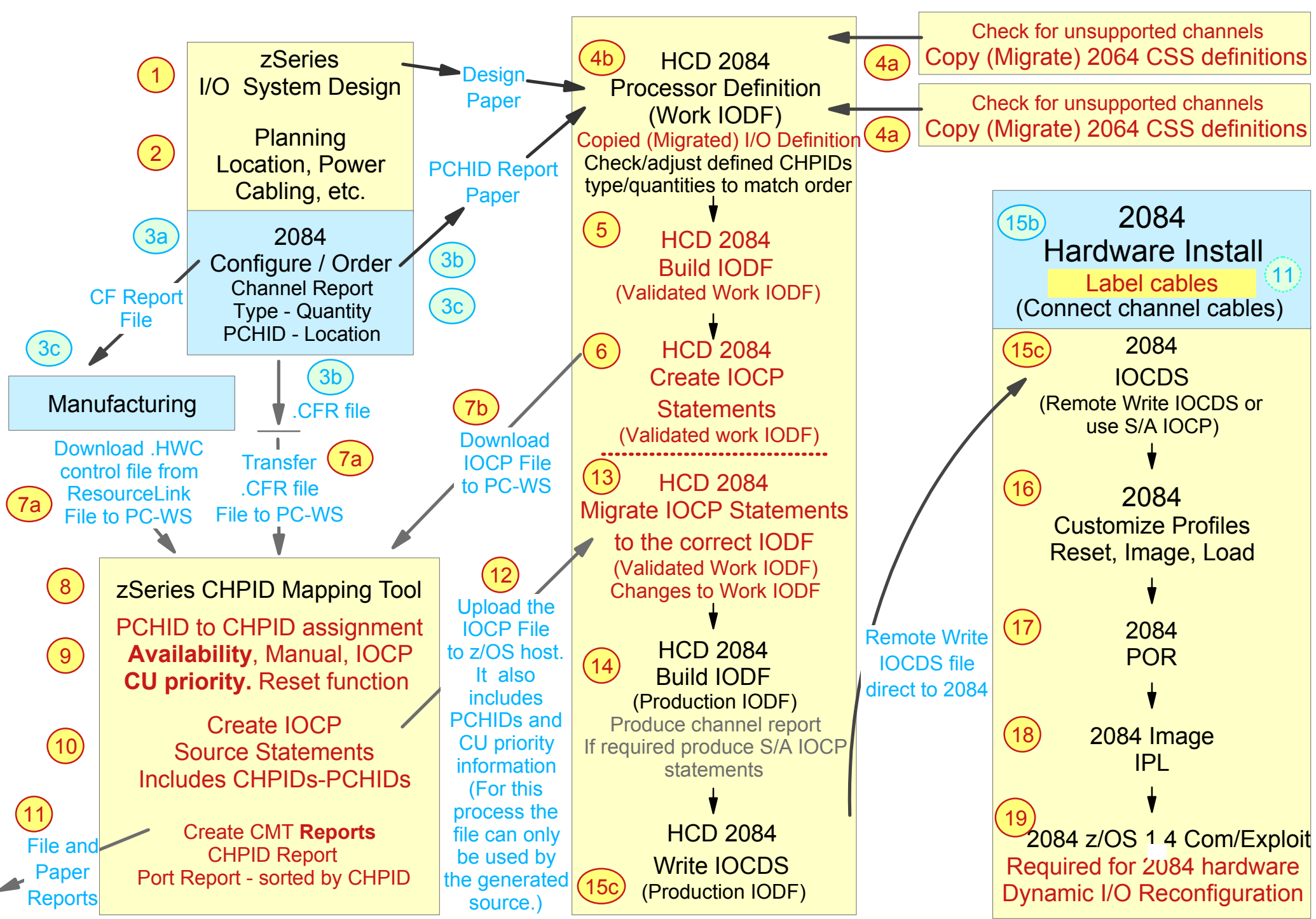
Do not get caught by this  
situation for a 2084 new install  
thinking you can use these  
IOCP statements with the S/A  
IOCP program, YOU CANNOT

- Multi-step approach, from the system I/O configuration design to loading the OS (IPL)
  1. Design - workload, logical partitions, data access, connectivity (physical and logical)
  2. Planning - source of the configuration definition, channel connections, CF connections
  3. a. Configuring, b. Optional channel/CU configuration availability testing (uses steps 4-9), c. Ordering
  4. Define or Copy an I/O configuration definition for the 2084 (using z/OS HCD with a work IODF)
  5. Validate the I/O configuration definition (also changes the IODF type to a 'Validated Work')
  6. Create an IOCP statements file from the HCD validated work IODF
  7. Transfer (download) files to a PC-WS with the CHPID Mapping Tool (CMT) installed
    - The machine order file - CFReport file (.CFR) or the manufacturing order file (.HWC)
    - IOCP statements file (from HCD)
  8. Start the z990 CHPID Mapping Tool (CMT) program
    - Select the required 2084 hardware configuration file (.HWC or .CFR)
    - Resolve any hardware definition types to order types (e.g. OSD - OSA-Express GbE or HSTR)
  9. Map the 2084 CHPID definitions to the 2084 installed PCHIDs
    - Use either or both the Availability mapping function, or the Manual mapping function
  10. Create a CMT IOCP statements file (this will include the CHPID to PCHID mapping)
  11. Create the required CMT PCHID and CHPID reports
  12. Transfer (upload) the CMT IOCP statements file to the z/OS host (normal dataset)
  13. Use HCD to migrate the CMT PCHID IOCP statements file into the HCD validated work IODF
  14. Build a production IODF (from the work IODF)
  15. Upgrade/Install the 2084, using the production IODF write the IOCDS to the 2084 support element
  16. Customize the RESET, IMAGE, and Load profiles
  17. POR the 2084
  18. IPL the required image
  19. Operate the system, and perform dynamic I/O reconfiguration changes as required

Swap Processor  
2064/9672 to 2084

COPY (CSS)  
I/O Configuration  
definitions

# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (Swap Processor)





## z990 CHPID Mapping Tool (CMT)

Transfer the customer's 2084 CFReport file to the PC-WS

Transfer z/OS IOCP file to the PC-WS

8



z990 CMT

Start the CMT program

### Load the 2084 configuration file

File: Import H/W Config from file (.HWC), or

File: Import CFReport order file (.CFR)

(Select the required processor)

### Load the IOCP statements file

Tool: Import IOCP file

Observe/resolve any PCHID conflicts

Resolve CHPIDs to hardware channel type

9

Invoke the CMT **Availability** function

PCHID to CHPID assignment

Set any required CU priority

Process CU Priority

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority** - define if required
- Reset function

View result - Select the CMT Manual tab

- View the CHPID to PCHID mapping, or
- View the PCHID to CHPID mapping

10

Create the IOCP input source

(includes PCHID #s and, CCN# & CU priority)

Transfer file to z/OS 'Text Fixed 80'

11

Create CMT **Reports**

1. CHPID Report
2. Port Report - sorted by CHPID

CF File .HWC or .CFR

7a

7b

Download the  
HCD validated  
work CMT IOCP  
file to CMT PC  
WS

6

## HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

## HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 6.4, IODF type should be a work type IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs

12

Upload the CMT IOCP  
file to z/OS host. The  
file also includes  
PCHIDs and CU priority  
information

(For this process the  
CMT IOCP file can only  
be used by the source  
that generated the initial  
statements )

11

File and  
Paper  
Reports

?

Warning an HCD CMT IOCP  
statement file cannot be used  
by any IOCP program.

Do not get caught by this  
situation for a 2084 new install  
thinking you can use these  
IOCP statements with the S/A  
IOCP program, YOU CANNOT

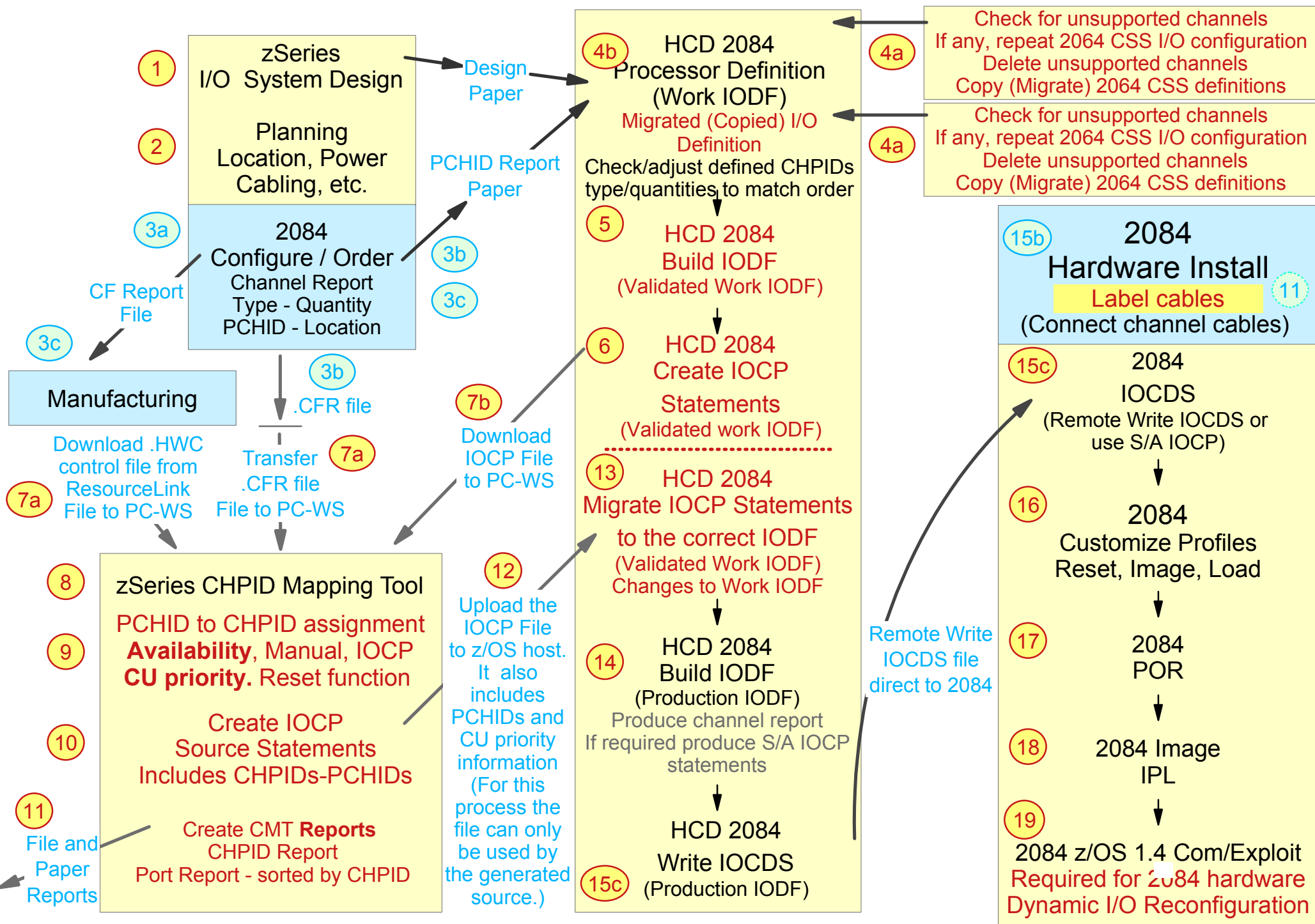
- Multi-step approach, from the system I/O configuration design to loading the OS (IPL)
  1. Design - workload, logical partitions, data access, connectivity (physical and logical)
  2. Planning - source of the configuration definition, channel connections, CF connections
  3. a. Configuring, b. Optional channel/CU configuration availability testing (uses steps 4-9), c. Ordering
  4. Define or Copy an I/O configuration definition for the 2084 (using z/OS HCD with a work IODF)
  5. Validate the I/O configuration definition (also changes the IODF type to a 'Validated Work')
  6. Create an IOCP statements file from the HCD validated work IODF
  7. Transfer (download) files to a PC-WS with the CHPID Mapping Tool (CMT) installed
    - The machine order file - CFReport file (.CFR) or the manufacturing order file (.HWC)
    - IOCP statements file (from HCD)
  8. Start the z990 CHPID Mapping Tool (CMT) program
    - Select the required 2084 hardware configuration file file (.HWC or .CFR)
    - Resolve any hardware definition types to order types (e.g. OSD - OSA-Express GbE or HSTR)
  9. Map the 2084 CHPID definitions to the 2084 installed PCHIDs
    - Use either or both the Availability mapping function, or the Manual mapping function
  10. Create a CMT IOCP statements file (this will include the CHPID to PCHID mapping)
  11. Create the required CMT PCHID and CHPID reports
  12. Transfer (upload) the CMT IOCP statements file to the z/OS host (normal dataset)
  13. Use HCD to migrate the CMT PCHID IOCP statements file into the HCD validated work IODF
  14. Build a production IODF (from the work IODF)
  15. Upgrade/Install the 2084, using the production IODF write the IOCDS to the 2084 support element
  16. Customize the RESET, IMAGE, and Load profiles
  17. POR the 2084
  18. IPL the required image
  19. Operate the system, and perform dynamic I/O reconfiguration changes as required



# Install New 2084 Processor

Repeat / COPY  
or  
COPY (CSS)  
I/O Configuration  
definitions

# 2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (Add 2084)



## z990 CHPID Mapping Tool

(CMT)

Transfer the customer's 2084 CFReport file to the PC-WS

Transfer z/OS IOCP file to the PC-WS

8



Start the CMT program

z990 CMT

### Load the 2084 configuration file

File: Import H/W Config from file (.HWC), or

File: Import CFReport order file (.CFR)

(Select the required processor)

### Load the IOCP statements file

Tool: Import IOCP file

Observe/resolve any PCHID conflicts

Resolve CHPIDs to hardware channel type

9

Invoke the CMT **Availability** function

PCHID to CHPID assignment

Set any required CU priority

Process CU Priority

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority** - define if required
- Reset function

View result - Select the CMT Manual tab

- View the CHPID to PCHID mapping, or
- View the PCHID to CHPID mapping

10

Create the IOCP input source

(includes PCHID #s and, CCN# & CU priority)

Transfer file to z/OS 'Text Fixed 80'

11

Create CMT **Reports**

1. CHPID Report
2. Port Report - sorted by CHPID

CF File .HWC or .CFR

7a

7b

Download the  
HCD validated  
work CMT IOCP  
file to CMT PC  
WS

6

### HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

### HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 6.4, IODF type should be a work type IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs

12

Upload the CMT IOCP  
file to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process the  
CMT IOCP file can only  
be used by the source  
that generated the  
initial statements )

11

File and  
Paper  
Reports

?

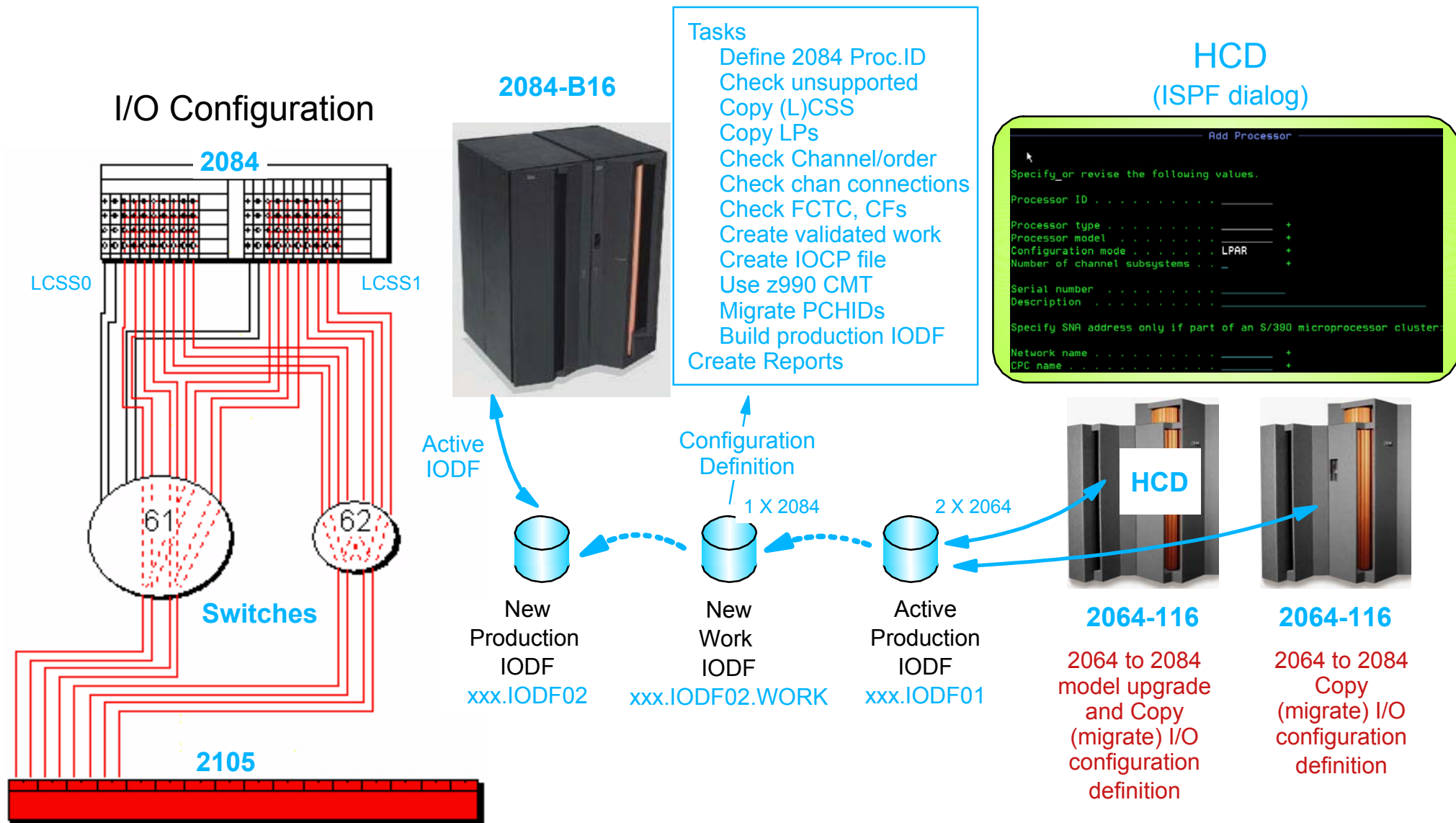
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Do not get caught by this  
situation for a 2084 new install  
thinking you can use these  
IOCP statements with the S/A  
IOCP program, YOU CANNOT

### (4a/b) HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084

- a. Define the new 2084 and LCSSs, using HCD options 1.3 and PF11 to add the 2084 processor
  - Use a current work IODF or create a new work IODF when defining the new 2084 processor
- b. Use HCD options 1.3.s to display the maximum number of devices that will be supported for an LCSS
- c. Definition management of unsupported channels (rules and recommendations)
- d. Conditional step when **physically Adding a new 2084 system**, check to see if there are any unsupported channels in the 2064/9672 CSS to be Copied (for the new 2084 system add) by using use HCD options 1.3.s.
  - If there are any unsupported channels, use HCD options 1.3.r to repeat this processor definition, use a new Proc.id
  - The repeated processor will be used by the HCD Copy CSS function, after unsupported channels have been deleted.
- e. Check for unsupported channels, use HCD options 1.3.s for all the HCD Copy source processor (2064/9672)
  - Delete each unsupported 2084 channel from the copy processor source, using HCD options 1.3.s.d
- f. Use HCD options 1.3.y to copy the 2064/9672 CSSs to the 2084 CSSs
  - You will be requested to change the Logical Partition names if they are not unique
- g. Delete the Copy source CSS, for an **Upgrade or Swap (processor to be replaced), Add New system (repeated processor)**
  - Use HCD options 1.3.d to delete the copied CSS(s) (processor(s))
  - **Note: these steps assume that, a hardware upgrade from a 2064 to a 2084 or a machine swap from a 2064 or 9672 to a 2084 will also include the physical transfer (recabling) of the channel-to-switch-port connections from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from.**
  - **If this assumption is not correct then perform the conditional step 'g' for the Upgrade and Swap situations as well for add**
- h. Conditional step, for **Add New system** (see **also 'd' above**) use HCD options 1.3.s.s to adjust channel to switch connections as per the new system design and planning steps (steps 1 and 2 in the main definition sequence flow)
- i. Optional step, use HCD options 1.3.s.s to view channel connections, and HCD options 1.2.p for switch ports
- j. Run the FCTC connection report using HCD options 3.1.CTC.2.
- k. Adjust the FCTC CUAADD, use HCD option 1.4, locate required CU #, then use HCD action code 'c' (the change option) to re-specify the CUs CUADD from a single character to two characters (CSSid + MIFid)
- l. Conditional step for a **Add New system**, define required CF channels using HCD options 1.3.s.s PF11 for the CF system/images that the **Add New system** connects to
- m. Define CF connections using HCD options 1.3.s.s.f.p for an **Upgraded, Swapped or Added new system**, configuration
- n. Define if required ESCON CVC and CBY channels to replace the unsupported BL and BY channels
  - Connect the still defined parallel interface CUs to the required ESCON CVC or CBY channels
- o. Define OSA-Express HSTR OSD/OSE channels for physically replace unsupported OSA-2 TR OSA channel

# z/OS HCD Support - Definition Migration (HCD CSS Copy) 2064s to 2084







IBM @server zSeries 990

## z990 I/O Configuration Definition Support End of 2084 definition support - Part-1

Ken Trowell  
zSeries  
IBM Poughkeepsie



IBM @server zSeries 990

# z990 I/O Configuration Definition Support - In-depth : Part-1

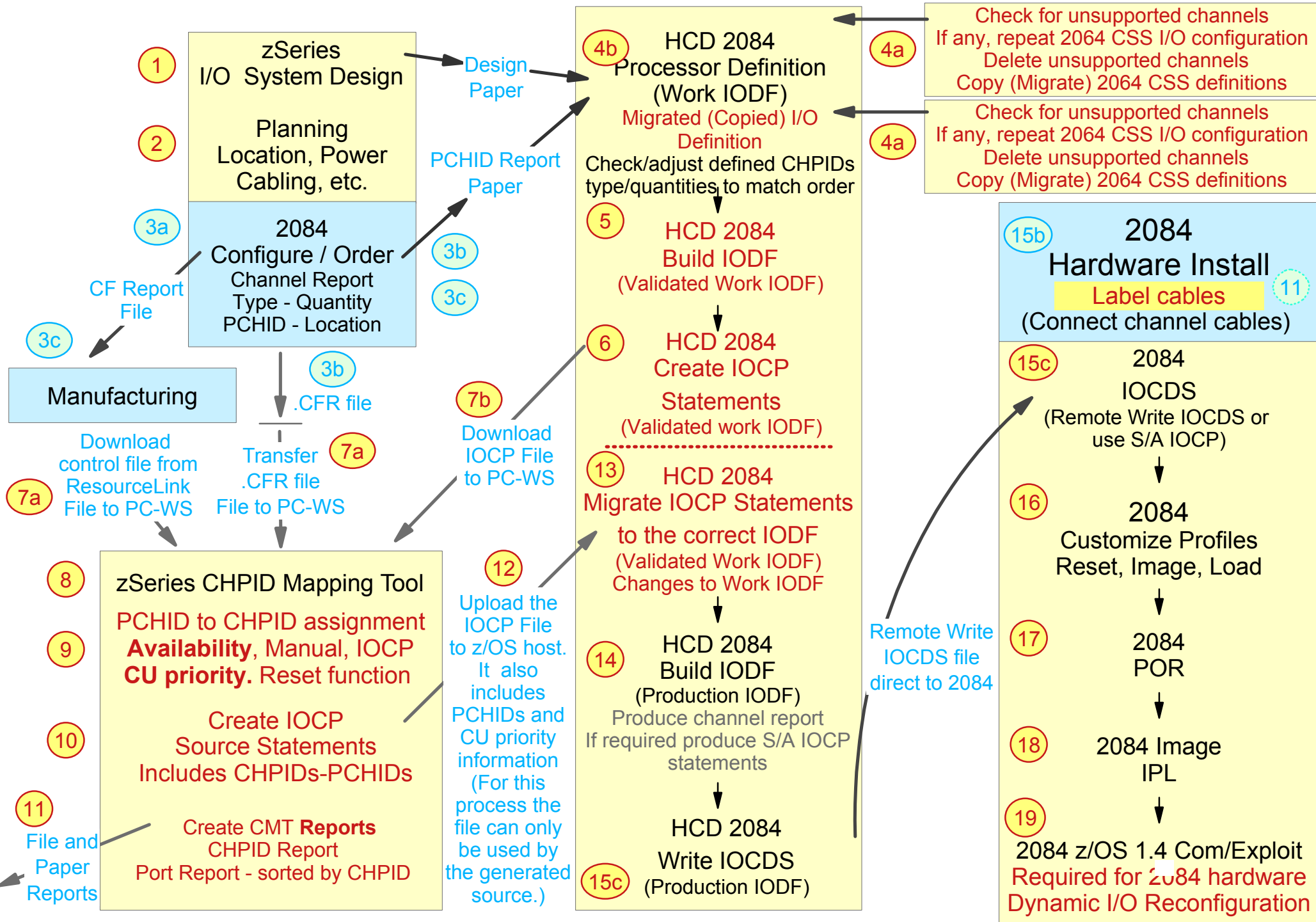
## 2084 Upgrade, Swap or New install

### HCD full processor and I/O configuration definition

ITSO Poughkeepsie  
zSeries  
2084 z990



## ~~2084 - I/O Configuration Definition Support - z/OS HCD COPY CSSs (Add 2084)~~



# 2084 - I/O Configuration Definition Support - z/OS HCD COPY (Migrate) CSSs

Assumes within the IODF there is:

- No changes to the OS Config definition
- No changes to the ESCON or FICON switch definitions, for Upgraded or Swapped systems/machines. There maybe be switch port additions/connections changes for Added 2084 systems/machines/LCSSs (at a later date)
- If LPAR names are not unique HCD will request a change
- No changes to the CU paths definitions
  - Same numbers of paths and CHPID #s
  - If real duplicate device number are used then the associated CUs must have different CU numbers
- No change to the I/O device definitions

- 5 \* Once having built a 'validated work' IODF do not make any changes to the IODF prior to importing the CMT IOCP statements
- 13

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport

Transfer z/OS IOCP file to the PC IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source (includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT Reports

CHPID Report

Port Report - sorted by CHPID

CFReport

Download the HCD validated work IOCP file to CMT PC WS

Upload the CMT IOCP file to the z/OS host. The file includes PCHIDs, CCN, CMT version, and CU priority, information  
For this process the CMT IOCP file can only be used by the source that generated the initial statements

## 4a/b HCD Migrate (Copy) 2064 or 9672 CSS Definitions to 2084

Use or create a work IODF (from the production IODF) to define the 2084

Use HCD options 1.3.s for the source copy processor, delete unsupported channels

Use HCD options 1.3 and PF11 to add new 2084, LCSSs and # of Devices

Use HCD options 1.3.y to copy the 2064/9672 CSSs to the 2084 CSSs

Define/Change the required Logical Partition names.

For an Upgrade or Swap use HCD 1.3.d to delete the copied CSSs (processors) or

For a new install use HCD 1.3.s.s to adjust the channel to switch connections

Use HCD option 1.3.s.s to view channel connections, and HCD 1.2.p for switch ports

Run the FCTC connection report HCD option 3.1.CTC.2.

FCTC use HCD option 1.4, locate required CU #, adjust CUADD (CSSid + MIFid)

Define any required CF channels 1.3.s.s PF11, then define CF connections 1.3.s.s.f.p

Define required ESCON CVC and CBY to replace unsupported BL and BY channels

Define OSA-Express OSD/OSE for physically replaced unsupported OSA TR channels

## HCD 2084 Build Validated Work IODF \*

- 5 Use the work IODF and HCD option 2.12, check completion messages

This validates the work IODF for the 2084, w/ or w/o PCHIDs

Use HCD option 6.4 to check IODF type - s/b 'Validated work'

## HCD 2084 Create CMT IOCP Statements \*

- 6 Use the 'validated work' IODF and HCD option 2.3, select required ProcId

Browse the IOCP statements file. Note the are no PCHID keywords

## HCD Migrate CMT IOCP Statement 'PCHIDs' \*

- 13 Migrate IOCP statements into the correct 'validated work' IODF by using HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 1.3.s.s and PF20 to view PCHIDs, 2nd PF20 for Spanned

Use HCD option 6.4, IODF type will be changed to a work type IODF

## HCD 2084 Build Production IODF

- 14 Use HCD option 2.1 to build a production IODF from the work IODF

Note every defined CHPID must have a PCHID (except IQD and ICP)

- 15a/c HCD 2064 or 2084 Write IOCDs

Use production IODF and HCD option 2.11 to remote write the IOCDs. The HCD CPC name and HMC CPC object names must be the same

## IPL the 2084 Image

- 18 OS/390 2.10 - z/OS 1.4 with compatability support IPL in CSS0 image

z/OS 1.4 with exploitation support IPL in CSS0 or CSS1 image

- 19 HCD 2084 Dynamic I/O Reconfiguration

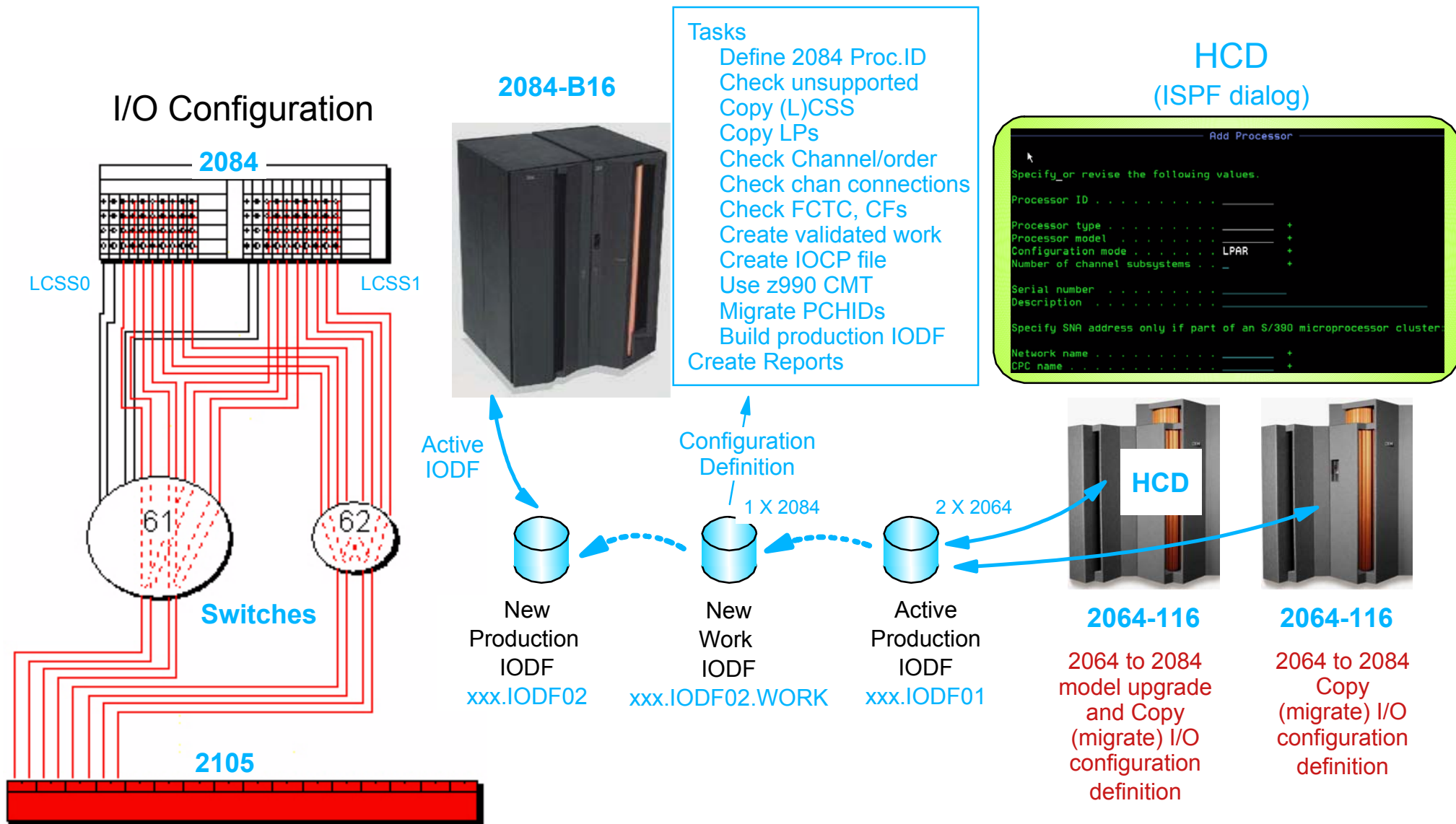
Use the z/OS activate command or the HCD activate function to perform dynamic I/O reconfiguration. Requires OS/390 2.10 - z/OS 1.4 + compatability support for dynamic to CSS0, or z/OS 1.4 + Exploitation support for dynamic to CSS0 and CSS1 - Note: z/OS 1.3 H/W activates are multi-CSS wide

## 2084 - I/O Configuration Definition Support - z/OS HCD COPY (Migrate) CSSs

### (4a/b) HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084

- a. Define the new 2084 and LCSSs, using HCD options 1.3 and PF11 to add the 2084 processor
  - Use a current work IODF or create a new work IODF when defining the new 2084 processor
- b. Use HCD options 1.3.s to display the maximum number of devices that will be supported for an LCSS
- c. Definition management of unsupported channels (rules and recommendations)
- d. Conditional step when **physically Adding a new 2084 system**, check to see if there are any unsupported channels in the 2064/9672 CSS to be Copied (for the new 2084 system add) by using use HCD options 1.3.s.
  - If there are any unsupported channels, use HCD options 1.3.r to repeat this processor definition, use a new Proc.id
  - The repeated processor will be used by the HCD Copy CSS function, after unsupported channels have been deleted.
- e. Check for unsupported channels, use HCD options 1.3.s for all the HCD Copy source processor (2064/9672)
  - Delete each unsupported 2084 channel from the copy processor source, using HCD options 1.3.s.d
- f. Use HCD options 1.3.y to copy the 2064/9672 CSSs to the 2084 CSSs
  - You will be requested to change the Logical Partition names if they are not unique
- g. Delete the Copy source CSS, for an **Upgrade or Swap (processor to be replaced), Add New system (repeated processor)**
  - Use HCD options 1.3.d to delete the copied CSS(s) (processor(s))
  - **Note: these steps assume that, a hardware upgrade from a 2064 to a 2084 or a machine swap from a 2064 or 9672 to a 2084 will also include the physical transfer (recabling) of the channel-to-switch-port connections from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from.**
  - **If this assumption is not correct then perform the conditional step 'g' for the Upgrade and Swap situations as well for add**
- h. Conditional step, for **Add New system** (see **also 'd' above**) use HCD options 1.3.s.s to adjust channel to switch connections as per the new system design and planning steps (steps 1 and 2 in the main definition sequence flow)
- i. Optional step, use HCD options 1.3.s.s to view channel connections, and HCD options 1.2.p for switch ports
- j. Run the FCTC connection report using HCD options 3.1.CTC.2.
- k. Adjust the FCTC CUAADD, use HCD option 1.4, locate required CU #, then use HCD action code 'c' (the change option) to re-specify the CUs CUADD from a single character to two characters (CSSid + MIFid)
- l. Conditional step for a **Add New system**, define required CF channels using HCD options 1.3.s.s PF11 for the CF system/images that the **Add New system** connects to
- m. Define CF connections using HCD options 1.3.s.s.f.p for an **Upgraded, Swapped or Added new system**, configuration
- n. Define if required ESCON CVC and CBY channels to replace the unsupported BL and BY channels
  - Connect the still defined parallel interface CUs to the required ESCON CVC or CBY channels
- o. Define OSA-Express HSTR OSD/OSE channels for physically replace unsupported OSA-2 TR OSA channel

# z/OS HCD Support - Definition Migration (HCD CSS Copy) 2064s to 2084





4a/b

### HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### A0. Use or create a work IODF (from the current production IODF) and define a 2084 processor

- Use HCD options 1.3 (Processor) and PF11 to add (add a processor), then specify the new 2084 processor definitions
  - Processor ID (the customer still chooses the proc.id)
  - Type 2084, model - at GA1: A08 or B16, - at GA2: A08, B16 and C24 or D32
  - Configuration mode, only LPAR mode is supported (Basic Mode is not supported)
  - Number of channel subsystems (LCSS) - 2084 at GA1: 1 or 2 - 2084 at GA2: 1, 2, 3 or 4
  - Note: each LCSS defined may be defined to provide support for a different number of devices, this will be checked in step 'b'
- If you are using a production IODF, the HCD process will proceed to create a new work IODF
  - You will be requested to provide the new work IODF dataset details
    - IODF name (dataset name)
    - Volume Serial Number (location of the new work IODF)
    - Space allocation (number of 4K blocks)
      - Make sure there is enough space allocated - you may need to specify double the amount of space for the new IODF that is shown by HCD to support the 2084 configuration definition process
  - Activity logging Yes/No - normal customer selection

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### A1. Using z/OS v1.4 HCD - Main Menu panel

- z/OS V1.4 HCD is the minimum required version/release for the defining 2084 (at GA1 time)
- Use HCD main menu panel option 1 to proceed to define the 2084 processor

#### z/OS V1.4 HCD

Command ===> \_\_\_\_\_

#### Hardware Configuration

Select one of the following.

