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New HCD Functions in MVS/ESa 5.1

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New HCD Functions in MVS/ESA SP 5.1

The Hardware Configuration Definition (HCD) 5.1 component of MVS/ESA SP Version 5.1 provides many new and enhanced functions, including support for the new S/390 Parallel Transaction Server 9672 and the new Coupling Facility and numerous usability enhancements.

Hardware Support

S/390 Microprocessor Cluster Support

The S/390 Parallel Transaction Server 9672 is a group of CPCs whose support elements are attached to the same local area network as the hardware management console used to configureand operate the CPCs. HCD running on one of the CPCs provides a single point of control to perform group actions for IOCDS management and IPL parameter management for all CPCs configured in the LAN.

Coupling Facility (CF) Support

The Coupling Facility enables high-performance data sharing among processors by allowing the the use of a PR/SM partition as a communication partition and high-speed channels to connect the partition with other processors. HCD 5.1 allows you to define the coupling facility links for the supported processors. The control unit and device definitions are generated by HCD and need not be defined.

Graphical Configuration Reports

HCD 5.1 allows you to create and view various types of graphical configuration reports of logical configurations in an IODF.

Print

The printed output can be used for documentation purposes and can serve as a base for future configuration planning. You can limit the report by means of filtering.

To print the reports created, you need either DCF Release 4 or BookMaster Release 3 and an AFP printer, such as an IBM 3800, 3820, 3825, or 3827.

Display

The display function allows you to get a quick overview of your logical hardware configuration. Using the Locate command, you can find a specific object and you can then jump from the graphical object representation to the related object list and back again.

To display a report graphically, you need GDDM. If you are using a programmable workstation and communicate with the host using a 3270 emulator session, the GDDM-OS/2 link files must be installed on your workstation.

IODF Enhancements

Copy Configuration Data

The existing **Repeat** pull-down choice of the **Add** action has been extended: you are now able to copy a selected object, together with its dependent objects and I/O attachments, not only within the same IODF but also to another IODF. This means that you can use this function to consolidate separate IODFs into one IODF.

The target objects may or may not exist in the target IODF. If the objects do not exist in the target IODF, new ones are created by copying the values and definitions of the objects in the source IODF. If some of the objects already exist, a merge action takes place, that is, the definitions of the objects in the source IODF are combined with those of the objects in the target IODF.

View Active IODF

This support allows you to view information about the currently active IODF and, if available, the configuration token which is currently active in the HSA (hardware system area). You can also see the current activation scope (software changes, hardware changes, or recovery required) and examine the reasons for any limitations to the scope.

Four-Digit Device Numbers

HCD 5.1 allows you to specify four digit device numbers (numbers higher than '0FFF') for devices defined to an MVS/ESA SP Version 5.1 operating system.

IODF Default Size

The default size of the IODF has been increased to 1024 blocks.

Enhanced Migration

Update Parts of a Configuration

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You can update existing processor and operating system configuration definitions in an IODF with IOCP, MVSCP, or HCPRIO control statements. In particular, you can:

- Add or replace control units, devices, channel paths, and partitions.
- Replace a list of consoles.
- Update EDTs and esoterics.

Retain Entries on Migration Panel

The last values entered for the input data sets on the migration panel are retained. You do not have to re-enter the values for a subsequent migration.

Merge Device Connections

Devices defined in the IODF and in the IOCP input data sets need not be connected to exactly the same set of control units. If one set is the subset of the other, the definitions are merged. Previously, the definitions were rejected.

Device Number Conflicts

Previously, when migrating the MVSCP input data sets, a wrong device to operating system connection could be established, if no control unit numbers were specified for the devices. To resolve this conflict, you are now able to associate an MVSCP input data set with a processor or a logical partition already defined in the IODF.

Duplicate Device Numbers

An improved mapping algorithm for devices results in fewer duplicate device numbers and in fewer migration failures due to control unit configuration mismatches.

Duplicate Labels

Labels in the input data sets no longer need to be unique; duplicate labels are now ignored.

Map Control Unit Types

You can use the startup profile to map the control unit definitions in the IOCP input data set to valid HCD control units thus reducing the need to change the IOCP input data set definitions before migrating them.

Switch Enhancements

Save/Migrate ESCON Director File Configuration

HCD 4.3 only allows the migration of switch configurations from an active ESCON Director or an ISPF table. If you have ESCON Manager Version 1.2 (plus PTFs) installed with its capability to read and update ESCON Director files, HCD 5.1 allows you to:

- Save a switch configuration, which you do not want to activate immediately, in an ESCON Director file.
- Migrate the saved switch configuration from the ESCON Director file for further processing and modifications by HCD; this support should assist you in predefining the switch configuration when adding a switch.

Connect New Switch

If a switch control unit and switch device were already defined, you could not specify them when defining the switch with HCD 4.4. As a consequence, the connection between control unit and switch had to be done manually using the HCD dialog. HCD 5.1 now allows the connection of a new switch to a switch control unit and switch device that you added to the IODF when migrating your IOCP or MVSCP input data set.

Port Range

In HCD 4.3 the minimum port range was set to 'Installed' when a switch was added. You can now set a port range larger than the minimum range to 'Installed' when defining a switch.

Improved Navigation and Ease-of Use Changes

Primary Task Selection Panel

This panel has been restructured by moving all options for defining a configuration to a separate panel, which shows the hierarchy of the objects you work with.

GOTO Command

The GOTO command has been enhanced and allows you to go directly to the list panels of dependent objects or to a specific object within a list. For example, you can now go directly from any list panel to a specific partition or channel path list of a processor.

Channel Path Change

HCD 5.1 allows you to change the channel path type from parallel to ESCON (or vice versa), and the operation mode from non-shared to shared (or vice versa). However, changing the type or operation mode of one channel path will result in changing all channel paths attached to the logical control units affected.

Reduced Keystrokes

- Type **L** for the Locate command.
- Type **Left** or **Right** for the Hleft or Hright commands.
- Press **Enter** just once on a scrollable confirm delete panel to delete all selected objects.

Auto-Assign

Select 'Auto-assign' to have some control unit and processor attachment parameters automatically proposed by HCD when defining a control unit which is to be connected to one or more switches.

Group Changes

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In previous releases of HCD, when you defined or changed the settings of a control unit that was attached to a group of processors, you had to set the attributes for each processor in the group one at a time. HCD 5.1 allows you to select the range of processors to which the attachment parameters will be applied, when you add a new control unit definition or modify an existing one.

Saving of Messages

In addition to displaying messages, you can now save all messages in the message log file.

Activity Log

Placement of the activity log can be controlled via a profile option. The IODF name is now shown in the activity log, which allows you to associate the changes with the IODF for which you made them.

CSS Reports

Instead of getting all CSS reports, you can now select the types of CSS reports you want to produce and print. The devices in the CHPID and control unit detail reports are grouped to improve readability.

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