IBM z/OS HCD & HCM Newsletter No 10



CTC Connections

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Is This Applicable?

Your Feedback Is Important to Us

Attached to this newsletter you will find an excerpt from Cheryl Watson's Tuning Letter, a highly respected journal of MVS tuning and measurement advice published six times a year, with customers in over fifty countries.

Viewing and Printing CTC Connections

+---PTF Numbers------++

This function has been made available for HCD 5.2, HCD 5.1, and the HCD 4.3 Usability Feature with the following PTF numbers:

HCD 5.2 UW90185 (Base) UW90186 (English) HCD 5.1 and HCD 4.3 U.F. UW90182 (Base) UW90183 (English)

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HCD offers you the possibility to view and verify your CTC connections that are defined through an ESCON Director. You can do the following:

- Print a CTC connection report including diagnostic messages
- View existing CTC connections including online diagnostic messages on the following lists:
 - Processor list
 - Partition list
 - ChPID list
 - Control unit list
 - Device list

These CTC connection lists let you immediately verify whether your definitions are done correctly.

A CTC connection requires a CTC channel at one end of the connection and a CNC channel at the other end of the connection. The two channels can be considered as communicating directly with each other in a peer-to-peer fashion. Each channel defines the channel at the other end of the CTC connection as a CTC control unit.

The port address of the channel (entry port) at the other end of the CTC connection is the link address of the control unit representing the channel.

The CTC devices associated with the control units at both ends of the CTC connection may have different device numbers, but they must have the same unit address. The device type of both devices is the same (SCTC or BCTC).

Restrictions:

HCD can only show CTC connections, if the connected processors are defined in one IODF and the CNC and CTC channel paths have a dynamic connection to the same ESCON director. CTC connections using a stand-alone CTC adapter cannot be shown.

CTC Connections with Shared Channels

If your processor has EMIF support you can share your channels among several partitions to save physical connections. The CTC channel will need a separate control unit definition for each partition sharing the CNC channel. Each of these control unit definitions has the same destination link address but the control unit logical addresses (CUADD) must be different. The control unit logical address must correspond to the image number of the LPAR.

Displaying CTC Connections

You can use the new action View related CTC connections (or action code (k)) on the following lists:

- Processor list
- Partition list
- ChPID list
- Control unit list
- Device list

A panel similar to the following one is displayed:

+								+
Goto F	ilter Backu	up Query He	elp					
		CTC	Connection	List H	Row 1 of 1	4 More:	>	• •
Select CT	C connection	ns to view C	C Messages	, then pres	ss Enter.			
	CTC si	.de		CNC	side			1
/ Proc.	Part. D	Devices CH (CU Proc.	Part.	Devices	CH CU	Msg.	I

											-	
۱_	PROC001A		0500,5	20	1020	PROC001		0100,5	10	1010	G750I	Ι
Ι_	PROC001A		0690,1	20	0069						G752I	
Ι_	PROC002		0650,1	11	0065	PROC002		0660,1	13	0066	G753I	
Ι_	PROC002		0680,1	11	0068						G752I	
Ι_	PROC002		0701,1	12	0050	PROC003	PART1	0301,1	10	1012		
Ι_	PROC002		0800,5	22	0060	PROC003	PART2	0400,5	11	1013		
Ι_	PROC002		0805,1	22	0060	PROC003	PART2	0405,1	11	1013	G751I	
Ι_	PROC002		0806,3	22	0060	PROC003	PART2	0406,3	11	1013		
Ι_	PROC002		2400,1	24	0024						G756I	
Ι_	PROC003	PART1	1105,1	21	0105	PROC001		1106,1	10	0106		
Ι_	PROC003	PART1	1107,1	21	0107	PROC002		1108,1	26	0108	G750I	
						PROC002		0200,2	10	1011	G757I	
						PROC003	PART1	0300,1	10	1012	G754I	
1						PROC003	PART2	0300,2	10	1012	G754I	
+												-+

This panel shows the definitions of the CNC side in relation to the definitions of the CTC side, such as processor, partition, channel path, control unit, and device information.

Incomplete CTC Definitions

If the CTC connection is not correctly defined as shown in Figure 1., the fields on this panel might be incomplete and an error message is shown. For example, message G754I indicates that HCD cannot determine the connection, since no control units and devices match to the processor, partition, control unit, and device of the same row.

Displaying More Detailed Information

Scroll to the right to see more detailed information about the CTC side of the connection, such as channel path mode, switch information, detailed control unit and device information.