- 1. Define, modify, or view configuration data
- 2. Activate or process configuration data
- 3. Print or compare configuration data
- 4. Create or view graphical configuration report
- 5. Migrate configuration data
- 6. Maintain I/O definition files
- 7. Query supported hardware and installed UIMs
- 8. Getting started with this dialog
- 9. What's new in this release

For options 1 to 5, specify the name of the IODF to be used.

I/O definition file . . . 'KMT1.IODF01' +

F1=Help      F2=Split      F3=Exit      F4=Prompt      F9=Swap      F12=Cancel  
F22=Command

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### A2. Using z/OS v1.4 HCD - Defining the 2084 processor - Main Definition panel

- Use HCD option 1 from the main menu to display this panel, then HCD option 3 on this panel to display the processor list. This action is also expressed as use HCD options 1.3

Define, Modify, or View Configuration Data

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

3\_ 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

F1=Help    F2=Split    F3=Exit    F9=Swap    F12=Cancel



## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### A3. Using z/OS v1.4 HCD - - Defining the 2084 processor - Processor List panel

- Using the HCD options 1.3 to get to the Processor List panel as the starting point to add the 2084 processor and then using PF11 (Add)

```

Processor List                      Row 1 of 5 More:      >
Command ===> _____ Scroll ===> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
- PR2064AA 2064    116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
- PR2064BB 2064    116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
- PR2064CC 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064DD 2064    100      LPAR  1234DD2064 2064 DD, CF not migrated
- PR9672EE 9672     Z97      LPAR  1234EE9672 9672 EE, OS not migrated
***** Bottom of data *****

```

```

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward   F9=Swap       F10=Actions  F11=Add        F12=Cancel    F13=Instruct
F20=Right    F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### A4. Using z/OS v1.4 HCD - Defining the 2084 processor - Add Processor panel

- The z/OS v1.4 HCD Add Processor panel that supports the defining of a 2084 processor
  - Note the new specification line - Number of Channel Subsystems (CSS) - it is used when defining a 2084 to support more than one CSS (LCSS)

#### Add Processor

Specify or revise the following values.

Processor ID . . . . . \_\_\_\_\_

Processor type . . . . . \_\_\_\_\_ +

Processor model . . . . . \_\_\_\_\_ +

Configuration mode . . . . . LPAR +

Number of channel subsystems . . . \_ +

Serial number . . . . . \_\_\_\_\_

Description . . . . . \_\_\_\_\_

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

Network name . . . . . \_\_\_\_\_ +

CPC name . . . . . \_\_\_\_\_ +

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

4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- A5. Using z/OS v1.4 HCD - Defining the 2084 processor - Add Processor panel**  
- Defining a 2084 model B18 with 2 LCSSs (only LPAR configuration mode is supported)

Add Processor

Specify or revise the following values.

Processor ID . . . . . sczp802\_

Processor type . . . . . 2084\_ +

Processor model . . . . . B16\_ +

Configuration mode . . . . . LPAR +

Number of channel subsystems . . 2 +

Serial number . . . . . \_\_\_\_\_

Description . . . . . ITSO Poughkeepsie defined 2084

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

Network name . . . . . usibmsc\_ +

CPC name . . . . . sczp802\_ +

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

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### A6. Using z/OS v1.4 HCD - Defining the 2084 processor - Create Work IODF panel

- If an attempt is made to change a production IODF, HCD will require the user to create a work IODF
- It is recommended to double the currently used IODF space allocation

#### Create Work I/O Definition File

The current IODF is a production IODF and therefore cannot be updated. To create a new work IODF based on the current production IODF, specify the following values.

IODF name . . . . . 'KMT1.IODF02.WORK'

Volume serial number . nw8100 +

Space allocation . . . 4000 (Number of 4K blocks)

Activity logging . . . Yes (Yes or No)

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

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### A7. Using z/OS v1.4 HCD - Defining the 2084 processor - Processor List panel

- The 2084-B16 processor is defined, and is now shown in the HCD processor list panel

Processor List                      Row 1 of 6 More:                      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

/ Proc. ID	Type +	Model +	Mode+	Serial-# +	Description
PR2064AA	2064	116	LPAR	1234AA2064	2064 AA, HCD Copy to 2084 CSS0
PR2064BB	2064	116	LPAR	1234BB2064	2064 BB, HCD Copy to 2084 CSS1
PR2064CC	2064	116	LPAR	1234CC2064	2064 CC, use for 'repeat' proc
PR2064DD	2064	100	LPAR	1234DD2064	2064 DD, CF not migrated
PR9672EE	9672	Z97	LPAR	1234EE9672	9672 EE, OS not migrated
SCZP802	2084	B16	LPAR	_____	ITSO Poughkeepsie defined 2084

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

F1=Help                      F2=S  
 F8=Forward                  F9=S  
 F20=Right                   F22=Command

New IODF KMT1.IODF02.WORK defined.

set                      F7=Backward  
 ncel                      F13=Instruct

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### **B0.** Using z/OS v1.4 HCD - check the Maximum Device Support specification

- Check the number of LCSSs, and maximum number of devices defined to support each defined 2084 LCSS
  - Generally the default value of 63K devices supported for each LCSS should show (this is the maximum), you may over-type the number of supported devices for each LCSS to meet your required support value
  - The value specified by you should be enough to support both your current configuration and your non-disruptive future growth
    - The LCSS device support value applied to each logical partitions defined to the LCSS, i.e. if the number specified is 36000 then each logical partition in the LCSS can support 36000 devices
    - If another logical partition is added to the LCSS, then the currently specified value also applies to the new logical partition
    - If the value is changed, to be able to use the new value requires a POR
    - To be able to use any of items after changes have be made (increase or decrease), requires that a new IOCDS be written and a POR be performed using the new IOCDS
      - Number of LCSSs for a 2084
      - Device number support for an LCSS
      - Number of logical partitions for an LCSS
      - Change in a logical partition name or change in a logical partition number

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### B1. Using z/OS v1.4 HCD - Defining the 2084 processor - Processor List panel

- Use HCD options 1.3 and then action code 's' against the 2084 processor to determine the maximum device support specified for each 2084 CSS (LCSS)
  - Note action code 's' against processor type:
    - 9672 or 2064/2066 shows the - Channel Path List panel (CHPIDs)
    - 2084 shows the - Channel Subsystem List panel (LCSSs)
      - For a 2084 - HCD action code 's' against an L CSS then shows the Channel Path List panel

```

                                Processor List                                Row 1 of 6 More:  >
Command ==> _____ Scroll ==> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
_ PR2064AA 2064    116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSSx
_ PR2064BB 2064    116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
_ PR2064CC 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
_ PR2064DD 2064    100      LPAR  1234DD2064 2064 DD, CF not migrated
_ PR9672EE 9672     Z97      LPAR  1234EE9672 9672 EE, OS not migrated
S SCZP802  2084     B16      LPAR  _____ ITSO Poughkeepsie defined 2084
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt    F5=Reset     F7=Backward
F8=Forward   F9=Swap       F10=Actions  F11=Add      F12=Cancel   F13=Instruct
F20=Right    F22=Command
    
```



### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### B2. Using z/OS v1.4 HCD - Defining the 2084 processor - Channel Subsystem List panel

- Determining the maximum number of devices supported for each 2084 LCSS
  - The value shown here was assigned as the default specification - it is the maximum allowed

```

                                Channel Subsystem List                                Row 1 of 2
Command ==> _____ Scroll ==> CSR

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

Processor ID . . . : SCZP802          ITSO Poughkeepsie defined 2084

  CSS Max number
/ ID of devices + Description
_ 0  64512
_ 1  64512
***** Bottom of data *****
```

```

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward   F9=Swap       F10=Actions  F11=Add        F12=Cancel    F13=Instruct
F22=Command
```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### B2. Using z/OS v1.4 HCD - Defining the 2084 processor - Channel Subsystem List panel

- This shows the changing of the maximum number of devices supported for each 2084 LCSS, by over-typing the maximum number of devices value specified
- If you specify a support value smaller than the number of devices defined to the CSS then, when validating a work IODF (HCD options 2.12) or the building of a production IODF (HCD options 2.1) it will fail with the following error
  - **CBDA194I Maximum number of 2000 subchannel(s) exceeded for processor SCZP802.0. Actual value: 2888**
    - This means that processor SCZP802 LCSS.0 supports 2000 devices, and 2888 devices were defined to the LCSS
    - You may change/correct this by re-specifying the maximum device support value for processor SCZP802 LCSS.0 , or define less device the LCSS
- When the maximum device support value is initially specified or or any time when it is changed, a POR of the CPC is required to make this change operational (i.e. HSA set-up with the new device support value)
- The value you specify should allow for future NON-disruptive I/O configuration growth for your system

```

                                Channel Subsystem List                                Row 1 of 2
Command ===> _____ Scroll ===> CSR

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

Processor ID . . . : SCZP802          ITSO Poughkeepsie defined 2084

  CSS Max number
/ ID  of devices +  Description
- 0   36000
- 1   24000
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward   F9=Swap       F10=Actions  F11=Add       F12=Cancel   F13=Instruct
F22=Command
    
```

4a/b

### HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### C0. Definition management of of unsupported channel definition types (unsupported by the 2084)

- Before you Copy a 2064 or 9672 processor CSS I/O configuration definition to a 2084 LCSS, check that there are no unsupported 2084 channels defined in the in the COPY source processor - i.e. in the 2064 or 9672 whos CSS will be copied to the 2084.
  - Channels types not supported by the 2084, are channels defined as - BL, BY, OSA
  - The unsupported channels will need to be deleted for the copy source processor (for a 2064/2084 Upgrade or Swap) before you invoke the HCD Copy CSS operation.
  - In the case where the source processor to be copied *is not being replaced* (for a 2084 Added in addition to currently installed 2064 or 9672) and will remain defined in the new IODF, you will not want to delete any 2084 unsupported channels for this processor in this IODF, therefore you will have 'repeat' this processor first, and then delete the unsupported channels in the 'repeated' processor definition before you use the HCD Copy processor function. This optional task (for this support) is shown in another part of these presentations
  - Unsupported channels found during the Copy CSS operation will cause the **Copy operation to fail, and message CBDA154I will be displayed for each unsupported channel**
- Note: For the BL and BY channel definition types that are deleted. You may later define ESCON channels (in the 2084) as CVC and CBY (plus you will require ESCON channel-interface to Parallel channel-interface convertor units) to access the parallel connected interface CUs if they are still required. In this case customers should manage this definition change themselves later in the 2084 definition. This change will involve the adding of the CVC and CBY channel definitions, and CU definition changes to connect the to the required CVC and CBY channel paths (CHPIDs). These CUs should still be defined in the IODF (they were previously connected to BL or BY defined channels before the BL or BY channels were deleted)
- Note: The OSA-2 TR physical channel type can/will be changed to a OSA-Express HSTR and can be defined as a OSD or an OSE channel. In this case customers should manage this definition change themselves later in the 2084. This change will involve the adding of the OSE/OSD channel definitions (for the OSA-Express HSTR there 2 ports and 2 channels for the one channel card) and changing/adding CU definitions to connect to the required OSD/OSE channel path (CHPID)

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### **D0.** Step 'd' is only for when adding an additional processor

- It is used when a Copy of a processor CSS I/O configuration definition is from a 2064 or 9672 processor definition that will NOT be deleted, i.e., the 2084 is an ADD (not an upgrade or swap) and the basis of the 2084 LCSS definition is from an existing processor CSS I/O configuration definition (and the definition will be retained).
- To make the presentation flow less complicated the Add 2084 scenario is covered in a separate section/part of this complete 2084 I/O configuration definition presentation
- The items ('a' to 'm') in this section/part of the 2084 I/O configuration definition covers a 2064 to 2084 upgrade, or a swap of a 2064 or 9672 for/to a 2084 LCSS

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### E0. Check for (and delete) unsupported channel definition types

- Before you Copy a 2064 or 9672 processor CSS I/O configuration definition to a 2084 LCSS, check that there are no 2084 unsupported channels types defined in the in the COPY source processor - i.e. in the 2064 or 9672 CSS that will be copied to the 2084
  - Channels types not supported by the 2084, are channels defined as - BL, BY, OSA
- Use HCD options 1.3.s to display the channel list for the 2064/9672 processor / CSS (against the source 2064 or 9672 processor that its CSS is being copied).
  - Check that there are no BL, BY or OSA, channel definitions.
  - These channel definitions must be deleted (from the work IODF Copy source processor) before COPYING the source 2064 or 9672 processor CSS to a 2084 CSS (to a 2084 logical CSS)
- Use HCD action code 'd' (HCD options 1.3.s.d) against each BL, BY and OSA defined channel in the channel list to delete these BL, BY or OSA, channel definitions
  - If any unsupported channels are found during the Copy 2064/9672 CSS to a 2084 LCSS process, the HCD Copy function will fail and display error message CBDA154I
- Note: if the unsupported channels are deleted as shown in this presentation, then the CU and devices will remain defined but the deleted channel path will not be in the CU path definitions.
  - Later, the new CHPIDs and channel path types can be defined (if installed) and the CU definitions can be modified to specify the required new CHPID (new channel type)
  - If the CU definitions are still required, then after the new CHPIDs and channel path types have been defined (CVC, CBY, or OSD/OSE), the existing CU definitions can be modified to specify the required new CHPID (new channel type)
  - If the CU definitions are not required then they can be deleted
  - The old OSA-2 TR connected OSA CU definitions may need to be changed, as well as a new OSA CU defined to support second CHANNEL PATH / PORT on a OSA-Express HSTR channel card
    - OSA-2 TR channel card - 2 ports but 1 channel definition
    - OSA-Express HSTE channel card - 2 ports and 2 channel definitions
- Repeat all of the above steps for other 2064 or 9672 CSS I/O configuration definitions that are to be migrated to same 2084 (but a different LCSSs in the 2084)

# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## E1. Using z/OS v1.4 HCD - Check for unsupport channels - Processor List panel

- Use HCD options 1.3.s to display the channel path list for the processor whos CSS will COPIED to a 2084 LCSS
- In this example Proc.ID PR2064AA CSS will be checked , as it will be copied to SCZP802 (2084) LCSS 0

Processor List Row 1 of 6 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

/	Proc. ID	Type	+	Model	+	Mode	+	Serial-#	+	Description
<b>S</b>	PR2064AA	2064		116		LPAR		1234AA2064		2064 AA, HCD Copy to 2084 CSS0
—	PR2064BB	2064		116		LPAR		1234BB2064		2064 BB, HCD Copy to 2084 CSS1
—	PR2064CC	2064		116		LPAR		1234CC2064		2064 CC, use for 'repeat' proc
—	PR2064DD	2064		100		LPAR		1234DD2064		2064 DD, CF not migrated
—	PR9672EE	9672		Z97		LPAR		1234EE9672		9672 EE, OS not migrated
—	SCZP802	2084		B16		LPAR				ITSO Poughkeepsie defined 2084

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

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right    F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### E2. Using z/OS v1.4 HCD - Check for unsupported channels - Channel Path List panel

- HCD options 1.3.s was used to display the channel path list for the processor whos CSS wil COPIED to a 2084 CSS
- Determine if there are any unsupported channels defined - unsupported channel path types are, BL, BY, and OSA
- PR2064AA channel path IDs 20-23, and 28-29 are defined channel paths types that are not supported by the 2084
- You may also use HCD action code 's' (HCD option 1.3.s.s), on each channel path ID to determine what CUs are defined on the channel path ID before you delete that channel path ID, note the CU number for any changes that have to be made later

```

                                Channel Path List          Row 13 of 56 More:      >
Command ==> _____ Scroll ==> CSR

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

Processor ID . . . . : PR2064AA      2064 AA, HCD Copy to 2084 CSS0
Configuration mode . : LPAR
Channel Subsystem ID :

                        DynEntry Entry +
/ CHPID Type+ Mode+ Switch + Sw Port Con Mngd Description
S 20      BL      DED      —      —      —      No  Unsupported 2084 channel (BL)
— 21      BL      DED      —      —      —      No  Unsupported 2084 channel (BL)
— 22      BY      DED      —      —      —      No  Unsupported 2084 channel (BY)
— 23      BY      DED      —      —      —      No  Unsupported 2084 channel BY
— 28      OSA     SHR      —      —      —      No  Unsupported 2084 channel TR/ETH
— 29      OSA     SHR      —      —      —      No  Unsupported 2084 channel TR/ETH
— 30      FC      SHR      61      61 12      No  FICON channel used for FCTC
— 31      FC      SHR      61      61 13      No  FICON channel used for FCTC
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions  F11=Add      F12=Cancel    F13=Instruct
F20=Right     F22=Command

```



# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## E3. Using z/OS v1.4 HCD - Checking for Unsupported channels - Control Unit List panel

- Use HCD options 1.3.s.s to list the CUs defined to an unsupported channel path type (before the channel path ID is deleted)
- Note the CU number for any changes / modification that have to be made later to the CU definition

Control Unit List				Row 1 of 1
Command ==>				Scroll ==> CSR
Select one or more control units, then press Enter. To add, use F11.				
Processor ID . . :		PR2064AA	CSS ID . :	Channel path ID : 20
/ CU	Type +	#CSS	#MC	Serial-# + Description
- 0840	3174	1		
***** Bottom of data *****				
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct F22=Command				

# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## E4. Using z/OS v1.4 HCD - Checking for Unsupported channels - Select Processor / CU panel

- Displaying a CU that was defined to an unsupported channel type
- The CHPID for the unsupported channel type has will be deleted from the Copy source processor (PR2064AA)
- The CU definition will remain but with previously defined channel path ID(for the processor to be copied) being removed from the CU definition

Select Processor / CU      Row 1 of 6 More: >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Control unit number . . : 0840      Control unit type . . . : 3174

	-----Channel Path ID . Link Address + -----							
/ Proc.CSSID	1-----	2-----	3-----	4-----	5-----	6-----	7-----	8-----
<b>c</b> PR2064AA	20							
— PR2064BB	20							
— PR2064CC	20							
— PR2064DD								
— PR9672EE								
— SCZP802.0								
— SCZP802.1								

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

F1=Help
F2=Split
F3=Exit
F4=Prompt
F5=Reset
F6=Previous

F7=Backward
F8=Forward
F9=Swap
F12=Cancel
F20=Right
F22=Command

4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- E5. Using z/OS v1.4 HCD - Checking for Unsupported channels - Change Control Unit Definition panel**  
 - Displaying a CU defined to an unsupported channel type (before the channel path ID is deleted)

Change Control Unit Definition

Specify or revise the following values.

Control unit number . . . . .	0840	Type . . . . .	3174	
Processor ID . . . . .	PR2064AA	2064 AA, HCD Copy to 2084 CSS0		
Channel Subsystem ID . . . . .				
Channel path IDs . . . . .	20	_____	_____	_____
Link address . . . . .	_____	_____	_____	_____
Unit address . . . . .	40	_____	_____	_____
Number of units . . . . .	032	_____	_____	_____
Logical address . . . . .	_____	+ (same as CUADD)		
Protocol . . . . .	D	+ (D, S or S4)		
I/O concurrency level . . . . .	1	+ (1, 2 or 3)		
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F9=Swap				
F12=Cancel				

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### E6. Using z/OS v1.4 HCD - Check for unsupport channels - Channel Path List panel

- HCD options 1.3.s was used to display the channel path list for the processor whos CSS will COPIED to a 2084 LCSS
- CHPIDs 20-23, and 28-29 are channel paths types that are not supported by the 2084, these should be deleted
- Note: Only delete these channel path ID defined channels if the to be Copied Processor CSS is no longer required, which should be the case for a 2064 upgrade to a 2084 or a 2064/9672 swap to a 2084 (and for where you are in this presentation flow

Channel Path List      Row 13 of 56 More:      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : PR2064AA      2064 AA, HCD Copy to 2084 CSS0

Configuration mode . : LPAR

Channel Subsystem ID :

/	CHPID	Type+	Mode+	Switch +	Sw	Port	Con	Mngd	Description
d	20	BL	DED	—	—	—		No	Unsupported 2084 channel (BL)
d	21	BL	DED	—	—	—		No	Unsupported 2084 channel (BL)
d	22	BY	DED	—	—	—		No	Unsupported 2084 channel (BY)
d	23	BY	DED	—	—	—		No	Unsupported 2084 channel BY
d	28	OSA	SHR	—	—	—		No	Unsupported 2084 channel TR/ETH
d	29	OSA	SHR	—	—	—		No	Unsupported 2084 channel TR/ETH
—	30	FC	SHR	61	61	12		No	FICON channel used for FCTC
—	31	FC	SHR	61	61	13		No	FICON channel used for FCTC

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

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

F20=Right
F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### E7. Using z/OS v1.4 HCD - Check for unsupport channels - Confirm Delete Channel Path panel

- Channel path IDs 20-23, and 28-29 are channel paths types that are not supported by the 2084, these should be deleted
- You will be requested to confirm deletion of these channel path IDs (CHPIDs 20-23, and 28-29)

#### Confirm Delete Channel Path

Row 1 of 6

Command ==> \_\_\_\_\_ Scroll ==> CSR

Scroll forward to view the complete list of channel paths to be deleted. Press ENTER to confirm delete request. Press F12 to cancel delete request.

Processor ID . . . . : PR2064AA      2064 AA, HCD Copy to 2084 CSS0  
Channel Subsystem ID :

CHPID	Type	Mode	PCHID
20	BL	DED	
21	BL	DED	
22	BY	DED	
23	BY	DED	
28	OSA	SHR	
29	OSA	SHR	

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

F1=Help	F2=Split	F3=Exit	F7=Backward	F8=Forward
F9=Swap	F12=Cancel	F22=Command		

# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## E8. Using z/OS v1.4 HCD - Check for unsupport channels - Channel Path List panel

- After confirming deletion of the channel path IDs, they are no longer in the channel path list for that processor (for this example Processor.ID PR2064AA)

Channel Path List Row 11 of 50 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : PR2064AA 2064 AA, HCD Copy to 2084 CSS0  
 Configuration mode . : LPAR  
 Channel Subsystem ID :

	CHPID	Type	Mode	Switch	Sw	Port	Con	Mngd	Description
-	1C	ICP	SHR	---	---	---	Y	No	
-	1D	ICP	SHR	---	---	---	Y	No	
-	30	FC	SHR	61	61	12	No		FICON channel used for FCTC
-	31	FC	SHR	61	61	13	No		FICON channel used for FCTC
-	40	CNC	SHR	01	01	40	No		
-	41	CNC	SHR	01	01	41	No		
-	42	CNC	SHR	01	01	42	No		
-	43	CNC	SHR	01	01	43	No		

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right      F22=Command



**4a/b** HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**E9. Using z/OS v1.4 HCD - Checking for Unsupported channels - Select / Processor / CU panel**

- Displaying a CU that was defined to an unsupported channel type, the CHPID for the channel type has been deleted
- The CU definition remains but with previously defined channel path ID being removed from the CU definition

```

                                Select Processor / CU      Row 1 of 6 More:      >
Command ==> _____ Scroll ==> CSR

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

Control unit number . . : 0840      Control unit type . . . : 3174

/ Proc.CSSID 1----- 2----- 3----- 4----- 5----- 6----- 7----- 8-----
PR2064BB      20
PR2064CC      20
PR2064AA
PR2064DD
PR9672EE
SCZP802.0
SCZP802.1
***** Bottom of data *****

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

```

4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS ....cont

- E10.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Copy CSS Messages panel
- If there are any unsupported channel types for the for the target processor (for this exercise the target processor type will be a 2084) defined in the source processor and detected during the HCD Copy CSS operation, the copy operation will fail and message CBDA154I will be presented for each unsupported channel path ID found in the source definition

Messages are sorted by severity. Select one or more, then press Enter.

/	Sev	Msg.	ID	Message Text
_	E	CBDA154I		Channel path type BL is not supported by channel path ID
#				0.20.
_	E	CBDA154I		Channel path type BL is not supported by channel path ID
#				0.21.
_	E	CBDA154I		Channel path type BY is not supported by channel path ID
#				0.22.
_	E	CBDA154I		Channel path type BY is not supported by channel path ID
#				0.23.
_	E	CBDA154I		Channel path type OSA is not supported by channel path
#				ID 0.28.

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### E11. Step 'e' item check

- Make sure that you performed all of the step 'e' items the first processor copy and for other 2064 or 9672 CSS I/O configuration definitions that are to be copied (migrated) to the same 2084 (but a different LCSS in the 2084) before you copy the 2064/9672 CSS I/O configuration definition.
- Again this procedure is for 2064 processors that are being upgraded to a 2084, or for 2064 or 9672 that are being swapped for a 2084
- The following step 'e' foils are for the 2nd 2064 that will be Copy to the 2084, but this time LCSS 1
- Some copy processor items that may be different when copying another 2064 or 9672 into a 2084 LCSS other than LCSS0
  - FICON CTC CUADDS at the source processors will need to change
  - There may be a logical partition name conflict, HCD will alert you, provide you with a new panel and allow you to change the logical partition names .

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E12.** Using z/OS v1.4 HCD - Check for unsupport channels - Processor List panel

- Use HCD options 1.3.s to display the channel path list for the processor whos CSS will COPIED to a 2084 LCSS
- In this example Proc.ID PR2064BB CSS will be checked , as it will be copied to SCZP802 (2084) LCSS 1

Processor List Row 1 of 6 More: >  
 Command ===> \_\_\_\_\_ Scroll ===> CSR

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

/	Proc. ID	Type	Model	Mode	Serial-#	Description
_	PR2064AA	2064	116	LPAR	1234AA2064	2064 AA, HCD Copy to 2084 CSS0
<b>S</b>	PR2064BB	2064	116	LPAR	1234BB2064	2064 BB, HCD Copy to 2084 CSS1
_	PR2064CC	2064	116	LPAR	1234CC2064	2064 CC, use for 'repeat' proc
_	PR2064DD	2064	100	LPAR	1234DD2064	2064 DD, CF not migrated
_	PR9672EE	9672	Z97	LPAR	1234EE9672	9672 EE, OS not migrated
_	SCZP802	2084	B16	LPAR		ITSO Poughkeepsie defined 2084

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

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right    F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E13.** Using z/OS v1.4 HCD - Check for unsupport channels - Channel Path List panel

- HCD options 1.3.s was used to display the channel path list for the processor whos CSS wil COPIED to a 2084 CSS
- Determine if there are any unsupported channels defined - unsupported channel path types are, BL, BY, and OSA
- PR2064BB channel path IDs 20-23, and 28-29 are defined channel paths types that are not supported by the 2084
- You may also use HCD action code 's' (HCD option 1.3.s.s), on each channel path ID to determine what CUs are defined on the channel path ID before you delete that channel path ID, note the CU number for any changes that have to be made later

```

                                Channel Path List          Row 13 of 56 More:      >
Command ==> _____ Scroll ==> CSR

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

Processor ID . . . . : PR2064BB          2064 BB, HCD Copy to 2084 CSS1
Configuration mode . : LPAR
Channel Subsystem ID :

                        DynEntry Entry +
/ CHPID Type+ Mode+ Switch + Sw Port Con Mngd Description
S 20      BL      DED      —      —      —      No  Unsupported 2084 channel (BL)
— 21      BL      DED      —      —      —      No  Unsupported 2084 channel (BL)
— 22      BY      DED      —      —      —      No  Unsupported 2084 channel (BY)
— 23      BY      DED      —      —      —      No  Unsupported 2084 channel BY
— 28      OSA     SHR      —      —      —      No  Unsupported 2084 channel TR/ETH
— 29      OSA     SHR      —      —      —      No  Unsupported 2084 channel TR/ETH
— 30      FC      SHR      61      61 12      No  FICON channel used for FCTC
— 31      FC      SHR      61      61 13      No  FICON channel used for FCTC
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions  F11=Add      F12=Cancel    F13=Instruct
F20=Right     F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E14.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Control Unit List panel

- Use HCD options 1.3.s.s to list the CUs defined to an unsupported channel path type (before the channel path ID is deleted)
- Note the CU number for any changes / modification that have to be made later to the CU definition

Control Unit List				Row 1 of 1	
Command ==> _____			Scroll ==> CSR		
Select one or more control units, then press Enter. To add, use F11.					
Processor ID . . :		PR2064BB	CSS ID . :	Channel path ID : 20	
/ CU	Type +	#CSS	#MC	Serial-#	+ Description
- 0840	3174	1			
***** Bottom of data *****					
F1=Help	F2=Split	F3=Exit	F4=Prompt	F5=Reset	F7=Backward
F8=Forward	F9=Swap	F10=Actions	F11=Add	F12=Cancel	F13=Instruct
F22=Command					



4a/b

## HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E15.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Select Processor / CU panel

- Displaying a CU that was defined to an unsupported channel type
- The CHPID for the unsupported channel type has will be deleted from the Copy source processor (PR2064AA)
- The CU definition will remain but with previously defined channel path ID(for the processor to be copied) being removed from the CU definition

```

                                Select Processor / CU      Row 1 of 6 More:      >
Command ==> _____ Scroll ==> CSR

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

Control unit number . . : 0840      Control unit type . . . : 3174

/ Proc.CSSID 1----- 2----- 3----- 4----- 5----- 6----- 7----- 8-----
PR2064AA    20_____
PR2064BB    20_____
PR2064CC    20_____
PR2064DD    _____
PR9672EE    _____
SCZP802.0    _____
SCZP802.1    _____
***** Bottom of data *****

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

```

4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

- E16.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Change Control Unit Definition panel  
 - Displaying a CU defined to an unsupported channel type (before the channel path ID is deleted)

Change Control Unit Definition

Specify or revise the following values.

Control unit number . . . . .	0840	Type . . . . .	3174
Processor ID . . . . .	PR2064AA	2064 AA, HCD Copy to 2084 CSS0	
Channel Subsystem ID . . . . .			
Channel path IDs . . . . .	20	—	+
Link address . . . . .	—	—	+
Unit address . . . . .	40	—	+
Number of units . . . . .	032	—	
Logical address . . . . .	—	+ (same as CUADD)	
Protocol . . . . .	D	+ (D, S or S4)	
I/O concurrency level . . . . .	1	+ (1, 2 or 3)	

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

# 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

## E17. Using z/OS v1.4 HCD - Check for unsupport channels - Channel Path List panel

- HCD options 1.3.s was used to display the channel path list for the processor whos CSS will COPIED to a 2084 LCSS
- CHPIDs 20-23, and 28-29 are channel paths types that are not supported by the 2084, these should be deleted
- Note: Only delete these channel path ID defined channels if the to be Copied Processor CSS is no longer required, which should be the case for a 2064 upgrade to a 2084 or a 2064/9672 swap to a 2084 (and for where you are in this presentation flow

Channel Path List Row 13 of 56 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : PR2064AA 2064 AA, HCD Copy to 2084 CSS0  
 Configuration mode . : LPAR  
 Channel Subsystem ID :

	CHPID	Type	Mode	Switch	Sw	Port	Con	Mngd	Description
d 20	BL	DED	—	—	—		No	Unsupported 2084 channel (BL)	
d 21	BL	DED	—	—	—		No	Unsupported 2084 channel (BL)	
d 22	BY	DED	—	—	—		No	Unsupported 2084 channel (BY)	
d 23	BY	DED	—	—	—		No	Unsupported 2084 channel BY	
d 28	OSA	SHR	—	—	—		No	Unsupported 2084 channel TR/ETH	
d 29	OSA	SHR	—	—	—		No	Unsupported 2084 channel TR/ETH	
— 30	FC	SHR	61	61	12		No	FICON channel used for FCTC	
— 31	FC	SHR	61	61	13		No	FICON channel used for FCTC	

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right      F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E18.** Using z/OS v1.4 HCD - Check for unsupport channels - Confirm Delete Channel Path panel

- Channel path IDs 20-23, and 28-29 are channel paths types that are not supported by the 2084, these should be deleted
- You will be requested to confirm deletion of these channel path IDs (CHPIDs 20-23, and 28-29)

## Confirm Delete Channel Path

Row 1 of 6

Command ==&gt; \_\_\_\_\_ Scroll ==&gt; CSR

Scroll forward to view the complete list of channel paths to be deleted. Press ENTER to confirm delete request. Press F12 to cancel delete request.

