This page provides details of what's new in HCD for z/OS V2R1.

Enhancements of the I/O Autoconfiguration function

HCD provides the following enhancements of the I/O Autoconfiguration function that has been introduced in z/OS V1R12:

- In addition to switched FICON connected controllers, I/O Autoconfiguration can now discover FICON directly attached controllers and devices and proposes point-to-point connection paths if available.

- I/O Autoconfiguration supports the inclusion or exclusion of specific switches or CHPIDs into the discovery and proposal process, that users can explicitly specify with the invocation of an I/O Autoconfiguration request. For this purpose, HCD introduces four new autoconfiguration policy keywords:
    - AUTO_CHPID_INCLUDE
    - AUTO_CHPID_EXCLUDE
    - AUTO_SWAD_INCLUDE
    - AUTO_SWAD_EXCLUDE

- The autoconfiguration policy keyword AUTO_SS_DEVNUM_SCHEME accepts a new value NONE. This value bypasses control unit and device number proposals by HCD and lets the user manually apply the numbers for detected objects.

- I/O Autoconfiguration allows discovery by controller serial number and filters the discovered controllers accordingly.

- HCD can process an I/O Autoconfiguration request that is partially directed against unavailable systems of an LPAR group or a sysplex, or against systems that are not capable to support I/O Autoconfiguration. Users can specify that the request applies to appropriate systems only, and that unavailable/uncapable systems are tolerated but ignored.

- HCD allows users to change certain I/O Autoconfiguration policies between two subsequent controller discoveries without the need to make a new fabric discovery. This enables I/O Autoconfiguration to perform each new controller discovery with changed policies.

- HCD provides the SAVE command on the I/O Autoconfiguration list panels (Discovered New or Changed Controller List, Proposed Control Unit List, and Proposed Control Unit / Device List) to allow users to save the fabric and controller discovery results and proposals in a data set.

HMC-wide activate

You can use a new HMC-wide activate function of HCD to remotely distribute and activate a new production IODF from a single managing z/OS system on all target systems of those CPCs that are configured in the Hardware Management Console (HMC) and that are defined in a specified TCP/IP connection table.

Launch this function from the System z Cluster List using action Work with CPC images introduced in z/OS V1R13. The upcoming CPC Image List now displays the activation status of the connected z/OS and z/VM systems and provides new

actions to activate the accessed production IODF for hardware and/or software changes at the selected z/OS or z/VM system. The new production IODF is sent to the target system if necessary. You can remotely issue any operational commands that are required for the activation. The messages resulting from the activation or from processing system commands are displayed in a message list.

For the HMC-wide activate function on remote z/OS and z/VM systems, HCD to HCD communication needs to be set-up. For this communication, the HCD agent is used. In previous releases, the HCD agent was only required when using HCM.

Support of PCIe functions

Peripheral Component Interconnect Express (PCIe) adapters offer new functionality to systems running on IBM zEnterprise EC12 and BC12 (zEC12 and zBC12) processors in order to connect, for example, to an IBM zEnterprise BladeCenter® Extension (zBX). Therefore, HCD introduces a new dialog where users can define PCIe functions, assign them to LPARs, and activate them via IOCP or dynamically. In addition, HCD provides the following new reports:

- The PCIe Function Summary Report displays the partitions in the access and candidate lists which are entitled to access the available PCIe functions.
- The PCIe Function Compare Report shows the changes of PCIe functions between processors of two IODFs.

In addition, HCD supports the new I/O configuration statement FUNCTION for defining and configuring PCIe functions.

Validation enhancements

HCD implements several new validation checks to help users to avoid unintended results:

New warning message when a CF CIB connection changes due to connectivity updates

HCD issues a new warning message CBDG422I, when users add or delete a CSS to/from a CIB CHPID that involves a change of the coupling facility connection, affecting the definition of the connected processor. This message informs the user about the change and a potentially required dynamic activation of the target processor.

Warning message CBDA845I now also issued for ACTIVATE SOFT system command

For users of the HCD Activate ... dialogs, if required, HCD issues warning message CBDA845I when users specify an ACTIVATE software-only request without hardware validation, because this will not process involved changes to coupling facility control units and devices for the software. This message is now also issued, if users specify an ACTIVATE SOFT system command without hardware validation.

Enhanced CF Channel Path Connectivity List

A new column in the CF Channel Path Connectivity List shows for both the source and destination channel path either the physical channel identifier (PCHID) to which the channel path is assigned or its host communication adapter ID and

port number.

OS group change action available for device groups

The OS group change action up to now has been available from the I/O Device List showing single devices only. Starting with this release, this action is also available from the I/O Device List showing device groups.

HCD batch enhancements

HCD provides the following new batch utility features:

Filter parameters for graphical reports created via batch utility
As with the HCD dialog for creating graphical reports, you now can specify filter parameters when creating graphical reports with the batch utility function.

ACTIVATE command now available as an HCD batch command
Users can now issue the ACTIVATE command as an HCD batch command. The syntax is the same as described in z/OS MVS System Commands.

New profile options

There are the following new keywords that you can specify in the HCD profile for the following purposes:

- Unconditional generation of D/R site OS configurations: Use profile option UNCOND_GENERATE_DROS to regenerate D/R site OS configurations whenever a new production IODF is built, independent from whether the configurations have been previously modified or not.

- Specify remote call connection table: Use profile option CONNECTION_TABLE to specify the name of a data set that contains the connection table for establishing connectivity to the remote systems while working with CPC images.

- Enable remote call logging: Use profile option RCALL_LOG to activate logging of remote calls into a data set while working with CPC images.

- Set initial remote call timeout value: Use profile option RCALL_TIMEOUT to set the timeout value for the initial connection to a remote system when working with CPC images.

PCHID Summary Report

The PCHID Summary Report as part of the CSS Summary Report lists all defined channel paths and PCIe functions grouped by their defined PCHID values or, as applicable, by their HCA adapter or port IDs.

Verify a configuration by means of I/O Autoconfiguration (zDAC)
With HCD you can now verify the active or target configuration by means of z/OS discovery and I/O Autoconfiguration (zDAC), if Tivoli System Automation (TSA) I/O operations is not installed or not working. This is possible for a processor supporting I/O Autoconfiguration and for a system in the local sysplex, which is

capable for dynamic activates. The verification is limited to FICON attached storage devices.

When generating the I/O path report, HCD includes information about single point of failures (SPOFs) into the sensed data if the report is produced for the local system. This is done when getting the report via (TSA) I/O operations as well as via zDAC.

Hardware support

HCD supports the IBM zEnterprise EC12 and BC12 (zEC12 and zBC12) processor family (processor types 2827-H20, -H43, -H66, -H89, -HA1 and 2828-H06, -H13).