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Report Enhancements

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Contents

[New HCD SPE now available!](#)
[Report enhancements](#)

- [Additional improvements to the reports](#)

[Message collection during build production IODF](#)

- [Check for channel path types incompatible to MVS V4](#)

[Preview of dynamic activation in TEST mode](#)

[New HCD SPE now available!](#)

SPE OW17595 fulfills high-prioritized requirements raised by HCD customers. It addresses the following areas:

- compare reports and configuration reports,
- messages given during Build Production IODF, and
- preview of dynamic I/O changes.

The benefits of the enhancements for HCD customers are

- improved readability and overview by a significant reduction of the size of the generated reports,
- improved overview and productivity gain by a significant reduction of messages given during Build Production IODF, and
- improved overview of dynamic I/O changes with the ACTIVATE TEST function.

The SPE has been shipped for HCD 5.1 (PTFs UW90236, UW90237, UW90238); for HCD 5.2 (PTFs UW90239, UW90240, UW90241); and ,thus, will be available also for OS/390 Release 1.

Report Enhancements

Many HCD reports related to devices showed them as individual devices. In many cases this was redundant data and made the size of the generated reports unnecessarily large. Especially in the IODF compare reports, it was difficult to find the relevant information because of missing overview and granularity.

Reports are shorter and more readable

HCD now shows device groups for ALL reports. Up to now, all compare reports and the Device Detail Report showed individual devices (e.g. a string of 64 devices showed up 64 times with redundant information).

Besides subsequent device numbers, the grouping criteria are device type/model, and, dependent on either processor related or operating system related reports, connected control units and corresponding processor attachment values or the OS parameters, features and assignments to esoteric groups. Examples of the Device Compare Report and the Device Detail Report are shown in [Figure 2.](#) and in [Figure 3.](#)

The following reports already showed device groups in HCD 5.2 and have been retrofit to HCD 5.1.

- Device Summary Report
- MVS Device Summary Report
- VM Device Summary Report
- EDT Report

On an average, this change reduces the size of the generated reports by a factor of ten!

Finer Granularity of Compare Reports

Prior to this SPE, users could only select a specific 'view' (processor, operating system or switch) and got all reports of this view printed. Now, they can select single compare reports (e.g. only the Device Compare Report). The intended report can be specified via dialog (see [Figure 1.](#) for the limitation panel) or by additional batch parameters.

In addition, the processor related compare reports can be limited to a partition. When selected, only objects related to the limiting LPAR via the channel path access or candidate list are included in the reports. The report then contains an indication whether the relation is via the access or candidate list.

Figure 1. Limit Processor Compare Reports Panel

```
+-----+
|           Limit Processor Compare Reports           |
|                                                     |
|Select one or more of the processor compare reports. |
|                                                     |
|  _ Processor Compare                               |
|  _ Partition Compare                               |
|  _ Channel Path Compare                           |
|  _ Control Unit Attachment Compare                 |
|  _ Device Attachment Compare                       |
|  _ Control Unit Compare                           |
|  _ Device Compare                                 |
|                                                     |
|To limit the reports, specify the following values.  |
|                                                     |
|               New IODF           Old IODF         |
|Processor ID . . . . . _____ + _____ +  |
|Partition name . . . . . _____ + _____ +  |
|                                                     |
| F1=Help   F2=Split  F3=Exit   F4=Prompt  F5=Reset  F9=Swap |
| F12=Cancel |
+-----+
```

Figure 2. Layout of Device Compare Report

Device, Range	New IODF	Old IODF	Description
0100,32	Actual Data	Old Data	
	3390	same	Device Type
	1234563990	same	Serial Number
	Compare string 1	same	Device Description
	>> BASPROC	>> new added	Attached to Processor
	>> LPARPROC	>> same	Attached to Processor
	>> A100	>> same	Connected to Control Unit
	>> B110	>> same	Connected to Control Unit
	>> MVSPROD1	>> same	Attached to OS Config
	>> access list	>> cand. list	Relation to Limiting LPAR
0200,32	Actual Data	Old Data	
	3390	same	Device Type
	2345673390	same	Serial Number
	Compare string 2	same	Device Description
	>> BASPROC	>> new added	Attached to Processor
	>> LPARPROC	>> same	Attached to Processor
	>> A200	>> same	Connected to Control Unit
	>> B200	>> same	Connected to Control Unit
	>> MVSPROD1	>> same	Attached to OS Config
	>> access list	>> cand. list	Relation to Limiting LPAR

Switch Port Data always shown

The Channel Path Detail Report and the Control Unit Detail Report showed related switch ports only if a switch configuration was defined. Now, related switch ports are always shown (except for chained switches where HCD can only find out the routing path if the corresponding switch configurations are defined).