Processor ID . . . . : PR2064AA      2064 AA, HCD Copy to 2084 CSS0  
Channel Subsystem ID :

CHPID	Type	Mode	PCHID
20	BL	DED	
21	BL	DED	
22	BY	DED	
23	BY	DED	
28	OSA	SHR	
29	OSA	SHR	

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

F1=Help      F2=Split      F3=Exit      F7=Backward      F8=Forward  
F9=Swap      F12=Cancel      F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E19.** Using z/OS v1.4 HCD - Check for unsupport channels - Channel Path List panel

- After confirming deletion of the channel path IDs, they are no longer in the channel path list for that processor (for this example Processor.ID PR2064AA)

Channel Path List Row 11 of 50 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : PR2064AA 2064 AA, HCD Copy to 2084 CSS0  
 Configuration mode . : LPAR  
 Channel Subsystem ID :

	CHPID	Type	Mode	Switch	Sw	Port	Con	Mngd	Description
-	1C	ICP	SHR	---	---	---	Y	No	
-	1D	ICP	SHR	---	---	---	Y	No	
-	30	FC	SHR	61	61	12	No		FICON channel used for FCTC
-	31	FC	SHR	61	61	13	No		FICON channel used for FCTC
-	40	CNC	SHR	01	01	40	No		
-	41	CNC	SHR	01	01	41	No		
-	42	CNC	SHR	01	01	42	No		
-	43	CNC	SHR	01	01	43	No		

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right     F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 - 2nd CSS Definitions to 2084 (continued)

**E20.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Select / Processor / CU panel

- Displaying a CU that was defined to an unsupported channel type, the CHPID for the channel type has been deleted
- The CU definition remains but with previously defined channel path ID being removed from the CU definition

Select Processor / CU      Row 1 of 6 More:      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Control unit number . . : 0840      Control unit type . . . : 3174

	-----Channel Path ID . Link Address + -----							
/ Proc.CSSID	1-----	2-----	3-----	4-----	5-----	6-----	7-----	8-----
PR2064BB	20							
PR2064CC	20							
PR2064AA								
PR2064DD								
PR9672EE								
SCZP802.0								
SCZP802.1								

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

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

4a/b Use HCD to COPY a 2064 or 9672 - 2nd CSS definition to a 2084 LCSS ....cont

- E21.** Using z/OS v1.4 HCD - Checking for Unsupported channels - Copy CSS Messages panel
- If there are any unsupported channel types for the for the target processor (for this exercise the target processor type will be a 2084) defined in the source processor and detected during the HCD Copy CSS operation, the copy operation will fail and message CBDA154I will be presented for each unsupported channel path ID found in the source definition

Messages are sorted by severity. Select one or more, then press Enter.

/	Sev	Msg.	ID	Message Text
_	E	CBDA154I		Channel path type BL is not supported by channel path ID
#				0.20.
_	E	CBDA154I		Channel path type BL is not supported by channel path ID
#				0.21.
_	E	CBDA154I		Channel path type BY is not supported by channel path ID
#				0.22.
_	E	CBDA154I		Channel path type BY is not supported by channel path ID
#				0.23.
_	E	CBDA154I		Channel path type OSA is not supported by channel path
#				ID 0.28.



**4a/b** Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS ....cont

**F0.** COPY the 2064/9672 processor CSS I/O configuration definition to a 2084 LCSS

- Determine the HCD action code for copying a 2064 processor to a 2084 LCSS
- Use HCD options 1.3.y (against the copy source processor), and then specify the target 2084 and target LCSS
  - Note: Presentation flow 4a/b Step 'e' should be performed before this step 'f', therefore there should be no unsupported 2084 channels defined for the Copy source processor
  - You will be requested change Logical Partition names for Copied CSS(during the Copy process) if the logical partition names in those CSSs are not unique within the target 2084
    - The logical partition names are must be unique across all LCSSs in a 2084
  - Repeat the above COPY source CSS for other 2064 or 9672 CSS I/O configuration definitions that are to be Copied (migrated) to same 2084 (but a different LCSSs in the 2084)

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F1.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Processor List panel

- Use HCD options 1.3 to display the list of processors defined in the IODF
- For the processor you wish to copy, place the cursor in that processors' select field and press PF4 (Prompt) to display the 'Actions on selected processors' panel

Processor List				Row 1 of 6 More: >																			
Command ==> _____		Scroll ==> CSR																					
Select one or more processors, then press Enter. To add, use F11.																							
/	Proc. ID	Type +	Model +	Mode+ Serial-# +	Description																		
-	PR2064AA	2064	116	LPAR 1234AA2064	2064 AA, HCD Copy to 2084 CSS0																		
-	PR2064BB	2064	116	LPAR 1234BB2064	2064 BB, HCD Copy to 2084 CSS1																		
-	PR2064CC	2064	116	LPAR 1234CC2064	2064 CC, use for 'repeat' proc																		
-	PR2064DD	2064	100	LPAR 1234DD2064	2064 DD, CF not migrated																		
-	PR9672EE	9672	Z97	LPAR 1234EE9672	9672 EE, OS not migrated																		
-	SCZP802	2084	B16	LPAR _____	ITSO Poughkeepsie defined 2084																		
***** Bottom of data *****																							
<table border="0" style="width: 100%;"> <tr> <td>F1=Help</td> <td>F2=Split</td> <td>F3=Exit</td> <td>F4=Prompt</td> <td>F5=Reset</td> <td>F7=Backward</td> </tr> <tr> <td>F8=Forward</td> <td>F9=Swap</td> <td>F10=Actions</td> <td>F11=Add</td> <td>F12=Cancel</td> <td>F13=Instruct</td> </tr> <tr> <td>F20=Right</td> <td>F22=Command</td> <td colspan="4"></td> </tr> </table>						F1=Help	F2=Split	F3=Exit	F4=Prompt	F5=Reset	F7=Backward	F8=Forward	F9=Swap	F10=Actions	F11=Add	F12=Cancel	F13=Instruct	F20=Right	F22=Command				
F1=Help	F2=Split	F3=Exit	F4=Prompt	F5=Reset	F7=Backward																		
F8=Forward	F9=Swap	F10=Actions	F11=Add	F12=Cancel	F13=Instruct																		
F20=Right	F22=Command																						

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F3. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Actions on Selected Processors panel

- Use HCD options 1.3 to display the list of processors, and PF4 prompt
- A list of actions that can be performed against the selected processor will be displayed
- Use the HCD option 'Copy to channel subsystem' by entering either the number '11' or action code 'y'

#### Actions on selected processors

Select by number or action code and press Enter.

- 11
1. Add like . . . . . (a)
  2. Repeat (Copy) processor configurations (r)
  3. Change . . . . . (c)
  4. Prime serial number . . . . . (i)
  5. Delete . . . . . (d)
  6. View processor definition . . . . . (v)
  7. View related CTC connections . . . . . (k)
  8. Work with partitions . . . . . (SMP) (p)
  9. Work with attached channel paths (SMP) (s)
  10. Work with attached devices . . . (SMP) (u)
  11. Copy to channel subsystem . . . (SMP) (y)
  12. Work with channel subsystems . . (XMP) (p,s)

F1=Help

F2=Split

F3=Exit

F9=Swap

F12=Cancel

4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F4.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Identify Target IODF panel

- Having selected the HCD option 'Copy to channel subsystem' you will be requested to specify to which IODF you want the copy make to, for this presentation the source and target work IODFs are the same (which is also the default for HCD)

Identify Target IODF

Specify the IODF to which the configuration data is to be repeated.

Target IODF name . . 'KMT1.IODF02.WORK' +

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

4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F5.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Copy to Channel Subsystem panel

- Next HCD will show the source processor ID (for the Copy CSS function) and request target Channel Subsystem that the Copy CSS should be made to

Copy to Channel Subsystem

Specify or revise the following values.

Source processor:

Processor ID . . . . . : PR2064AA    2064 AA, HCD Copy to 2084 CSS0

Target channel subsystem:

Processor ID . . . . . \_\_\_\_\_ +

Channel subsystem ID . . \_ +

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

4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F6.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Copy to Channel Subsystem panel

- Respond to the request target Channel Subsystem with the processor.ID of the 2084 and LCSS
- In this example the 2084 - proc.ID = SCZP802, and the target Channel Subsystem ID (LCSS) = 0

Copy to Channel Subsystem

Specify or revise the following values.

Source processor:

Processor ID . . . . . : PR2064AA    2064 AA, HCD Copy to 2084 CSS0

Target channel subsystem:

Processor ID . . . . . : sczp802\_ +

Channel subsystem ID . . : 0 +

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

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F7. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Copy CSS action - Message List panel**

- None of the Coupling Facility CONNECTION s between the source processors CF channels and the other end of those connections are copied. This is the case for all CF channel types including IC CF channel types
- You should note these messages and compare them with your 2084 installation plan to determine what CF connections you will have to re-define at a later stage of this complete process.
- The CF channel path IDs and channel path types definitions ARE copied from the Copy source processor to the target 2084 CSS

```

                                Message List

Save   Query   Help
-----
                                Row 1 of 32
Command ==> _____ Scroll ==> CSR
Messages are sorted by severity. Select one or more, then press Enter.

/ Sev Msg. ID  Message Text
_ W   CBDG441I The coupling facility connection between channel path 10
#                                     of processor PR2064AA and channel path 28 of processor
#                                     PR2064DD is not copied.
_ W   CBDG441I The coupling facility connection between channel path 11
#                                     of processor PR2064AA and channel path 29 of processor
#                                     PR2064DD is not copied.
_ W   CBDG441I The coupling facility connection between channel path 12
#                                     of processor PR2064AA and channel path 10 of processor
#                                     PR2064BB is not copied.
_ W   CBDG441I The coupling facility connection between channel path 13
#                                     of processor PR2064AA and channel path 11 of processor

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset
F7=Backward  F8=Forward  F9=Swap      F10=Actions    F12=Cancel
F13=Instruct F22=Command

```



# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## F8. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Copy CSS action - Message List panel

- None of the Coupling Facility CONNECTION s between the source processors CF channels and the other end of those connections are copied. This is the case for all CF channel types including IC CF channel types
- You should note these messages and compare them with your 2084 installation plan to determine what CF connections you will have to re-define at a later stage of this complete process.
- The CF channel path IDs and channel path types definitions ARE copied from the Copy source processor to the target 2084 CSS

### Message List

Save Query Help

Row 12 of 32

Command ===> \_\_\_\_\_ Scroll ===> CSR

Messages are sorted by severity. Select one or more, then press Enter.

```

/ Sev Msg. ID  Message Text
#
_ W   CBDG441I The coupling facility connection between channel path 18
#     of processor PR2064AA and channel path 10 of processor
#     PR2064CC is not copied.
_ W   CBDG441I The coupling facility connection between channel path 19
#     of processor PR2064AA and channel path 11 of processor
#     PR2064CC is not copied.
_ W   CBDG441I The coupling facility connection between channel path 1A
#     of processor PR2064AA and channel path C4 of processor
#     PR9672EE is not copied.
_ W   CBDG441I The coupling facility connection between channel path 1B
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset
F7=Backward  F8=Forward    F9=Swap      F10=Actions    F12=Cancel
F13=Instruct F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F9.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Copy CSS action - Message List panel

- None of the Coupling Facility CONNECTION s between the source processors CF channels and the other end of those connections are copied. This is the case for all CF channel types including IC CF channel types
- You should note these messages and compare them with your 2084 installation plan to determine what CF connections you will have to re-define at a later stage of this complete process.
- The CF channel path IDs and channel path types definitions ARE copied from the Copy source processor to the target 2084 CSS

```

                                Message List

Save  Query  Help
-----
                                Row 23 of 32
Command ==> _____ Scroll ==> CSR
Messages are sorted by severity. Select one or more, then press Enter.

/ Sev Msg. ID  Message Text
#
#              of processor PR2064AA and channel path C5 of processor
#              PR9672EE is not copied.
_ W   CBDG441I The coupling facility connection between channel path 1C
#              of processor PR2064AA and channel path 1D of processor
#              PR2064AA is not copied.
_ W   CBDG441I The coupling facility connection between channel path 1D
#              of processor PR2064AA and channel path 1C of processor
#              PR2064AA is not copied.
_ I   CBDG271I Requested action on object PR2064AA successfully
#              processed.
***** Bottom of data *****
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset
F7=Backward  F8=Forward    F9=Swap      F10=Actions    F12=Cancel
F13=Instruct F22=Command

```

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F10.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Processor List panel

- Use HCD options 1.3 to display the list of processors, the processor list panel contents is not changed by the HCD Copy CSS process if the processor was previously defined.
- Use HCD options 1.3.s against the Proc.id SCZP802 (the 2084) to display the number of LCSSs and maximum number of devices supported. There should be no change in the values when the 2084 was initially defined

```

Processor List                               Row 1 of 6 More:      >
Command ==> _____ Scroll ==> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
- PR2064AA 2064     116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
- PR2064BB 2064     116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
- PR2064CC 2064     116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064DD 2064     100      LPAR  1234DD2064 2064 DD, CF not migrated
- PR9672EE 9672     Z97      LPAR  1234EE9672 9672 EE, OS not migrated
s SCZP802  2084     B16      LPAR  _____ ITSO Poughkeepsie defined 2084
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions   F11=Add        F12=Cancel    F13=Instruct
F20=Right    F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F11.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Subsystem List panel

- The HCD options 1.3.s against the Proc.id SCZP802 (the 2084) displays the number of LCSSs and maximum number of devices supported.
- The display shows there is no change from the values when the 2084 was initially defined
- Next use HCD options 1.3.s.p to view the:
  - The Logical Partition - Names, Numbers (MIF.ID) and Usage definitions, for CSS ID 0
- As a result of the Copy CSS process (and having no logical partition name conflict during the Copy CSS process) the Logical Partition names should be the same as the Copy source CSS (Processor ID PR2064AA)

```

                                Channel Subsystem List                                Row 1 of 2
Command ===> _____ Scroll ===> CSR

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

Processor ID . . . : SCZP802          ITSO Poughkeepsie defined 2084

  CSS Max number
/ ID of devices + Description
p 0   36000
_ 1   24000
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward   F9=Swap       F10=Actions  F11=Add       F12=Cancel   F13=Instruct
F22=Command

```

**4a/b** HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F12.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Partition List panel

- The display shows that the logical partition definitions are the same in the 2084 (SCZP802) CSS ID 0 as they were in the Copied source CSS (processor.ID PR2064AA)
- Use PF3 to return to the Channel Subsystem List panel (or HCD options 1.3.s.s) and proceed to display the 2084 (SCZP802) CSS ID 0 Channel Path List panel

```

                                Partition List

Goto  Backup  Query  Help
-----
                                                    Row 1 of 5
Command ==> _____ Scroll ==> CSR
Select one or more partitions, then press Enter. To add, use F11.

Processor ID   . . . . : SCZP802   ITSO Poughkeepsie defined 2084
Configuration mode . : LPAR
Channel Subsystem ID : 0

/ Partition Name      Number Usage + Description
- CF03                F      CF      _____
- LP1                 1      OS      _____
- LP2                 2      OS      _____
- LP3                 3      OS      _____
- LP4                 4      OS      _____
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset
F7=Backward  F8=Forward  F9=Swap   F10=Actions   F11=Add
F12=Cancel   F13=Instruct F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F13. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Subsystem List panel

- At the Channel Subsystem List panel use HCD action code 's' (or HCD options 1.3.s.s) and to display the 2084 (SCZP802) CSS ID 0 Channel Path List panel

Channel Subsystem List Row 1 of 2

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . : SCZP802      ITSO Poughkeepsie defined 2084

CSS Max number

/	ID	of devices	+ Description	
s	0	36000		
—	1	24000		

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

F1=Help

F2=Split

F3=Exit

F4=Prompt

F5=Reset

F7=Backward

F8=Forward

F9=Swap

F10=Actions

F11=Add

F12=Cancel

F13=Instruct

F22=Command

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F14.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Path List panel

- The 2084 (SCZP802) CSS.ID 0 Channel Path List panel (plus using PF8/7 for other CHPIDs) shows the Channel definition for reach defined CHPID. All these CHPIDs were Copied from the Copy source processor (PR2064AA)
  - CHPID (0D - 1A) - Type - Mode - Dynamic switch - Entry switch and entry port
  - Note: none of the CF channel types show a connection - the connections were removed in the Copy process
  - The CF connections will be re-defined later

Channel Path List                      Row 2 of 50 More:                      >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : SCZP802                      ITSO Poughkeepsie defined 2084  
 Configuration mode . : LPAR  
 Channel Subsystem ID : 0

/	CHPID	Type	Mode	DynEntry	Entry +	Sw	Port	Con	Mngd	Description
-	0D	OSD	SHR	___	___	___	___		No	Gigabit Ethernet
-	10	CBP	SHR	___	___	___	___	N	No	_____
-	11	CBP	SHR	___	___	___	___	N	No	_____
-	12	CBP	DED	___	___	___	___	N	No	_____
-	13	CBP	DED	___	___	___	___	N	No	_____
-	18	CFR	DED	___	___	___	___	N	No	_____
-	19	CFR	DED	___	___	___	___	N	No	_____
-	1A	CFR	DED	___	___	___	___	N	No	_____

F1=Help                      F2=Split                      F3=Exit                      F4=Prompt                      F5=Reset                      F7=Backward  
 F8=Forward                      F9=Swap                      F10=Actions                      F11=Add                      F12=Cancel                      F13=Instruct  
 F20=Right                      F22=Command



4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F15.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Path List panel

- The 2084 (SCZP802) CSS.ID 0 Channel Path List panel (plus PF8 for the other CHPIDs) shows the Channel definition for each defined CHPID. These were all Copied from the Copy source processor (PR2064AA)
  - CHPID(1A - 41) - Type - Mode - Dynamic switch - Entry switch and entry port
  - Note: none of the CF channel types show a connection
  - The CF connections will be re-defined later

Channel Path List Row 9 of 50 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : SCZP802 ITSO Poughkeepsie defined 2084  
 Configuration mode . : LPAR  
 Channel Subsystem ID : 0

/	CHPID	Type+	Mode+	DynEntry	Entry +	Sw	Port	Con	Mngd	Description
-	1A	CFR	DED	---	---	---	---	N	No	
-	1B	CFR	DED	---	---	---	---	N	No	
-	1C	ICP	SHR	---	---	---	---	N	No	
-	1D	ICP	SHR	---	---	---	---	N	No	
-	30	FC	SHR	61	61	12		No		FICON channel used for FCTC
-	31	FC	SHR	61	61	13		No		FICON channel used for FCTC
-	40	CNC	SHR	01	01	40		No		
-	41	CNC	SHR	01	01	41		No		

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right     F22=Command

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F16. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Path List panel

- The 2084 (SCZP802) CSS.ID.0 Channel Path List panel (plus PF8 for the other CHPIDs) shows the Channel definition for reach defined channel. These were all Copied from the Copy source processor (PR2064AA)
  - CHPID - Type - Mode - Dynamic switch - Entry switch and entry port
  - Use the HCD PF20 option (oonce) while displaying on this panel shows which partitions can access the CHPIDs, it also shows the PCHID vaues column (if there were PCHID values in a copy source they would NOT be copied)
  - Note: Using the HCD option PF20 for a 2nd time (or more if there were more than 2 CSSs defined to this processor) changes the partition matrix from 0x to 1x, and allows you to determine for spanned channels, which other partitions in other LCSSs can access this same channel

Channel Path List Row 50 More: < >  
 Command ==> \_\_\_\_\_ Roll ==> CSR  
 Select one or more channel paths, then press Enter F11.  
 Channel Subsystem ID : 0  
 1=LP1 2=LP2 3=LP3 4=LP4  
 6= 7= 8= 9=  
 B= C= D= E= F03  
 I/O Cluster Partitions 0x -----  
 / CHPID Type+ Mode+ Mngd Name + 4 5 6 7 8 9 A B C D E F PCHID  
 - 1A CFR DED No - - - - - - - - - - - - - - - a -  
 - 1B CFR DED No - - - - - - - - - - - - - - - a -  
 - 1C ICP SHR No a a a a - - - - - - - - - - - -  
 - 1D ICP SHR - - - - - - - - - - - - - - - a -  
 - 30 FC SH a a a a - - - - - - - - - - - -  
 - 31 FC - - - - - - - - - - - - - - - - -  
 - 40 CM - - - - - - - - - - - - - - - - -  
 - 41 C No - - - - - - - - - - - - - - - - -  
 F1=Help -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

question: what happens if I copy a 2084 LCSS (that has PCHIDs specified) to a different 2084 (LCSS), will the PCHIDs values be copied (answer: still to be determined)

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F17. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Channel Path List panel

- The 2084 (SCZP802) CSS.ID 0 Channel Path List panel (plus PF8 for the other CHPIDs) shows the Channel definition for reach defined channel. These were all Copied from the Copy source processor (PR2064AA)
  - CHPID - Type - Mode - Dynamic switch - Entry switch and entry port
- The ESCON and FICON channel-to-switch port connections are also copied, this is a good action and it avoids the user of having to re-enter these when an Upgrade or Swap installation occurs. However at this stage both the Copy source processor channel definitions and the Copy target processor channel definitions are connected to the same switch ports (Note CHPID 80 entry switch-port is 61.30). But to gain the benefit of HCD copying the channel-to-switch connection definitions assumes that the physical channel cable connections will be moved from the Copy source processor channels to the copy target processor channels at installation time of the 2084. If this is the case you should be able to delete the Copy source processor before you validate this IODF (deleting the Copy source CSS will be performed later in these steps)

Channel Path List      Row 26 of 50 More:      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . . : SCZP802      ITSO Poughkeepsie defined 2084

Configuration mode . : LPAR

Channel Subsystem ID : 0

/	CHPID	Type+	Mode+	DynEntry	Entry +	Sw	Port	Con	Mngd	Description
—	53	CNC	SHR	02		02	43		No	
—	54	CNC	SHR	02		02	44		No	
—	55	CNC	SHR	02		02	45		No	
—	56	CNC	SHR	02		02	46		No	
—	57	CNC	SHR	02		02	47		No	
—	80	FC	SHR	61		61	30		No	
—	81	FC	SHR	61		61	31		No	

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

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

F20=Right
F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F18. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Switch List List panel

- The ESCON and FICON channel connection port connections are also copied, this is a good action and it avoids the user of having to re-enter these when a Upgrade or Swap installation occurs. However at this stage both the Copy source processor channel definitions and the Copy target processor channel definitions are connected to the same switch ports (The CHPID 80 entry switch-port is 61.30).
- Use HCD options 1.2 to display the Switch List and then enter HCD action code 'p' (HCD options 1.2.p) against switch 61 to show Switch 61 Port List, and view the port connection status of switch 61 port 30

```

Switch List                               Row 1 of 8 More:      >
Command ==>                               Scroll ==> CSR
Select one or more switches, then press Enter. To add, use F11.

/ ID Type +      Ad Serial-# + Description                               CU   Dev
- 01 9032-5      -  -  -  -  -  ESCON Director 01 (site A)             0C01 0C01
- 02 9032-5      -  -  -  -  -  ESCON Director 02 (site A)             0C02 0C02
- 03 9032-5      -  -  -  -  -  ESCON Director 03 (site B)
- 04 9032-5      -  -  -  -  -  ESCON Director 04 (site B)
p 61 2032        61  -  -  -  -  FICON Director 61 (site A)             0C61 0C61
- 62 2032        62  -  -  -  -  FICON Director 62 (site A)             0C62 0C62
- 63 2032        63  -  -  -  -  FICON Director 63 (site B)
- 64 2032        64  -  -  -  -  FICON Director 64 (site B)
***** Bottom of data *****

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward   F9=Swap      F10=Actions  F11=Add        F12=Cancel    F13=Instruct
F20=Right    F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F19.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Port List List panel

- The ESCON and FICON channel connection port connections are also copied, this is a good action and it avoids the user of having to re-enter these when a Upgrade or Swap installation occurs. However at this stage both the Copy source processor (PR2064AA) channel definitions and the Copy target processor (SCZP802.0) channel definitions are connected to the same switch port (e.g. see Switch-61 Port -30) .
- But to gain the benefit of HCD copying the channel connection definitions assumes that the physical channel cable connections will be moved from the Copy source processor channels to the copy target processor channels at installation time. If this is the case you should be able to delete the Copy source processor before you validate this IODF (deleting the Copy source processor CSS will be performed later in these steps)

```

Port List                                     Row 78 of 322
Command ==> _____ Scroll ==> CSR
Select one or more ports, then press Enter.
Switch ID . . . . : 61   Address : 61   FICON Director 61 (site A)
-----Connection-----
/ Port H Name +          Unit ID          Unit Type          O
- 2B   Y _____ PR PR9672EE    CHP F7 9672-Z97      N
- 2C   Y _____                                     N
- 2D   Y _____                                     N
- 2E   Y _____                                     N
- 2F   Y _____                                     N
- 30   Y _____ PR PR2064AA    CHP 80 2064-116      N
# 30   _____ PR SCZP802.0    CHP 80 2084-B16
- 31   Y _____ PR PR2064AA    CHP 81 2064-116      N
# 31   _____ PR SCZP802.0    CHP 81 2084-B16
- 32   Y _____ PR PR2064AA    CHP 82 2064-116      N
# 32   _____ PR SCZP802.0    CHP 82 2084-B16

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions  F12=Cancel    F13=Instruct  F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

### F20. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Actions on Selected Processor

- To delete the Copy source processor, use HCD options 1.3 to display the list of processors, and PF4 prompt
- A list of actions that can be performed against the selected processor will be displayed
  - Use HCD action code 'd' to delete the Copy source processor

```

                                Processor List                Row 1 of 6 More:      >
Command ===> _____ Scroll ===> CSR

```

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

```

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
d PR2064AA 2064    116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
_ PR2064BB 2064    116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
_ PR2064CC 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
_ PR2064DD 2064    100      LPAR  1234DD2064 2064 DD, CF not migrated
_ PR9672EE 9672     Z97      LPAR  1234EE9672 9672 EE, OS not migrated
_ SCZP802  2084     B16      LPAR  _____ ITSO Poughkeepsie defined 2084
***** Bottom of data *****

```