+-	Goto Fi	lter Bac	kup	Query	Help											+
-				CTC	Connect	cio	n L:	ist	(CTC))]	Row	1 0:	f 14 1	More:	<>	
S	elect CTC	connecti	ons t	to view	CTC Me	ess	ages	3, †	then p	pre	ss I	Ente	r.			
1		-Partiti	on	Devi	ces			-CI	HPID-	Ent	cry	Dyn		Link	CU	
17	Proc.	Name	Num	Number	Type	OS	UA	ID	Mode	SW	PO	SW	CU	Addr	ADD	1
1	PROC001A			0500,5	BCTC	Ν	00	20	DED	05	FO	05	1020	E1		1
1	PROC001A			0690,1	SCTC	Ν	00	20	DED	05	FO	05	0069	E7		1
1	PROC002			0650,1	SCTC	Ν	00	11	DED	05	E7	05	0065	E8		1
1	PROC002			0680,1	SCTC	Ν	00	11	DED	05	E7	05	0068	FO		1
1	PROC002			0701,1	SCTC	Ν	01	12	DED	05	D0	05	0050	F4	1	1
1	PROC002			0800,5	SCTC	Ν	00	22	DED	05	D7	05	0060	FЗ	2	1
1	PROC002			0805,1	BCTC	Ν	05	22	DED	05	D7	05	0060	FЗ	2	1
1	PROC002			0806,3	SCTC	Ν	06	22	DED	05	D7	05	0060	FЗ	2	1
1	PROC002			2400,1	SCTC	Ν	00	24	DED	04	ΕO	05	0024	ΕO		1
_	PROC003	PART1	1	1105,1	SCTC	Ν	00	21	DED	05	F7	05	0105	E1		I
_ +-	PROC003	PART1	1	1107,1	SCTC	N	00	21	DED	05	F7	05	0107	F8		 +

Scroll once again to the right to see the same detailed information for the CNC side of the connection.

Filtering CTC Definitions

To get a better overview of your CTC connections you can filter the list by specifying different filter criteria. Select action bar *Filter* and then *Set filter*. The following panel appears:

** Filter	CTC Connections **
	I
Specify or revise the following f	ilter criteria and press Enter.
	I
Message ID	
Device type (SCTC/B	SCTC)
Dynamic switch +	
CTC side	CNC side
Processor +	Processor +
Partition +	Partition +
CHPID	CHPID
	I
CU number	CU number
<pre> Starting device no</pre>	Starting device no
Defined to OS (Y/N)	Defined to OS (Y/N)
*	*
+	

Printing CTC Connection Lists

You can also print the list panel by using the SAVE command.

Printing a CTC Connection Report

HCD offers you a new type of report about configuration data in an IODF, the CTC connection report.

Printing a CTC Connection Report Using the Batch Utility

The Batch Utility has been extended to print the new CTC connection report. A new report type T has been introduced for the CTC connection report.

Hardware Configuration Manager for MVS (HCM)

+---HCM News------+

Hardware Configuration Manager for MVS is available:

General Availability 10/27/95

The following HCD PTFs are required for running HCM:

HCD 5.2 UW90193 UW90194 HCD 5.1 and HCD 4.3 U.F. UW90190 UW90191

The HCM Demo can be ordered now:

Demo Diskette G511-3533

A Tutorial is available and can be ordered via your IBM Representative:

Tutorial

request from HOEHN@BOEVM3

A first PTF for HCM will be available during 11/95.

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Cheryl Watson's Tuning Letter

Following please find an excerpt from Cheryl Watson's Tuning Letter discussing HCD.

HCD Hints & Tips

Hardware Configuration Definition, HCD, is a component of MVS that provides a single point for all I/O definitions, both hardware and software. It is a replacement of IOCP and MVSCP generations for I/O definitions. HCD provides support to allow dynamic reconfiguration of devices, movement of the UCB above the 16 Mb line, and 4-digit device addresses.

Is This Applicable?

This article is to help prepare a site for migration to HCD. If you already have HCD installed, congratulate yourself and skip this section!

Limited HCD support is available from SP 4.1, and HCD support for dynamic reconfiguration available from SP 4.2 on. It's a requirement for all SP 5 installations. You probably need to convert your IOCP and MVSCP I/O definitions to HCD if one or more of the following is true at your installation:

- 1. You'll be converting to MVS/ESA SP 5.
- 2. You need to define more than 4,095 devices (SP 5.1).
- 3. You need to reconfigure devices dynamically between IPLs (SP 4.2).
- 4. You are experiencing virtual storage constraint below the line and want to move the UCBs above the line (SP 5.2).

Additional benefits from HCD include:

- 1. Single point of definition for both hardware and software.
- 2. Validation of definitions at entry time, not at IPL or when first trying to access a device.
- 3. Better availability of your systems.
- 4. Single point of definition for multiple systems, thus reducing the complexity for multi-image systems.
- 5. Documentation and graphical display of the I/O configuration.
- 6. Automatic facility to document changes between two configurations.
- 7. Simple change to EDT can be done dynamically.

HCD runs on all processors supported by MVS. The following releases of MVS support HCD facilities:

MVS/SP 3.1.0e

- Provides UCB services to allow customer's additional time to change programs.

- MVS/SP 4.1
- MVS/SP 4.2
- Dynamic reconfiguration is available with HCD. MVS/SP 4.3
- HCD provides shared channel path capability, EMIF support, and ESCON director support.

MVS/SP 5.1 - HCD is required for SP 5 and provides support for 4-digit device numbers, coupling facility definitions, and adds several usability features.

MVS/SP 5.2 - Moves UCBs above the 16 Mb line.

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The letter then continues with the following chapters:

- Background
- UCB Changes
- 4-Digit Device Support
- HCD ReleasesPlanning for HCD
- Recommendations
- Recent HCD APARs
- References.

If you are interested to subscribe, subscription information can be obtained by faxing a request to Watson & Walker, Inc. in the U.S. at 813-366-6479.

Your Feedback Is Important to Us

If you like the idea of the 'HCD Newsletters', or if you don't like it, or if you have suggestions for topics you want to hear about

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