Partition Access Data consistent with IOCP Report

The Channel Path Summary Report and the Device Detail Report have been changed to show the accessing partitions as a partition matrix instead of listing the partition names for the access/candidate lists or device candidate lists.

Besides reducing the required size and improving the readability of the reports, additional information is given for the reachability and accessibility of the devices from the defined logical partitions

Additional Improvements to the Reports

Redundant header lines omitted:

The header lines for each relation of an object have been dropped to save space and improve the readability of the reports.

Default parameters taken into account:

When comparing parameters and features of devices, devices were shown as changed if its definition in one IODF used a default (shown as blank) and in the other IODF had the value explicitly specified. The OS Device Compare now considers the default of a parameter also when comparing to explicitly set value.

New message for comparison result EQUAL:

When the user selected the option to only print added and deleted data and the configuration was the same, HCD showed message CBDA630I 'No data available' for the report. This led to the confusion whether the report had nothing to report because the configurations were equal or the IODF could not be read. Message CBDA639I now states explicitly that the comparison will not find any differences.

Message Collection during Build Production IODF

In the past, many customers complained about the large amount of warning or informational messages when building a production IODF. For example, if a backup switch configuration has been defined with no dedicated connections for control units defined without a dynamic switch/link address, message CBDG033I was given for each port id and each control unit for the switch configuration.

These messages are now collected for each object class and the number of messages is no longer dependent on the number of defined objects. The above message is now given only once.

The following example shows all messages that have been changed to a compressed format.

CBDG033I

Switch 01 - defined as static - has no dedicated connection defined for 2 channel path ports (CUs - switch configurations): E6 (3000 - SW1DREI, SW1NODAT), E7 (3100 - SW1DREI, SW1NODAT)

CBDG039I

Switch 01 has no dedicated connections defined for 2 chaining channel path ports (chained switch - switch configurations): E9 (02 - SW1DREI, SW1NODAT), FB (02 - SW1DREI, SW1NODAT)

CBDG042I

Switch 01 has no required dedicated connections defined for 5 channel path ports (CHPID - switch configurations): E1 (PROC2.20, PROC3.20 - SW1DREI, SW1NODAT), E2 (PROC2.21, PROC3.21 - SW1DREI, SW1NODAT), E3 (PROC2.22, PROC3.22 - SW1DREI, SW1NODAT), E4 (PROC2.23, PROC3.23 - SW1DREI, SW1NODAT), E5 (PROC2.24, PROC3.24 - SW1DREI, SW1NODAT)

CBDG081I

Following 2 operating system configurations of type MVS have no console devices defined: KSA, KSB
CBDG084I
The maximum allowed protocol speed of S4 is not used for following 5 control units attached to at least one processor: 0100, 0105, 0240, 0358, 1440
CBDG448I
Following 3 control units of type 3490 have less devices than the minimum of 16 unit addresses: 0180, 0181, 0182

The generated message list containing these messages is now significantly shorter and provides a much better overview of the messages than before.
[Check for channel path types incompatible to MVS V4](#)

Message CBDA838I 'Channel path type found which is not supported by the current MVS release' is shown during dynamic activate if a channel path type is not supported by the MVS version HCD is running on. This message is now also shown as a warning message to prevent subsequent activation failures when building a production IODF with HCD V5 under MVS V4 from a work IODF that contains coupling facility channel paths or other channel path types that are not supported under MVS V4.

[Preview of Dynamic Activation in TEST Mode](#)

When performing both a hardware and software change with the TEST option, HCD now provides information about the channel paths, control units and devices that are deleted, modified or added.

This additional information is shown when the HCD profile has set the option SHOW_IO_CHANGES=YES.

The following are messages that might appear.

CBDA886I
Following devices are deleted from processor A9672: 0010-0017,0040-004F,0A60-0A63,0A68-0A6B,0B40-0B43
CBDA887I
Following devices are added to processor A9672: 0010-0017,0040-004F
CBDA888I
Following devices are modified for processor A9672: 1C80
CBDA883I
Following control units are deleted from processor A9672: 1010,2040,3A60,3B40
CBDA884I
Following control units are added to processor A9672: 1010,2040
CBDA889I
Following control units are modified for processor A9672: 2200
CBDA879I
Following channel paths are deleted from processor A9672: 32,60
CBDA881I
Following channel paths are added to processor A9672: 60
CBDA881I
Following channel paths are added to processor A9672: 60
CBDA882I
Following channel paths are modified for processor A9672: 29

To keep the amount of messages small, each of the messages specifies a list of objects.

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