```

F1=Help      F2=Split    F3=Exit      F4=Prompt    F5=Reset     F7=Backward
F8=Forward   F9=Swap     F10=Actions  F11=Add      F12=Cancel   F13=Instruct
F20=Right    F22=Command

```

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F21.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Confirm Delete Processor panel

- Use HCD options 1.3.d to delete the Copy source processor CSS
- Pressing enter will confirm the deletion of the processor

## Confirm Delete Processor

Row 1 of 1

Command ==&gt; \_\_\_\_\_ Scroll ==&gt; CSR

Scroll forward to view the complete list of processors to be deleted. Press ENTER to confirm delete request. Press F12 to cancel delete request.

Processor ID	Type	Model	Description
PR2064AA	2064	116	2064 AA, HCD Copy to 2084 CSS0
***** Bottom of data *****			

F1=Help	F2=Split	F3=Exit	F7=Backward	F8=Forward
F9=Swap	F12=Cancel	F22=Command		



# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

## F22. Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Processor List panel

- Use HCD options 1.3 to display the list of processors
- The Copy source processor no longer appears in the list
- During the delete processor process HCD will:
  - Delete the processor
  - Delete all the channel definitions for the deleted processor
  - Delete all the channel to switch-port connections for the deleted processors channels
  - Delete the CU connections to the deleted processor

Processor List                      Row 1 of 5 More:                      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

/	Proc. ID	Type	+	Model	+	Mode	+	Serial-#	+	Description
_	PR2064BB	2064		116		LPAR		1234BB2064		2064 BB, HCD Copy to 2084 CSS1
_	PR2064CC	2064		116		LPAR		1234CC2064		2064 CC, use for 'repeat' proc
_	PR2064DD	2064		100		LPAR		1234DD2064		2064 DD, CF not migrated
_	PR9672EE	9672		Z97		LPAR		1234EE9672		9672 EE, OS not migrated
_	SCZP802	2084		B16		LPAR		_____		ITSO Poughkeepsie defined 2084

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

F1=Help	F2=Split	F3=Exit	F4=Prompt	F5=Reset	F7=Backward
F8=Forward	F9=Swap	F10=Actions	F11=Add	F12=Cancel	F13=Instruct
F20=Right	F22=Command				

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F23.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Switch List panel

- Use HCD options 1.2 to display the Switch List panel
- Use HCD action code 'p' to select and display for a switch the list of port and port status

Switch List Row 1 of 8 More: >  
 Command ==> \_\_\_\_\_ Scroll ==> CSR

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

/	ID	Type	+	Ad	Serial-#	+	Description	CU Num.	Dev Num.
—	01	9032-5		—	—		ESCON Director 01 (site A)	0C01	0C01
—	02	9032-5		—	—		ESCON Director 02 (site A)	0C02	0C02
—	03	9032-5		—	—		ESCON Director 03 (site B)		
—	04	9032-5		—	—		ESCON Director 04 (site B)		
p	61	2032		61	—		FICON Director 61 (site A)	0C61	0C61
—	62	2032		62	—		FICON Director 62 (site A)	0C62	0C62
—	63	2032		63	—		FICON Director 63 (site B)		
—	64	2032		64	—		FICON Director 64 (site B)		

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

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F11=Add      F12=Cancel    F13=Instruct  
 F20=Right     F22=Command

**4a/b** HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

**F24.** Using z/OS v1.4 HCD - Copying the 2064/9672 CSS - Port List panel

- Use HCD options 1.2.p to display the Port List panel
- PF8 to the required port (in this case port 30 on switch 61), and now there is only one channel defined to connect to this port. Some of the benefits of this are, it allows:
  - The HCD FCTC connection report to function correctly
  - HCM provide correct logical I/O configuration definition diagrams, if the IODF is used as input to HCM
  - HCD to perform its correct checking if another channel/CU is subsequently defined to connect to this same port

Row 78 of 312

Port List

Command ==> \_\_\_\_\_ Scroll ==> CSR

Select one or more ports, then press Enter.

Switch ID . . . . : 61    Address : 61    FICON Director 61 (site A)

-----Connection-----

/	Port	H	Name +	Unit ID	Unit Type	O
—	2D	Y	_____			N
—	2E	Y	_____			N
—	2F	Y	_____			N
—	30	Y	_____	PR SCZP802.0	CHP 80 2084-B16	N
—	31	Y	_____	PR SCZP802.0	CHP 81 2084-B16	N
—	32	Y	_____	PR SCZP802.0	CHP 82 2084-B16	N
—	33	Y	_____	PR SCZP802.0	CHP 83 2084-B16	N
—	34	Y	_____			N
—	35	Y	_____			N
—	36	Y	_____			N
—	37	Y	_____			N

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward    F9=Swap      F10=Actions    F12=Cancel    F13=Instruct   F22=Command



IBM @server zSeries 990

# z990 I/O Configuration Definition Support End of 2084 definition support presentation Development Engineering Version

Ken Trowell  
zSeries  
IBM Poughkeepsie

### 4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS ....cont

#### - Ensure no duplication of the 2084 channel to switch port connection definitions correct

- g. This step assumes that, a hardware **upgrade** from a 2064 to a 2084 or a machine **swap** from a 2064/9672 to a 2084 will also include the eventual physical transfer of all the channel-to-switch-port connections (recabling) from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from
  - If this assumption is correct then proceed to step xxx
  - If this assumption is not correct then
- h. If the new 2084 definition (which was obtained by a HCD Copy CSS function) was for an **Add** of a new 2084 system, it is assumed that the channel cables will not be physically transferred from the copied 2064/9672 CSS to the 2084 CSS. Therefore there is a need specify the correct channel-to-switch-port connections for the **new 2084 install**.
  - If this assumption is correct then proceed to step xxx `

### 4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS ....cont

#### - Ensure no duplication of the 2084 channel to switch port connection definitions correct

- g. These steps assume that, a hardware **upgrade** from a 2064 to a 2084 or a machine **swap** from a 2064/9672 to a 2084 will also include the eventual physical transfer of all the channel-to-switch-port connections (recabling) from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from
  - If this assumption is correct then proceed to step xxx
  - If this assumption is not correct then proceed to step xxx
- h. If the new 2084 definition was for an **Upgrade (2064 to 2084)** or a **Swap** (2064/9672) then you should be able to delete (from the work IODF) the 2064 or 9672 COPY source CSS processor. This will remove the duplicated channel-to-switch-port connection definition information in the IODF for the 2084..
  - **Note:** do not delete the source processor definition if was used to just make a CSS copy to the 2084, and the copied 2064/9672 processor CSS is going to remain operational, i.e. keep the copied 2064/9672 processors I/O configuration definition in case there is a need to perform dynamic I/O reconfiguration changes in future, or a need to re-write the IOCDs using from HCD, and at the same time having to maintain a minimum number of IODFs
  - For a machine upgrade delete the copied 2064 processor/CSS definition
  - For a machine replacement / swap delete the copied 2064/9672 processor/CSS definition
    - This does not require that ALL the channel interfaces cables be physically recabled before the 2084 IPL time, but only a subset of the cables sufficient to IPL the required 2084 images for acceptance testing or for controlled production runs
  - Use HCD options 1.3.d against the upgraded/replaced processor definition (**caution** this will delete that processor definition and remove all the duplicated channel-to-switch-port connections for the 2084)
    - This prevents confusion when reading reports, and allows the FICON FCTC to be processed correctly by HCD
- i. **Optionally check** all ESCON and FICON channels to switch port connection (or channel-to-CU connections)
  - Use HCD 1.2.p to view ESCON switch ports and FICONswitch ports for multi-channel connection to the same port
  - Use HCD option 1.3.s.s (LCSS channel list) against each 2084 LCSS to view the defined channel connections
- j. If the new 2084 definition was for an **Add** of a new system - specify the correct channel-to-switch-port connections for a **new install** of a machine whos definitions were migrated (copied) from an operational (still channel connected) processor
  - Use HCD 1.3.p.s.s (LCSS channel list) and specify for each ESCON and FICON channel the correct
    - Dynamic switch number, entry switch number and entry port address`



### 4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS ....cont

#### - Ensure no duplication of or the 2084 channel to switch port connection definitions correct

- g. These steps assume that, a hardware **upgrade** from a 2064 to a 2084 or a machine **swap** from a 2064/9672 to a 2084 will also include the eventual physical transfer (recabling) of all the channel-to-switch-port connections from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from
  - If this assumption is correct then proceed to step xxx
  - If this assumption is not correct then proceed to step xxx
- h. If the new 2084 definition was for an **Upgrade (2064 to 2084)** or a **Swap** (2064/9672) then you should be able to delete (from the work IODF) the 2064 or 9672 COPY source CSS processor. This will remove the duplicated channel-to-switch-port connection definition information in the IODF for the 2084..
  - **Note:** do not delete the source processor definition if was used to just make a CSS copy to the 2084, and the copied 2064/9672 processor CSS is going to remain operational, i.e. keep the copied 2064/9672 processors I/O configuration definition in case there is a need to perform dynamic I/O reconfiguration changes in future, or a need to re-write the IOCDs using from HCD, and at the same time having to maintain a minimum number of IODFs
  - For a machine upgrade delete the copied 2064 processor/CSS definition
  - For a machine replacement / swap delete the copied 2064/9672 processor/CSS definition
    - This does not require that ALL the channel interfaces cables be physically recabled before the 2084 IPL time, but only a subset of the cables sufficient to IPL the required 2084 images for acceptance testing or for controlled production runs
  - Use HCD options 1.3.d against the upgraded/replaced processor definition (**caution** this will delete that processor definition and remove all the duplicated channel-to-switch-port connections for the 2084)
    - This prevents confusion when reading reports, and allows the FICON FCTC to be processed correctly by HCD
- i. **Optionally check** all ESCON and FICON channels to switch port connection (or channel-to-CU connections)
  - Use HCD 1.2.p to view ESCON switch ports and FICONswitch ports for multi-channel connection to the same port
  - Use HCD option 1.3.s.s (LCSS channel list) against each 2084 LCSS to view the defined channel connections
- j. If the new 2084 definition was for an **Add** of a new system - specify the correct channel-to-switch-port connections for a **new install** of a machine whos definitions were migrated (copied) from an operational (still channel connected) processor
  - Use HCD 1.3.p.s.s (LCSS channel list) and specify for each ESCON and FICON channel the correct
    - Dynamic switch number, entry switch number and entry port address`



### 4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS.... cont

#### - Run FCTC connection report and check for correct CUADDs

- k. Use HCD option 3.1.CTC.2 - and check the output reports
- l. Check there are no errors indicated by an \* against any line # in the CTC section of the report
- m. If there are errors indicated and the COPY CSS 2064/9672 action was for an upgrade or swap to a 2084, then
  - Use HCD option 1.4 and then locate required CU number (CU number from the IODF CU list)
  - Use HCD action code 'c' (change) and specify the correct CUADD (CSSid + MIFid)
  - Note: a FCTC CUADD specification should be - CSSid + MIFid at the source-processor FCTC CU that targets a 2084 logical partition
- n. If there are errors indicated and the COPY 2064/9672 CSS action was to a new 2084 system definition
  - Use HCD option 1.4 and then locate required CU number (CU number from the IODF CU list)
  - Use HCD action code 'c' (change) and specify the correct CHPID link
  - Note: a FCTC CUADD specification should be - CSSid + MIFid at the source-processor FCTC CU that targets a 2084 logical partition

#### - Define any additional CF channels and define the required CF connections

- o. Use HCD option to 1.3.s.s + PF11 to define any additional CF channels
- p. Use HCD option 1.3.s.s.f.p to define CF connections
- q. Note: for adding a new 2084 you should review the CF channel availability

4a/b Use HCD to COPY a 2064 or 9672 Processor/CSS definition to a 2084 LCSS.... cont

- Define any required additional ESCON CVC and CBY channels to support the migration from Parallel interface channels to ESCON convertor channels
  - q. Use HCD option to 1.3.s.s + PF11 to define any additional ESCON CVC or CBY channels. Do this for each 2084 LCSS
  - r. Use HCD option 1.4 and then locate required CU number (CU number from the IODF CU list), and add the CU to channel connections (add the CHPID number to the CU definition). Do this to all the required 2084 LCSSs.
  
- Define any required additional OSD channels to support the change from the unsupported OSA-2 TR to the OSA-Express HSTR channel card
  - s. Note: An OSA-2 TR channel card had two ports, both were accessed from the same CHPID number
  - t. Note: An OSA-Express HSTR channel card had two ports, they are accessed from different CHPID numbers
  - u. Use HCD option to 1.3.s.s + PF11 to define any additional OSA-Express OSD channels that are being installed to replace the unsupported OSA-2 TR channels. Do this for each 2084 LCSS
  - v. Use HCD option 1.4 and then locate required OSA CU number (CU number from the IODF CU list), and add the CU to channel connections (add the CHPID number to the OSA CU definition).
  - w. Do this to all the required 2084 LCSSs.

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport to the PC-WS  
Transfer z/OS IOCP file to the PC-WS

8



z9xx CMT

Start the CMT program

### Load the 2084 configuration file

File: Import H/W Config from file (.HWC), or  
File: Import CFReport order file (.CFR)  
(Select the required processor)

### Load the IOCP statements file

Tool: Import IOCP file  
Observe/resolve any PCHID conflicts  
Resolve CHPIDs to hardware channel type

9

Invoke the CMT **Availability** function  
PCHID to CHPID assignment  
Set any required CU priority  
Process CU Priority

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority** - define if required
- Reset function

Select the CMT Remap tab

View the CHPID to PCHID, or PCHID to CHPID mapping

10

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

11

### Create CMT **Reports**

1. CHPID Report
2. Port Report - sorted by CHPID

CFReport

7a

7b

Download the  
HCD validated  
work CMT IOCP  
file to CMT PC  
WS

6

### HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

### HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct  
'validated work' IODF by using HCD option 5.1plus  
options 2 and 3 - PCHIDs  
Use HCD option 6.4, IODF type will be changed to  
a work type IODF  
Use HCD option 1.3.s.s and PF20 to view PCHIDs

12

Upload the CMT IOCP  
file to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process the  
CMT IOCP file can only  
be used by the source  
that generated the  
initial statements )

?

Warning an HCD CMT IOCP  
statement file cannot be used  
by any IOCP program.

Do not get caught by this  
situation for a 2084 new install  
thinking you can use these  
IOCP statements with the S/A  
IOCP program, YOU CANNOT

11

File and  
Paper  
Reports

# 2064 to 2084 Upgrade IOCDS Save / Restore Management

## 1. Write 2084 IOCDS (using HCD/IOCP)

In preparation for an upgrade

HCD to 2064 SE

2084 IOCDS status on the 2064 SE

will show as invalid

## 2. Upgrade/Install HMC to driver 52+

Require 2064 CPC object on the HMC

## 3. Install any required 2064 patches Provides new IOCDS save function

## 4. 2064-2084 MES Upgrade Invoke Save/Restore Warning perform steps 5/6

## 5. Single object operation

HMC to 2064

## 6. Save IOCDS - from 2064 to HMC

Use new IOCDS tools function

## 7. Install 2084

Upgrade from 2064 to 2084)

## 8. Single object operation

HMC to 2084

## 9. Restore IOCDS

From HMC to 2084

Use new IOCDS tools function

## 10. Reboot SE

11. IOCDS status on 2084 SE changes to Valid (2084) and Invalid (2064)

## 12. Delete IOCDSs from the HMC

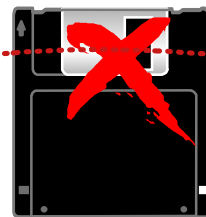
Main flow  
sequence step 15b

2064



3 2064 SE	4 IOCDS Status
A0 IOCDS 1	Invalid 1
A1 IOCDS	Valid
A2 IOCDS	Valid
A3 IOCDS	Valid

HMC (2084) 2
Single object operation 5
2084 IOCDS 6
2064 IOCDSs 9
Single object operation to 2084 8



During an upgrade the Save / Restore of the IOCDSs no longer uses a diskette, instead the IOCDS Save / Restore function uses the HMC harddrive

2084



10 2084 SE	IOCDS Status
A0 IOCDS 11	Valid 11
A1 IOCDS	Invalid
A2 IOCDS	Invalid
A3 IOCDS	Invalid

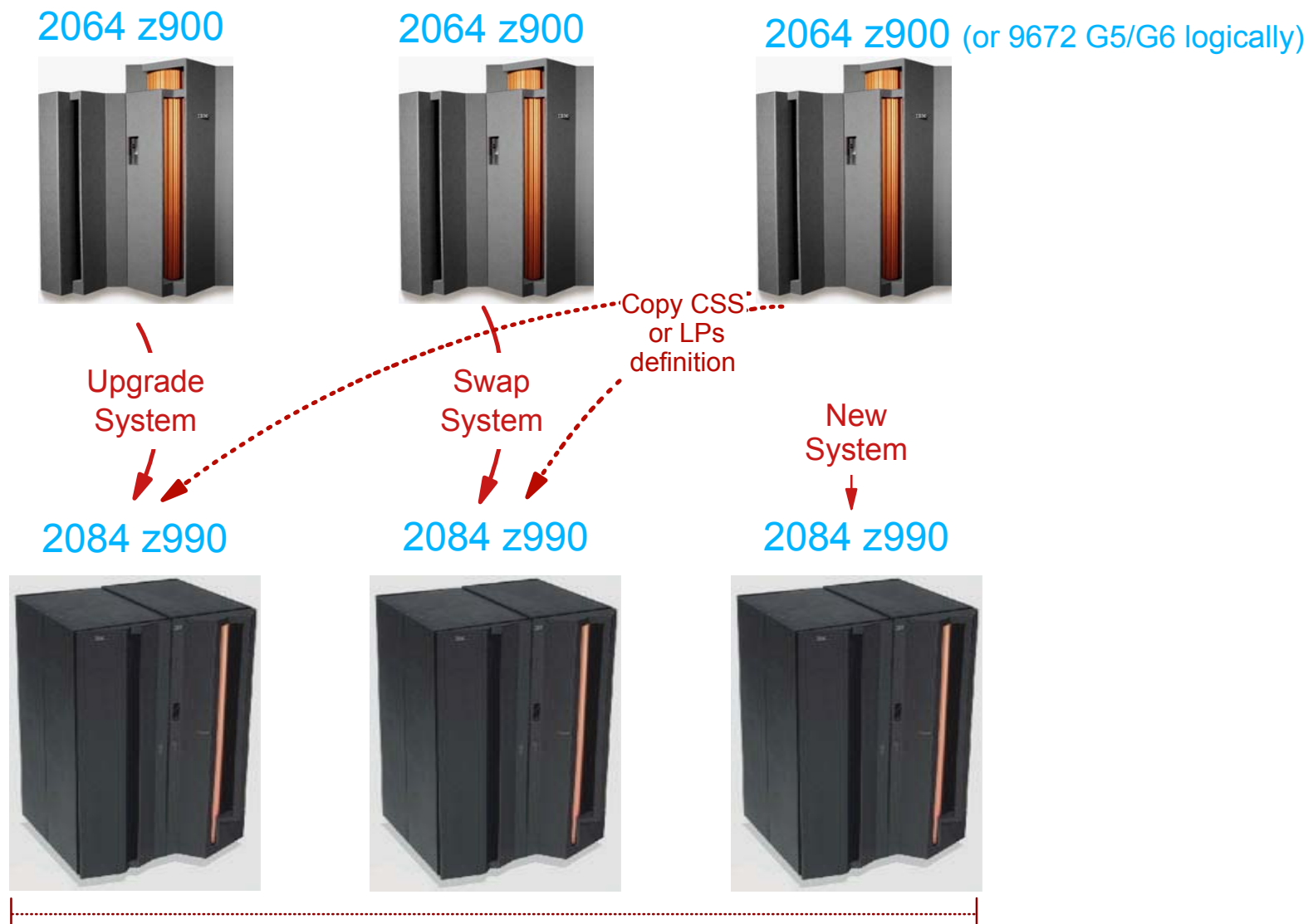


IBM @server zSeries 990

# z990 I/O Configuration Definition Support - In-depth 2064-2084 - COPY (Migrate) CSS I/O Configuration Definition Upgrade, Swap or New Install

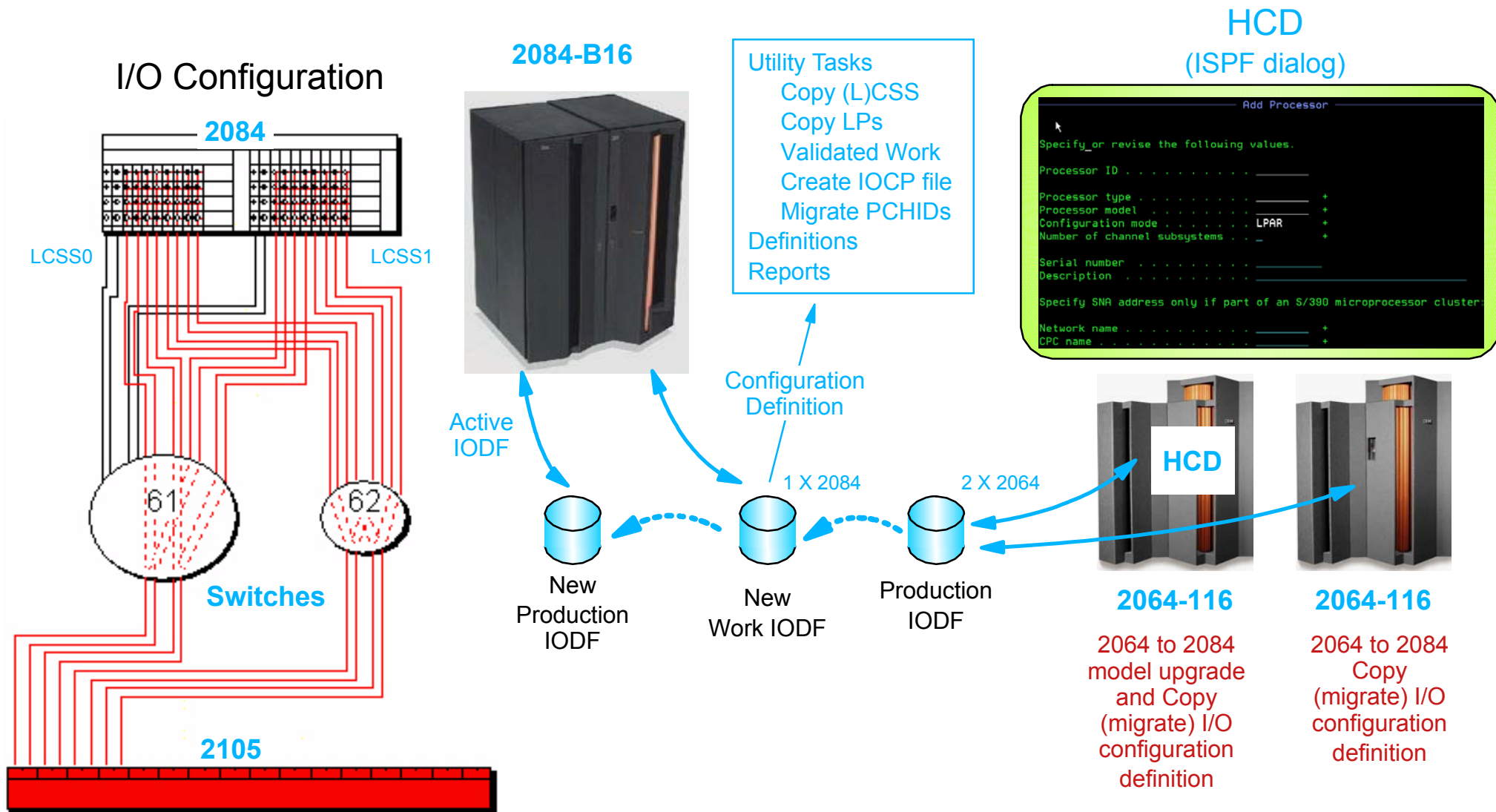
ITSO Poughkeepsie  
zSeries  
2084 z990

## 2084 - I/O Configuration Definition Support - I/O Configuration Definition Options



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs or LPs - (copy / migration) - copies the I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing CUs

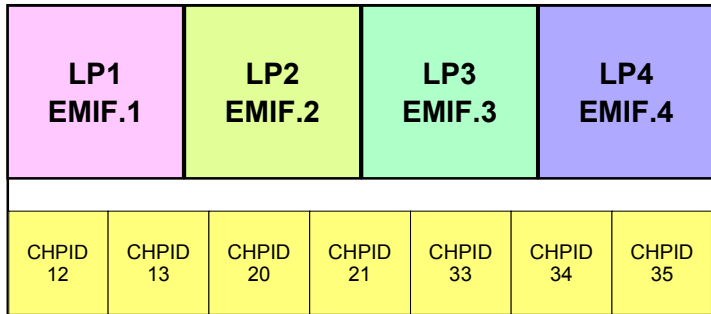




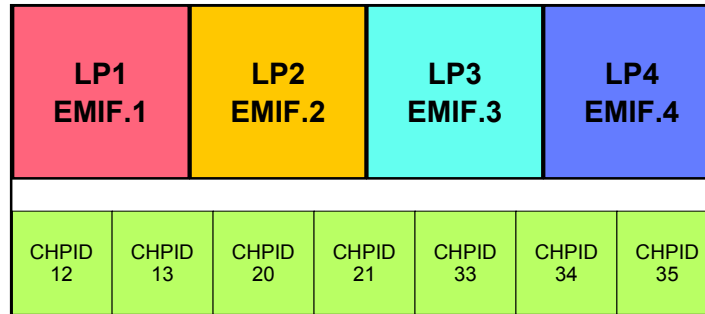


# 2084 - I/O Configuration Definition Support - z/OS HCD cOPY CSSs

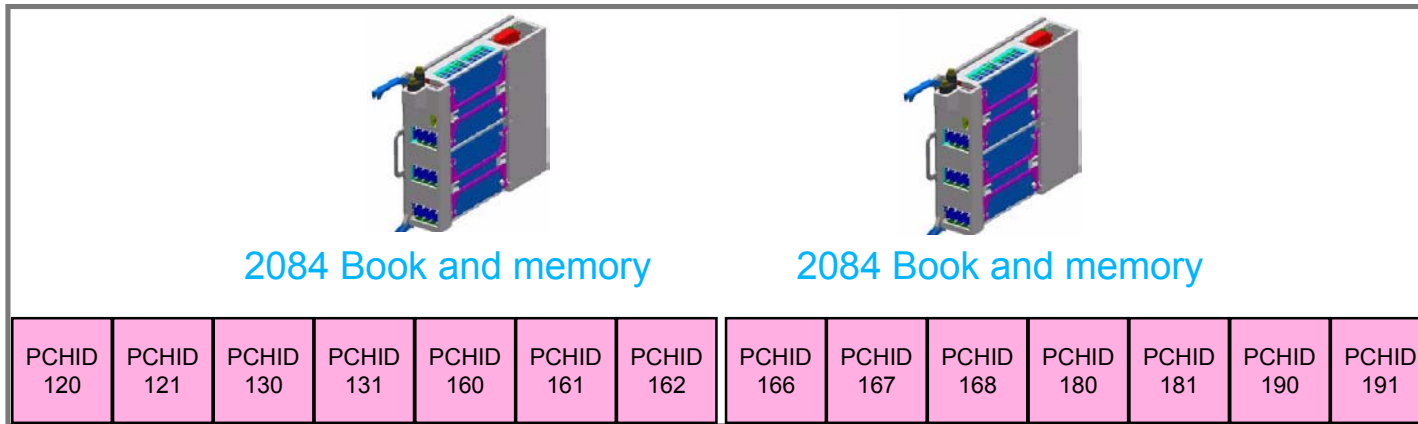
2064 (PR2064AA)



2064 (PR2064BB)

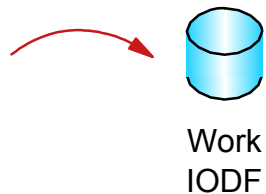


2084 B16 (MYCEC)



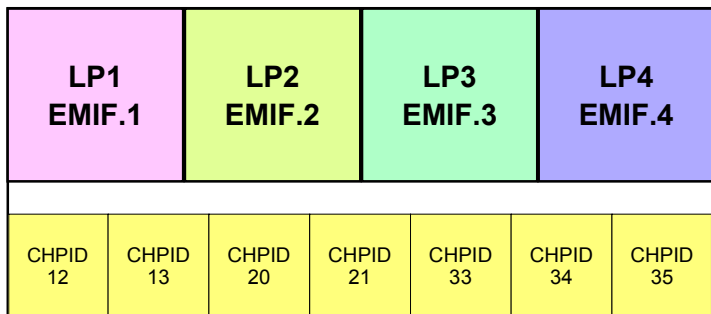
1. Two Installed 2064s
2. Install 1 2084
3. Define the 2084 processor

I/O definition File (Work  
IODF)  
Processor - MYCEC

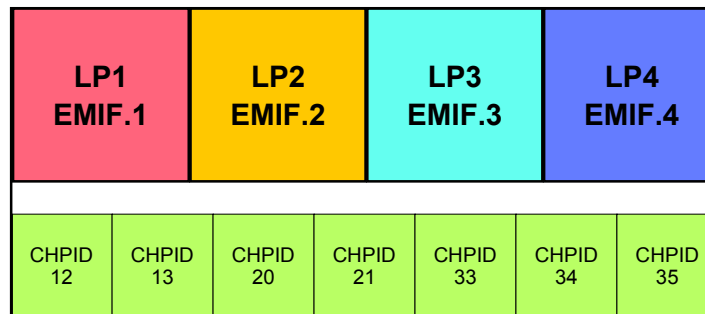


# 2084 I/O Configuration Definition Support - z/OS HGD Copy CSS

2064 (PR2064AA)



2064 (PR2064BB)



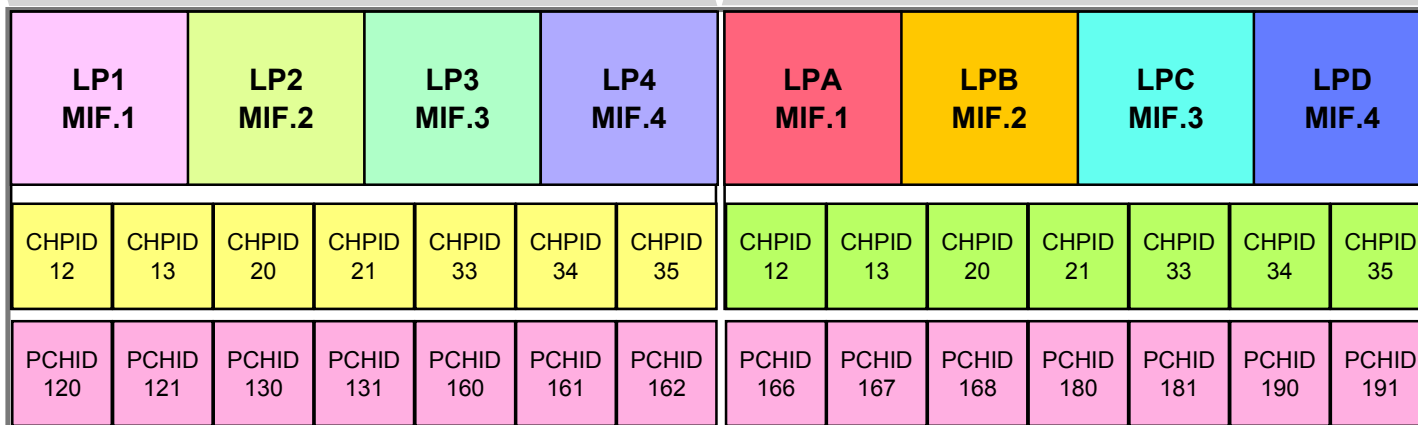
Migrate 2064 (PR2064AA) to CSS.0

Migrate 2064 (PR2064BB) to CSS.1

LCSS.0

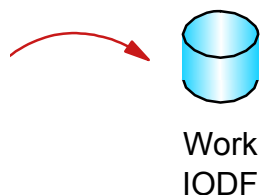
2084 B16 (MYCEC)

LCSS.1



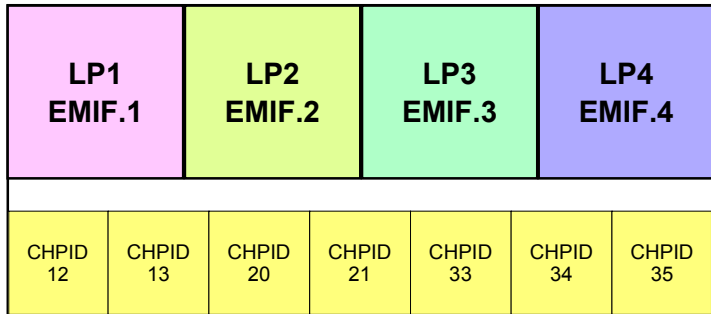
1. Two Installed 2064s
2. Install 1 2084
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Migrate PR2064AA to CSS0
6. Migrate PR2064BB to CSS1

I/O definition File (Work IODF)  
 Processor - MYCEC  
 CSS.0 + SubChan Support  
 CSS.1 + SubChan Support  
 LPs in CSS.0 and CHPIDs  
 LPs in CSS.1 and CHPIDs

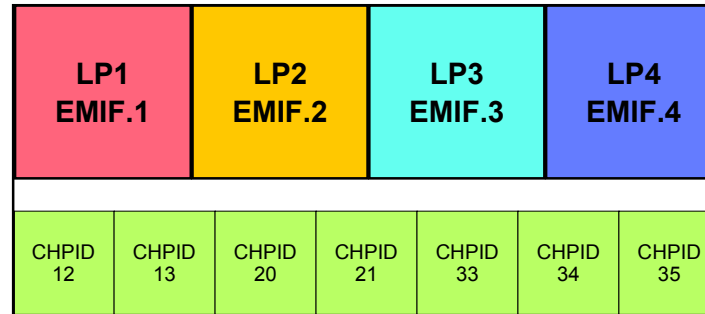


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



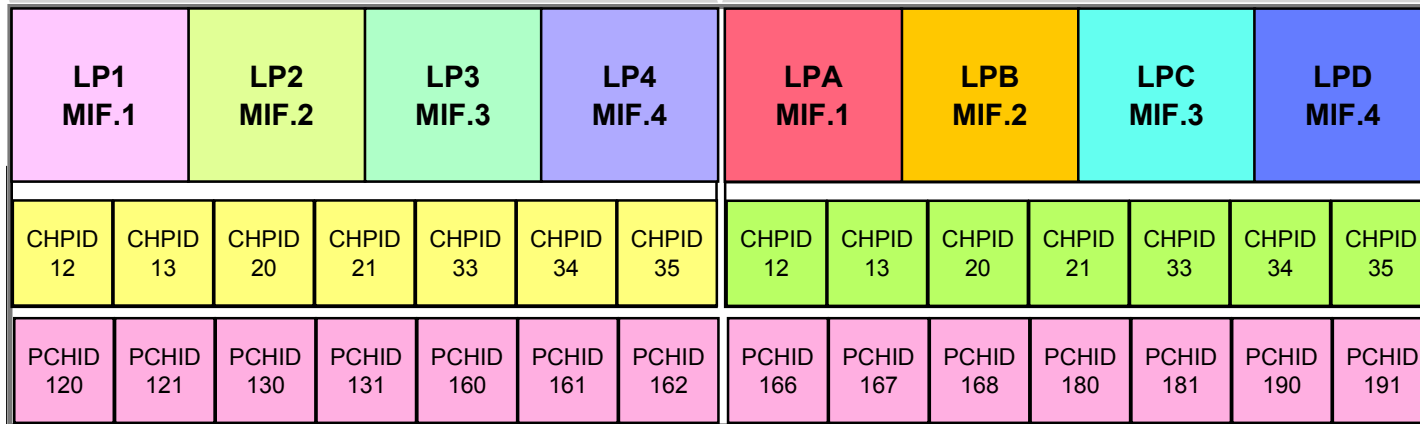
2064 (PR2064BB)



Copy 2064 (PR2064AA) to CSS.0

Copy 2064 (PR2064BB) to CSS.1

2084 B16 (MYCEC)



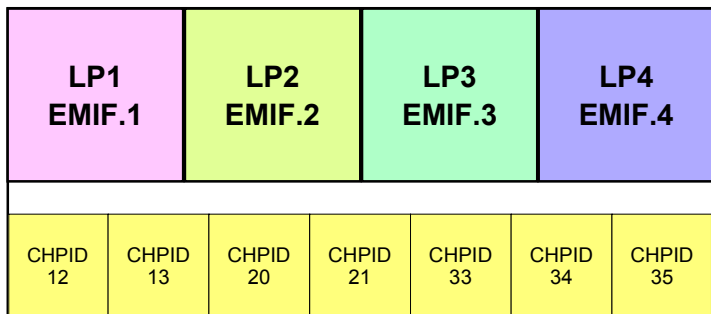
1. Two Installed 2064s
2. One 2084 to be instilled/upgraded
3. Define the 2084 processor
4. Define 2 CSSs + Devs to the 2084
5. Copy PR2064AA CSS to CSS0
5. Copy PR2064AA CSS to CSS0
6. Copy PR2084BB CSS to CSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Install or upgrade to the 2084
10. Write the IOCDS
11. Customize profiles
12. POR
13. IPL

I/O definition File (Work IODF)  
Processor - MYCEC  
CSS.0 + SubChan Support  
CSS.1 + SubChan Support  
LPs in CSS.0 and CHPIDs

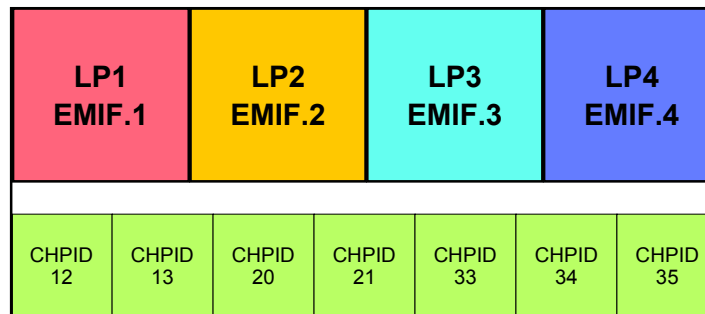


# 2084 - I/O Configuration Definition Support - z/OS Copy (Migrate) CSS

2064 (PR2064AA)



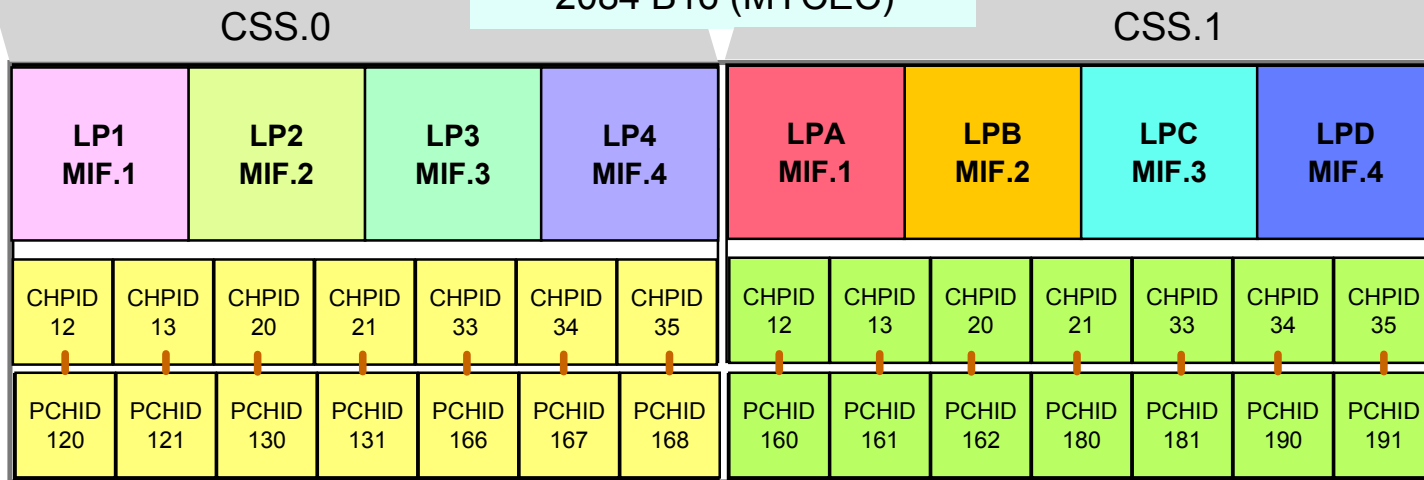
2064 (PR2064BB)



Copy 2064 (PR2064AA) to CSS.0

Copy 2064 (PR2064BB) to CSS.1

2084 B16 (MYCEC)



1. Two Installed 2064s
2. Install 1 2084
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Copy PR2064AA to CSS0
6. Copy PR2084BB to CSS1
7. 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/migrate to the 2084
10. Write the IOCDS
11. Customize profiles
12. POR
13. IPL

I/O definition File (Work IODF)

Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

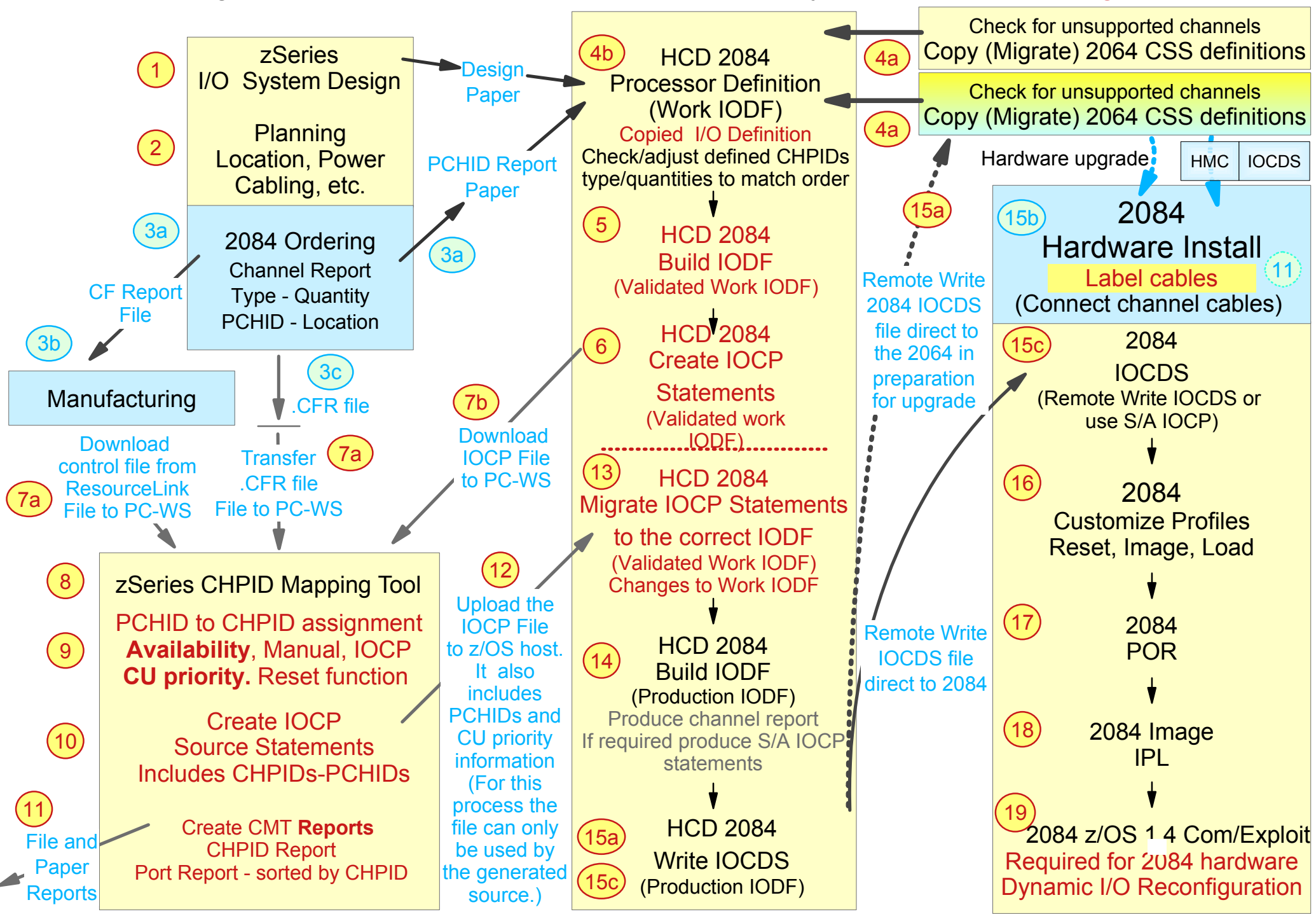
LPs in CSS.0 and CHPIDs

LPs in CSS.1 and CHPIDs

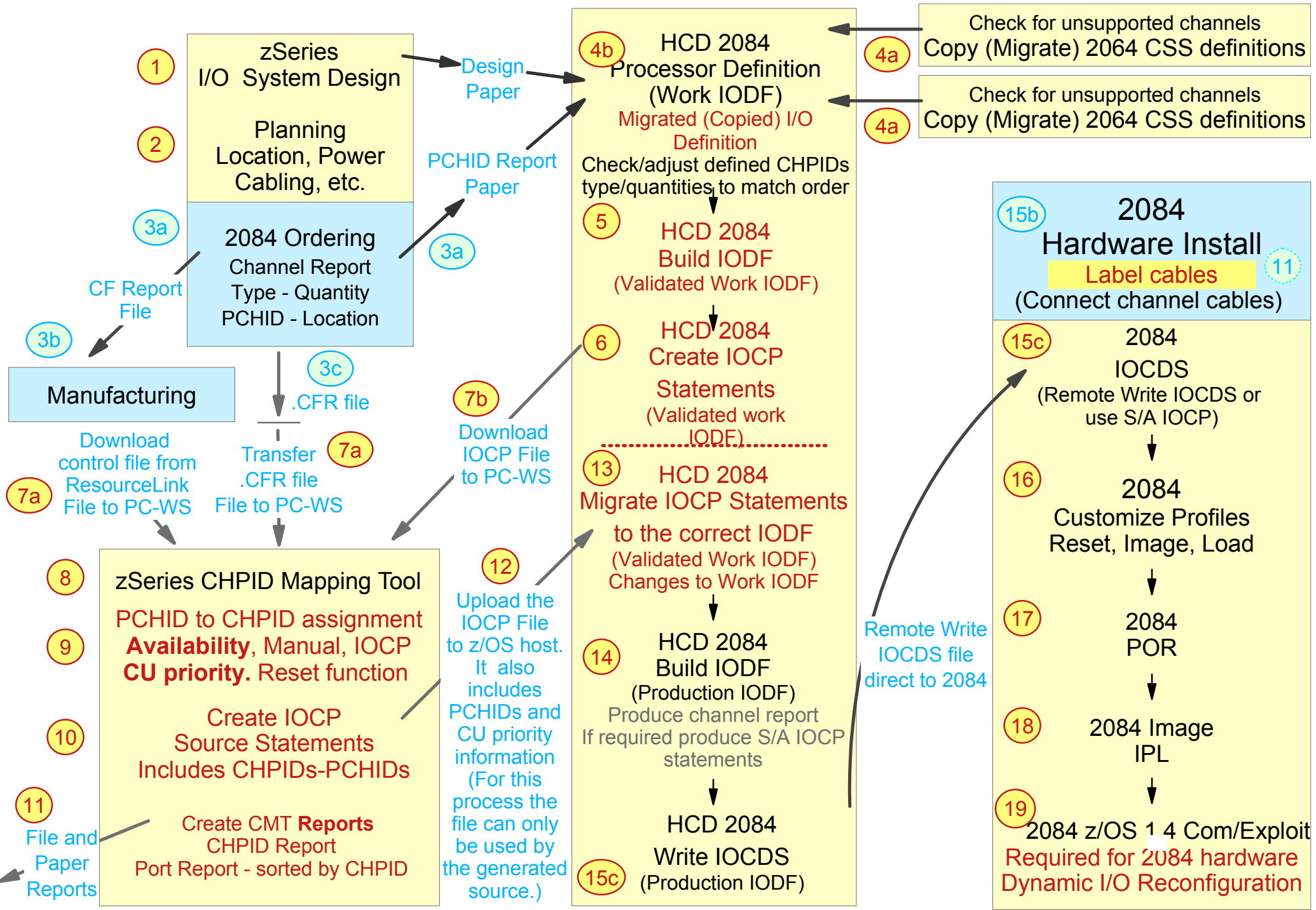
Use CMT to map CHPIDs to PCHIDs



2084 - I/O Configuration Definition Support - z/OS HCD Copy CSSs (with **H/W Upgrade**)

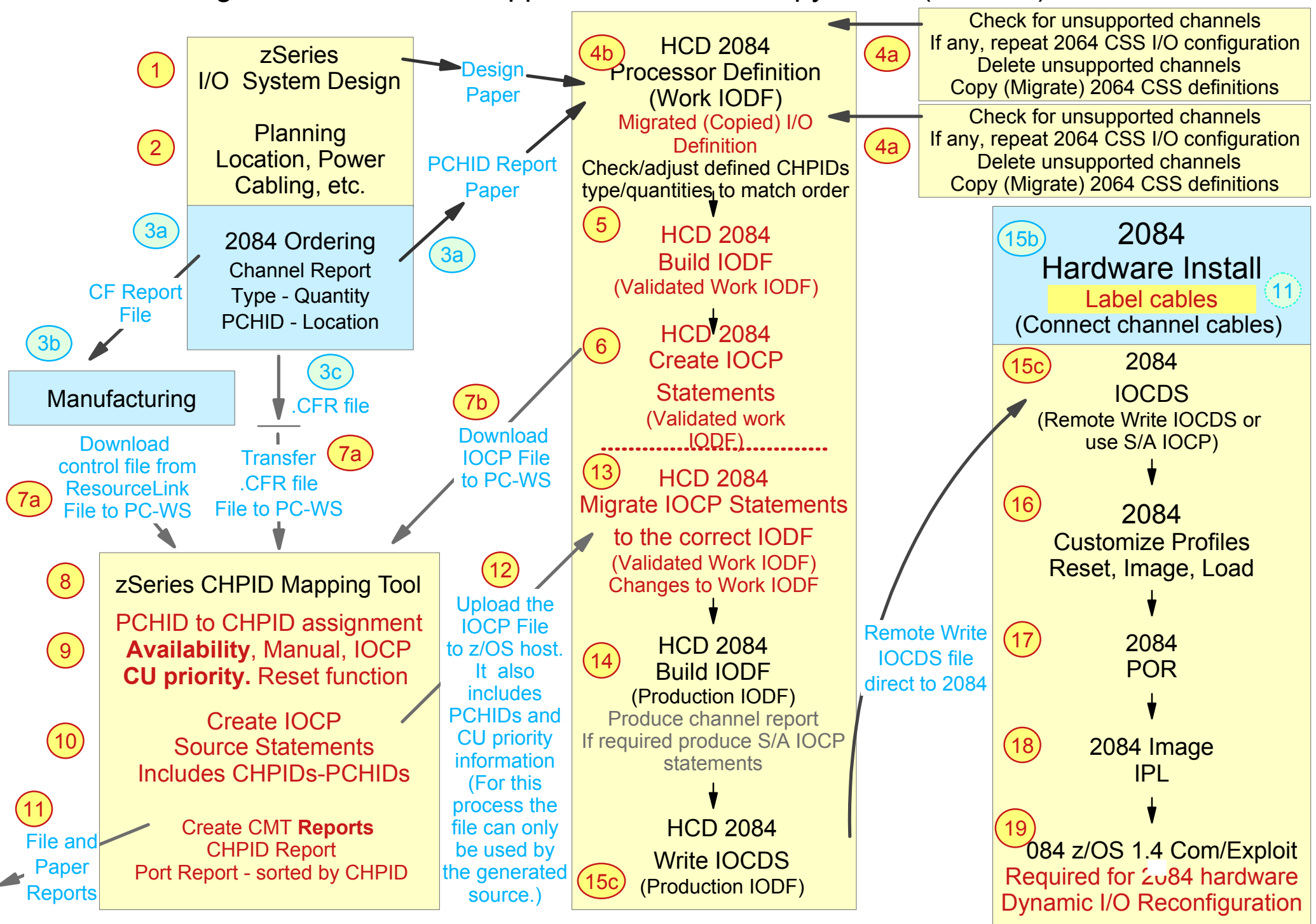


2084 - I/O Configuration Definition Support - z/OS HCD Copy CSSs (for **Swap**)





2084 - I/O Configuration Definition Support - z/OS HCD Copy CSSs (for New)





# 2084 - I/O Configuration Definition Support - z/OS HCD Copy (Migrate) CSSs

Assumes within the IODF there is:

- No changes to the OS Config definition
- No changes to the ESCON or FICON switch definitions, for Upgraded or Swapped systems/machines. There maybe be switch port additions/connections changes for Added 2084 systems/machines/LCSSs (at a later date)
- If LPAR names are not unique HCD will request a change
- No changes to the CU paths definitions
  - Same numbers of paths and CHPID #s
  - If real duplicate device number are used then the associated CUs must have different CU numbers
- No change to the I/O device definitions

- 5 \* Once having built a 'validated work' IODF do not make any changes to the IODF prior to importing the CMT IOCP statements
- 13

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport

Transfer z/OS IOCP file to the PC  
IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT Reports  
CHPID Report

Port Report - sorted by CHPID

CFReport

Download the  
HCD validated  
work IOCP file to  
CMT PC WS

Upload the CMT  
IOCP file to the  
z/OS host. The file  
includes PCHIDs,  
CCN, CMT version,  
and CU priority,  
information  
For this process the  
CMT IOCP file can  
only be used by the  
source that  
generated the initial  
statements

## HCD Migrate (Copy) 2064 or 9672 CSS Definitions to 2084

- 4a/b Use or create a work IODF (from the production IODF) to define the 2084  
Use HCD options 1.3.s for the source copy processor, delete unsupported channels  
Use HCD options 1.3 and PF11 to add new 2084, LCSSs and # of Devices  
Use HCD options 1.3.y to copy the 2064/9672 CSSs to the 2084 CSSs  
Define/Change the required Logical Partition names.  
For an Upgrade or Swap use HCD 1.3.d to delete the copied CSSs (processors) or  
For a new install use HCD 1.3.s.s to adjust the channel to switch connections  
Use HCD option 1.3.s.s to view channel connections, and HCD 1.2.p for switch ports  
Run the FCTC connection report HCD option 3.1.CTC.2.  
FCTC use HCD option 1.4, locate required CU #, adjust CUADD (CSSid + MIFid)  
Define any required CF channels 1.3.s.s PF11, then define CF connections  
1.3.s.s.f.p

Define required ESCON CVC and CBY to replace unsupported BL and BY channels  
Define any required OSA-Express OSD to replace unsupported OSA TR channels

## HCD 2084 Build Validated Work IODF \*

- 5 Use the work IODF and HCD option 2.12, check completion messages  
This validates the work IODF for the 2084, w/ or w/o PCHIDs  
Use HCD option 6.4 to check IODF type - s/b 'Validated work'

## HCD 2084 Create CMT IOCP Statements \*

- 6 Use the 'validated work' IODF and HCD option 2.3, select required ProcId  
Browse the IOCP statements file. Note the are no PCHID keywords

## HCD Migrate CMT IOCP Statement 'PCHIDs' \*

- 13 Migrate IOCP statements into the correct 'validated work'  
IODF by using HCD option 5.1 plus options 2 and 3 - PCHIDs  
Use HCD option 1.3.s.s and PF20 to view PCHIDs, 2nd PF20 for Spanned  
Use HCD option 6.4, IODF type will be changed to a work type IODF

## HCD 2084 Build Production IODF

- 14 Use HCD option 2.1 to build a production IODF from the work IODF  
Note every defined CHPID must have a PCHID (except IQD and ICP)

## HCD 2064 or 2084 Write IOCDs

- 15a/c Use production IODF and HCD option 2.11 to remote write the IOCDs. The  
HCD CPC name and HMC CPC object names must be the same

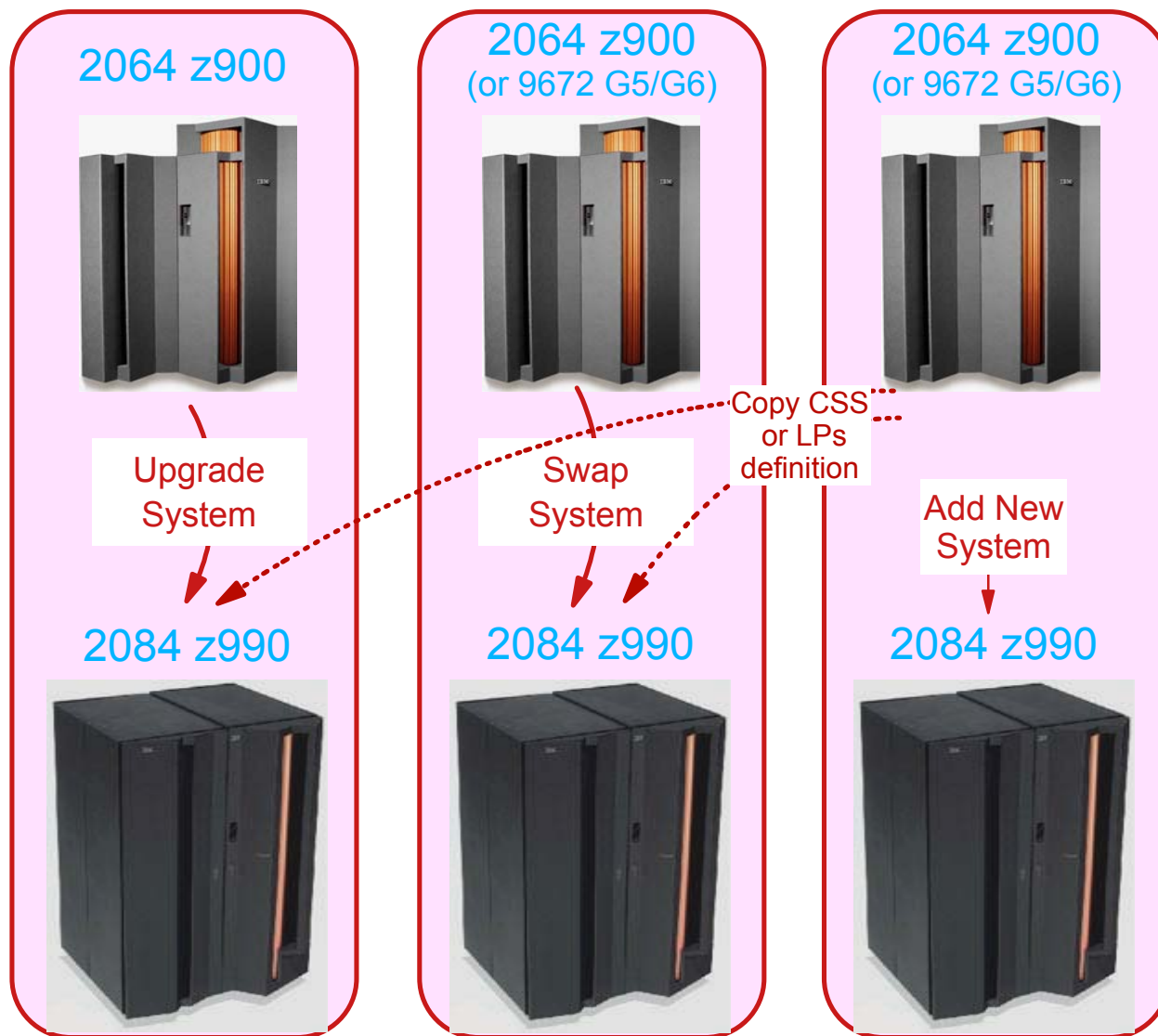
## IPL the 2084 Image

- 18 OS/390 2.10 - z/OS 1.4 with compatability support IPL in CSS0 image  
z/OS 1.4 with exploitation support IPL in CSS0 or CSS1 image

## HCD 2084 Dynamic I/O Reconfiguration

- 19 Use the z/OS activate command or the HCD activate function to perform  
dynamic I/O reconfiguration. Requires OS/390 2.10 - z/OS 1.4 + compatability  
support for dynamic to CSS0, or z/OS 1.4 + Exploitation support for dynamic to  
CSS0 and CSS1 - Note: z/OS 1.3 H/W activates are multi-CSS wide

## 2084 - I/O Configuration Definition - HCD Copy 2064/9672 CSS to 2084 LCSS



- Define a new 2084 I/O configuration (HCD or HCD/HCM)
  - 2084, LCSSs, LPs, Channels, CUs and connections, I/O H/W and S/W
- **Copy, an I/O configuration definition - to a predefined or currently defined 2084**
  - **Copy CSSs - (copy / migration)**
  - **Copies the complete processor I/O configuration**
- Define a 2084, LCSSs, LPs and Channels, and then:
  - Define connections to existing CUs

## 2084 - I/O Configuration Definition Support - z/OS HCD Copy (Migrate) CSSs

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084

- a. Use or create a work IODF (from the production IODF) to define the 2084
- b. To define the new 2084 and LCSSs, use HCD options 1.3 and PF11 to add the 2084 processor
  - Use HCD options 1.3.s to display the maximum number of devices that will be supported for an LCSS
- c. Definition management of unsupported channels
- d. Conditional step when **physically Adding a new 2084 system**, check to see if there are any unsupported channels in the 2064/9672 CSS to be Copied (for the new 2084 system add) by using use HCD options 1.3.s.
  - If there are any unsupported channels, use HCD options 1.3.r to repeat this processor definition, use a new Proc.id
  - The repeated processor will be used by the HCD Copy CSS function, after unsupported channels have been deleted.
- e. Check for unsupported channels, use HCD options 1.3.s for all the HCD Copy source processor (2064/9672)
  - To delete each unsupported 2084 channel from the copy processor source, use HCD options 1.3.s.d
- f. Use HCD options 1.3.y to copy the 2064/9672 CSSs to the 2084 CSSs
  - You will be requested to change the Logical Partition names if they are not unique
- g. Delete the Copy source CSS, for an **Upgrade or Swap (processor to be replaced), Add New system (repeated processor)**
  - Use HCD options 1.3.d to delete the copied CSS(s) (processor(s))
  - **Note: these steps assume that, a hardware upgrade from a 2064 to a 2084 or a machine swap from a 2064 or 9672 to a 2084 will also include the physical transfer (recabling) of the channel-to-switch-port connections from the upgraded 2064 or swapped 2064/9672 to the 2084 CSS that the upgraded 2064 or swapped 2064/9672 definition was COPIED from.**
  - **If this assumption is not correct then perform the conditional step 'g' for the Upgrade and Swap situations as well for add**
- h. Conditional step, for **Add New system (also see above)** use HCD options 1.3.s.s to adjust channel to switch connections as per the new system design and planning steps (steps 1 and 2)
  - i. Optional step, use HCD options 1.3.s.s to view channel connections, and HCD options 1.2.p for switch ports
  - j. Run the FCTC connection report using HCD options 3.1.CTC.2.
- k. Adjust the FCTC CUAADD, use HCD option 1.4, locate required CU #, then use HCD action code 'c' (the change option) to re-specify the CUs CUADD from a single character to two characters (CSSid + MIFid)
  - l. Conditional step for a **Add New system**, define required CF channels using HCD options 1.3.s.s PF11 for the CF system/images that the **Add New system** connects to
- m. Define CF connections using HCD options 1.3.s.s.f.p for an **Upgraded, Swapped or Added new system**, configuration
- n. Define if required ESCON CVC and CBY channels to replace the unsupported BL and BY channels
  - Connect the still defined parallel interface CUs to the required ESCON CVC or CBY channels
- o. Define if required OSA-Express HSTR OSD channels to replace unsupported OSA-2 TR OSA channels

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- a. Use HCD options 1.3 (Processor) and PF11 to add (add a processor), then specify the new 2084 processor definitions
  - Use or create a work IODF (from the current production IODF) and define the 2084
    - If you are using a production IODF, the HCD process will proceed to create a new work IODF and you will be requested to provide the new work IODF dataset details
      - IODF name (dataset name)
      - Volume Serial Number (location of the work IODF)
      - Space allocation (number of 4K blocks) -
        - Make sure there is enough space allocated - you may need to specify double the amount of space for this IODF that is shown by HCD
    - Activity logging Yes/No
- b. Define the new 2084 processor
  - Processor ID (the customer still chooses the proc.id)
  - Type 2084, model - at GA1: A08 or B16, at GA2: A08, B16 and C24 or D32
  - Configuration mode, only LPAR mode is supported (Basic Mode is not supported)
  - Number of channel subsystems (LCSS) - 2084 at GA1: 1 or 2 - 2084 at GA2: 1, 2, 3 or 4
  - Use HCD options 1.3.s and check the number of LCSSs, and maximum number of devices supported for each defined 2084 LCSS
    - Generally the default value of 63K devices supported for each LCSS should show, you may over-type the number of supported devices for each LCSS to your required support value.
    - Note: each LCSS defined may be defined to provide support for a different number of devices
    - The value specified by you should be enough to support both your current configuration and your non-disruptive future growth)

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Main Menu panel
  - z/OS V1.4 HCD is the minimum required version/release for the defining 2084 (at GA1 time)

z/OS V1.4 HCD

Command ===> \_\_\_\_\_

#### Hardware Configuration

Select one of the following.

- 1. Define, modify, or view configuration data
- 2. Activate or process configuration data
- 3. Print or compare configuration data
- 4. Create or view graphical configuration report
- 5. Migrate configuration data
- 6. Maintain I/O definition files
- 7. Query supported hardware and installed UIMs
- 8. Getting started with this dialog
- 9. What's new in this release

For options 1 to 5, specify the name of the IODF to be used.

I/O definition file . . . 'KMT1.IODF01' +

F1=Help      F2=Split      F3=Exit      F4=Prompt      F9=Swap      F12=Cancel  
F22=Command



### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Main Definition panel
  - Use HCD option 1 from the main menu to display this panel, then HCD option 3 on this panel to display the defined processor list. This action is also expressed as use HCD options 1.3

Define, Modify, or View Configuration Data

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

3\_ 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

F1=Help

F2=Split

F3=Exit

F9=Swap

F12=Cancel

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - - Defining the 2084 processor - Adding a processor
  - Using the HCD options 1.3 (processor list panel) as the starting point to add the 2084 processor by using PF11 (Add)

```

Processor List                      Row 1 of 5 More:      >
Command ===> _____ Scroll ===> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
- PR2064AA 2064    116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
- PR2064BB 2064    116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
- PR2064CC 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064DD 2064    100      LPAR  1234DD2064 2064 DD, CF not migrated
- PR9672EE 9672     Z97      LPAR  1234EE9672 9672 EE, OS not migrated
***** Bottom of data *****

F1=Help      F2=Split    F3=Exit      F4=Prompt    F5=Reset     F7=Backward
F8=Forward   F9=Swap     F10=Actions  F11=Add      F12=Cancel   F13=Instruct
F20=Right    F22=Command

```



4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Add Processor panel
  - The z/OS v1.4 HCD Add Processor panel that supports the defining of a 2084 processor

Add Processor

Specify or revise the following values.

Processor ID . . . . . \_\_\_\_\_

Processor type . . . . . \_\_\_\_\_ +

Processor model . . . . . \_\_\_\_\_ +

Configuration mode . . . . . LPAR +

Number of channel subsystems . . . . . \_ +

Serial number . . . . . \_\_\_\_\_

Description . . . . . \_\_\_\_\_

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

Network name . . . . . \_\_\_\_\_ +

CPC name . . . . . \_\_\_\_\_ +

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

F12=Cancel

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Add Processor panel
  - Defining a 2084 model B18 with 2 LCSSs (only LPAR configuration mode is supported)

### Add Processor

Specify or revise the following values.

Processor ID . . . . . sczp802\_

Processor type . . . . . 2084\_ +

Processor model . . . . . B16\_ +

Configuration mode . . . . . LPAR +

Number of channel subsystems . . 2 +

Serial number . . . . . \_\_\_\_\_

Description . . . . . ITSO Poughkeepsie defined 2084

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

Network name . . . . . usibmsc\_ +

CPC name . . . . . sczp802\_ +

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

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Create Work IODF panel
  - If an attempt is made to change a production IODF, HCD will require the user to create a work IODF
  - It is recommended to double the currently used IODF space allocation

#### Create Work I/O Definition File

The current IODF is a production IODF and therefore cannot be updated. To create a new work IODF based on the current production IODF, specify the following values.

IODF name . . . . . 'KMT1.IODF02.WORK'

Volume serial number . nw8100 +

Space allocation . . . 4000 (Number of 4K blocks)

Activity logging . . . Yes (Yes or No)

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

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Processor List panel
  - The 2084 processor is defined, and is now shown in the HCD processor list panel

Processor List                      Row 1 of 6 More:                      >

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

/ Proc. ID	Type +	Model +	Mode+	Serial-# +	Description
PR2064AA	2064	116	LPAR	1234AA2064	2064 AA, HCD Copy to 2084 CSS0
PR2064BB	2064	116	LPAR	1234BB2064	2064 BB, HCD Copy to 2084 CSS1
PR2064CC	2064	116	LPAR	1234CC2064	2064 CC, use for 'repeat' proc
PR2064DD	2064	100	LPAR	1234DD2064	2064 DD, CF not migrated
PR9672EE	9672	Z97	LPAR	1234EE9672	9672 EE, OS not migrated
SCZP802	2084	B16	LPAR	_____	ITSO Poughkeepsie defined 2084

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

F1=Help                      F2=S

F8=Forward                  F9=S

F20=Right                   F22=Command

New IODF KMT1.IODF02.WORK defined.

set                      F7=Backward

ncel                      F13=Instruct

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Channel Subsystem List panel
  - Determining the maximum number of devices supported for each 2084 LCSS (the maximum was assigned by default)

Channel Subsystem List

Row 1 of 2

Command ==> Scroll ==> CSR

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

Processor ID . . . : SCZP802ITSO Poughkeepsie defined 2084

CSS Max number

/ ID of devices + Description

064512

164512

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

F1=HelpF2=SplitF3=ExitF4=PromptF5=ResetF7=Backward

F8=ForwardF9=SwapF10=ActionsF11=AddF12=CancelF13=Instruct

F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Defining the 2084 processor - Channel Subsystem List panel
  - This shows the changing of the maximum number of devices supported for each 2084 LCSS

Channel Subsystem List

Row 1 of 2

Command ==> \_\_\_\_\_ Scroll ==> CSR

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

Processor ID . . . : SCZP802      ITSO Poughkeepsie defined 2084

CSS Max number

/ ID	of devices +	Description
0	36000	_____
1	24000	_____

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

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

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

F22=Command

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### c. Definition management of unsupported channel definition types (unsupported by the 2084)

- Before you Copy a 2064 or 9672 processor CSS I/O configuration definition to a 2084 LCSS, check that there are no unsupported 2084 channels defined in the in the COPY source processor - i.e. in the 2064 or 9672 whos CSS will be copied to the 2084.
- Channels types not supported by the 2084, are channels defined as - BL, BY, OSA
- The unsupported channels will need to be deleted before you invoke the HCD Copy CSS operation, unsupported channels found during the Copy CSS operation will cause the Copy operation to fail, and message CBDA154I will be displayed for each unsupported channel
- In the case where the processor to be copied is not being replaced and will still be defined in the new IODF, you will not want to delete any unsupported channels, therefore you will have 'repeat' this processor first, and then delete the unsupported channels in the 'repeated' processor definition before you use the HCD Copy processor function. This optional task is shown for this support in another part of this presentation
- Note: For the BL and BY channel definition types that are deleted. You may later define ESCON channels (in the 2084) as CVC and CBY (plus you will require ESCON channel-interface to Parallel channel-interface convertor units) to access the parallel connected interface CUs if they are still required. In this case customers should manage this definition change themselves later in the 2084 definition. This change will involve the adding of the CVC and CBY channel definitions, and CU definition changes to connect the to the required CVC and CBY channel paths (CHPIDs). These CUs should still be defined in the IODF (they were previously connected to BL or BY defined channels before these channels were deleted)
- Note: The OSA-2 TR physical channel type can/will be changed to a OSA-Express HSTR and can be defined as a OSD or an OSE channel. In this case customers should manage this definition change themselves later in the 2084. This change will involve the adding of the OSE/OSD channel definitions (for the OSA-Express HSTR channels) and changing CU definitions to connect the to the required OSD/OSE channel path (CHPID) for the still defined CUs that were previously



### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

#### d. Conditional step when physically Adding a new 2084 system,

- Check to see if there are any unsupported channels in the 2064/9672 CSS to be Copied (for a new 2084 system add) by using use HCD options 1.3.s.
- If there are any unsupported channels, use HCD options 1.3.r to repeat this processor definition
  - Use a new Proc.id
- Delete the unsupported channels from the 'repeated' processor
- The repeated processor will be used by the HCD Copy CSS function (after the unsupported channels have been deleted)

4a/b

## HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672 processor - Channel PathList panel
  - Use HCD options 1.3.s to check to see if there are any unsupported channels defined in the 2064/9672 processor to be copied - CHPIDs 20-23, and 28-29, are unsupported
  - They should not be deleted from an active processor definition, therefore repeat this processor

Channel Path List

Row 7 of 50 More: >

Command ===> \_\_\_\_\_ Scroll ===> CSR

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

Processor ID . . . . : PR2064CC      2064 CC, use for 'repeat' proc

Configuration mode . : LPAR

Channel Subsystem ID :

DynEntry Entry +													
/	CHPID	Type+	Mode+	Switch	+	Sw	Port	Con	Mngd	Description			
—	20	BL	DED	—		—	—		No	Unsupported 2084 channel (BL)			
—	21	BL	DED	—		—	—		No	Unsupported 2084 channel (BL)			
—	22	BY	DED	—		—	—		No	Unsupported 2084 channel (BY)			
—	23	BY	DED	—		—	—		No	Unsupported 2084 channel BY			
—	28	OSA	SHR	—		—	—		No	Unsupported 2084 channel TR/ETH			
—	29	OSA	SHR	—		—	—		No	Unsupported 2084 channel TR/ETH			
—	30	FC	SHR	61		61	18		No	FICON channel used for FCTC			
—	31	FC	SHR	61		61	19		No	FICON channel used for FCTC			
F1=Help			F2=Split		F3=Exit			F4=Prompt		F5=Reset			
F8=Forward			F9=Swap		F10=Actions			F11=Add		F12=Cancel			
F20=Right			F22=Command									F7=Backward	
											F13=Instruct		

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672processor - Channel PathList panel
  - Use HCD options 1.3.r repeat the processor that the HCD Copy CSS function will use
- d. The next step will be to delete the unsupported channels from the Repeated processor

```

Processor List                      Row 1 of 5 More:      >
Command ===> _____ Scroll ===> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
- PR2064AA 2064     116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
- PR2064BB 2064     116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
r PR2064CC 2064     116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064DD 2064     100      LPAR  1234DD2064 2064 DD, CF not migrated
- PR9672EE 9672     Z97       LPAR  1234EE9672 9672 EE, OS not migrated
***** Bottom of data *****

F1=Help      F2=Split    F3=Exit      F4=Prompt    F5=Reset     F7=Backward
F8=Forward   F9=Swap     F10=Actions  F11=Add      F12=Cancel   F13=Instruct
F20=Right    F22=Command
    
```

### 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672 processor - Channel PathList panel
  - Use HCD options 1.3.r repeat the processor that the HCD Copy CSS function will use
- d. The next step will be to delete the unsupported channels from the Repeated processor

#### Repeat Processor

Specify or revise the following values.

Processor ID . . . . . pr2064cr

Processor type . . . . . : 2064

Processor model . . . . . : 116

Configuration mode . . . . . : LPAR

Serial number . . . . . 1234CC2064

Description . . . . . 2064 CC, use for 'repeat' proc

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

Network name . . . . . USIBMSC +

CPC name . . . . . PR2064CC +

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

- ```

                                Message List
Save  Query  Help
-----
                                Row 1 of 12
Command ==> _____ Scroll ==> CSR

Messages are sorted by severity. Select one or more, then press Enter.

/ Sev Msg. ID  Message Text
_ I   CBDG441I The coupling facility connection between channel path 10
#           of processor PR2064CC and channel path 18 of processor
#           PR2064AA is not copied.
_ I   CBDG441I The coupling facility connection between channel path 11
#           of processor PR2064CC and channel path 19 of processor
#           PR2064AA is not copied.
_ I   CBDG441I The coupling facility connection between channel path 12
#           of processor PR2064CC and channel path 20 of processor
#           PR2064DD is not copied.
_ I   CBDG441I The coupling facility connection between channel path 13
#           of processor PR2064CC and channel path 21 of processor
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset
F7=Backward   F8=Forward   F9=Swap      F10=Actions     F12=Cancel
F13=Instruct  F22=Command

```

# 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672processor - Channel Subsystem List panel
  - This repeted processor will be used in by the HCD copy process (to the 2084) after the unsupported channel have been deleted

```

Processor List                      Row 1 of 6 More:      >
Command ===> _____ Scroll ===> CSR

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

/ Proc. ID Type +   Model +   Mode+ Serial-# + Description
- PR2064AA 2064    116      LPAR  1234AA2064 2064 AA, HCD Copy to 2084 CSS0
- PR2064BB 2064    116      LPAR  1234BB2064 2064 BB, HCD Copy to 2084 CSS1
- PR2064CC 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064CR 2064    116      LPAR  1234CC2064 2064 CC, use for 'repeat' proc
- PR2064DD 2064    100      LPAR  1234DD2064 2064 DD, CF not migrated
- PR9672EE 9672    Z97      LPAR  1234EE9672 9672 EE, OS not migrated
***** Bottom of data *****

```

```

F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward
F8=Forward    F9=Swap      F10=Actions   F11=Add        F12=Cancel    F13=Instruct
F20=Right     F22=Command

```

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672processor - Channel Subsystem List panel
  - This repeted processor will be used in by the HCD copy process (to the 2084) after the unsupported channel have been deleted

Channel Path List Row 7 of 50 More: >  
 Command ===> \_\_\_\_\_ Scroll ===> CSR

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

Processor ID . . . . : PR2064CR 2064 CC, use for 'repeat' proc  
 Configuration mode . : LPAR  
 Channel Subsystem ID :

|      | CHPID | Type | Mode | Switch | Sw | Port | Con | Mngd                            | Description |
|------|-------|------|------|--------|----|------|-----|---------------------------------|-------------|
| d 20 | BL    | DED  | —    | —      | —  |      | No  | Unsupported 2084 channel (BL)   |             |
| d 21 | BL    | DED  | —    | —      | —  |      | No  | Unsupported 2084 channel (BL)   |             |
| d 22 | BY    | DED  | —    | —      | —  |      | No  | Unsupported 2084 channel (BY)   |             |
| d 23 | BY    | DED  | —    | —      | —  |      | No  | Unsupported 2084 channel BY     |             |
| d 28 | OSA   | SHR  | —    | —      | —  |      | No  | Unsupported 2084 channel TR/ETH |             |
| d 29 | OSA   | SHR  | —    | —      | —  |      | No  | Unsupported 2084 channel TR/ETH |             |
| — 30 | FC    | SHR  | 61   | 61     | 18 |      | No  | FICON channel used for FCTC     |             |
| — 31 | FC    | SHR  | 61   | 61     | 19 |      | No  | FICON channel used for FCTC     |             |

F1=Help F2=Split F3=Exit F4=Prompt F5=Reset F7=Backward  
 F8=Forward F9=Swap F10=Actions F11=Add F12=Cancel F13=Instruct  
 F20=Right F22=Command



## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672processor - Channel Subsystem List panel
  - This repeted processor will be used in by the HCD copy process (to the 2084) after the unsupported channel have been deleted

### Confirm Delete Channel Path

Row 1 of 6

Command ==> \_\_\_\_\_ Scroll ==> CSR

Scroll forward to view the complete list of channel paths to be deleted. Press ENTER to confirm delete request. Press F12 to cancel delete request.

Processor ID . . . . : PR2064CR      2064 CC, use for 'repeat' proc  
Channel Subsystem ID :

| CHPID | Type | Mode | PCHID |
|-------|------|------|-------|
| 20    | BL   | DED  |       |
| 21    | BL   | DED  |       |
| 22    | BY   | DED  |       |
| 23    | BY   | DED  |       |
| 28    | OSA  | SHR  |       |
| 29    | OSA  | SHR  |       |

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

F1=Help      F2=Split      F3=Exit      F7=Backward      F8=Forward  
F9=Swap      F12=Cancel      F22=Command

## 4a/b HCD Copy (Migrate) 2064 or 9672 CSS Definitions to 2084 (continued)

- Using z/OS v1.4 HCD - Repeating a 2064/9672processor - Channel Subsystem List panel
  - This repeted processor will be used in by the HCD copy process (to the 2084) after the unsupported channel have been deleted

Channel Path List      Row 1 of 44 More:      >

Command ===> \_\_\_\_\_ Scroll ===> CSR

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

Processor ID . . . . : PR2064CR      2064 CC, use for 'repeat' proc  
 Configuration mode . : LPAR  
 Channel Subsystem ID :

|   | CHPID | Type | Mode | Switch | DynEntry | Entry + | Sw | Port | Con | Mngd | Description                 |
|---|-------|------|------|--------|----------|---------|----|------|-----|------|-----------------------------|
| - | 0C    | OSD  | SHR  | ---    |          |         |    |      |     | No   | Gigabit Ethernet            |
| - | 0D    | OSD  | SHR  | ---    |          |         |    |      |     | No   | Gigabit Ethernet            |
| - | 10    | CFS  | SHR  | ---    |          |         |    |      | N   | No   | _____                       |
| - | 11    | CFS  | SHR  | ---    |          |         |    |      | N   | No   | _____                       |
| - | 12    | CFS  | SHR  | ---    |          |         |    |      | N   | No   | _____                       |
| - | 13    | CFS  | SHR  | ---    |          |         |    |      | N   | No   | _____                       |
| - | 30    | FC   | SHR  | 61     |          |         | 61 | 18   |     | No   | FICON channel used for FCTC |
| - | 31    | FC   | SHR  | 61     |          |         | 61 | 19   |     | No   | FICON channel used for FCTC |

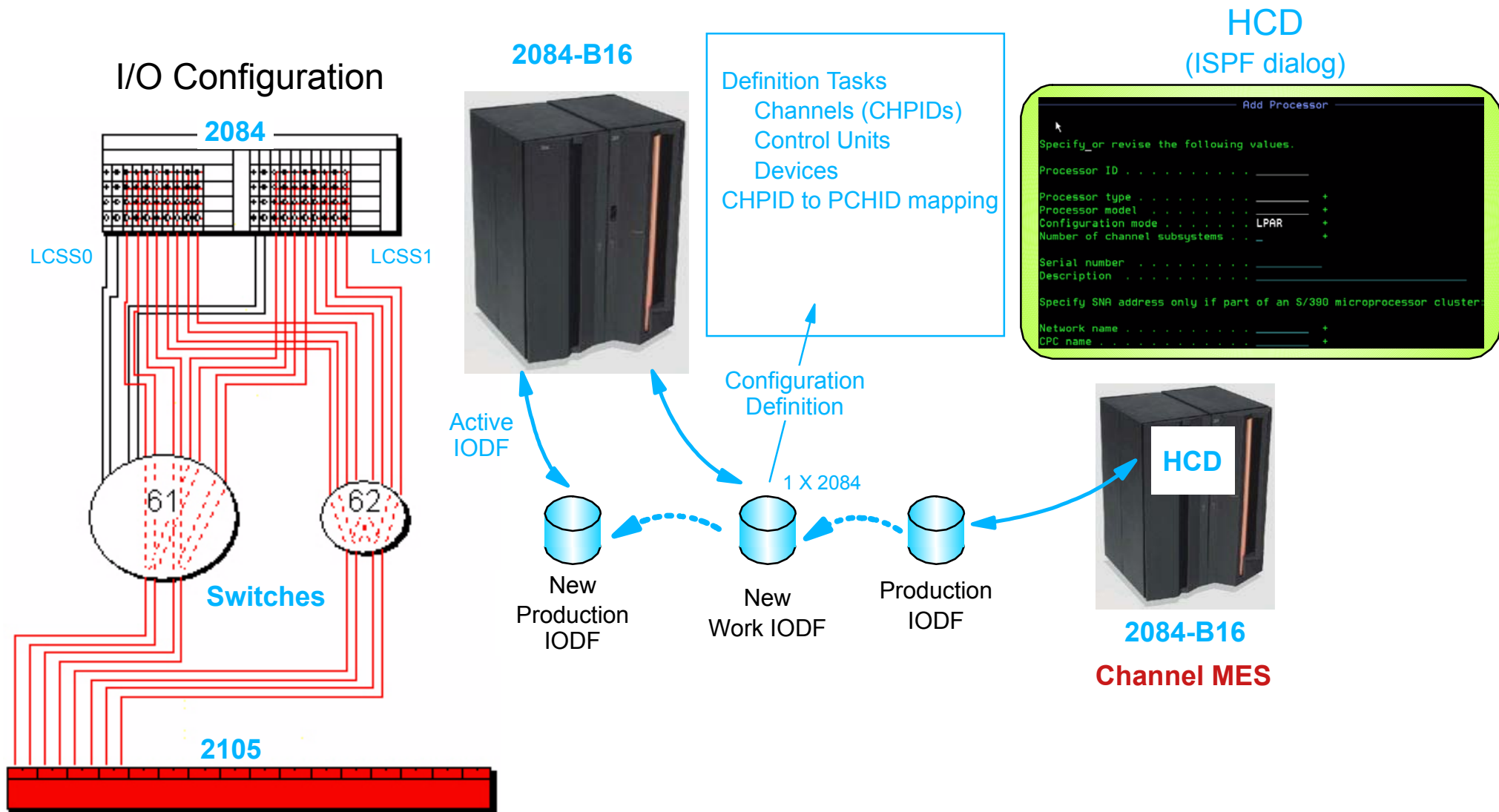
F1=Help      F2=Split      F3=Exit      F4=Prompt      F5=Reset      F7=Backward  
 F8=Forward      F9=Swap      F10=Actions      F11=Add      F12=Cancel      F13=Instruct  
 F20=Right      F22=Command

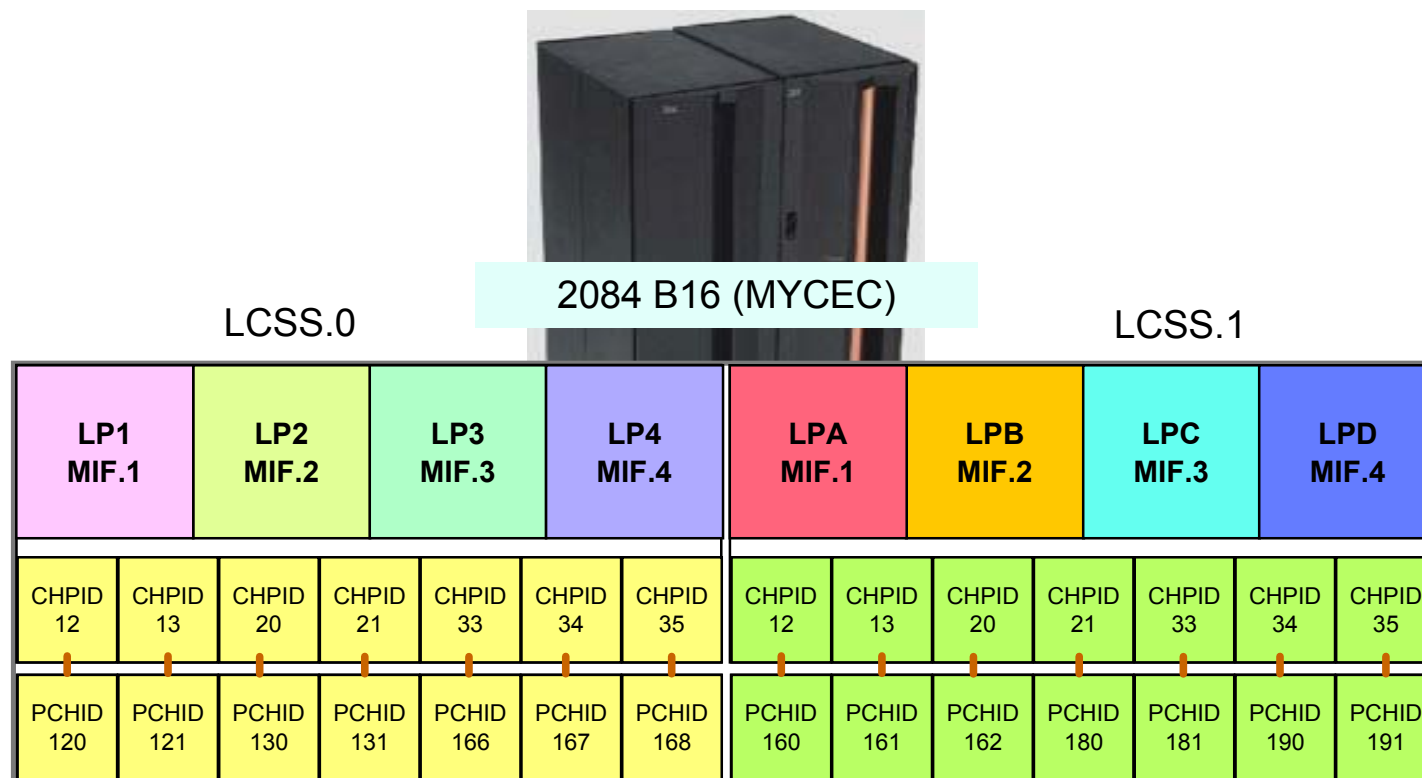


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## z990 I/O Configuration Definition Support - In-depth 2084 MES - Channel Upgrade (using HCD w/ w/o CMT)

ITSO Poughkeepsie  
zSeries  
2084 z990

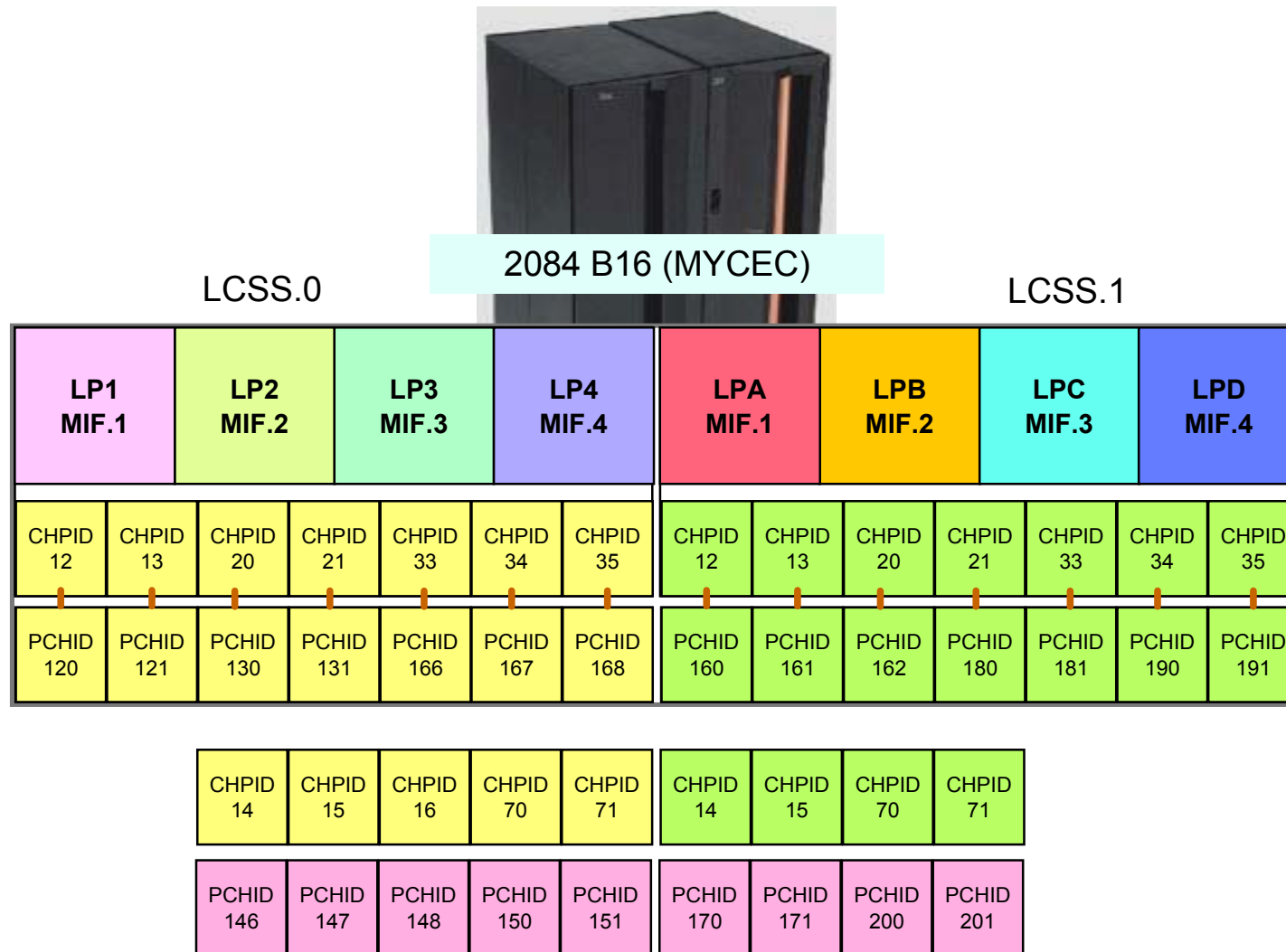




### New Channels

|              |              |              |              |              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| PCHID<br>146 | PCHID<br>147 | PCHID<br>148 | PCHID<br>150 | PCHID<br>151 | PCHID<br>170 | PCHID<br>171 | PCHID<br>200 | PCHID<br>201 |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|

- Channel can be added, removed, or moved, physically concurrent and activated dynamically for both Shared and Spanned channels. However, adding I/O cages is nonconcurrent - use plan ahead at initial order time



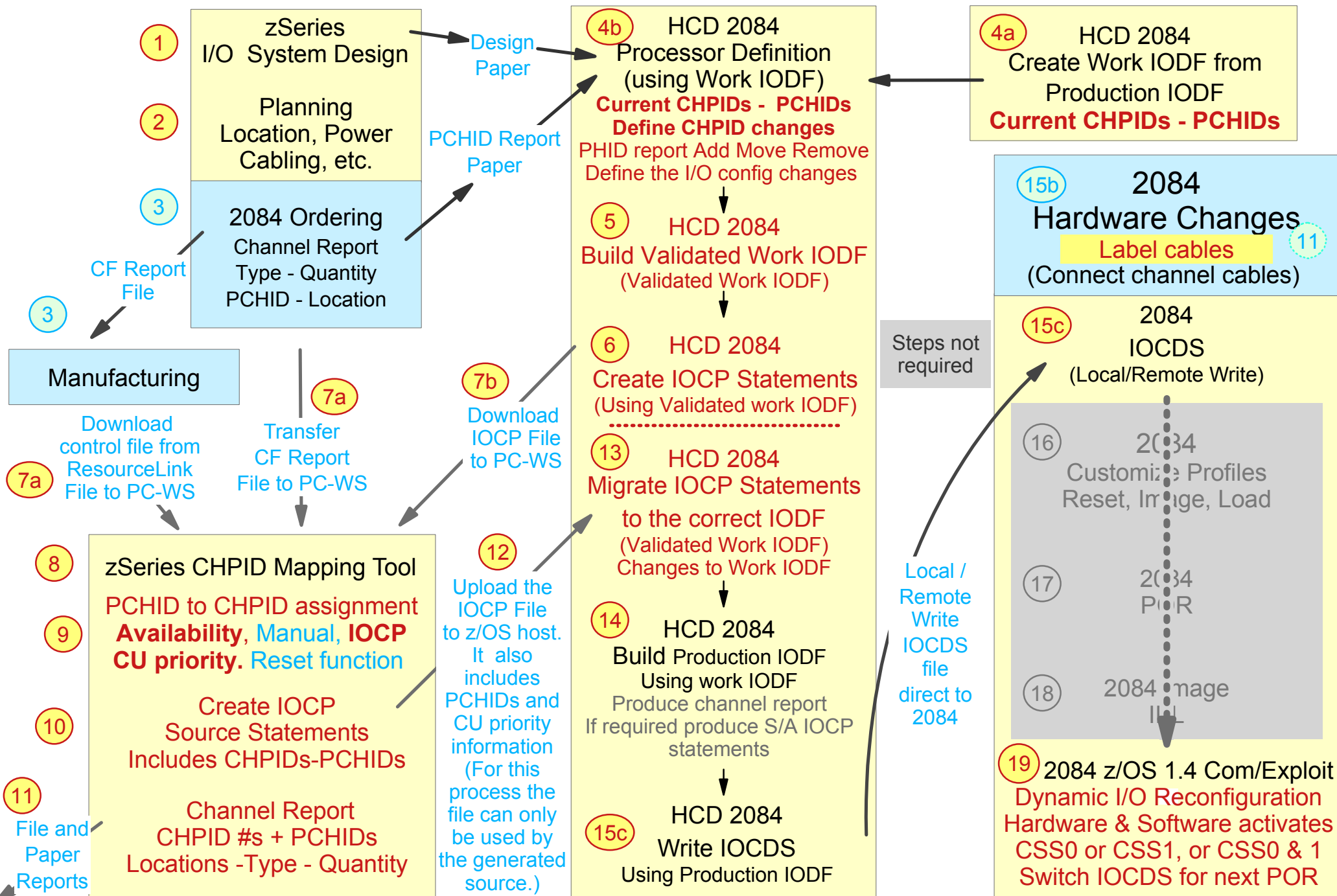
- Channel can be added, removed, or moved, physically concurrent and activated dynamically for both Shared and Spanned channels. However, adding I/O cages is nonconcurrent - use plan ahead at initial order time
- Define the new channels with CHPID numbers



- Channel can be added, removed, or moved, physically concurrent and activated dynamically for both Shared and Spanned channels. However, adding I/O cages is nonconcurrent - use plan ahead at initial order time
- Define the new channels with CHPID numbers
- You may use the z990 CMT to map the CHPIDs to PCHIDs, this does NOT cause a remap of the currently installed/defined unchanged channels



# I/O Configuration Definition Support - Channel MES Upgrade w/ CMT



# ~~I/O Configuration Definition Support Channel MES Upgrade (w/ CMT)~~

| HCD Processor definition options |                                          |
|----------------------------------|------------------------------------------|
| 1.3                              | Processor-                               |
| 1.3.s                            | CSS + # Subchans                         |
| 1.3.s.p                          | Partitions (for a CSS)                   |
| 1.3.s.s                          | Channels (for a                          |
| HCD CU definition options        |                                          |
| 1.4                              | CU path connections to each required CSS |

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

Start the z990 CMT program  
PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- **IOCP** assignment
- **CU priority**, current and new
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority )

Transfer file to z/OS 'Text Fixed 80'

Create Channel Report  
CHPID #s + PCHIDs  
Locations -Type - Quantity

\* Once having built a 'validated work' IODF do not make ANY changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

CFReport

Download the HCD validated work IOCP file to CMT PC WS

Upload the CMT IOCP file to z/OS host. The file also includes PCHIDs and CU priority information (For this process the CMT IOCP file can only be used by the source that generated the initial statements )

4a/b

## HCD 2084 Channel MES Upgrade

Start to make a definition change to the production IODF for the channel MES, this will cause a work IODF to be created.

**You must** review the PCHID report for channel changes  
Use HCD option 1.3.s.s & PF11 to add channels by CHPID #  
Use HCD option 1.4 to add CUs and 1.5 to add Devices

5

## HCD 2084 Build Validated Work IODF \*

Use the work IODF and HCD option 2.12  
This validates the work IODF for the 2084, w/ and w/o PCHIDs  
Use HCD option 6.4 to check IODF type - s/b 'Validated work'  
Print HCD CTC connection report, FICON target CUADDD s/b CSS.ID - MIF.ID

6

## HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

## HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF by using HCD option 5.1 plus options 2 and 3 - PCHIDs  
Use HCD option 6.4, IODF type will be changed to a work type IODF  
Use HCD option 1.3.s.s and PF20 to view PCHIDs, PF20 for Spanned

14

## HCD 2084 Build Production IODF

Use HCD option 2.1 to build a production IODF from the work IODF  
Note every defined CHPID must have a PCHID (except IQD and ICP)

15c

## HCD 2084 Write IOCDS

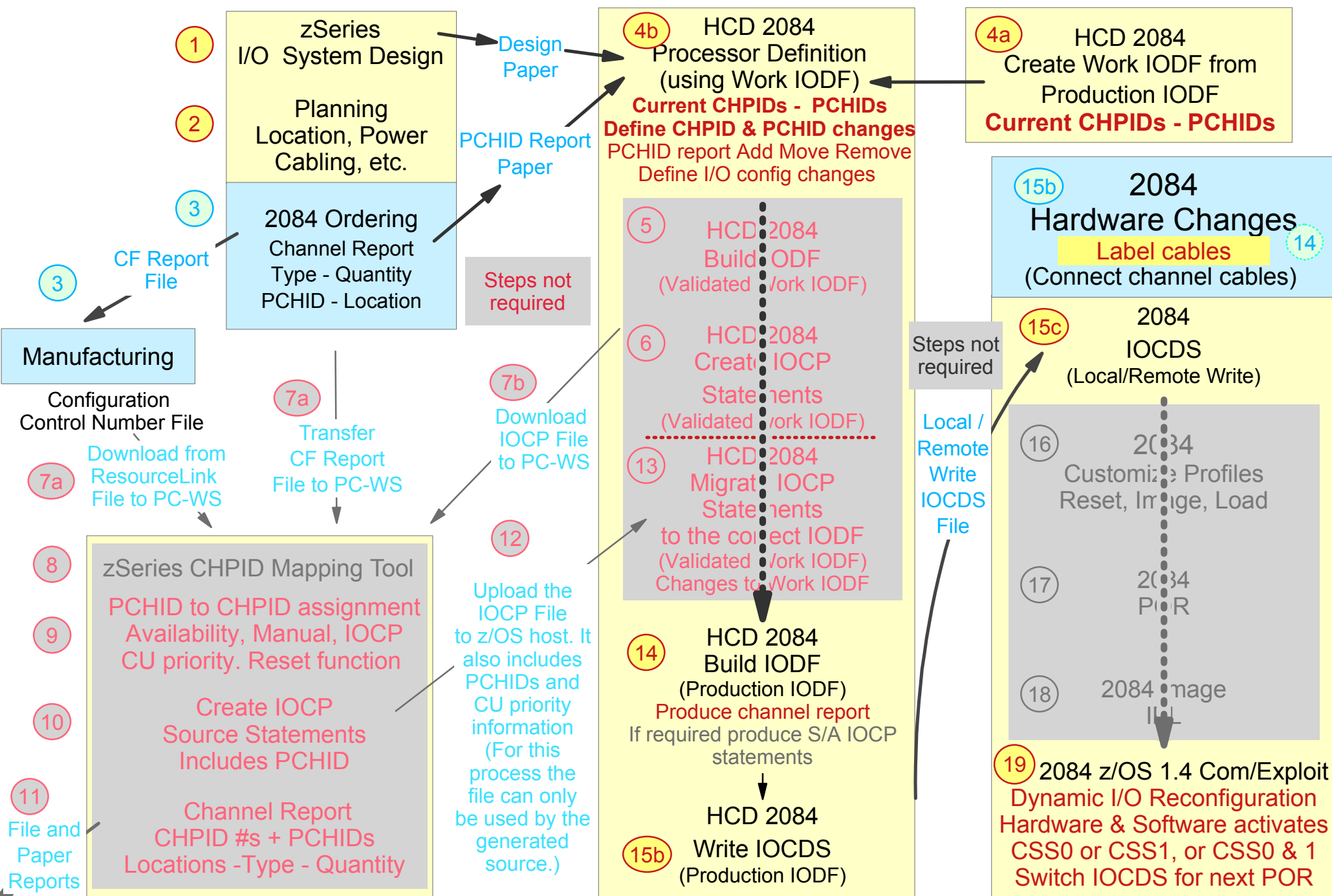
Use production IODF & HCD option 2.11 to remote write the IOCDS.  
HCD CPC and HMC CPC object names must be the same

19

## HCD 2084 Dynamic I/O Reconfiguration

Use current and new IODFs, and the z/OS activate command or the HCD activate function to perform I/O changes dynamically to CSS0 or CSS1, or 0 & 1 - note: Hardware activate is multi-CSS wide  
Use z/OS command or HCD function to switch IOCDS dynamically

# I/O Configuration Definition Support - Channel MES Upgrade (w/o CMT)



## 2084 Concurrent Channel MES Upgrade (Not using the CMT)

| HCD Processor definition options |                                          |
|----------------------------------|------------------------------------------|
| 1.3                              | Processor (2084)-                        |
| 1.3.s                            | GSS + # Subchans                         |
| 1.3.s.p                          | Partitions (for a GSS)                   |
| 1.3.s.s                          | Channels (for a                          |
| HCD CU definition options        |                                          |
| 1.4                              | CU path connections to each required CSS |

4a/b

### HCD 2084 Channel MES Upgrade

Start to make a definition change to the production IODF for the channel MES, this will cause a work IODF to be created.

**You must** review the CHPID report for channel changes

Use HCD option 1.3.s.s & PF11 to add channels by CHPID #  
Use the PCHID report and assign required PCHIDs to CHPIDs

Use HCD option 1.4 to add CUs and 1.5 to add Devices

### HCD 2084 Build Production IODF

14

Use HCD option 2.1 to build a production IODF from the work IODF

### HCD 2084 Write IOCDS

15c

Use the production IODF and  
HCD option 2.11 to remote write the IOCDS  
The HCD CPC object name and the 2084 CPC object name must be the same

19

### HCD 2084 Dynamic I/O Reconfiguration

Use current and new IODFs, and the z/OS activate command or the HCD activate function to perform Hardware & Software I/O changes dynamically to CSS0 or CSS1, or CSS0 & 1

**Note:** Hardware activate is multi-CSS wide

Use z/OS command or HCD function to switch IOCDS dynamically

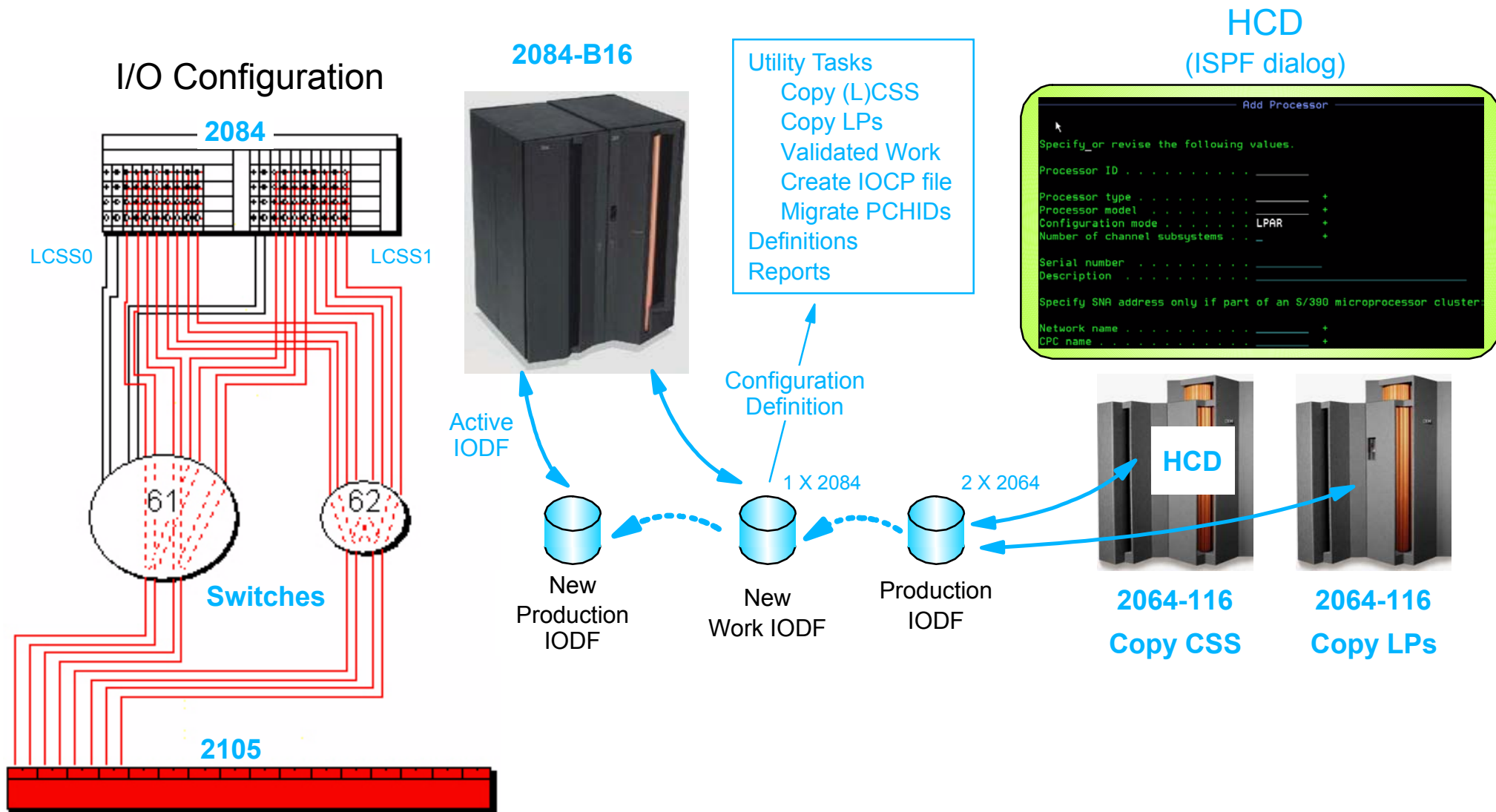




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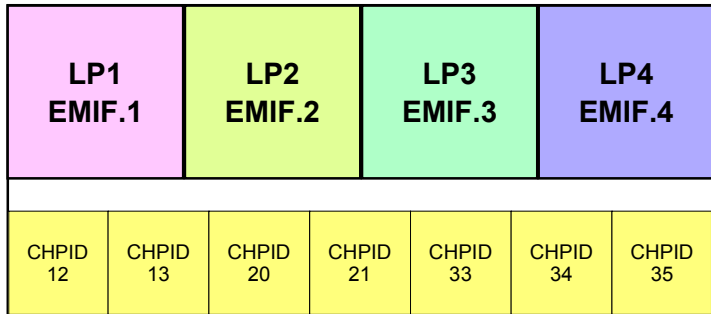
# z990 I/O Configuration Definition Support - In-depth 2064-2084 staged migrations Using HCD with 2064 definition migrations

ITSO Poughkeepsie  
zSeries  
2084 z990

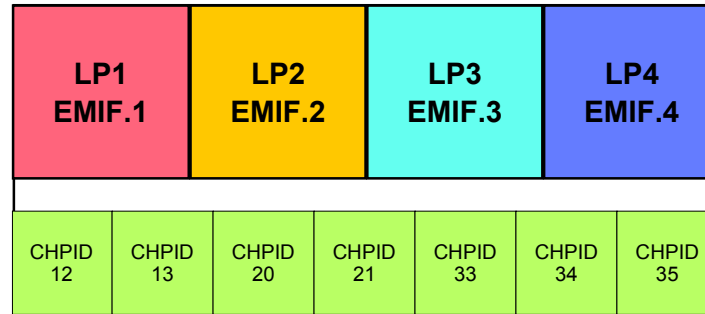


# 2084 I/O Configuration Definition Support z/OS Migrate CSS

2064 (PR2064AA)



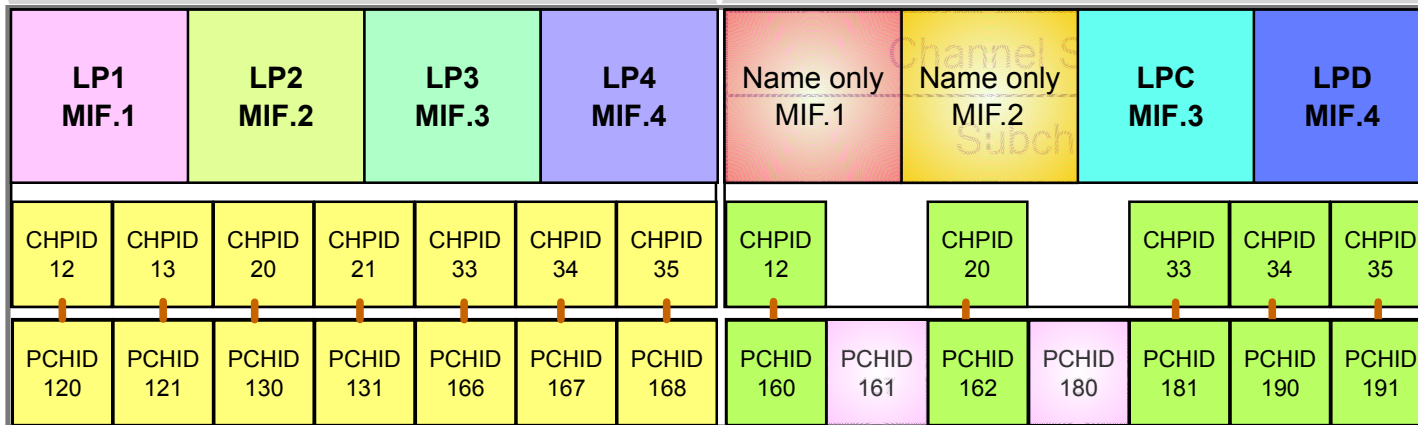
2064 (PR2064BB)



Migrate 2064 (PR2064AA) to CSS.0

Migrate 2064 (PR2064BB) to CSS.1

2084 B16 (MYCEC)



1. Two Installed 2064s
2. Install 1 2084
3. Define the 2084 processor
4. Define 2 CSSs in the 2084
5. Migrate PR2064AA to CSS0
6. Migrate 2064BB LPs to CSS1
7. Map 2084 CHPIDs to PCHIDs
8. Build production IODF
9. Physically install/migrate to the 2084
10. Write the IOCDS
11. Customize profiles
12. POR
13. IPL

I/O definition File (Work IODF)

Processor - MYCEC

CSS.0 + SubChan Support

CSS.1 + SubChan Support

LPs in CSS.0 and CHPIDs

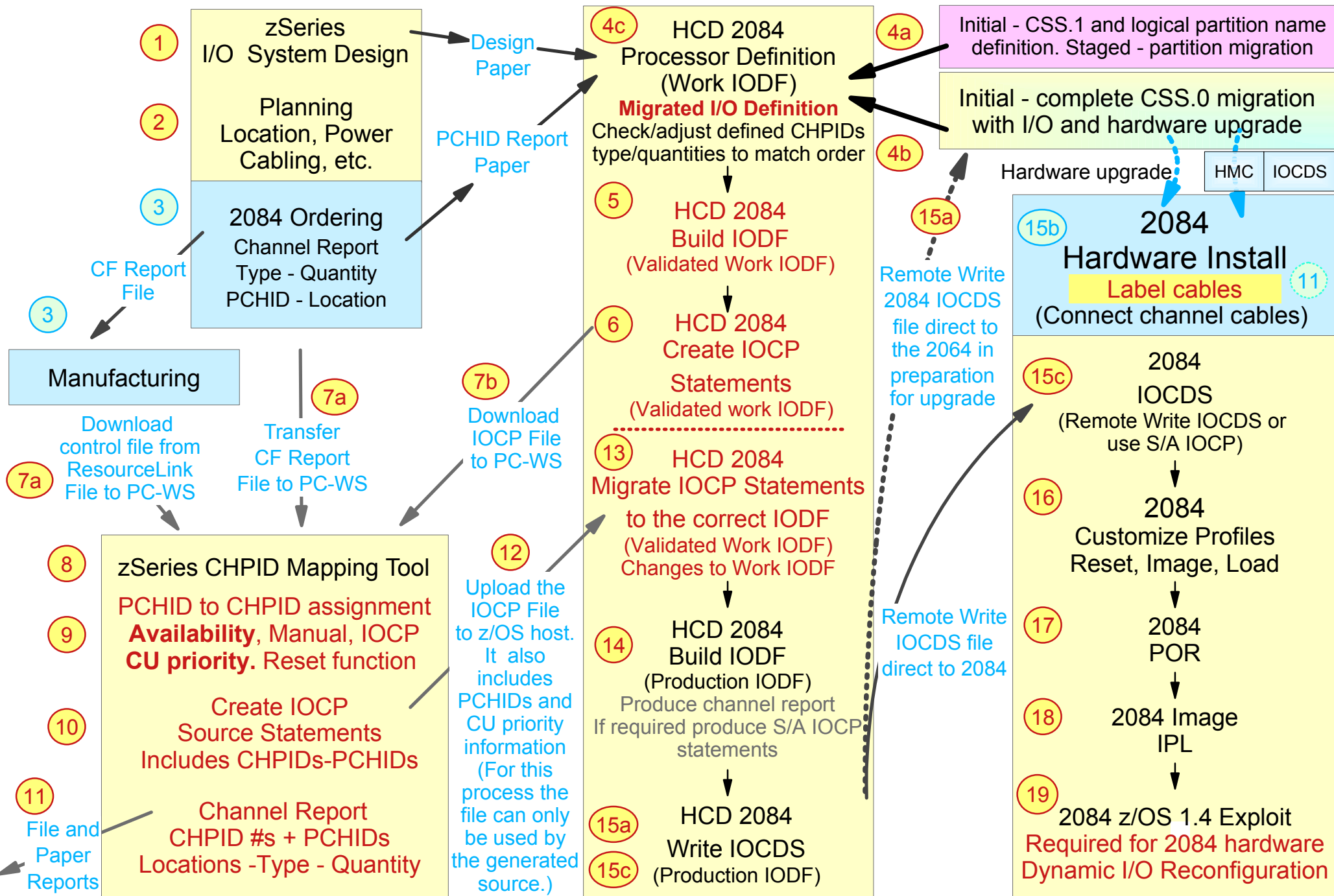
LPs in CSS.1 and CHPIDs

Use CMT to map CHPIDs to PCHIDs





# New 2084 with Staged Migration



# New 2084 with 2064 multi step migration

## Assumes within the IODF there is:

- No changes to the OS Config definition
- No changes to the ESCON or FICON switch definitions
- If LPAR names are not unique HCD will request a change
- No changes to the CU paths definitions
  - Same numbers of paths and CHPID #s
  - If real duplicate device number are used then the associated CUs must have different CU numbers
- No change to the I/O device definitions

\* Once having built a 'validated work' IODF do not make any changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

### z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

#### PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create Channel Report  
CHPID #s + PCHIDs  
Locations -Type - Quantity

CFReport

Upload the CMT  
IOCP file  
to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process  
the CMT IOCP file  
can only be used  
by the source that  
generated the initial  
statements )

## HCD Migrate 2064 Definitions to 2084

Create Work IODF from current production IODF and proceed to migrate the 2064/9672 I/O configuration definitions to the 2084 CSSs

Use HCD options 1.3/1.3.s/ for the new 2084

Use HCD options 1.3.y to copy the 2064 CSSs to the 2084 CSSs

Use HCD options 1.3.p.r to copy a 2064 LP to a 2084 LP

Define the required Logical Partition names, FCTC CUADDs, CU #s

## HCD 2084 Build Validated Work IODF \*

Use the work IODF and HCD option 2.12

This validates the work IODF for the 2084, w/ or w/o PCHIDs

Use HCD option 6.4 to check IODF type - s/b 'Validated work'

## HCD Create 2084 IOCP Statements \*

Create from the 'validated work' IODF using HCD option 2.3  
Validated work IOCP statements can only be used with the CMT  
.....

## HCD Migrate (import) IOCP Statements \*

Use HCD option 5.1 plus options 2/ 3 - PCHIDs

Migrate IOCP statements into the correct 'validated work' IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs

IODF type will be changed to a work type IODF

## HCD 2084 Build production IODF

Use HCD option 2.1 to build a production IODF  
from the 2084 work IODF

Note every defined CHPID must have a PCHID (except IQD and ICP)

## HCD 2084 Write IOCDS

Use the production IODF and HCD option 2.11

Note CPC object name must be the 2064 if writing for an upgrade,  
or 2084 if remote write to the 2084



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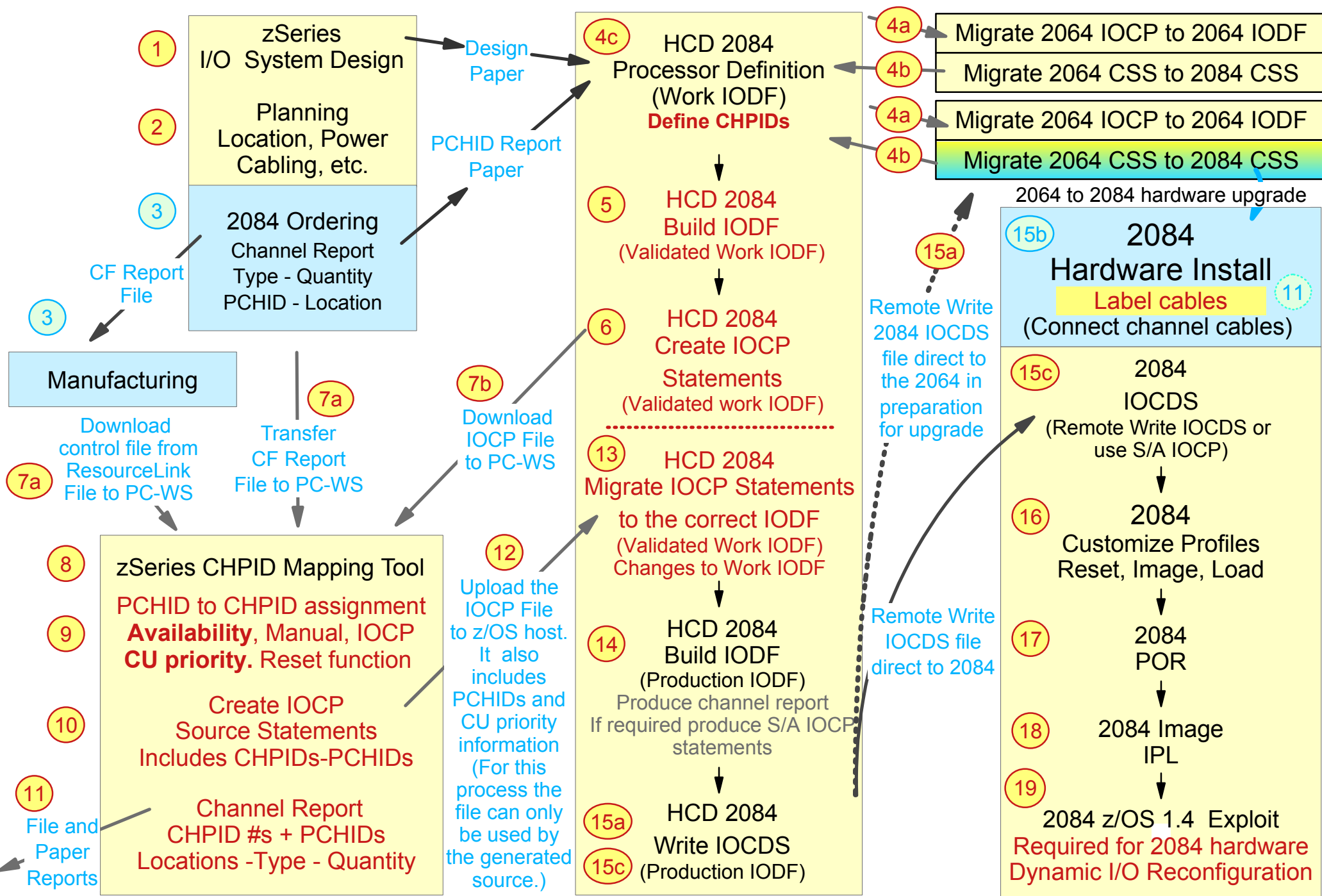
# z990 I/O Configuration Definition Support - In-depth New/Upgrade 2084 Using HCD with 2064 IOCP source statements

ITSO Poughkeepsie  
zSeries  
2084 z990

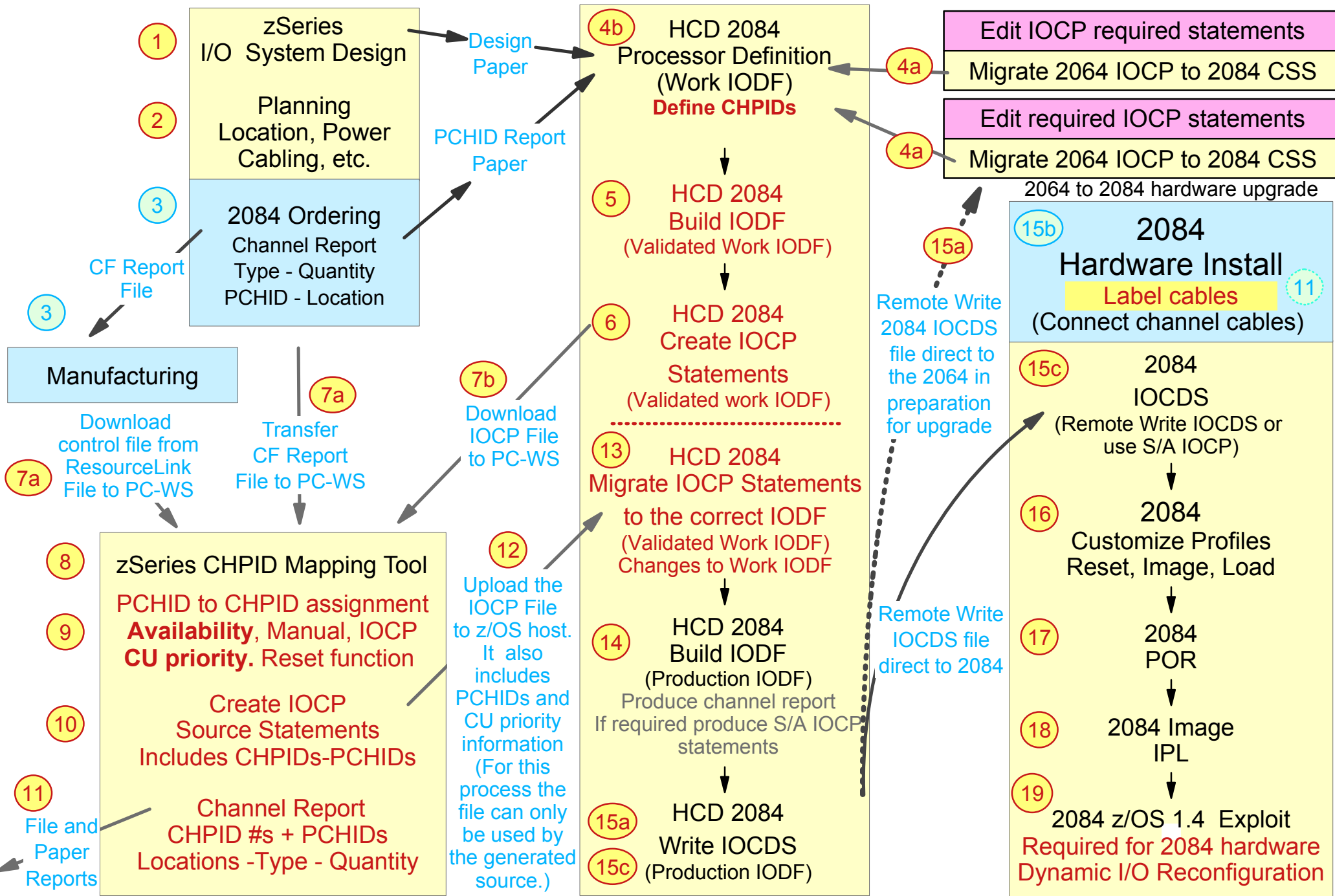
- If a customer only wants to use IOCP source statements to migrate one or more 2064s to a 2084, then there are a number of ways that this can be performed. Three of those ways are shown here:
  - Migrate each of the 2064 IOCP statement files into an IODF where each target processor in the IODF is defined as a 2064, then later migrate each of the 2064 processors defined in this IODF to a different 2084 CSSs in the same IODF
    - ▶ If there are duplicate LP names between the IOCP source statement files, then HCD will request that you to change the LP names (via an HCD panel) during the HCD migrate process
  - Migrate each of the 2064 IOCP statement files into an IODF where the target processor.CSS in the IODF is defined as a 2084
    - ▶ If there are duplicate LP names between the IOCP source statement files, then the user will be required to change the names prior to invoking the HCD migrate process. Otherwise the HCD migrate process will fail with an error message.
    - ▶ Use a text file editor that supports global changes.
  - Add or change the 2064 IOCP source statement syntax (where required) to support multiple 2084 CSSs, and spanned channels.
    - ▶ THIS APPROACH IS NOT RECOMMENDED AND MAY TAKE SEVERAL DAYS OR WEEKS TO COMPLETE SUCCESSFULLY
    - ▶ This method is not documented in this presentation



# 2084 - IOCP New 2084 with Migration from 2064s to 2084



# 2084 - IOCP New 2084 with Migration from 2064s to 2084





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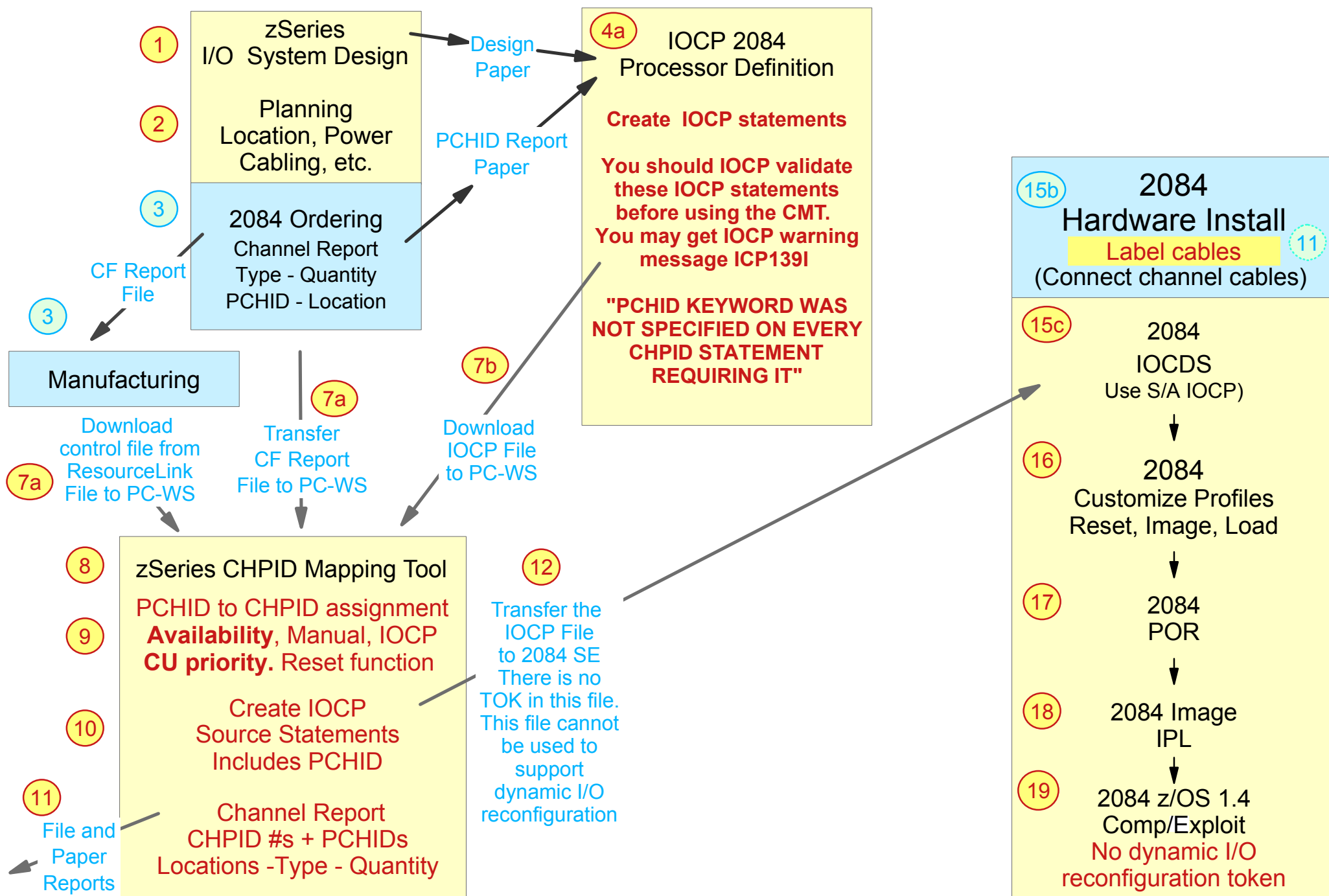
# z990 I/O Configuration Definition Support

## New 2084 Install - using IOCP and the CMT

ITSO Poughkeepsie  
zSeries  
2084 z990



## New 2084 - I/O Configuration Support - Only using IOCP and CMT





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# z990 I/O Configuration Definition Support IOCP Statements

ITSO Poughkeepsie  
zSeries  
2084 z990

- ICPIOCP

- ID Statement - Token - Characters or Special
  - Resource Statement - Partition names - CSSn + Partition names
  - Resource Statement - CSS.id - MAXDEV
  - CHPID - Path - CSS.ID - CHPID
  - CHPID - CHPID mode - SPANNED
  - CHPID - PCHID
- Warning  
This is  
IOCP s  
be use

## Warning:

This is a HCD validated work IOCP statement and CANNOT be used by any IOCP program

```

ID      MSG1='TREXTEST',
MSG2='TROWELL.IODFA1.WORK - 2003-02-02 22:29',
SYSTEM=(2084,1),
TOK=('PRTREX01',000000090ECB2064222925750103033000000000,
,00000000,'03-02-02','22:29:25',,,'')
RESOURCE PARTITION=((CSS(0),(LP1,1),(LP2,2),(LP3,3)),(CSS(1),(LP4,1),(LP5,2),(LP6,3))),
MAXDEV=((CSS(0),64512),(CSS(1),64512))
CHPID  PATH=(CSS(0),40),SHARED,PARTITION=((LP1,LP2,LP3),(=)),
SWITCH=01,TYPE=CNC,
PCHID=160
CHPID  PATH=(CSS(0),41),SHARED,PARTITION=((LP1,LP2,LP3),(=)),
SWITCH=01,TYPE=CNC,
PCHID=370
CHPID  PATH=(CSS(0),42),SHARED,PARTITION=((LP1,LP2,LP3),(=)),
SWITCH=01,TYPE=CNC,
PCHID=360
CHPID  PATH=(CSS(0),43),SHARED,PARTITION=((LP1,LP2,LP3),(=)),
SWITCH=01,TYPE=CNC,
PCHID=161

```

## ● ICPIOCP

- CNTLUNIT Statement - one CU statement covers all CSSs in the same 2084
- CNTLUNIT Statement - Path changes - CSSn + CHPID, CCSn + CHPID ...
- CNTLUNIT Statement - Link changes - CSSn + Link, CCSn + Link ...

```

CNTLUNIT CUNUMBR=2200,
PATH= ( (CSS (0) , 44, 45, 46, 47, 54, 55, 56, 57) , (CSS (1) , 44, 45, 46, *
      47, 54, 55, 56, 57) ) , UNITADD= ( (00, 256) ) ,
LINK= ( (CSS (0) , 70, 71, 72, 73, 70, 71, 72, 73) , (CSS (1) , 70, 71, 72, *
      73, 70, 71, 72, 73) ) , CUADD=2, UNIT=2105
CNTLUNIT CUNUMBR=2300,
PATH= ( (CSS (0) , 44, 45, 46, 47, 54, 55, 56, 57) , (CSS (1) , 44, 45, 46, *
      47, 54, 55, 56, 57) ) , UNITADD= ( (00, 128) ) ,
LINK= ( (CSS (0) , 70, 71, 72, 73, 70, 71, 72, 73) , (CSS (1) , 70, 71, 72, *
      73, 70, 71, 72, 73) ) , CUADD=3, UNIT=2105
CNTLUNIT CUNUMBR=3000,
PATH= ( (CSS (0) , 80, 81, 82, 83, 90, 91, 92, 93) , (CSS (1) , 80, 81, 82, *
      83, 90, 91, 92, 93) ) , UNITADD= ( (00, 256) ) ,
LINK= ( (CSS (0) , 6160, 6161, 6162, 6163, 6260, 6261, 6262, 6263) , (*
      CSS (1) , 6160, 6161, 6162, 6163, 6260, 6261, 6262, 6263) ) ,
      CUADD=0, UNIT=2105
CNTLUNIT CUNUMBR=3100,
PATH= ( (CSS (0) , 80, 81, 82, 83, 90, 91, 92, 93) , (CSS (1) , 80, 81, 82, *
      83, 90, 91, 92, 93) ) , UNITADD= ( (00, 256) ) ,

```

- ICPIOCP

- IODEVICE Statement - Preferred Path - CSSn + CHPID
- IODEVICE Statement - Candidate Partition - CSSn + Partition name

→  
IODEVICE ADDRESS=(2300,032),CUNUMBR=(2300),STADET=Y,UNIT=3390B  
IODEVICE ADDRESS=(2320,096),CUNUMBR=(2300),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(3000,032),CUNUMBR=(3000),STADET=Y, \*

**PATH=( (CSS (0) , 80) ) , UNIT=3390B**

IODEVICE ADDRESS=(3080,128),CUNUMBR=(3000),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(3100,032),CUNUMBR=(3100),STADET=Y,UNIT=3390B  
IODEVICE ADDRESS=(3180,128),CUNUMBR=(3100),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(3200,032),CUNUMBR=(3200),STADET=Y,UNIT=3390B  
IODEVICE ADDRESS=(3280,128),CUNUMBR=(3200),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(3300,032),CUNUMBR=(3300),STADET=Y,UNIT=3390B  
IODEVICE ADDRESS=(3380,128),CUNUMBR=(3300),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(4000,032),CUNUMBR=(4000),STADET=Y, \*

→  
**PARTITION=( (CSS (0) , LP1) ) , UNIT=3390B**

IODEVICE ADDRESS=(4100,032),CUNUMBR=(4100),STADET=Y,UNIT=3390B  
IODEVICE ADDRESS=(4180,128),CUNUMBR=(4100),STADET=Y,UNIT=3390A  
IODEVICE ADDRESS=(4200,032),CUNUMBR=(4200),STADET=Y,UNIT=3390B



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## z990 I/O Configuration Definition Support - In-depth

Using z/OS HCD/HCM

2064-2084 Upgrade - using HCD with 2064 migration

2084 New Install - Define the 2084

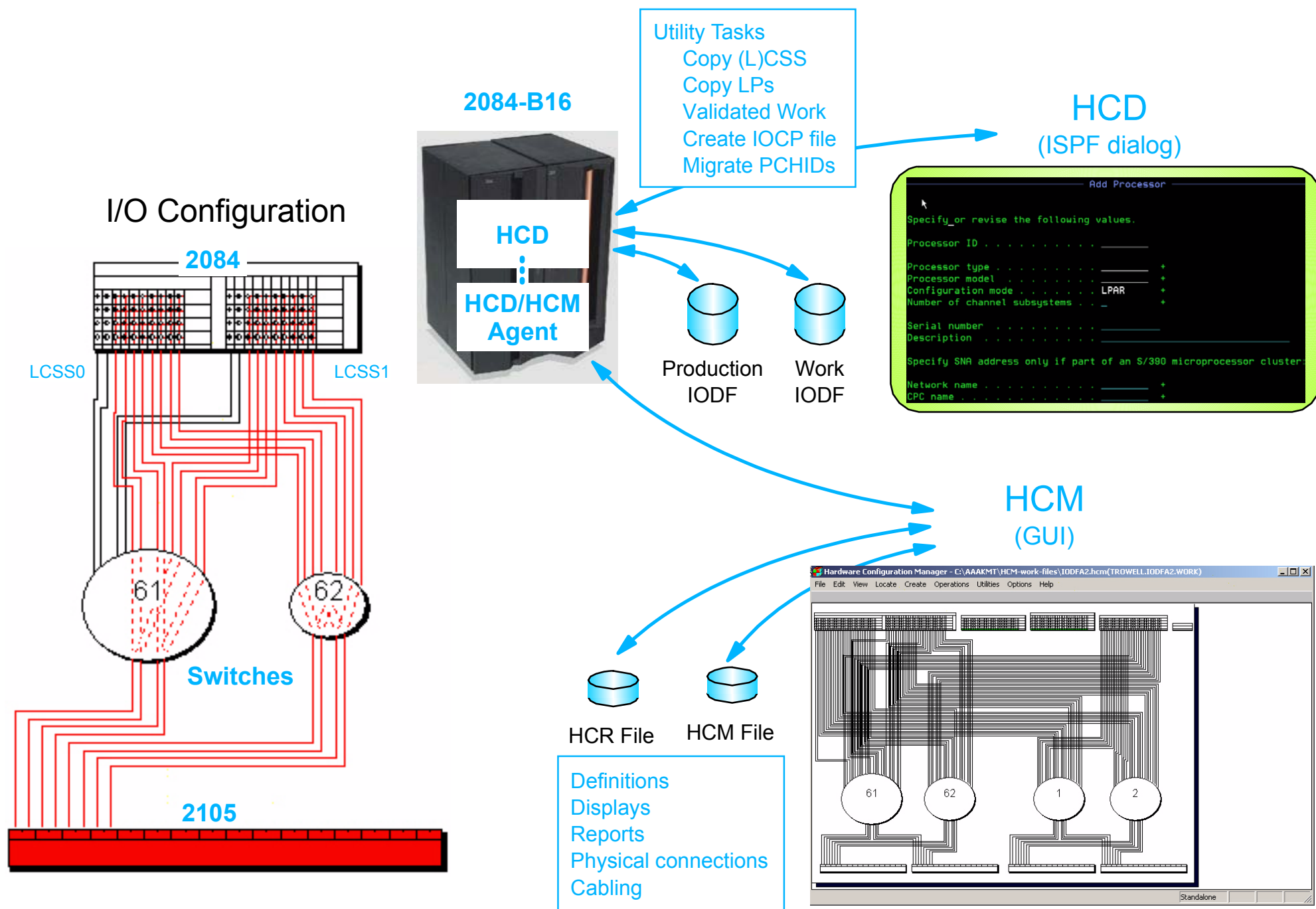
ITSO Poughkeepsie

zSeries

2084 z990



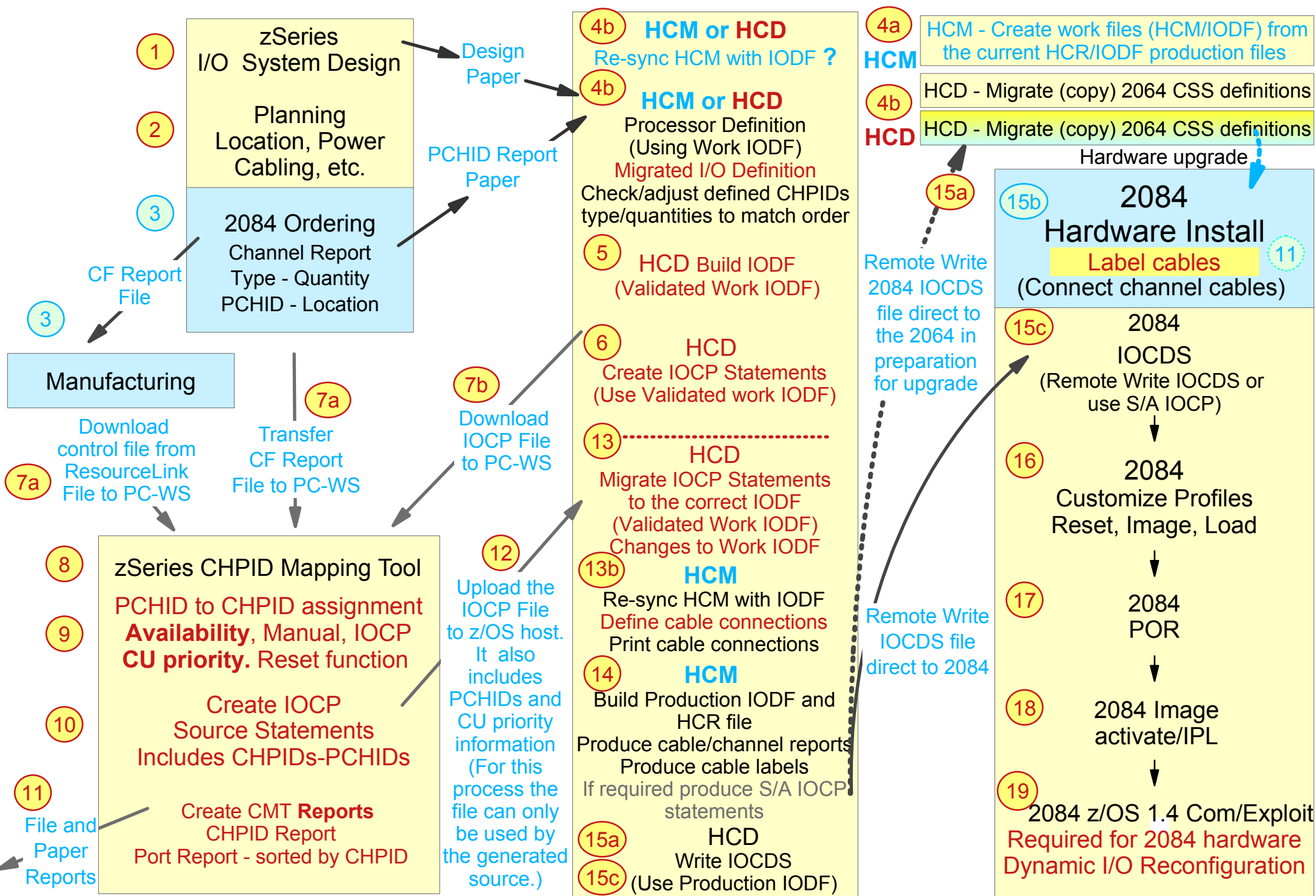
# 2084 - I/O Configuration Support - z/OS HCD / HCM Support - Migrate to 2084



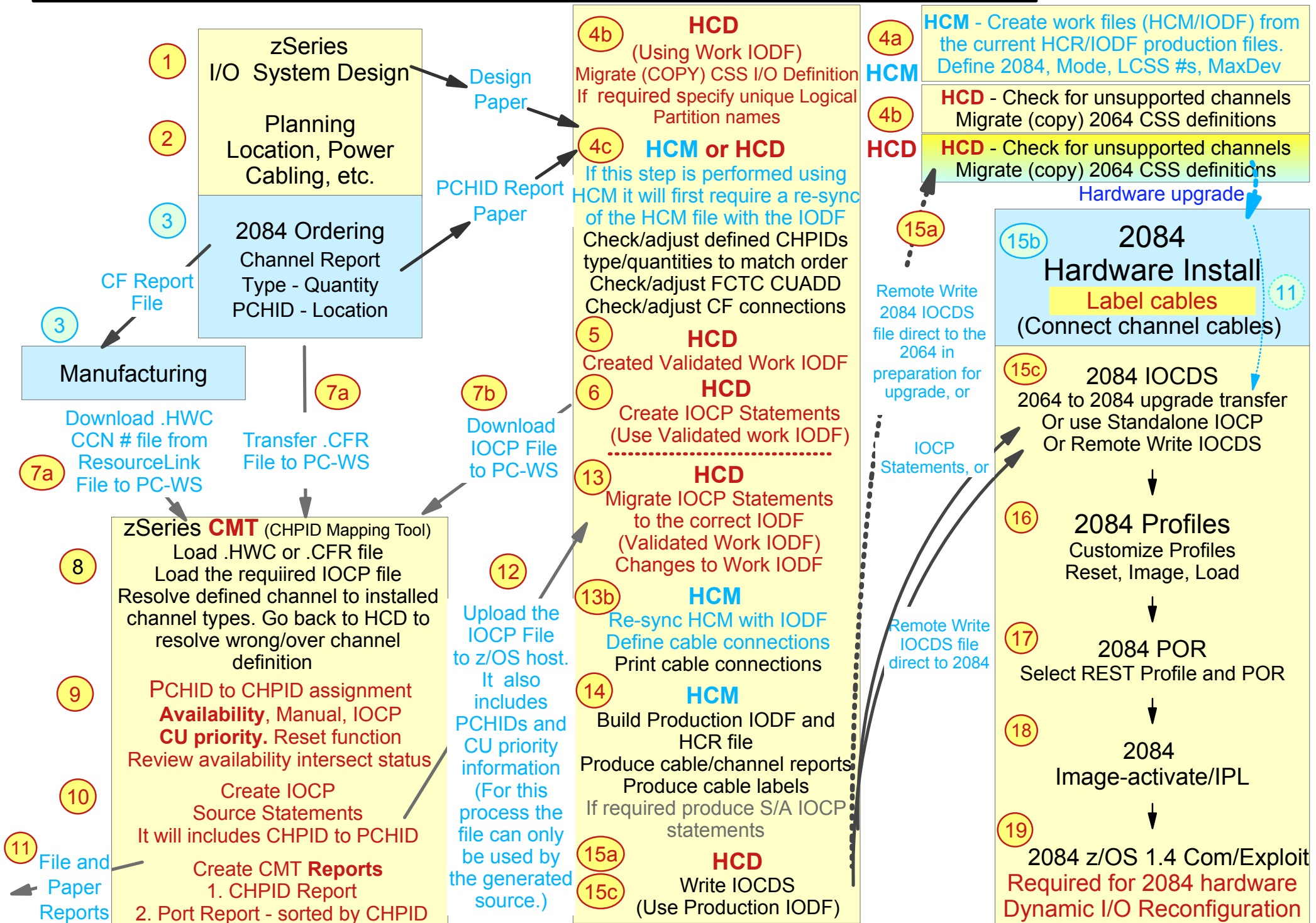


- HCD HCM provides the same I/ O configuration definition support for the 2084 as it does for the 2064, with the additional support for the 2084 as follows:
  - Multiple logical channel subsystems (LCSSs) in one physical 2084 processor
  - The capability defining the SPANNED channel definition
  - The assigning of a PCHID to a CHPID
- For the 2064 I/O configuration definitions, some of the operations can only be invoked from HCD, it is the same for the 2084
  - In the following migrate sequence it is strongly recommended to use HCM initially and when there is a need to switch to HCD, remain in HCD up to the build production IODF step
- The following are examples of HCD operations (not HCM) that are required to support the total 2084 I/O configuration definition process up to the building of a production IODF and writing of an IOCDS:
  - Copy an LCSS or copy a Logical Partition
  - Create a validated work (HCD option 2.12)
  - Create a IOCP file
  - Migrating the PCHID information back into the HCD validated work
  - Write an IOCDS

# 2084 - I/O Configuration Definition Support - z/OS HCD / HCM Migrate CSSs



# 2084 - I/O Configuration Definition Support - z/OS HCD / HCM Migrate CSSs





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## z990 I/O Configuration Definition Support End of 2084 definition support presentation

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# 2084 - I/O Configuration Definition Support - Migrate CSS

Assumes within the IODF there is:

- No changes to the OS Config definition
- No changes to the ESCON or FICON switch definitions
- If LPAR names are not unique HCD will request a change
- No changes to the CU paths definitions
  - Same numbers of paths and CHPID #s
- If real duplicate device number are used then the associated CUs must have different CU numbers
- No change to the I/O device definitions

\* Once having built a 'validated work' IODF do not make any changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT Reports

CHPID Report  
Port Report - sorted by CHPID

CFReport

Download the HCD  
validated work IOCP  
file to CMT PC WS

Upload the CMT  
IOCP file  
to z/OS host. The  
file also includes  
PCHIDs and CU  
priority information  
(For this process  
the CMT IOCP file  
can only be used  
by the source that  
generated the initial  
statements )

4a/b

## HCM - Create work files and Define 2084

Create HCM/IODF work files from current production HCR/IODF files, and define the 2084 (define using HCM or HCD)

### HCD Migrate 2064 Definitions to 2084

Migrate the 2064/9672 I/O configuration definitions to the 2084 CSSs

Use HCD options 1.3 and PF11 to add new 2084 (optional)

Use HCD options 1.3.y to copy the 2064 CSSs to the 2084 CSSs  
Define the required Logical Partition names, FCTC CUADDs, CU #s

### HCD 2084 Build Validated Work IODF \*

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Use the work IODF and HCD option 2.12, check completion messages

This validates the work IODF for the 2084, w/ or w/o PCHIDs

Use HCD option 6.4 to check IODF type - s/b 'Validated work'

Print an HCD CTC connection report, FICON target CUADD s/b CSS.ID - MIF.ID

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### HCD 2084 Create CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

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### HCD Migrate CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work'

IODF by using HCD option 5.1 plus options 2 and 3 - PCHIDs

Use HCD option 1.3.s.s and PF20 to view PCHIDs, PF20 for Spanned

Use HCD option 6.4, IODF type will be changed to a work type IODF

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### HCD 2084 Build Production IODF

Use HCD option 2.1 to build a production IODF from the work IODF

Note every defined CHPID must have a PCHID (except IQD and ICP)

15a/c

### HCD 2064 or 2084 Write IOCDS

Use production IODF & HCD option 2.11 to remote write the IOCDS.

HCD CPC and HMC CPC object names must be the same

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### IPL 2084 Image

OS/390 2.10 - z/OS 1.4 with toleration support IPL in CSS0 image

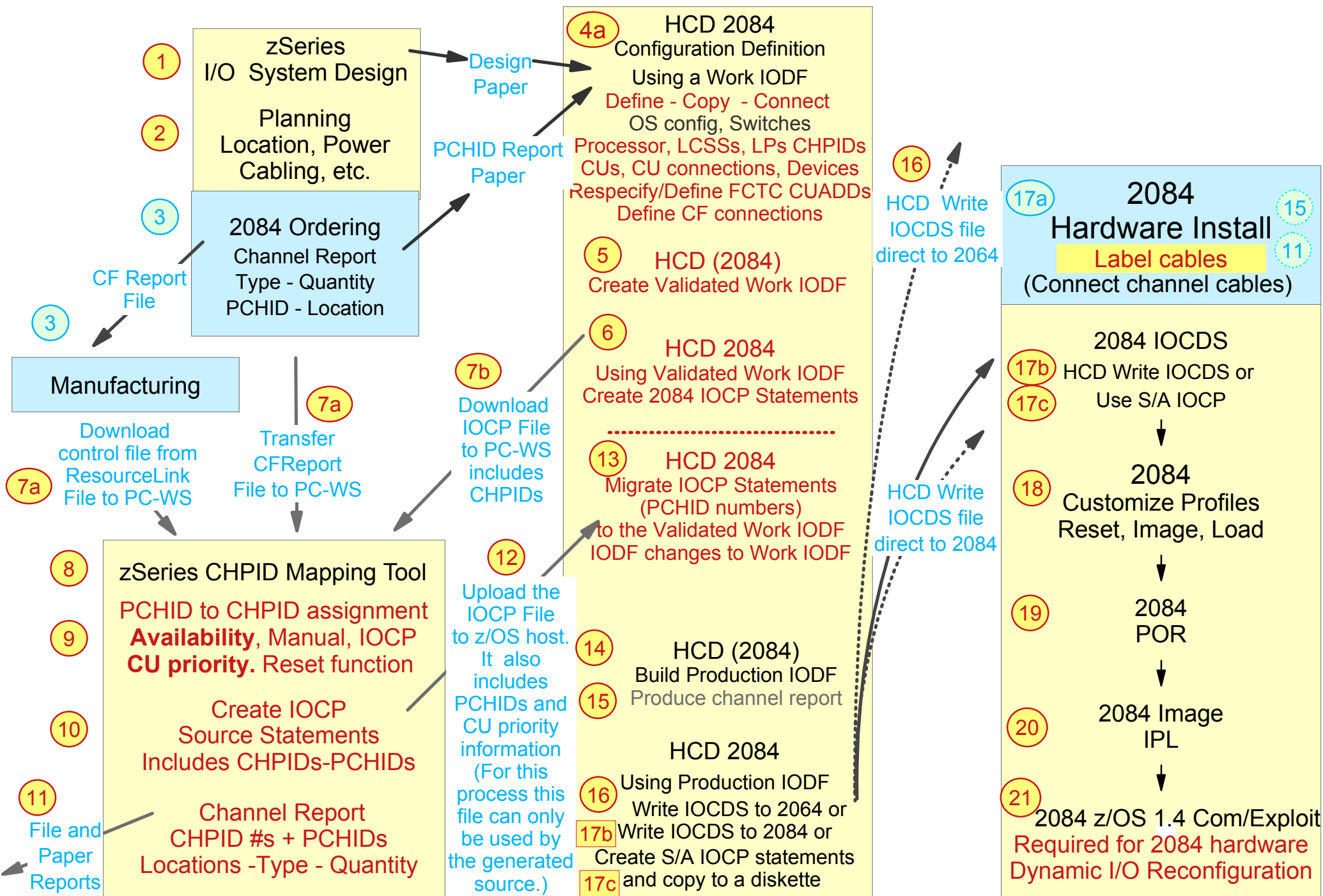
z/OS 1.4 with exploitation support IPL in CSS0 or CSS1 image

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### HCD 2084 Dynamic I/O Reconfiguration

Use the z/OS activate command or the HCD activate function to perform I/O changes dynamically. This requires z/OS 1.4 + toleration support for dynamic to CSS0, or z/OS 1.4 + Exploitation support for dynamic to CSS0 and CSS1 -Note: H/W activates are multi-CSS wide

# Define new 2084 I/O configuration definition: 2084 - Upgrade - Swap - New



# Define new 2084 I/O configuration definition: 2084 Upgrade Swap New

| HCD Processor definition options |                                          |
|----------------------------------|------------------------------------------|
| 1.3                              | Processor (2084)                         |
| 1.3.s                            | CSS + # Subchans                         |
| 1.3.s.p                          | Partitions (for a CSS)                   |
| 1.3.s.s                          | Channels (for a                          |
| HCD CU definition options        |                                          |
| 1.4                              | CU path connections to each required CSS |

## z990 CHPID Mapping Tool

Transfer the customer's 2084 CFReport  
Transfer z/OS IOCP file to the PC  
IOCP Source Statements

PCHID to CHPID assignment

- **Availability** assignment
- Manual assignment
- IOCP assignment
- **CU priority**
- Reset function

Create the IOCP input source  
(includes PCHID #s and CU priority)

Transfer file to z/OS 'Text Fixed 80'

Create CMT **Reports**

CHPID Report

Port Report - sorted by CHPID

\* Once having built a 'validated work' IODF do not make ANY changes to the IODF prior to importing the CMT IOCP statements and having built a production IODF

CFReport

Download the HCD validated work CMT IOCP file to CMT PC WS

Upload the CMT IOCP file to z/OS host. The file also includes PCHIDs and CU priority information (For this process the CMT IOCP file can only be used by the source that generated the initial statements)

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### HCD 2084 I/O Definition (z/OS 1.4 HCD)

Create a work IODF and define the 2084 I/O configuration

Use HCD options 1.1 (OS config) and 1.2 (switches)

Use HCD option 1.3 (processor), and 1.3.s, 1.3.s.p 1.3.s.s

Use HCD option 1.4 (CUs) and 1.5 (Devices)

Specify FCTC CUADD as LCSSId.MIFid when FCTC target is a 2084 LP

Produce a processor CTC report - HCD option 1.3.s.x, or a  
a System CTC report, HCD option 3.1.CTC.2

Define CF connections using HCD option 1.3.s.s.f.p (for CF channels)

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### HCD Build 2084 Validated Work IODF \*

Use the work IODF and HCD option 2.12, check completion messages

This validates the work IODF for the 2084, w/ or w/o PCHIDs

Use HCD option 6.4 to check IODF type - s/b 'Validated work'

6

### HCD Create 2084 CMT IOCP Statements \*

Use the 'validated work' IODF and HCD option 2.3

13

### HCD Migrate 2084 CMT IOCP Statements \*

Migrate IOCP statements into the correct 'validated work' IODF  
by using HCD option 5.1 plus options 2 and 3 (PCHID)

Use HCD option 6.4, IODF type has changed to a work type IODF

Use HCD option 1.3.s.s and PF20 to view PCHIDs, PF20 for Spanned

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### HCD Build Production 2084 IODF

Use HCD option 2.1 to build a production IODF from the work IODF

Use HCD option x.x to produce a 2084 channel/PCHID report

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17b

17c

### HCD Write 2084 IOCDS

Use production IODF & HCD option 2.11 to remote write the IOCDS.

The HCD CPC and HMC CPC object names must be the same

Or use HCD option 2.3 to produce S/A IOCP file and transfer to diskette

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### IPL 2084 Image

OS/390 2.10 - z/OS 1.4 with compatibility, IPL in CSS0 image

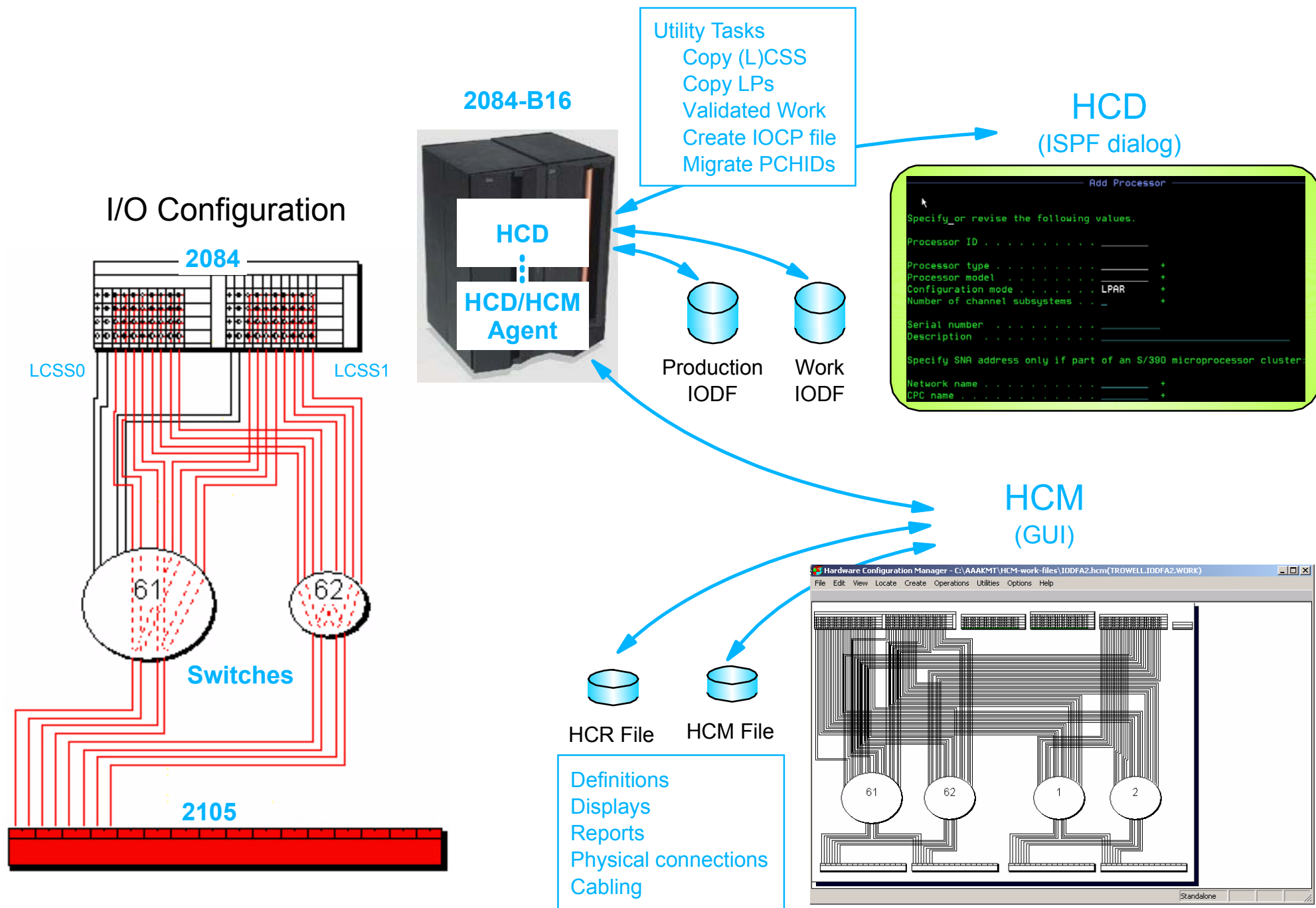
z/OS 1.4 with exploitation supports IPL in CSS0 or CSS1 image

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### HCD 2084 Dynamic I/O Reconfiguration

Use the z/OS activate command or the HCD activate function to perform I/O changes dynamically. This requires z/OS 1.4 + Compatibility support for dynamic to ICSS0, or z/OS 1.4 + Exploitation support for dynamic to LCSS0 and LCSS1 - hardware activates are CEC wide (mult-LCSS)





- HCM provides the same I/ O configuration definition support for the 2084 as it does for the 2064, with the additional support for the 2084 as follows:
  - Multiple logical channel subsystems (LCSSs) in one physical 2084 processor
  - The capability defining the SPANNED channel definition
  - The assigning of a PCHID to a CHPID
- For the 2064 I/O configuration definitions, some of the operations can only be invoked from HCD, it is the same for the 2084
- The following are examples of HCD operations required to support the total 2084 I/O configuration definition process up to the building of a production IODF and writing of an IOCDS:
  - Copy an LCSS or copy a Logical Partition
  - Create a validated work (HCD option 2.12)
  - Create a IOCP file
  - Migrating the PCHID information back into the HCD validated work
  - Write an IOCDS

- Full I/O configuration definition
- Using HCD/HCM - all the following functions can be are invoked from HCM
  - Create an IODF and a HCM file
  - Provide a configuration description (HCM configuration title)
  - Define the OS Config + EDT + Esoterics
  - Define the switches (FICON) - for this configuration example there will be
    - 2 switched paths
    - 2 cascade paths - this is just to test this specification capability
  - Define the cabinets
  - Define the patch panels
  - Connect the switch ports to cabinets and/or patch panels
    - Specify the cable assignment

- Using HCD/HCM - all the following functions are invoked from HCM cont...
  - Define a processor
    - Define the Processor
      - Define an LCSS - and Maximum Device support
        - Define the logical partitions for the LCSS
        - Define the channels for the LCSS
      - Define an LCSS - and Maximum Device support
        - Define the logical partitions for the LCSS
        - Define the channels for the LCSS
        - Assign the PCHID to the CHPID (can be defined later)
      - Connect the switches and/or cabinets and/or patch panels to the channels

- Using HCD/HCM - all the following functions are invoked from HCM cont...
  - Define a CU
    - Define a PHYSICAL Control Unit and interfaces (example 2105 with FICON)
    - Connect the Control Unit interfaces to switches and/or cabinets and/or patch panels
      - Specify the cable assignment
    - Define a logical CU
      - Define the devices to the LCU
      - Define the logical CU channel paths
  - Define the PPRC connections
  - Define the CTC connections

- Using HCD/HCM - all the following functions are invoked from HCM cont...
  - xxx
  - Define the CF connections
  - Adjust FCTC
  - Close the HCM file
  - PCHID to CHPID
    - Use HCD option 2.12





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## z990 I/O Configuration Definition Support End of 2084 definition support presentation

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| Support Item                                                | GA 1 | GA 2 | Comments                                             |
|-------------------------------------------------------------|------|------|------------------------------------------------------|
| LCSS.0                                                      | Yes  |      |                                                      |
| LCSS.1                                                      | Yes  |      |                                                      |
| 30 Partitions defined                                       | Yes  |      |                                                      |
| < 15 logical partitions activated                           |      | Yes  |                                                      |
|                                                             |      |      |                                                      |
| Spanned IQD                                                 |      |      |                                                      |
| Spanned IC                                                  |      |      |                                                      |
| Spanned FICON                                               |      |      |                                                      |
| Spanned ISC                                                 |      |      |                                                      |
| Spanned OSA-E                                               |      |      |                                                      |
| Shared ESCON                                                | Yes  |      |                                                      |
| OS/390 2.10 + compatibility<br>z/OS 1.2-1.4 + compatibility | Yes  |      | Runs in LCSS.0 only<br>Wait state if IPL'd in LCSS.1 |
| z/OS 1.4 + exploitation                                     |      | Yes  | Runs in LCSS.0 and LCSS.1                            |
| z/VM 4.4 + (HCD/HCM)                                        |      | Yes  | Available 7-8/03                                     |
|                                                             |      |      |                                                      |
|                                                             |      |      |                                                      |
|                                                             |      |      |                                                      |

- Valid mix of 2084 channels defined to the same CU from the same host image:
  - CVC, CBY
  - CNC, FCV, FC
  - CTC
  - CFS, CBS
  - CFP, CBP, ICP
  - OSD
  - OSE
  - FCP
  - IQD
- A control unit (that is defined to connect to the 2084) can only have a mix of paths type (for the 2084) that are from the same bulleted entry shown above.
  - The mix applies to the combined set of paths in all of the CSS's in a control unit.

## ~~2084 I/O Configuration Support HCM Support step by step definition~~

- Logon to the z/OS host from HCM
- Create an work IODF
  - File - IODF - HLQ - Create... (IODF)
    - Dataset name - Volser - No of blocks - Logging Request - OK
      - Should get HCD information message CNDA450I - IODF dataset created successfully - OK
- Work with the work IODF and create an HCM file
  - Load...
    - Choose a local file (HCM)
    - Enter file details - Save
- Your defined I/O configuration should be shown, showing that it is 'untitled'
- Provide a title and any footnotes (if required)
  - Edit - Title and Footnotes...
    - Title - Test 2084 I/O Configuration Definition
    - FootNote1: Version 03/23/03
  - OK

## ~~2084 I/O Configuration Support HGM Support step by step definition~~

- Define the OS config
  - Edit - OS Configurations...
    - Create OS Config...
      - Name - MVS2084
      - Type - MVS
      - Description - OS Config for test 2084
      - OK
    - Select the OS Config - MVS2084
      - Edit EDT...
        - EDT ID - 01
        - Description - blank
        - OK
      - Select the EDT - 01
        - Create Esoteric...
          - Esoteric name - DASD - OK
        - Create Esoteric...
          - Esoteric name - SYSDA - OK
        - Create Esoteric...
          - Esoteric name - TAPE - OK
      - Close
      - This will end the OS config definition
      - You will need to return to the OS config
        - When defining devices
        - To define the NIP console



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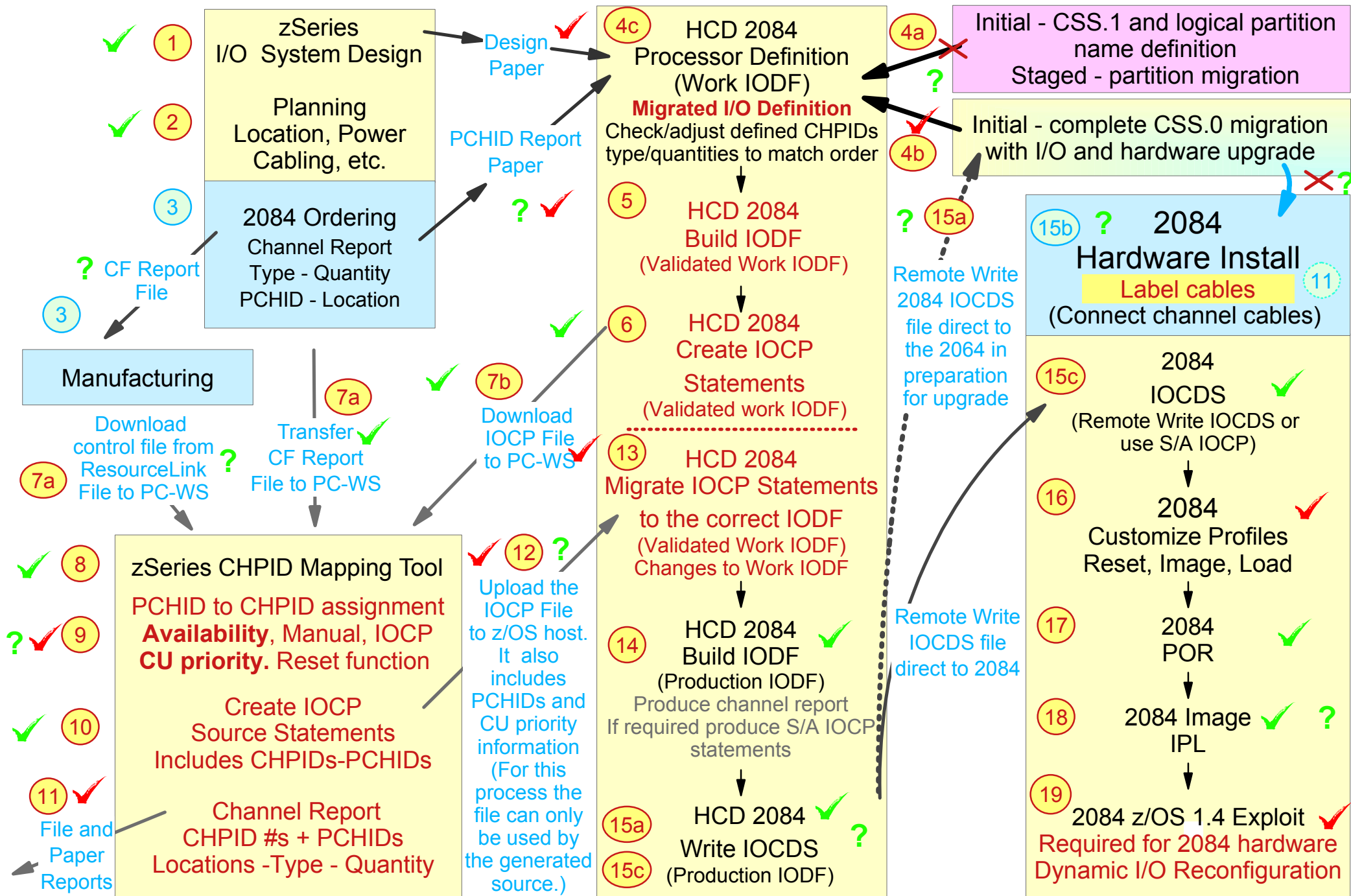
## z990 I/O Configuration Definition Support

2064-2084 Upgrade \*\*\*\*\* 3/26/03 Status \*\*\*\*\*

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# New 2084 with Staged Migration





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# z990 I/O Configuration Definition Support End of 2084 definition support presentation Development Engineering Version

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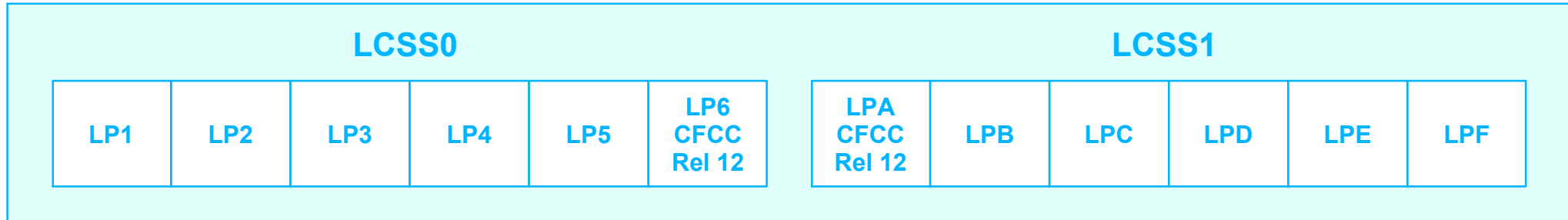
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# Basics support z990 - OS/390 - z/OS - z/VM

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- The following charts provide a quick summary of the basics support for
  - z990 LCSS and LP support
  - CF support
  - OS/390 and z/OS support
  - z/VM support

2084 - z990



- z990 June to October - Hardware support
  - 1 or 2 LCSSs
  - Up to 30 logical partitions can be defined
  - Up to 15 logical partitions can be activated
  - Up to 512 channels supports (256 maximum for a LCSS)
  - No Spanning support for IQD or IC (should not be defined, POR will fail if in the IOCDS)
  - Coupling Facility partition supported in either LCSS
    - ▶ CF LPAR.id (from image profile) of equal or less than x'F' is required if z/OS compatibility is not installed on any one system in the sysplex that connects to this CF
    - ▶ When a Z990 CF sender channel is coupled to a Freeway (2064), G5/G6 (9672) or Raptor (2066) the CFCC toleration support code is required at the receiver end
      - CFCC release 11 for G5/G6
      - CFCC release 12 for Freeway (2064) and Raptor (2066)

## 2084 - Z990

| LCSS0                 |                            |                       |     |     |                       | LCSS1                 |     |     |     |     |                       |
|-----------------------|----------------------------|-----------------------|-----|-----|-----------------------|-----------------------|-----|-----|-----|-----|-----------------------|
| LP1<br>OS/390<br>2.10 | LP2<br>z/OS<br>1.2 1.3 1.4 | LP3<br>z/OS<br>1.4 Ex | LP4 | LP5 | LP6<br>CFCC<br>Rel 12 | LPA<br>z/OS<br>1.4 Ex | LPB | LPC | LPD | LPE | LPF<br>CFCC<br>Rel 12 |

- z990 June to October - OS/390 and z/OS Support
  - The following OS/390 and z/OS version/levels are supported to run in LCSS0, when the OS/390 or z/OS Z990 compatibility support code is installed. If the code is not installed the system will go into a coded wait state at IPL time. OS/390 or z/OS with or without compatibility code cannot run in LCSS1.
    - ▶ OS/390 2.10
    - ▶ z/OS 1.2
    - ▶ z/OS 1.3
    - ▶ z/OS 1.4
  - All of the above levels will support static (POR required) I/O configuration definitions for LCSS0 or LCSS1, or LCSS0 and LCSS1, as well as dynamic I/O reconfiguration for LCSS0
- z990 post October - z/OS support
  - z/OS 1.4 with exploitation code can run in either LCSS0 or LCSS1
  - It will support static (POR required) I/O configuration definitions for LCSS0 or LCSS1, or LCSS0 and LCSS1, as well as full dynamic I/O reconfigurations for LCSS0 and LCSS1. The dynamic hardware change can be invoked from any one LP in LCSS0 or LCSS1



2084 - Z990

| LCSS0 |     |     |                      |                    |                       | LCSS1 |     |                      |                    |     |                       |
|-------|-----|-----|----------------------|--------------------|-----------------------|-------|-----|----------------------|--------------------|-----|-----------------------|
| LP1   | LP2 | LP3 | LP4<br>z/VM<br>3x 4x | LP5<br>z/VM<br>4.4 | LP6<br>CFCC<br>Rel 12 | LPA   | LPB | LPC<br>z/VM<br>3x 4x | LPD<br>z/VM<br>4.4 | LPE | LPF<br>CFCC<br>Rel 12 |

## ● z990 June to October - z/VM Support

- The following z/VM version/releases are supported to run in LCSS0 or LCSS1, when the z/VM Z990 compatibility support code is installed (APAR VM63124).
  - ▶ z/VM 3.1
  - ▶ z/VM 4.2
  - ▶ z/VM 4.3
- All of the above levels will support static (POR required) I/O configuration definitions for LCSS0 or LCSS1, or LCSS0 and LCSS1, as well as dynamic I/O reconfiguration for LCSS0

## ● z990 post August/October - z/VM support

- z/VM 4.4 with xxxx code can run in either LCSS0 or LCSS1
- z/VM 4.4 with yyyy code can run in either LCSS0 or LCSS1. It will support static (POR required) I/O configuration definitions for LCSS0 or LCSS1, or LCSS0 and LCSS1, as well as full dynamic I/O reconfigurations for LCSS0 and LCSS1. The dynamic hardware change can be invoked from any one LP in LCSS0 or LCSS1. z/VM 4.4 uses HCD and HCM an I/O configuration definition tool.

## ● z/VM 3.1, 4.2, 4.3, 4.4 will support a number of different guests, some of these being:

- OS/390 2.10, z/OS 1.2, z/OS 1.3, z/OS 1.4 (comp), z/OS 1.4 (exp)

- z/VM 3.1, z/VM 4.2, z/VM 4.3, z/VM 4.4 and Linux



## 2084 - Z990

| LCSS0                 |                            |                       |                      |                    |                       | LCSS1                 |              |                      |                    |     |                       |
|-----------------------|----------------------------|-----------------------|----------------------|--------------------|-----------------------|-----------------------|--------------|----------------------|--------------------|-----|-----------------------|
| LP1<br>OS/390<br>2.10 | LP2<br>z/OS<br>1.2 1.3 1.4 | LP3<br>z/OS<br>1.4 Ex | LP4<br>z/VM<br>3x 4x | LP5<br>z/VM<br>4.4 | LP6<br>CFCC<br>Rel 12 | LPA<br>z/OS<br>1.4 Ex | LPB<br>Linux | LPC<br>z/VM<br>3x 4x | LPD<br>z/VM<br>4.4 | LPE | LPF<br>CFCC<br>Rel 12 |

- LCSS0

- OS/390 2.10, z/OS 1.2, z/OS 1.3, z/OS 1.4 with compatibility support
- z/OS 1.4 with exploitation support
- z/VM 3.1, z/VM 4.2, z/VM 4.3 with Z990 support (APAR VM 63124)
- z/VM 4.4 with exploitation support
- Linux for zSeries, Linux for S/390 --- to be verified
- CFCC release 12

- LCSS1

- z/OS 1.4 with exploitation support
- z/VM 3.1, z/VM 4.2, z/VM 4.3 with Z990 support (APAR VM 63124)
  - No dynamic support
- z/VM 4.4 with exploitation support
- Linux for zSeries, Linux for S/390 --- to be verified
- CFCC release 12